

The product range
Small drives



Compact, powerful, versatile

The product range Small drives



lenze

Lenze

Our commitment to you

If you are looking for effective and easy solutions for the implementation of your machine and drive concepts or want to optimise existing concepts and cut your costs, Lenze is your ideal partner.

We have more than 60 years' experience at the cutting edge of drive and automation technology.



Drive and automation technology from Lenze keep things moving – for example in the areas of materials handling, robotics and component handling as well as in packaging facilities for the intralogistics and automotive sectors and the food and beverage industries.

Lenze | about us

We can offer you automation solutions, including control, visualisation and drive technology, from one source. Our drive systems will improve the performance of your machines. From project planning to commissioning, we have the know-how. Our international sales and service network can provide you with expert help and advice at any time.

Cut your process costs and increase your ability to compete. Let us analyse your drive technology tasks and support you with made-to-measure solutions.

We can take an integrated approach to projects thanks to the scalability of our products and the scope of the overall portfolio. We can get the best from your machines and systems.



At your side all over the world – with thorough and professional support from our motivated team.

Small Drives | in a power range of 12 ... 600 W

The product range comprises direct current permanent magnet motors and three-phase asynchronous motors, which can be combined with worm, helical or planetary gearboxes to form geared motors. Modular motor structure and the wide range of variants make it easy to find the most suitable design for any specific application.

Connected directly to the mains, speed controlled or battery-driven – the Small Drives from Lenze are suitable for many application areas, e.g.:

- ▶ Materials handling
- ▶ Medical engineering
- ▶ Batching systems
- ▶ Handling/robotics
- ▶ Printing machinery
- ▶ Packaging machinery

Customer benefit takes pride of place for us during the development of our products. This is what helps to make us such a powerful partner for you, with the ability to solve your drive tasks in a quick and flexible manner. Our experienced team of engineers, technicians and product specialists is at your disposal.

The small drives are part of the Lenze product portfolio for cost-optimised drive solutions. From smallest drives to drive solutions from 400 kW – you can rely on our well thought-out program.



Three-phase AC motors



Worm gearbox



Bevel gearboxes



Planetary gearboxes

An Overview | our products



Controls and industrial PCs



Software, I/O and visualisation



Frequency inverters



Servo inverters



Decentralised drives



Standard three-phase AC motors, synchronous and asynchronous servo motors



Gearboxes and geared motors



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Small drives

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General information

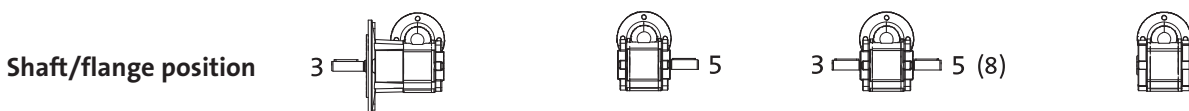
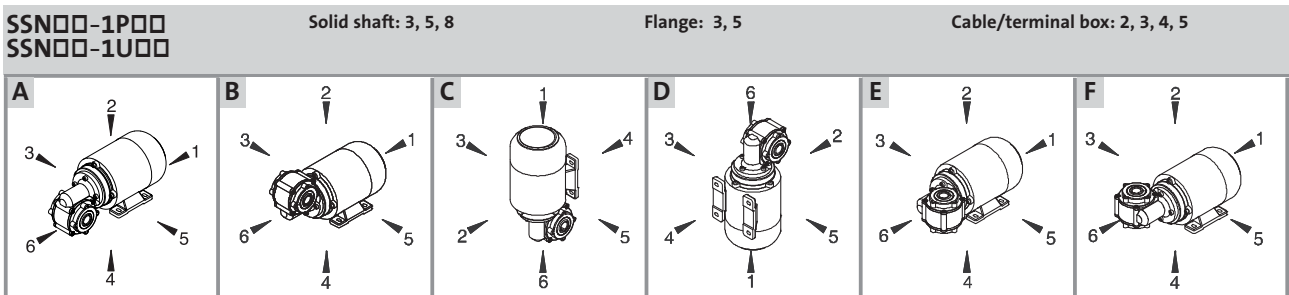
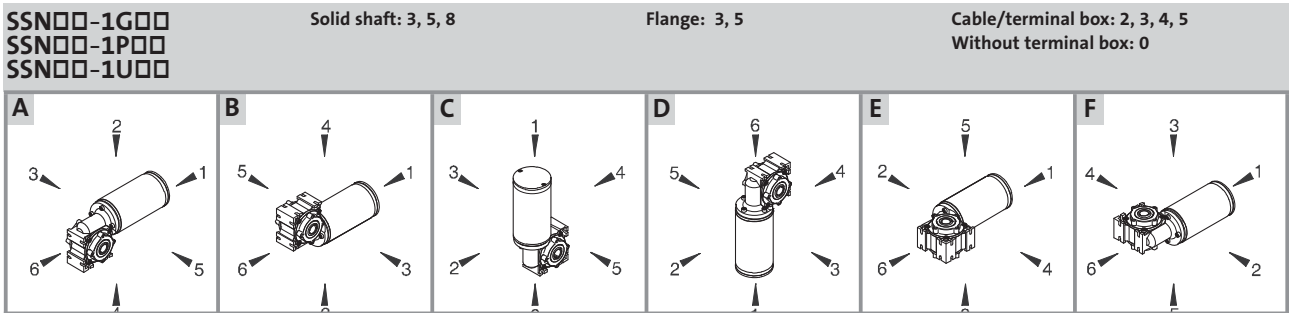
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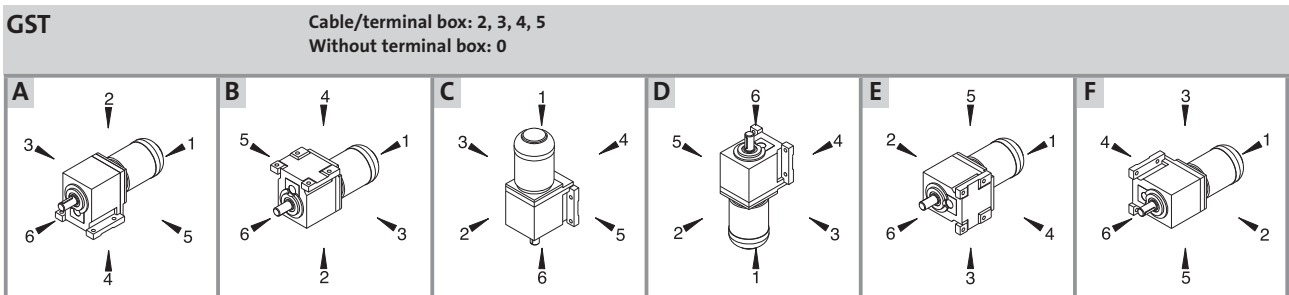
General information

Product key

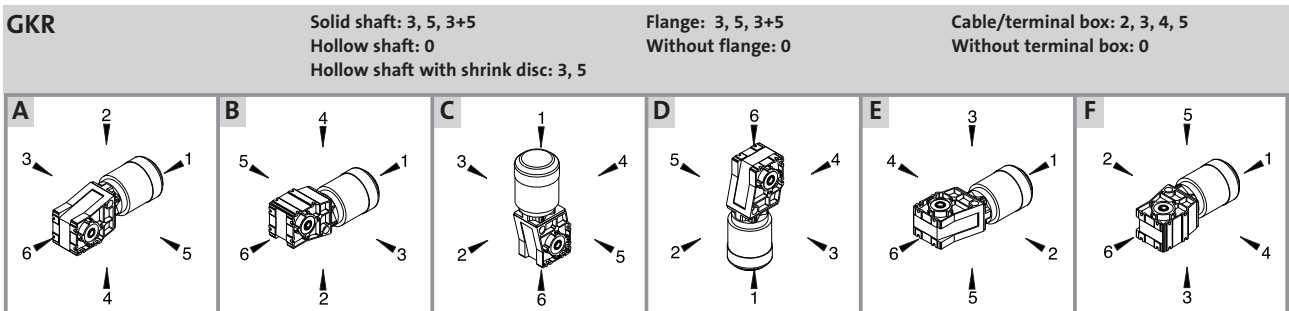
Mounting position (A-F) and position of system blocks (1-6)



Helical geared motors GST



Helical geared motors GKR





Type codes for geared motors

SSN40-2GVAR-063C22

Product group

- G- Gearboxes
- S- Small drives

Product range

- KR- Bevel gearbox
- PL- Planetary gearbox
- SN- Worm gearbox
- ST- Helical gearbox

Size

- Helical gearbox -03, 04, 05
- Bevel gearbox -03
- Worm gearbox -25, 31, 40
- Planetary gearbox -42, -52, 62, 81, 12

No. of stages

- 1- Single-stage
- 2- Two-stage
- 3- Three-stage

Drive-end version

- G- Three-phase asynchronous motor SDS series
- U- Three-phase asynchronous motor 13.71 series □/13.75□
- P- DC permanent magnet motors 13.12 series □

Output design

Shaft design

- V- Solid shaft
- D- Double shaft
- H- Hollow shaft

Housing design

- A- Foot-mounted with centring
- C- Without foot, with centring

Output design

- L- Round flange with tapped holes
- R- Without flange
- K- Round flange with through hole

Motor frame size

Axis height according to standard e.g. 071 = IEC71

Input design

- C- Compact motor with Lenze mounting flange
- N- Standard motor with IEC mounting flange

Overall length

- 1- S, short
- 2- M, medium
- 3- L, long

Number of pole pairs

- 1- 2 pole
- 2- 4 pole



General information

Type code

Type code for series 13.12 motors □, 13.71□, 13.75□

13.121.45.3.5.5

Product group

13- Small drives

Motor type

12- DC permanent magnet motor
71- Three-phase asynchronous motor, smooth housing
75- Three-phase asynchronous motor, ribbed housing

Output design

0- Lenze standard, IEC
1- For worm gearbox SSN
6- For helical gearbox GST and bevel gearbox GKR

Motor frame size

1st digit Frame size (encoded)
2nd digit Overall length (encoded)

Output design specification

0- Lenze standard dimensions
1- IEC dimensions
2- Worm gearbox SSN25
3- Worm gearbox SSN31
5- Worm gearbox SSN40
In the case of output design 6
3- Gearbox size 03
4- Gearbox size 04
5- Gearbox size 05

Motor type

2- Flange mounting B14
3- Foot mounting B3
5- Foot-flange mounting B3/B14
6- Flange mounting B9 for gearbox GST/GKR

Built-on accessories

0- No built-on accessories
1- With brake
4- With DC tachometer
5- With AC tachometer
6- For tachometer attachment
7- For brake attachment

1



Type codes motors series SDS

SDSGARS056-22

Product group

S- small drives

Current

D- Three-phase AC current

Ventilation

S- Naturally ventilated

Design

G- Smooth housing

Machine type

A- Asynchronous machine

Built-on accessories

BI- Brake and incremental encoder

BR- Brake

BS- Brake and resolver

BV- Brake, prepared

IG- Pulse encoder

RS- Resolver

XX- None

Motor frame size

Axis height according to standard e.g. 071 = IEC71

Overall length

2- M, medium

3- L, long

Number of pole pairs

2- 4 pole



General information

Type code

Gearbox type code

SSN40-1FVAR

Product group

S- Small drives

Product range

PL- Planetary gearbox

SN- Worm gearbox

Size

Worm gearbox -25, 31, 40

Planetary gearbox -42, -52, 62, 81, 12

No. of stages

1- Single-stage

2- Two-stage

3- Three-stage

Drive-end version

N- Standard motor

F- Open design

Output design

Shaft design

V- Solid shaft

D- Double shaft

H- Hollow shaft

Housing design

A- Foot-mounted with centring

C- Without foot, with centring

Output flange

L- Round flange with tapped holes

R- Without flange

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Abbreviations used in this catalogue:

| | | | | |
|------------------|--|-------------|-----------------|---|
| α | Angle of action of radial force | M_r | [Nm] | Rated torque |
| c | Load capacity of gearboxes/geared motors | M_A | [Nm] | Starting torque of motor |
| d_w | [mm] Effective diameter of transmission element | M_B | [Nm] | Holding torque of brake |
| $\cos \varphi$ | Motor power factor | M_{cont} | [Nm] | Continuous torque |
| $\cos \varphi_N$ | Power factor of asynchronous motors | M_{stall} | [Nm] | Stalling torque of motor |
| F_a | [N] Applied axial force | M_i | | Maximum torque factor |
| F_a | [N] Permissible axial force | M_{max} | [Nm] | Maximum torque |
| $F_{a Tab}$ | [N] Table value of axial force | M_{perm} | [Nm] | Permissible torque |
| f_{ch} | [kHz] Chopper frequency | n_1 | [rpm] | Input speed |
| f_d | [Hz] Field frequency | n_2 | [rpm] | Output speed |
| F_l | Mass acceleration factor | n_r | [rpm] | Rated speed |
| f_{max} | [Hz] Set maximum frequency | n_{max} | [rpm] | Maximum speed |
| f_r | [Hz] Rated frequency | P_1 | [kW] | Drive power |
| F_r | [N] Applied radial force | P_2 | [kW] | Output power |
| $F_{r Tab}$ | [N] Table value of radial force | P_r | [kW] | Rated power |
| F_r | [N] Permissible radial force | P_v | [kW] | Inverter power loss |
| f_w | Load position factor of applied radial force | R | [Ω] | Resistance |
| f_{α} | Effective direction factor of applied radial force | S_r | [kW] | Inverter output power |
| f_z | Additional radial force factor of transmission element | TU | [$^{\circ}C$] | Operating ambient temperature |
| i | Ratio | UG | [V] | DC-bus voltage |
| φ | Ratio step | U_r | [V] | Rated voltage |
| η | Mechanical efficiency | U_{mains} | [V] | Mains voltage |
| I_0 | [A] Continuous standstill current | \hat{u} | [kV] | Voltage peak |
| I_A | [A] Motor starting current | IP | | International protection code |
| I_{max} | [A] Maximum output current | IEC | | International Electrotechnical Commission |
| I_r | [A] Rated current | DIN | | Deutsches Institut für Normung |
| I_{mains} | [A] Rated mains current | VDE | | Verband deutscher Elektrotechniker |
| J_{ext} | [kgm ²] Moment of inertia of the machine to be driven reduced to motor shaft | $USDA$ | | United States Department of Agriculture |
| J_{load} | [kgm ²] Moment of inertia of the load machine | $NEMA$ | | National Electrical Manufacturers Association |
| J_{mot} | [kgm ²] Moment of inertia of the motor | AC | | Alternating current/voltage |
| J_A | [kgm ²] Moment of inertia of the drive reduced to drive shaft | DC | | Direct current/voltage |
| J_B | [kgm ²] Moment of inertia of the brake | EMC | | Electromagnetic compatibility |
| k | Application factor (following DIN 3990) | EN | | European standard |
| L | [mH] Inductance | CE | | Communauté Européene |
| m | [kg] Weight | IM | | International Mounting Code |
| M_0 | [Nm] Continuous standstill torque | | | |
| M_1 | [Nm] Input torque | | | |
| M_2 | [Nm] Output torque | | | |



General information

Product information Motors and Gearboxes

DC permanent magnet motor in the power range from 55 - 600 W

- ▶ **Protection from external influences**
Enclosure IP54 ensures good protection for motors from dust and water.
- ▶ **High performance**
The high power density of the motors makes compact drive units possible.
- ▶ The modular motor structure and the variations with gearboxes that have been planned into the concept makes it easy to select the right version for the particular application.
- ▶ **Long life**
The insulation design to thermal class F means the windings are durable.
- ▶ **Independent at 24 V**
Battery operation makes it possible to work independently of the mains supply. Please contact Lenze Small Drives.

Three-phase asynchronous motor (smooth housing) in the power range from 12 - 600 W

- ▶ **Quiet**
No fan noise.
- ▶ **Compact**
The optimised design with a smooth housing facilitates a space-saving installation.
- ▶ **Reliable operation**
The smooth surface of the housing prevents a reduction of the cooling by dust and fluff.
- ▶ The modular motor structure and the variations with gearboxes that have been planned into the concept makes it easy to select the right version for the particular application.

Three-phase asynchronous motor (ribbed housing) in the power range from 30 - 250 W

- ▶ **High performance**
High output power thanks to the fan and cooling ribs on the housing.
- ▶ The modular motor structure and the variations with gearboxes that have been planned into the concept makes it easy to select the right version for the particular application.

Bevel and helical gearboxes

- ▶ **Compact**
The modular concept and the high power density achieved using ground gears with optimised teeth profiles make extremely compact designs possible.
- ▶ **Adaptable and compatible**
Numerous input and output designs mean that Lenze gearboxes can be adapted to almost any drive task. Shaft-mounted helical and right-angle gearboxes are compatible at the output within any given gearbox size.
- ▶ **Easy to integrate**
The high functionality of the housing allows easy integration of Lenze gearboxes into their surroundings.
- ▶ **Quiet**
Optimised geometry of the gear teeth reduces generated noise and internally ribbed cast iron housings provide additional noise damping.
- ▶ **Finely stepped output speed**
Large ratio ranges combined with the small ratio step $\varphi = 1.12$ allow a precise selection of the required output speed.
- ▶ **Reduced clearance**
The two-stage basic concept (three-stage helical-bevel gearbox), low backlash connections and the high quality of the tothing provided by precision manufacturing give a high torsional stiffness at the output compared to other gearboxes.

Worm gearbox

- ▶ **Durable**
The choice of material and machining of the gearbox ensure a long service life.
- ▶ **Low maintenance**
No maintenance required

Planetary gearbox

- ▶ **Compact**
The optimised design with a smooth housing facilitates a space-saving installation.
- ▶ **Low maintenance**
No maintenance required



Operating modes

The ratings are obtained when the following conditions are fulfilled:

- ▶ Ambient temperature up to 40 °C
- ▶ Installation at a height up to 1000 m a.m.s.l.
- ▶ Unobstructed airflow
- ▶ No recycling of the warm exhaust air via the intake

The operating mode is important when choosing a motor. A motor heats up much less, for example, when loaded only intermittently than when constantly under load, thus allowing the selection of a smaller motor. In accordance with VDE 0530, there are eight different modes of operation; S1 to S8.

For **Continuous operation S1** the operating time at the rated power is so long that the steady-state temperature of the machine is reached. Such motors are suitable for continuous duty, i.e. they can be permanently loaded with the rated load.

For **Short-time operation S2** the operating time is so short in comparison to the resting time which follows it that the

steady-state temperature of the machine is never achieved. In the resting time following the operating time the motor cools down to the initial temperature.

With **Intermittent operation S3, S4, S5** the operation consists of a repeating set of short-term duties. The running time is normally 10 minutes. The resting periods between the operating periods are sufficiently long for the machine to cool down.

S3 operation occurs, when the heating effect of the starting current is negligible, S4 when the effect of the starting current cannot be disregarded, S5 when the braking current causes additional heating of the machine.

With **continuous duty with intermittent loading S6** the motor can cool down in the idle phases.

With **continuous operation with start-up and braking S7** there are practically no pauses. The machine is permanently under voltage.

Increased power in operating modes S2, S3 and S6

| Duty cycle S2 | | Operating mode S3 | | Operating mode S6 | |
|----------------------|------------------------|--------------------|------------------------|--------------------|------------------------|
| Operating time [min] | $\frac{P_{perm}}{P_r}$ | Operating time [%] | $\frac{P_{perm}}{P_r}$ | Operating time [%] | $\frac{P_{perm}}{P_r}$ |
| 10 | 1.4 ... 1.5 | 15 | 1.4 ... 1.5 | 15 | 1.5 ... 1.6 |
| 30 | 1.15 ... 1.2 | 25 | 1.3 ... 1.4 | 25 | 1.4 ... 1.5 |
| 60 | 1.07 ... 1.1 | 40 | 1.15 ... 1.2 | 40 | 1.3 ... 1.4 |
| 90 | 1.0 ... 1.05 | 60 | 1.05 ... 1.1 | 60 | 1.15 ... 1.2 |

Varying ambient conditions

Variations in the ambient conditions require a power reduction according to the factors given in Tables 2 and 3. The permissible continuous power is given by:

$$P_{red} = \frac{P_{\Delta}}{P_N} \cdot P_N$$

Effect of the ambient operating temperature

| How the ambient operating temperature T_{amb} affects rated power | | | | | |
|---|------|------|------|------|-----|
| T_{amb} [°C] | ≤ 40 | 45 | 50 | 55 | 60 |
| $\frac{P_{\Delta}}{P_N}$ | 1 | 0.95 | 0.90 | 0.83 | 0.7 |



General information

Dimensioning of geared motors and gearboxes

1. Calculate the required load capacity

Work out the output torque M_2 and speed n_2 required

Calculate the required motor power $P_1 = \frac{M_2 \cdot n_2}{9550 \cdot \eta}$

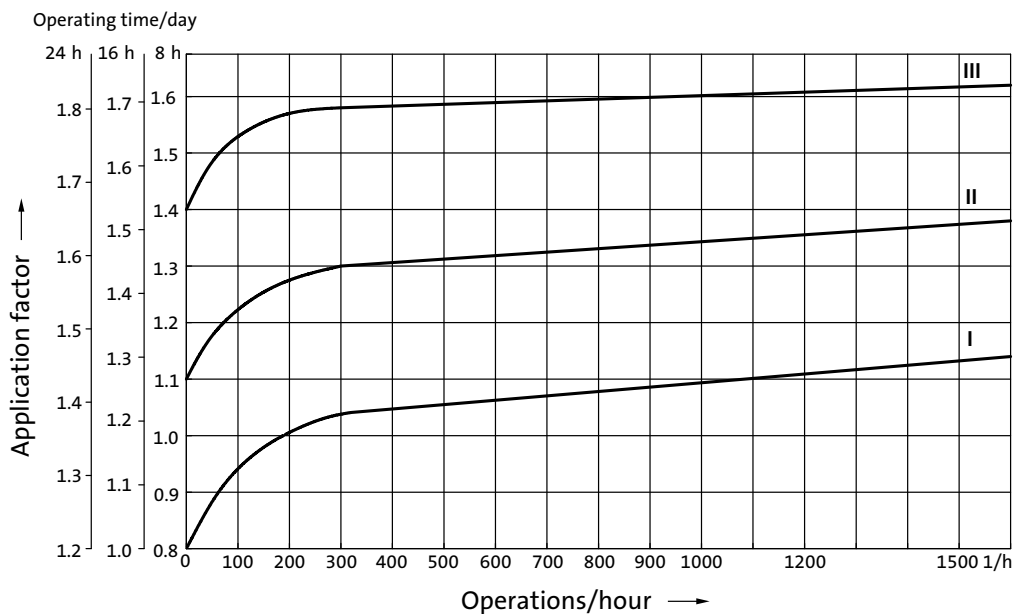
Calculate the duty class:

| Duty class | Type of load | Intensity | |
|------------|--|---------------------|--|
| I | Smooth operation, minor or negligible shocks | $F_I \leq 1.25$ | F_I (geared motor) = $\frac{J_{ext} + J_{mot}}{J_{mot}}$ |
| II | Irregular operation, average shocks | $1.25 < F_I \leq 4$ | |
| III | Irregular operation, major shocks and/or alternating loads | $F_I > 4$ | F_I (gearbox) = $\frac{J_{ext} + J_A}{J_A}$ |

Calculate the temporal factors:

- ▶ Operating time/day
- ▶ Switching operations/hour

Use the diagram to determine the application factor k of the machine



Requirement for geared motor: c (selection table) $\geq k$
 Requirement for gearbox: $M_{2 \text{ perm}}$ (selection table) $\geq M_2 \cdot k$



2. Calculate the axial and radial forces applied to the gearbox shaft

Estimate the axial and radial forces applied
Approximate calculation of radial forces:

↓

$$F_r = 2000 \cdot \frac{M_2 \cdot f_z}{d_w [\text{mm}]}$$

| f_z | Transmission element |
|--------------|---|
| 1.12 | Gears |
| 1.25 ... 1.4 | Sprocket |
| 1.5 | Toothed belt pulleys |
| 1.5 ... 2.0 | Narrow V-belt pulleys depending on initial stress |

↓

Requirement:

- ▶ $F_{rperm} \geq F_r$
(F_{rperm} taken from gearbox-specific data)
- ▶ $F_{aperm} \geq F_a$
(F_{aperm} taken from gearbox-specific data)

Power, torque and speed

The power, torque and speed values specified in this catalogue are rounded values and are valid under the following conditions:

- ▶ Operating time/day = 8h (100% ED)
- ▶ Duty class I at 10 switching operations/h
- ▶ Mounting positions and designs in this catalogue
- ▶ Standard lubricant
- ▶ $f_{mains} = 50 \text{ Hz or } 100 \text{ Hz constant}$
- ▶ $T_U = 20 \text{ }^\circ\text{C}$
- ▶ Site altitude $< = 1000 \text{ m}$ above mean sea level

The rated power specified for motors and geared motors applies to operating mode S1 in accordance with VDE 0530 Part 1 / DIN 57530 Part 1.

If your operating conditions differ, the values that can be obtained may deviate from those specified.

If you are operating under extreme conditions, please contact your nearest Lenze representative.

Load capacity c of gearboxes

Parameter for the load capacity of Lenze gearboxes and geared motors.

- ▶ c is the ratio of the permissible rated torque of the gearbox to the rated torque supplied by the drive component (e.g. the built-in Lenze motor).
- ▶ The value of c must always be greater than the value of the application factor k calculated for the application.

Operating factor k (corresponding to DIN 3990)

Takes into account the influence of temporally variable loads which are actually present during the anticipated runtime of gearboxes and geared motors.

k is determined by

- ▶ the type of load
- ▶ the load intensity
- ▶ temporal factors



Motors and geared motors

AC asynchronous motors / geared motors

| | |
|---|-------|
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| | |
|----------------------------|-------|
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| | |
|-----------------------------|-------|
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General data

| | | | |
|-------------------------|--------------------------|---|-----------------|
| Motor type | 13.71□.35.□.2.0 | 13.71□.□□.□.□.□ | 13.75□.□□.□.□.□ |
| Enclosure | IP54 or IP 55 | | |
| Thermal class (VDE530) | F | | |
| Motor protection | - | Thermal contact (normally-closed contact) | |
| Cooling | Naturally ventilated | | Integral fan |
| Temperature range | -20 to +40 °C | | |
| Site altitude | Up to 1000 m a.m.s.l. | | |
| Electrical connection | Terminal box | | |
| Bearing | Deep-groove ball bearing | | |
| Operating mode (VDE530) | S1 | | |

Description

The multi-range windings make three-phase asynchronous motors suitable for operation in a wide range of operating

voltages – 3-phase 220-240/380-415 V. The lower voltage applies to delta connections and the higher to star connections.



Three-phase asynchronous motor type: 13.710 (smooth housing)



Three-phase asynchronous motor type: 13.750 (ribbed housing)

Operation with frequency inverters for AC motors

The sticker in the terminal box indicates the voltage limit values for your motor.

Permissible voltage
 $\hat{u} \leq 0.75 \text{ kV}$
 $dU/dt \leq 5 \text{ kV } \mu\text{s}$

Sticker for product range 13.7□□

Protecting the motor from excessive voltage spikes

- ▶ When operating the motor with a frequency inverter or for mains switching operation, voltage spikes can occur which can damage the motor insulation.
- ▶ To prevent malfunctions, the limit values given in the tables must not be exceeded:

| Operating the motor with | Limit values for voltage spikes | |
|---------------------------------|---------------------------------|---|
| | Max. amplitude \hat{u} (kV) | Max. rate of rise dU/dt (kV / μs) |
| Frequency inverter single-phase | 0.75 | 5 |
| Frequency inverter three-phase | 1.5 | |
| Mains switching operation | 0.75 | |

TIP!

For mains switching operation, the voltage spikes can be limited by the use of a suppressor circuit with RC components or varistors (not part of scope of supply). The suppressor circuit must be of a suitable dimension for the application in question!

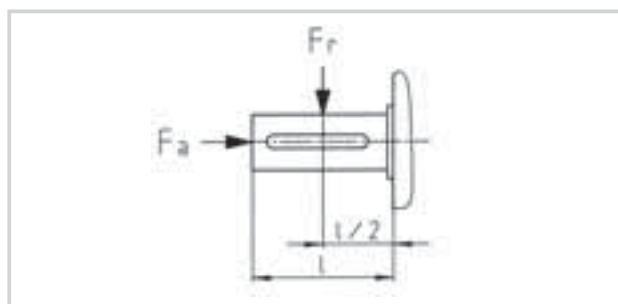


Rated data

| Motor type (smooth housing) | 13.710.35 | 13.710.35 | 13.710.47 | 13.710.47 | 13.710.55 | 13.710.55 |
|--|------------|------------|-------------|-------------|-------------|-------------|
| Rated power (W) | 12 | 25 | 40 | 75 | 60 | 90 |
| Rated torque (Nm) | 0.085 | 0.088 | 0.28 | 0.27 | 0.42 | 0.32 |
| Rated current (A) | 0.18 / 0.1 | 0.35 / 0.2 | 0.38 / 0.22 | 0.40 / 0.23 | 0.37 / 0.21 | 0.44 / 0.25 |
| Rated voltage (V) | 230/400 | 230/400 | 230/400 | 230/400 | 230/400 | 230/400 |
| Rated frequency (Hz) | 50 | 50 | 50 | 50 | 50 | 50 |
| Rated speed (rpm) | 1350 | 2700 | 1350 | 2700 | 1350 | 2700 |
| Power factor | 0.7 | 0.53 | 0.61 | 0.76 | 0.72 | 0.86 |
| Moment of inertia (kgcm ²) | 0.22 | 0.22 | 0.41 | 0.41 | 1.4 | 0.85 |
| Max. radial force (N) F_r | 240 | 190 | 350 | 280 | 340 | 270 |
| Max. axial force (N) F_a | 230 | 170 | 320 | 240 | 320 | 240 |
| M_A/M_N | 2.6 | 2.6 | 2.2 | 2.4 | 1.9 | 2.1 |
| M_K/M_N | 2.0 | 2.0 | 2.5 | 2.0 | 1.8 | 2.1 |

| Motor type (ribbed housing) | 13.750.45 | 13.750.45 | 13.750.55 | 13.750.55 | 13.750.65 | 13.750.65 |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
| Rated power (W) | 30 | 60 | 90 | 150 | 180 | 250 |
| Rated torque (Nm) | 0.21 | 0.21 | 0.64 | 0.53 | 1.27 | 0.86 |
| Rated current (A) | 0.42 / 0.24 | 0.48 / 0.28 | 0.70 / 0.40 | 0.73 / 0.42 | 1.20 / 0.70 | 1.27 / 0.73 |
| Rated voltage (V) | 230/400 | 230/400 | 230/400 | 230/400 | 230/400 | 230/400 |
| Rated frequency (Hz) | 50 | 50 | 50 | 50 | 50 | 50 |
| Rated speed (rpm) | 1350 | 2700 | 1350 | 2700 | 1350 | 2750 |
| Power factor | 0.56 | 0.62 | 0.65 | 0.86 | 0.79 | 0.83 |
| Moment of inertia (kgcm ²) | 0.31 | 0.31 | 1.3 | 0.79 | 2.1 | 1.4 |
| Max. radial force (N) F_r | 240 | 190 | 400 | 320 | 570 | 450 |
| Max. axial force (N) F_a | 120 | 90 | 380 | 280 | 520 | 390 |
| M_A/M_N | 2.8 | 3.3 | 2.1 | 2.3 | 1.7 | 2.7 |
| M_K/M_N | 2.0 | 2.9 | 1.9 | 2.6 | 2.0 | 2.0 |

The motors are dimensioned for a rated frequency of 50 Hz. The rated frequency of 60 Hz is permissible. If the same rated voltage is maintained with 60 Hz operation the utilisation of the motor and thus the motor temperature reduce. If the rated voltage is increased by the factor 1.2 (ratio 60 Hz/50 Hz) in 60 Hz operation, the motor utilisation remains constant and the temperatures are the same as in 50 Hz operation.



| Frequency | Voltage | Power | Speed | Torque | Starting torque |
|-----------|-----------------------|-----------------------|-----------------------|-----------------------|--------------------------------------|
| Hz | U/U _N in % | P/P _N in % | n/n _N in % | M/M _N in % | M _A /M _{AN} in % |
| 50 | 100 | 100 | 100 | 100 | 100 |
| 60 | 100 | 100 | 120 | 83 | 70 |
| 60 | 120 | 120 | 120 | 100 | 100 |



Drive selection

AC asynchronous motors (smooth housing)

Selection table Type 13.710.□□.□.2.□

| Motor type | P _N W rpm | 50 Hz | | Design A-side | Selection (tick as required) |
|-----------------|-------------------------|----------------------|----------------|------------------|---------------------------------|
| | | n ₂ Nm | M ₂ | | |
| 13.710.35.0.2.0 | 12 | 1350 | 0.09 | B14 | |
| 13.710.35.0.2.0 | 25 | 2700 | 0.09 | B14 | |
| 13.710.47.0.2.□ | 40 | 1350 | 0.28 | B14 | |
| 13.710.47.0.2.□ | 75 | 2700 | 0.27 | B14 | |
| 13.710.55.1.2.□ | 60 | 1350 | 0.42 | IEC56 B14 C80 | |
| 13.710.55.1.2.□ | 90 | 2700 | 0.32 | IEC56 B14 C80 | |

Additional order information

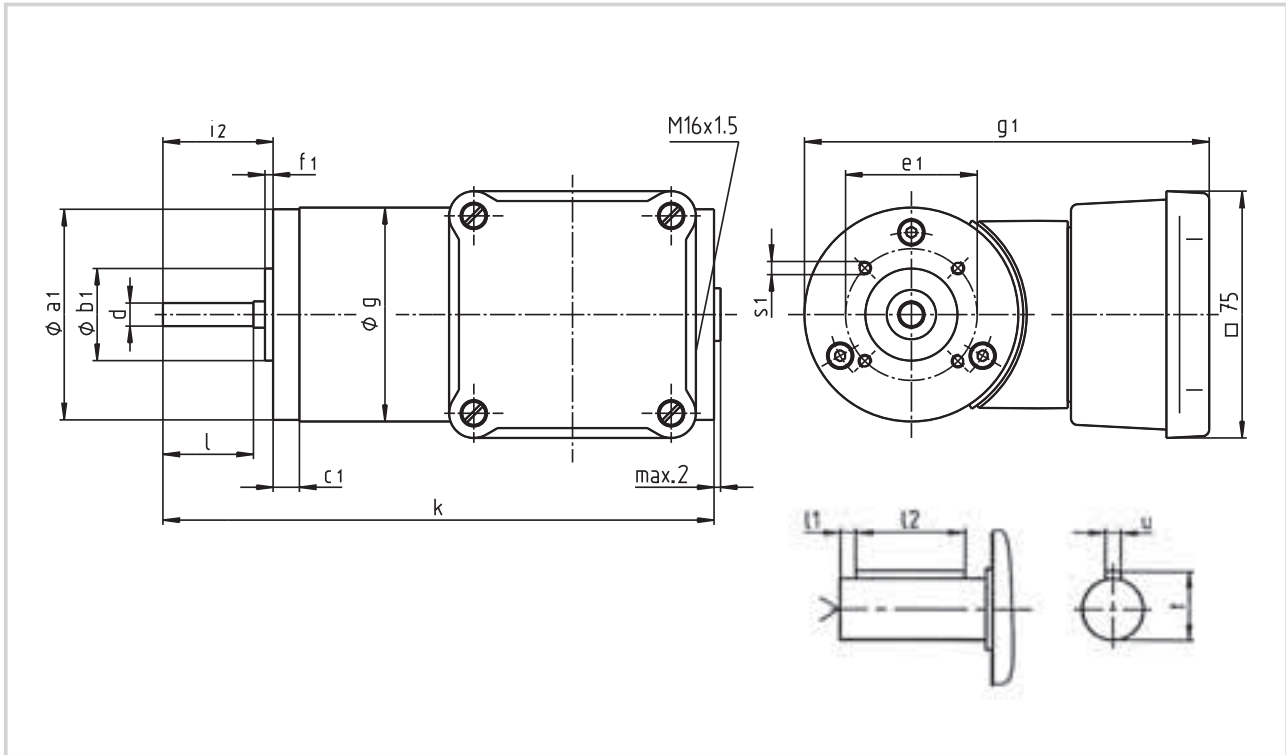
| | | |
|-----------------------------------|---|---|
| B-side design | 0 = no built-on accessories | |
| | 1 = with spring-applied brake | |
| | 7 = for brake attachment | |
| Enclosure | IP54 | |
| | IP55 | |
| Brake supply voltage | 24 V DC with motor frame size 47 and 55 only | |
| | 230 V AC with bridge rectifier with motor frame size 47 and 55 only | |
| Position of electrical connection | | 2 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type 13.710.□□.□.2.□



| Motor type | Frame size | a_1 | b_1 j7 | c_1 | d | e_1 | f_1 | g | g_1 | i_2 | k | l | l_1 | l_2 | s_1 | t | u | Weight approx. kg |
|-----------------|------------|-------|-------------|-------|------|-------|-------|-----|-------|-------|-------|-----|-------|-------|-------|------|-----|-------------------|
| 13.710.35.0.2.0 | | 64 | 28 | 10 | 7 h6 | 40 | 2.5 | 65 | 123 | 33.5 | 167.5 | 31 | - | - | M4 | - | - | 1.8 |
| 13.710.47.0.2.□ | | 74 | 28 | 10 | 8 h6 | 45 | 2.5 | 75 | 133 | 32.5 | 186.5 | 29 | - | - | M4 | - | - | 2.9 |
| 13.710.55.1.2.□ | IEC 56 | 85 | 50 | 14 | 9 k6 | 65 | 2.5 | 85 | 144 | 20 | 183 | 20 | 3 | 14 | M5 | 10.2 | 3 | 3.6 |

Dimensions in mm



Drive selection

AC asynchronous motors (ribbed housing)

Selection table Type 13.750.□□.□.□.□

| Motor type | P _N W rpm | 50 Hz | | Design A-side | Selection (tick as required) |
|-----------------|-------------------------|----------------------|----------------|------------------|---------------------------------|
| | | n ₂ Nm | M ₂ | | |
| 13.750.45.0.3.□ | 30 | 1350 | 0.21 | B3 | |
| 13.750.45.0.2.□ | | | | B14 | |
| 13.750.45.0.3.□ | 60 | 2700 | 0.21 | B3 | |
| 13.750.45.0.2.□ | | | | B14 | |
| 13.750.55.1.3.□ | 90 | 1350 | 0.64 | IEC56 B3 | |
| 13.750.55.1.2.□ | | | | IEC56 B14 C80 | |
| 13.750.55.1.3.□ | 150 | 2700 | 0.53 | IEC56 B3 | |
| 13.750.55.1.2.□ | | | | IEC56 B14 C80 | |
| 13.750.65.1.3.□ | 180 | 1350 | 1.27 | IEC63 B3 | |
| 13.750.65.1.2.□ | | | | IEC63 B14 C90 | |
| 13.750.65.1.3.□ | 250 | 2750 | 0.86 | IEC63 B3 | |
| 13.750.65.1.2.□ | | | | IEC63 B14 C90 | |

Additional order information

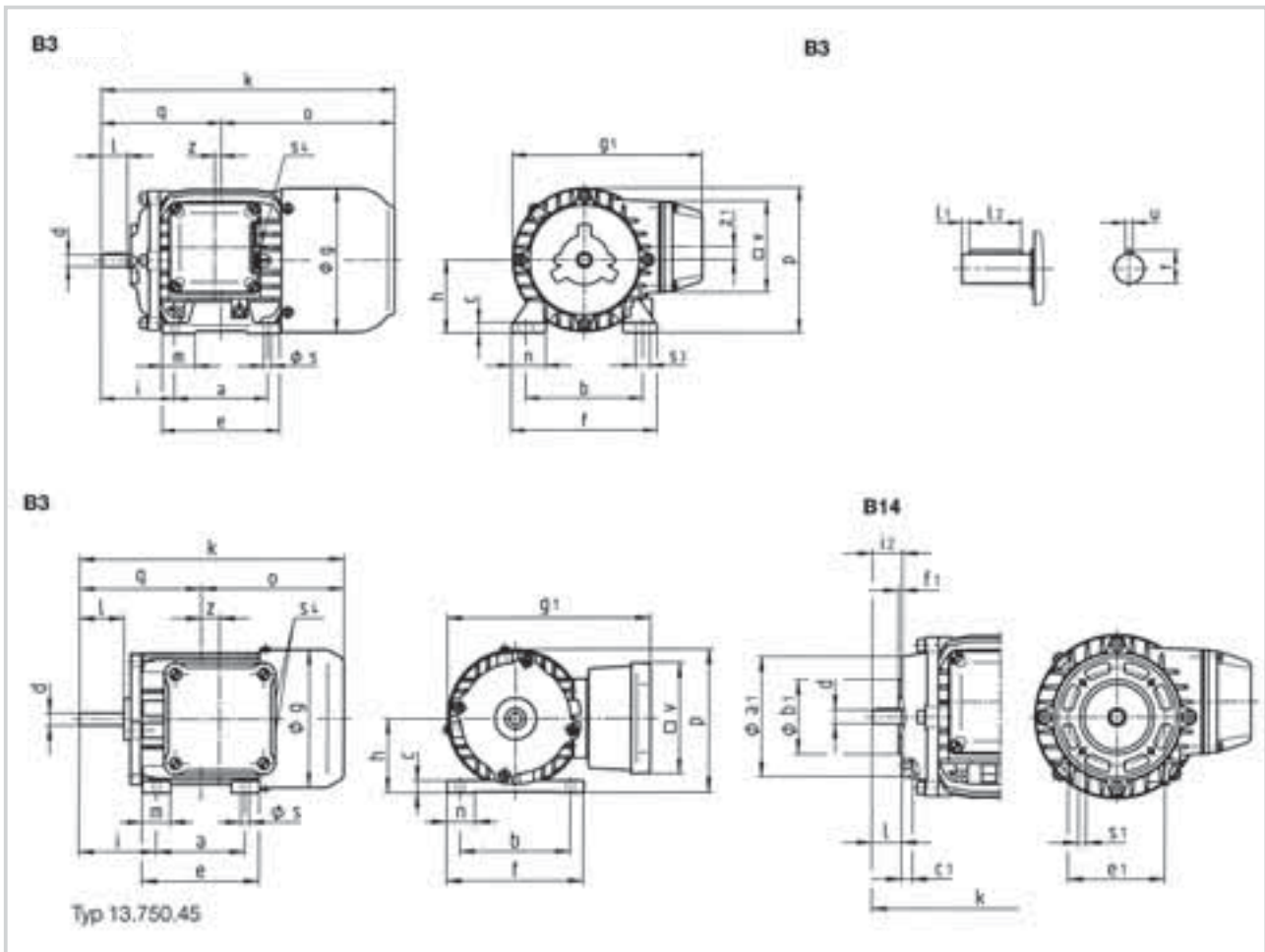
| | | |
|---|--------------------------------|-------|
| B-side design | 0 = no built-on accessories | |
| | 1 = with spring-applied brake | |
| | 7 = for brake attachment | |
| Enclosure | IP54 | |
| | IP55 | |
| Brake supply voltage | 24 V DC | |
| | 230 V AC with bridge rectifier | |
| Position of electrical connection on type B3 | | 2 3 5 |
| Position of electrical connection on type B14 | | 2 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type 13.750.□□.□.□.□



| Motor type | Frame size | a B3 | a ₁ B14 | b B3 | b ₁ B14 j7 | c B3 | c ₁ B14 | d | e B3 | e ₁ B14 | f B3 | f ₁ B14 | g | g ₁ | h B3 | i B3 | i ₂ B14 |
|-------------------|------------|---------|-----------------------|---------|-----------------------------|---------|-----------------------|----------|---------|-----------------------|---------|-----------------------|-------|----------------|---------|---------|-----------------------|
| 13.750.45.0.□.□.□ | — | 60 | 74.5 | 75 | 28 | 8 | 7 | 8 h6 | 79 | 45 | 93 | 4.5 | 93 | 137.5 | 50 | 52 | 32.5 34.5 |
| 13.750.55.1.□.□.□ | IEC 56 | 71 | 80 | 90 | 50 | 8 | 7.5 | 9 k6 | 90 | 65 | 112 | 2.5 | 110.5 | 146 | 56 | 56 | 20 |
| 13.750.65.1.□.□.□ | IEC 63 | 80 | 90 | 100 | 60 | 9.5 | 8 | 11 k6 | 105 | 75 | 125 | 2.5 3 | 123 | 158 | 63 | 63 | 23 |

| Motor type | k | l (*) | l ₁ | l ₂ | m B3 | n B3 | o | p B3 | p ₁ B3 | q | s B3 | s ₁ B14 | s ₃ B3 | s ₄ | t | u | v | z | z ₁ | Weight approx. kg |
|-------------------|-------|----------|----------------|----------------|---------|---------|-------|---------|----------------------|------|---------|-----------------------|----------------------|----------------|------|---|----|------|----------------|----------------------|
| 13.750.45.0.□.□.□ | 178.5 | 30 | | | 19 | 19 | 96.5 | 96.5 | 141 | 82 | 5.5 | M5 | — | M16x1.5 | — | — | 75 | 13.5 | — | 2.3 |
| 13.750.55.1.□.□.□ | 187 | 20 | 2.5 | 15 | 25 | 26 | 95.5 | 111.5 | 146.5 | 91.5 | 6 | M5 | 11 | M16x1.5 | 10.2 | 3 | 70 | 5 | 10 | 3.7 |
| 13.750.65.1.□.□.□ | 215.5 | 23 | 3 | 18 | 27.5 | 30 | 112.5 | 124.5 | 165.5 | 103 | 7 | M5 | 12 | M16x1.5 | 12.5 | 4 | 70 | 8.5 | 16 | 5 |

*) Motors, if non-IEC motors, do not have a shaft collar

Dimensions in mm



Drive selection

AC asynchronous motors (smooth housing)

Selection table Type 13.71□.□□.□.2.□

| Motor type | P _N W | 50 Hz | | Design A-side for gearbox attachment | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|--|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | | |
| 13.710.35.9.2.0 | 12 | 1350 | 0.085 | B14 for SPL42 | |
| 13.710.35.9.2.0 | 25 | 2700 | 0.088 | B14 for SPL42 | |
| 13.711.35.2.2.0 | 12 | 1350 | 0.085 | B14 for SSN25 | |
| 13.711.35.2.2.0 | 25 | 2700 | 0.088 | B14 for SSN25 | |
| 13.711.47.0.2.0 | 40 | 1350 | 0.280 | B14 for SSN25 | |
| 13.711.47.0.2.0 | 75 | 2700 | 0.270 | B14 for SSN25 | |
| 13.711.55.3.2.0 | 60 | 1350 | 0.420 | B14 for SSN31 | |
| 13.711.55.3.2.0 | 90 | 2700 | 0.320 | B14 for SSN31 | |

Additional order information

| | | |
|-----------------------------------|--------------------------------|---|
| B-side design | 0 = no built-on accessories | |
| | 1 = with spring-applied brake | |
| | 7 = for brake attachment | |
| Enclosure | IP54 | |
| | IP55 | |
| Brake supply voltage | 24 V DC | |
| | 230 V AC with bridge rectifier | |
| Position of electrical connection | | 2 |

Dimensional drawing available on request

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Selection table Type 13.751.□□.□.□.□

| Motor type | P _N W | 50 Hz | | Design A-side for gearbox attachment | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|--|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | | |
| 13.751.45.2.5.□ | 30 | 1350 | 0.21 | B3/B14 for SSN25 | |
| 13.751.45.2.2.□ | | | | B14 for SSN25 | |
| 13.751.45.2.5.□ | 60 | 2700 | 0.21 | B3B14 for SSN25 | |
| 13.751.45.2.2.□ | | | | B14 for SSN25 | |
| 13.751.55.3.5.□ | 90 | 1350 | 0.64 | B3/B14 for SSN31 | |
| 13.750.55.1.2.□ | | | | B14 for SSN31 | |
| 13.751.55.3.5.□ | 150 | 2700 | 0.53 | B3/B14 for SSN31 | |
| 13.751.55.3.2.□ | | | | B14 for SSN31 | |
| 13.751.65.5.5.□ | 180 | 1350 | 1.27 | B3/B14 for SSN40 | |
| 13.751.65.5.2.□ | | | | B14 for SSN40 | |
| 13.751.65.5.5.□ | 250 | 2750 | 0.86 | B3/B14 for SSN40 | |
| 13.751.65.5.2.□ | | | | B14 for SSN40 | |

Additional order information

| | | |
|--|--------------------------------|-------|
| B-side design | 0 = no built-on accessories | |
| | 1 = with spring-applied brake | |
| | 7 = for brake attachment | |
| Enclosure | IP54 | |
| | IP55 | |
| Brake supply voltage | 24 V DC | |
| | 230 V AC with bridge rectifier | |
| Position of electrical connection on type B3/B14 | | 2 3 5 |
| Position of electrical connection on type B14 | | 2 |

Dimensional drawing available on request

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Drive selection

AC worm geared motors (smooth housing)

Selection table Type SSN25-1UVCL-035C2□

| Motor type | P _N W | 50 Hz | | | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|-------|----|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| 13.711.35.2.2.0 | 12 | 270 | 0.30 | 20.33 | 5 | |
| | | 169 | 0.50 | 14.51 | 8 | |
| | | 135 | 0.60 | 13.07 | 10 | |
| | | 90 | 0.80 | 9.19 | 15 | |
| | | 68 | 1.00 | 8.11 | 20 | |
| | | 45 | 1.20 | 6.13 | 30 | |
| | | 34 | 1.50 | 4.79 | 40 | |
| | | 27 | 1.50 | 3.92 | 50 | |
| | | 23 | 1.70 | 3.33 | 60 | |
| 13.711.35.2.2.0 | 25 | 540 | 0.40 | 19.64 | 5 | |
| | | 338 | 0.50 | 14.02 | 8 | |
| | | 270 | 0.60 | 12.63 | 10 | |
| | | 180 | 0.80 | 8.88 | 15 | |
| | | 135 | 1.00 | 7.84 | 20 | |
| | | 90 | 1.30 | 5.92 | 30 | |
| | | 68 | 1.50 | 4.62 | 40 | |
| | | 54 | 1.60 | 3.79 | 50 | |
| | | 45 | 1.80 | 3.21 | 60 | |

Additional order information

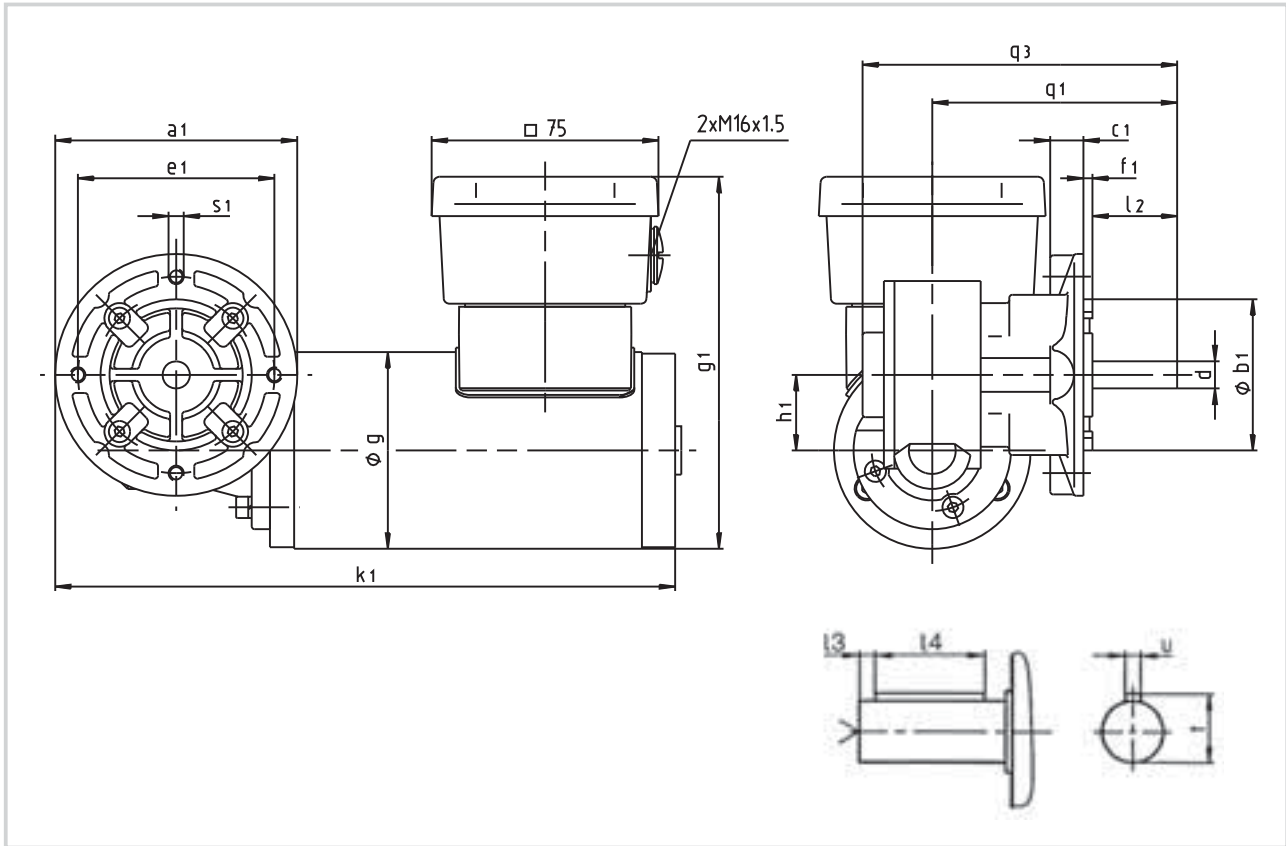
| | | |
|-----------------------------------|------|-------------|
| Enclosure | IP54 | |
| | IP55 | |
| Gearbox type | VCL | |
| Flange/shaft position | | 3 5 |
| Mounting position | | A B C D E F |
| Position of electrical connection | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SSN25-1UVCL-035C2□



| Geared motor | a_1 ϕ | b_1 $j7$ | c_1 | d $h6$ | e_1 | f_1 | g | g_1 | h_1 | k_1 | l_2 | l_3 | l_4 | q_1 | q_3 | s_1 | t | u | Weight approx. kg |
|--------------------|-----------------|---------------|-------|-------------|-------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-----|----------------------|
| SSN25-1UVCL-035C2□ | 80 | 50 | 8 | 9 | 65 | 3 | 65 | 123 | 25 | 205 | 28 | 3 | 20 | 81 | 104 | M5 | 10.2 | 3 | 2.35 |

Dimensions in mm



Drive selection

AC worm geared motors (smooth housing)

Selection table Type SSN25-1UVCL-047C2□

| Motor type | P _N W | 50 Hz | | | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|------|----|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| 13.711.47.2.2.□ | 40 | 270 | 1.10 | 6.17 | 5 | |
| | | 169 | 1.70 | 4.41 | 8 | |
| | | 135 | 2.00 | 3.97 | 10 | |
| | | 90 | 2.70 | 2.79 | 15 | |
| | | 68 | 3.30 | 2.46 | 20 | |
| | | 45 | 4.10 | 1.86 | 30 | |
| | | 34 | 4.90 | 1.45 | 40 | |
| | | 27 | 5.10 | 1.19 | 50 | |
| | | 23 | 5.60 | 1.00 | 60 | |
| 13.711.47.2.2.□ | 75 | 540 | 1.10 | 6.40 | 5 | |
| | | 338 | 1.60 | 4.57 | 8 | |
| | | 270 | 1.90 | 4.12 | 10 | |
| | | 180 | 2.50 | 2.89 | 15 | |
| | | 135 | 3.10 | 2.55 | 20 | |
| | | 90 | 3.80 | 1.93 | 30 | |
| | | 68 | 4.60 | 1.51 | 40 | |
| | | 54 | 4.80 | 1.23 | 50 | |
| | | 45 | 5.30 | 1.05 | 60 | |

Additional order information

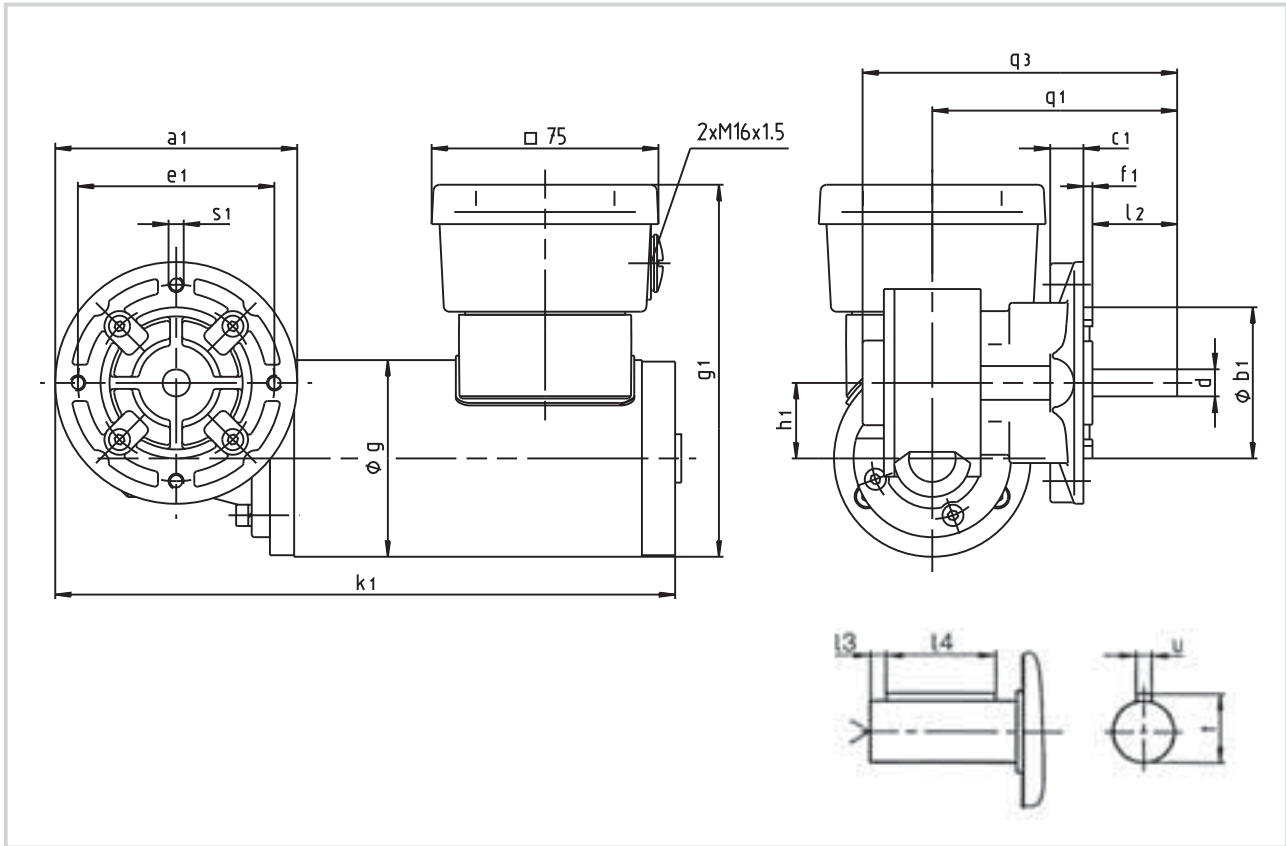
| | | |
|-----------------------------------|--------------------------------|-------------|
| B-side design | 0 = no built-on accessories | |
| | 1 = with spring-applied brake | |
| | 7 = for brake attachment | |
| Brake supply voltage | 24 V DC | |
| | 230 V AC with bridge rectifier | |
| Enclosure | IP54 | |
| | IP55 | |
| Gearbox type | VCL | |
| Flange/shaft position | | 3 5 |
| Mounting position | | A B C D E F |
| Position of electrical connection | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SSN25-1UVCL-047C2□



| Geared motor | a_1 ϕ | b_1 j_7 | c_1 | d h_6 | e_1 | f_1 | g | g_1 | h_1 | k_1 | l_2 | l_3 | l_4 | q_1 | q_3 | s_1 | t | u | Weight approx. kg |
|--------------------|-----------------|----------------|-------|--------------|-------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-----|----------------------|
| SSN25-1UVCL-047C2□ | 80 | 50 | 8 | 9 | 65 | 3 | 75 | 133 | 25 | 225 | 28 | 3 | 20 | 81 | 104 | M5 | 10.2 | 3 | 3.45 |

Dimensions in mm



Drive selection

AC worm geared motors (smooth housing)

Selection table Type SSN31-1U□□□-056C2□

| Motor type | P _N W | 50 Hz | | | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|-------|-----|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| 13.711.55.3.2.□ | 60 | 270 | 1.79 | 7.84 | 5 | |
| | | 192 | 2.44 | 5.74 | 7 | |
| | | 135 | 3.23 | 4.33 | 10 | |
| | | 90 | 4.66 | 3.43 | 15 | |
| | | 68 | 5.80 | 2.59 | 20 | |
| | | 54 | 6.41 | 2.19 | 25 | |
| | | 45 | 7.43 | 2.02 | 30 | |
| | | 35 | 9.10 | 1.76 | 38 | |
| | | 27 | 9.66 | 1.35 | 50 | |
| | | 24 | 12.01 | 1.25 | 55 | |
| | | 18 | 11.00 | 0.97 | 75 | |
| | | 14 | 11.00 | 0.69 | 100 | |
| 13.711.55.3.2.□ | 90 | 540 | 1.36 | 10.29 | 5 | |
| | | 385 | 1.86 | 7.53 | 7 | |
| | | 270 | 2.46 | 5.68 | 10 | |
| | | 180 | 3.55 | 4.50 | 15 | |
| | | 135 | 4.42 | 3.40 | 20 | |
| | | 108 | 4.88 | 2.87 | 25 | |
| | | 90 | 5.66 | 2.65 | 30 | |
| | | 71 | 6.93 | 2.31 | 38 | |
| | | 54 | 7.36 | 1.77 | 50 | |
| | | 49 | 9.15 | 1.64 | 55 | |
| | | 36 | 8.64 | 1.27 | 75 | |
| | | 27 | 11.00 | 0.90 | 100 | |

Additional order information

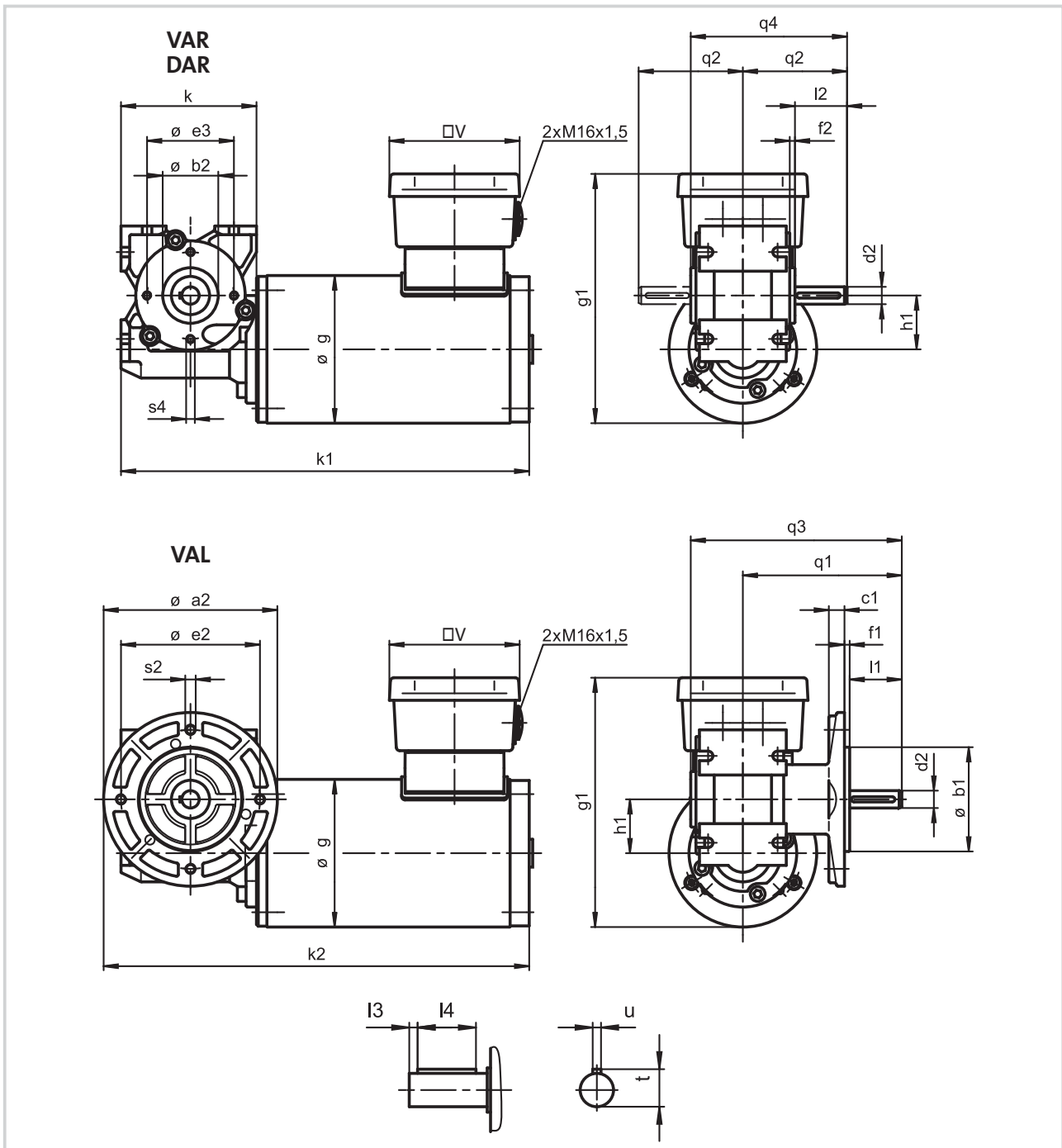
| | | | |
|-----------------------------------|--------------------------------|----------------|---------------|
| B-side motor design | 0 = no built-on accessories | | |
| | 1 = with spring-applied brake | | |
| | 7 = for brake attachment | | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Brake supply voltage | 24 V DC | | |
| | 230 V AC with bridge rectifier | | |
| Gearbox type | VAR | Shaft D10x30mm | |
| | | Shaft D12x40mm | |
| | VAL | Shaft D10x30mm | Flange D100mm |
| | | Shaft D12x40mm | Flange D120mm |
| | DAR | Shaft D10x30mm | |
| Shaft D12x40mm | | | |
| HAR | | | |
| Shaft position on type VAR | | | 3 5 |
| Flange/shaft position on type VAL | | | 3 5 |
| Mounting position | | | A B C D E F |
| Position of electrical connection | | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SSN31-1UVA□-056C2□



| Geared motor | a_2 | b_1 j7 | b_2 h8 | c_1 | d_2 h6 | e_2 | e_3 | f_1 | f_2 | g | g_1 | h_1 | k | k_1 | k_2 |
|--------------------|-------|-------------|-------------|-------|-------------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------|
| SSN31-1UVA□-056C2□ | 100 | 60 | 32 | 9 | 10 | 80 | 50 | 3 | 3 | 85 | 144 | 31 | 78 | 235 | 245 |
| | 120 | 80 | 32 | 9 | 12 | 100 | 50 | 3 | 3 | 85 | 144 | 31 | 78 | 235 | 255 |

| Geared motor | l_1 | l_2 | l_3 | l_4 | q_1 | q_2 | q_3 | q_4 | s_2 | s_4 | t | u | v | Weight approx. kg |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-----|-----|----------------------|
| SSN31-1UVA□-056C2□ | 30 | 30 | 4 | 25 | 91.5 | 60 | 121.5 | 90 | M6 | M5 | 11.2 | 3 | 75 | 4.5 |
| | 40 | 40 | 4 | 28 | 101.5 | 70 | 131.5 | 100 | M6 | M5 | 13.5 | 4 | 75 | 4.6 |

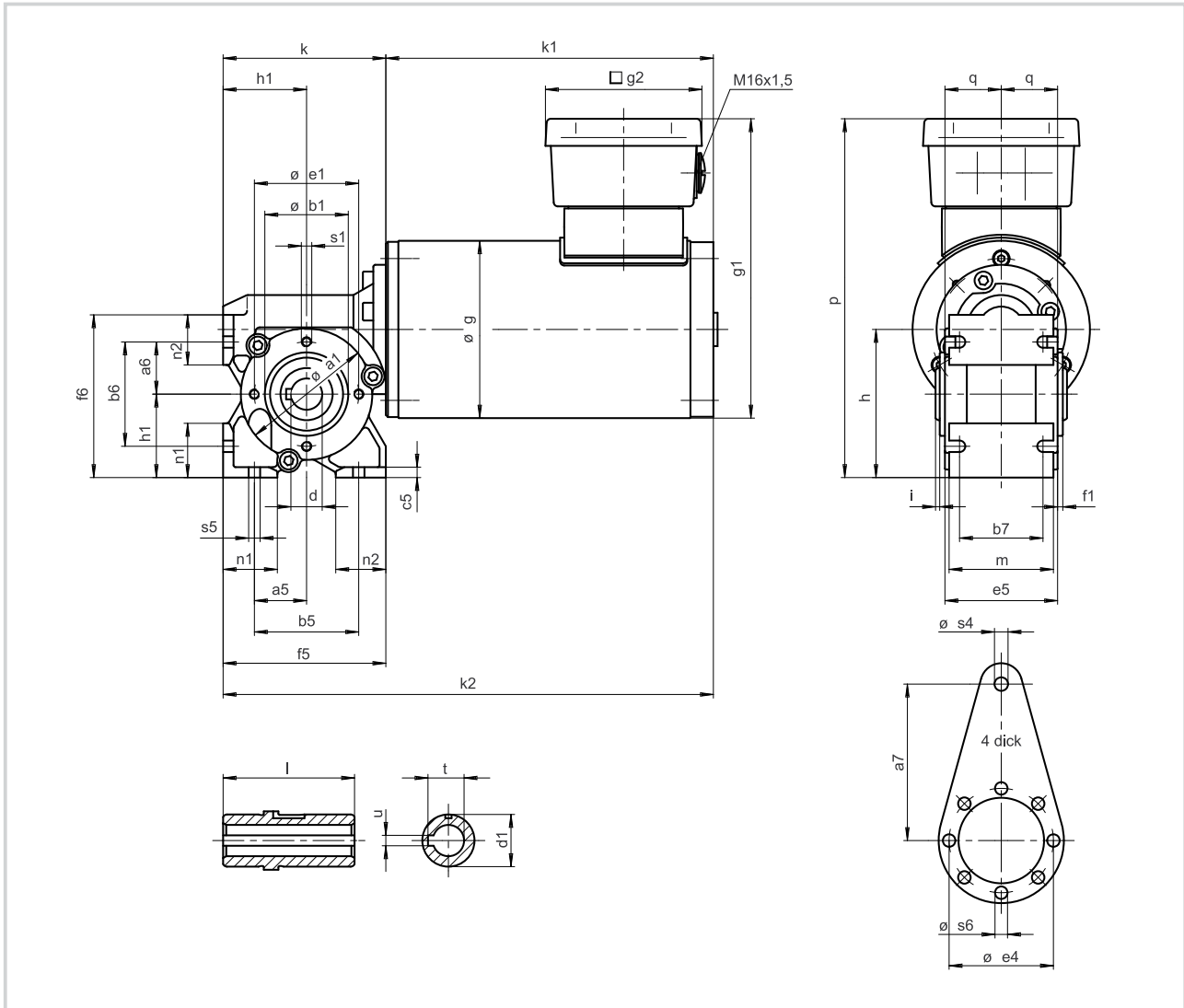
Dimensions in mm



Drive selection

AC worm geared motors (smooth housing)

Dimensions Type SSN31-1UHAR-056C2□



| Geared motor | a_1 | a_5 | a_6 | a_7 | b_1 h_8 | b_5 | b_6 | b_7 | c_5 | d H_7 | d_1 | e_1 | e_4 | e_5 | f_1 | f_5 | f_6 | g | g_1 |
|--------------------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|--------------|-------|-------|-------|-------|-------|-------|-------|-----|-------|
| SSN31-1UHAR-056C2□ | 63 | 25 | 25 | 75 | 40 | 50 | 50 | 40 | 5 | 15 | 25 | 50 | 50 | 54 | 2.5 | 78 | 78 | 85 | 144 |

| Geared motor | g_2 | h | h_1 | i | k | k_1 | k_2 | l | m | n_1 | n_2 | p | q | s_1 | s_4 | s_5 | s_6 | t | u | Weight approx. kg |
|--------------------|-------|-----|-------|-----|-----|-------|-------|-----|-----|-------|-------|-----|-----|-------|-------|-------|-------|------|-----|----------------------|
| SSN31-1UHAR-056C2□ | 75 | 71 | 40 | 2 | 78 | 157 | 235 | 63 | 50 | 26 | 24 | 172 | 27 | M5 | 6.5 | 5.5 | 6 | 17.3 | 5 | 4.5 |

Dimensions in mm





Drive selection

AC planetary geared motors (smooth housing)

Selection table Type SPL42-□UVCR-035C2□

| Motor type | P _N W | 50 Hz | | | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|-------|--------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| 13.710.35.9.2.0 | 12 | 365 | 0.25 | 11.92 | 3.7 | |
| | | 200 | 0.45 | 6.54 | 6.75 | |
| | | 98 | 0.86 | 8.57 | 13.73 | |
| | | 54 | 1.57 | 4.70 | 25.01 | |
| | | 30 | 2.90 | 2.58 | 45.56 | |
| | | 26 | 3.00 | 4.96 | 50.86 | |
| | | 15 | 5.50 | 2.72 | 92.7 | |
| | | 8 | 10.00 | 1.50 | 168.34 | |
| 13.710.35.9.2.0 | 25 | 730 | 0.26 | 11.52 | 3.7 | |
| | | 400 | 0.47 | 6.31 | 6.75 | |
| | | 197 | 0.90 | 8.28 | 13.73 | |
| | | 108 | 1.65 | 4.54 | 25.01 | |
| | | 59 | 3.00 | 2.49 | 45.56 | |
| | | 53 | 3.13 | 4.79 | 50.86 | |
| | | 29 | 5.70 | 2.63 | 92.7 | |
| | | 16 | 10.30 | 1.45 | 168.34 | |

Additional order information

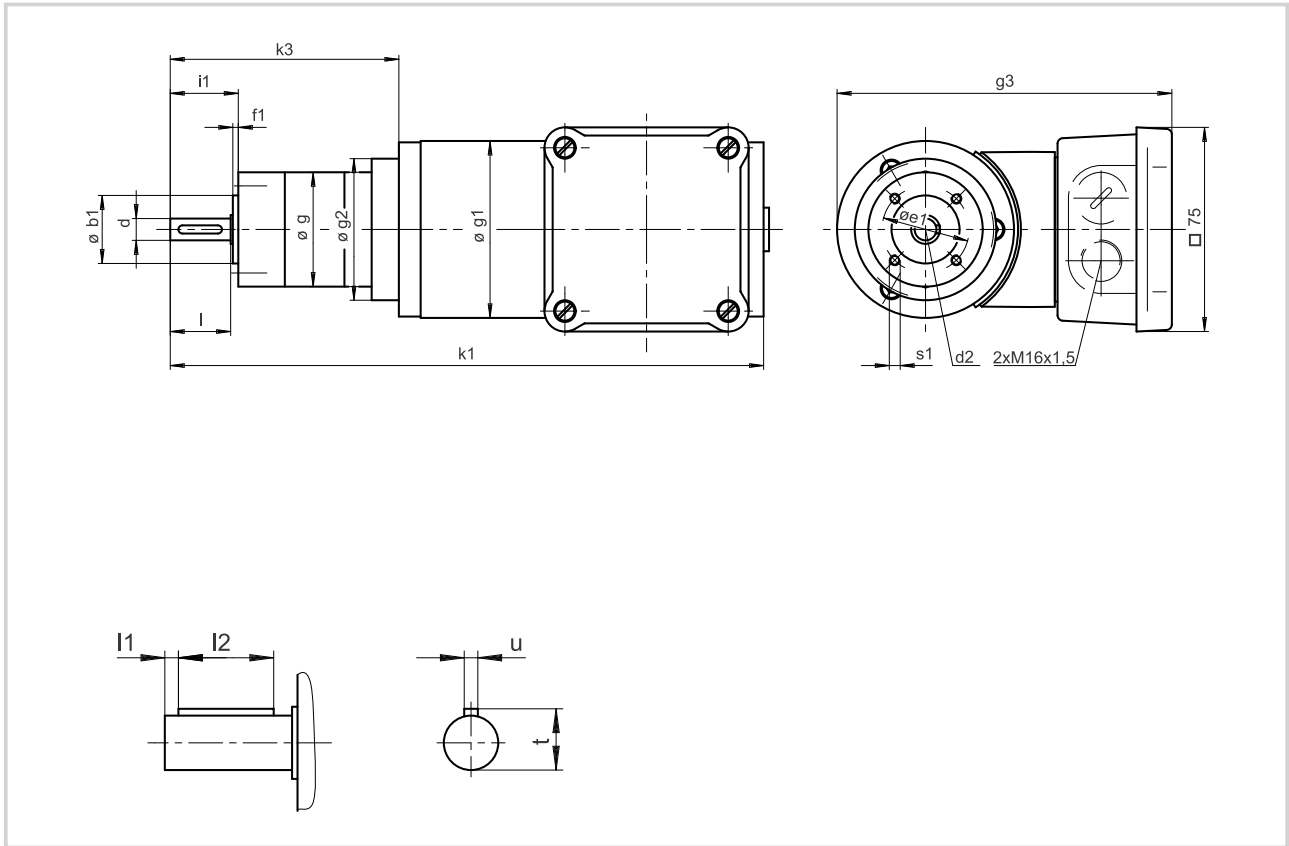
| | | |
|-----------------------------------|------|---|
| Enclosure | IP54 | |
| | IP55 | |
| Position of electrical connection | | 2 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SPL42-□UVCR-035C2□



| Geared motor | Ratio i | b_1 h10 | d g6 | d_2 | e_1 | f_1 | g | g_1 | g_2 | g_3 |
|--------------------|--------------|--------------|-----------|-------|-------|-------|-----|-------|-------|-------|
| SPL42-□UVCR-035C2□ | 3.7 | 25 | 8 | M3 | 32 | 2 | 42 | 65 | 52 | 123 |
| | 14 ... 46 | | | | | | | | | |
| | 51...169 | | | | | | | | | |

| Geared motor | i_1 | k_1 | k_3 | l | l_1 | l_2 | s_1 | t | u | Weight approx. kg |
|--------------------|-------|-------|-------|------|-------|-------|-------|-----|-----|----------------------|
| SPL42-□UVCR-035C2□ | 25 | 218 | 84 | 22.2 | 3 | 16 | M4x10 | 9.2 | 3 | 2.2 |
| | | 231 | 97 | | | | | | | 2.3 |
| | | 244 | 110 | | | | | | | 2.5 |

Dimensions in mm



Drive selection

AC planetary geared motors (smooth housing)

Selection table Type SPL52-□UVCR-056C2□

| Motor type | P _N W | 50 Hz | | | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| 13.710.55.1.2.□ | 60 | 365 | 1.24 | 3.22 | 3.70 | |
| | | 200 | 2.20 | 1.76 | 6.75 | |
| | | 98 | 4.32 | 2.77 | 13.73 | |
| | | 54 | 7.87 | 1.52 | 25.01 | |
| | | 30 | 12.00 | 0.84 | 45.56 | |
| | | 26 | 14.95 | 1.67 | 50.86 | |
| | | 15 | 25.00 | 0.92 | 92.70 | |
| | | 8 | 25.00 | 0.51 | 168.34 | |
| 13.710.55.1.2.□ | 90 | 730 | 0.94 | 4.22 | 3.70 | |
| | | 400 | 1.70 | 2.31 | 6.75 | |
| | | 197 | 3.29 | 3.64 | 13.73 | |
| | | 108 | 6.00 | 2.00 | 25.01 | |
| | | 59 | 10.39 | 1.10 | 45.56 | |
| | | 53 | 11.39 | 2.19 | 50.86 | |
| | | 29 | 20.76 | 1.20 | 92.70 | |
| | | 16 | 25.00 | 0.66 | 168.34 | |

Additional order information

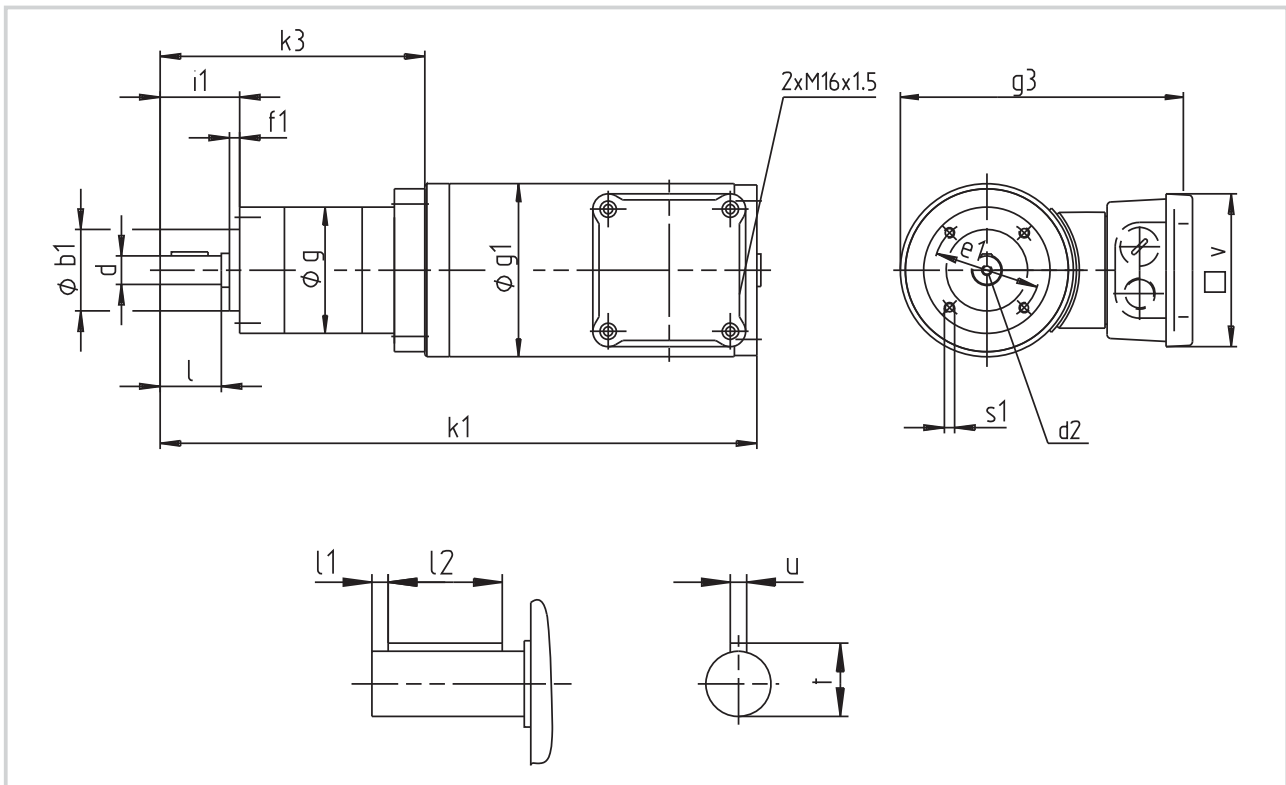
| | | |
|-----------------------------------|--------------------------------|---|
| B-side design | 0 = no built-on accessories | |
| | 1 = with spring-applied brake | |
| | 7 = for brake attachment | |
| Brake supply voltage | 24 V DC | |
| | 230 V AC with bridge rectifier | |
| Enclosure | IP54 | |
| | IP55 | |
| Position of electrical connection | | 2 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SPL52-□UVCR-056C2□



| Geared motor | Ratio i | b_1 | d h7 | d_2 | e_1 | f_1 | g | g_1 | g_3 | i_1 |
|--------------------|--------------|-------|-----------|-------|-------|-------|-----|-------|-------|-------|
| SPL52-□UVCR-056C2□ | 3.7 | 32 | 12 | M4 | 40 | 3 | 52 | 85 | 144 | 25 |
| | 14 ... 46 | h8 | | | | | | | | |
| | 51...169 | | | | | | | | | |

| Geared motor | k_1 | k_3 | l | l_1 | l_2 | s_1 | t | u | v | Weight approx. kg |
|--------------------|-------|-------|------|-------|-------|-------|------|-----|-----|----------------------|
| SPL52-□UVCR-056C2□ | 262 | 99 | 20.8 | 2.5 | 16 | M5x10 | 13.5 | 4 | 75 | 4.6 |
| | 276 | 113 | | | | | | | | 4.8 |
| | 290 | 127 | | | | | | | | 5.0 |

Dimensions in mm



Drive selection

AC planetary geared motors (smooth housing)

Selection table Type SPL62-□UVCR-056C2□

| Motor type | P _N W | 50 Hz | | | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| 13.710.55.1.2.□ | 60 | 365 | 1.24 | 6.44 | 3.70 | |
| | | 200 | 2.20 | 3.53 | 6.75 | |
| | | 98 | 4.32 | 5.78 | 13.73 | |
| | | 54 | 7.87 | 3.17 | 25.01 | |
| | | 30 | 15.35 | 1.74 | 45.56 | |
| | | 26 | 14.95 | 3.34 | 50.89 | |
| | | 20 | 20.92 | 2.39 | 71.16 | |
| | | 14 | 29.25 | 1.71 | 99.50 | |
| | | 11 | 36.44 | 1.37 | 123.97 | |
| 13.710.55.1.2.□ | 90 | 730 | 0.94 | 8.45 | 3.70 | |
| | | 400 | 1.70 | 4.63 | 6.75 | |
| | | 197 | 3.29 | 7.59 | 13.73 | |
| | | 108 | 6.00 | 4.17 | 25.01 | |
| | | 59 | 10.39 | 2.29 | 45.56 | |
| | | 53 | 11.39 | 4.39 | 50.89 | |
| | | 38 | 15.93 | 3.14 | 71.16 | |
| | | 27 | 22.28 | 2.24 | 99.50 | |
| | | 22 | 27.76 | 1.80 | 123.97 | |

Additional order information

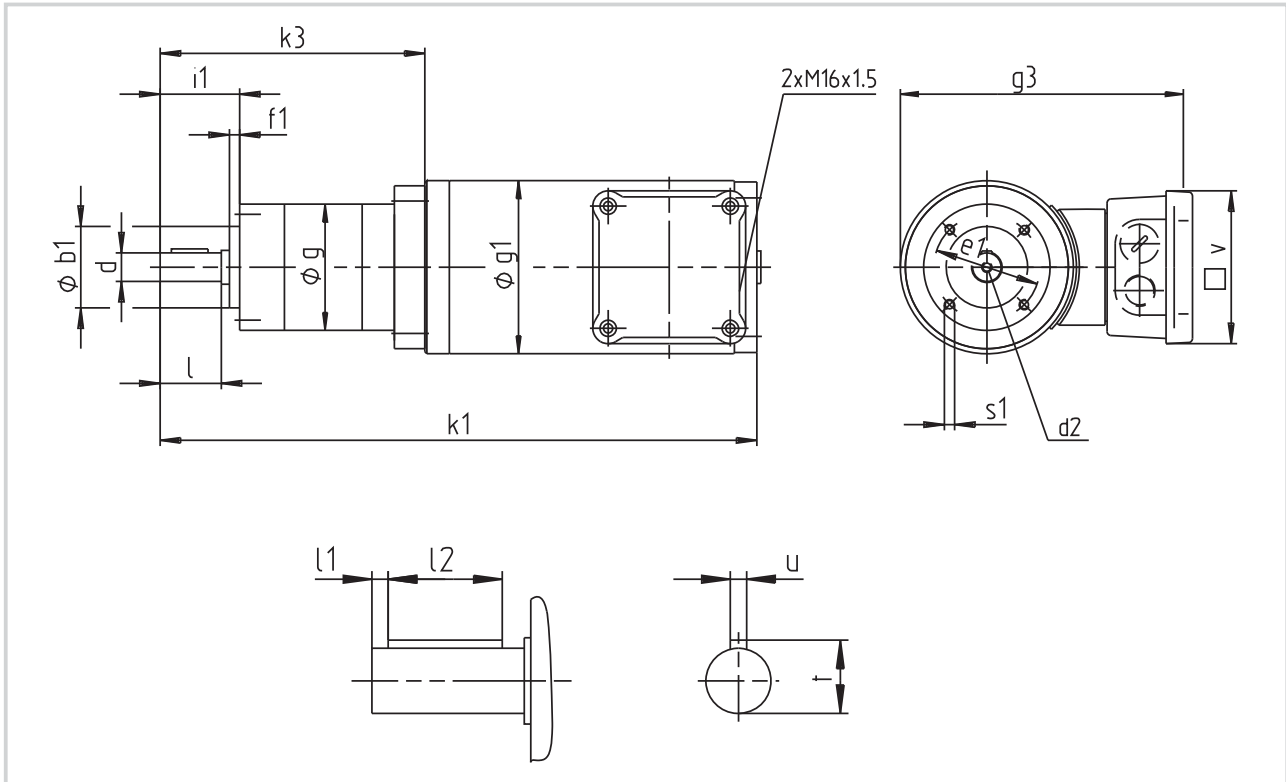
| | | |
|-----------------------------------|--------------------------------|---|
| B-side design | 0 = no built-on accessories | |
| | 1 = with spring-applied brake | |
| | 7 = for brake attachment | |
| Brake supply voltage | 24 V DC | |
| | 230 V AC with bridge rectifier | |
| Enclosure | IP54 | |
| | IP55 | |
| Position of electrical connection | | 2 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SPL62-□UVCR-056C2□



| Geared motor | Ratio i | b_1 | d h7 | d_2 | e_1 | f_1 | g | g_1 | g_3 | i_1 |
|--------------------|--------------|-------|-----------|-------|-------|-------|-----|-------|-------|-------|
| SPL62-□UVCR-056C2□ | 3.7 | 40 | 14 | M5 | 52 | 5 | 62 | 85 | 144 | 39 |
| | 14 ... 46 | j7 | | | | | | | | |
| | 51...169 | | | | | | | | | |

| Geared motor | k_1 | k_3 | l | l_1 | l_2 | s_1 | t | u | v | Weight approx. kg |
|--------------------|-------|-------|-----|-------|-------|-------|-----|-----|-----|----------------------|
| SPL62-□UVCR-056C2□ | 278 | 115 | 30 | 5.5 | 18 | M5x10 | 16 | 5 | 75 | 4.5 |
| | 294 | 131 | | | | | | | | 4.9 |
| | 310 | 147 | | | | | | | | 5.3 |

Dimensions in mm



Drive selection

AC worm geared motors (ribbed housing)

Selection table Type SSN25-1U□□□-045C2□

| Motor type | P _N W | 50 Hz | | | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|------|----|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| 13.751.45.2.□.□ | 30 | 270 | 0.90 | 8.23 | 5 | |
| | | 169 | 1.30 | 5.87 | 8 | |
| | | 135 | 1.50 | 5.29 | 10 | |
| | | 90 | 2.00 | 3.72 | 15 | |
| | | 68 | 2.50 | 3.28 | 20 | |
| | | 45 | 3.10 | 2.48 | 30 | |
| | | 34 | 3.60 | 1.94 | 40 | |
| | | 27 | 3.80 | 1.59 | 50 | |
| | | 23 | 4.20 | 1.35 | 60 | |
| 13.751.45.2.□.□ | 60 | 540 | 0.90 | 8.23 | 5 | |
| | | 388 | 1.30 | 5.87 | 8 | |
| | | 270 | 1.50 | 5.29 | 10 | |
| | | 180 | 2.00 | 3.72 | 15 | |
| | | 135 | 2.50 | 3.28 | 20 | |
| | | 90 | 3.10 | 2.48 | 30 | |
| | | 68 | 3.50 | 1.94 | 40 | |
| | | 54 | 3.80 | 1.54 | 50 | |
| | | 45 | 4.20 | 1.35 | 60 | |

Additional order information

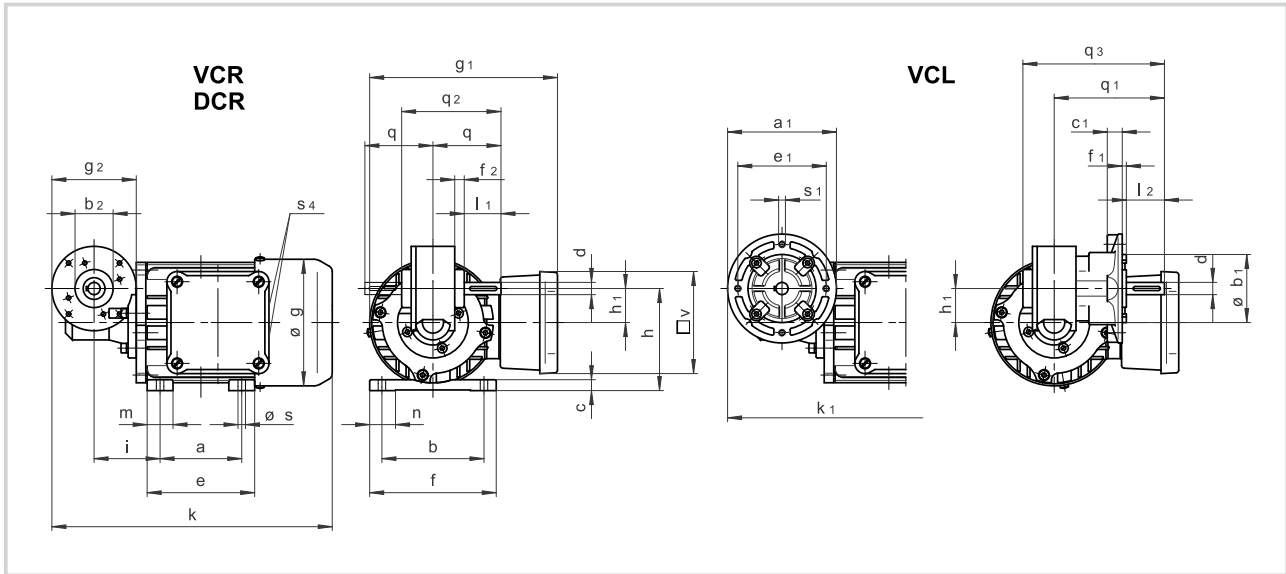
| | | |
|--|--------------------------------|-------------|
| Motor design | 2 = B14 | |
| | 5 = B3/B14 | |
| B-side design | 0 = no built-on accessories | |
| | 1 = with spring-applied brake | |
| | 7 = for brake attachment | |
| Brake supply voltage | 24 V DC | |
| | 230 V AC with bridge rectifier | |
| Enclosure | IP54 | |
| | IP55 | |
| Gearbox type | VCR | |
| | DCR | |
| | VCL | |
| | | |
| Shaft position on type VCR | | 3 5 |
| Flange/shaft position on type VCL | | 3 5 |
| Mounting position | | A B C D E F |
| Position of electrical connection on motor type B3/B14 | | 2 3 5 |
| Position of electrical connection on motor type B14 | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SSN25-1UV□-045C2□



| Geared motor | a B3 | a ₁ B14 Ø | b B3 | b ₁ B14 j7 | b ₂ B3 h11 | c B3 | c ₁ B14 | d h6 | e B3 | e ₁ B14 | f B3 | f ₁ B14 | f ₂ B3 | g | g ₁ | g ₂ B3 Ø | h B3 | h ₁ | i B3 |
|-------------------|---------|----------------------------|---------|-----------------------------|-----------------------------|---------|-----------------------|---------|---------|-----------------------|---------|-----------------------|----------------------|----|----------------|---------------------------|---------|----------------|---------|
| SSN25-1UV□-045C2□ | 60 | 80 | 75 | 50 | 28 | 8 | 8 | 9 | 79 | 65 | 93 | 3 | 7 | 93 | 137.5 | 62 | 75 | 25 | 48.5 |

| Geared motor | k B3 | k ₁ B14 | l ₁ B3 | l ₂ B14 | l ₃ | l ₄ | m B3 | n B3 | q B3 | q ₁ B14 | q ₂ B3 | q ₃ B14 | s B3 | s ₁ B14 | s ₄ | t | u | v | Weight approx. kg |
|-------------------|---------|-----------------------|----------------------|-----------------------|----------------|----------------|---------|---------|---------|-----------------------|----------------------|-----------------------|---------|-----------------------|----------------|------|---|----|----------------------|
| SSN25-1UV□-045C2□ | 206 | 215 | 27 | 28 | 3 | 20 | 19 | 19 | 50 | 81 | 73 | 104 | 5.5 | M5 | 2xM16x1.5 | 10.2 | 3 | 75 | 2.85 |

Dimensions in mm



Drive selection

AC worm geared motors (ribbed housing)

Selection table Type SSN31-1U□□□-056C2□

| Motor type | P _N W | 50 Hz | | | i | Selection (tick as required) |
|------------------|---------------------|-----------------------|----------------------|------|-----|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| 13.751.55.3.□. □ | 90 | 270 | 2.72 | 5.15 | 5 | |
| | | 192 | 3.72 | 3.77 | 7 | |
| | | 135 | 4.93 | 2.84 | 10 | |
| | | 90 | 7.10 | 2.25 | 15 | |
| | | 68 | 8.83 | 1.70 | 20 | |
| | | 54 | 9.76 | 1.43 | 25 | |
| | | 45 | 11.33 | 1.32 | 30 | |
| | | 35 | 13.86 | 1.15 | 38 | |
| | | 27 | 13.00 | 0.88 | 50 | |
| | | 24 | 15.00 | 0.82 | 55 | |
| | | 18 | 11.00 | 0.64 | 75 | |
| | | 14 | 11.00 | 0.45 | 100 | |
| 13.751.55.3.□. □ | 150 | 540 | 2.25 | 6.22 | 5 | |
| | | 385 | 3.08 | 4.55 | 7 | |
| | | 270 | 4.08 | 3.43 | 10 | |
| | | 180 | 5.88 | 2.72 | 15 | |
| | | 135 | 7.31 | 2.05 | 20 | |
| | | 108 | 8.08 | 1.73 | 25 | |
| | | 90 | 9.38 | 1.60 | 30 | |
| | | 71 | 11.48 | 1.39 | 38 | |
| | | 54 | 12.19 | 1.07 | 50 | |
| | | 49 | 15.00 | 0.99 | 55 | |
| | | 36 | 11.00 | 0.77 | 75 | |
| | | 27 | 11.00 | 0.55 | 100 | |

Additional order information

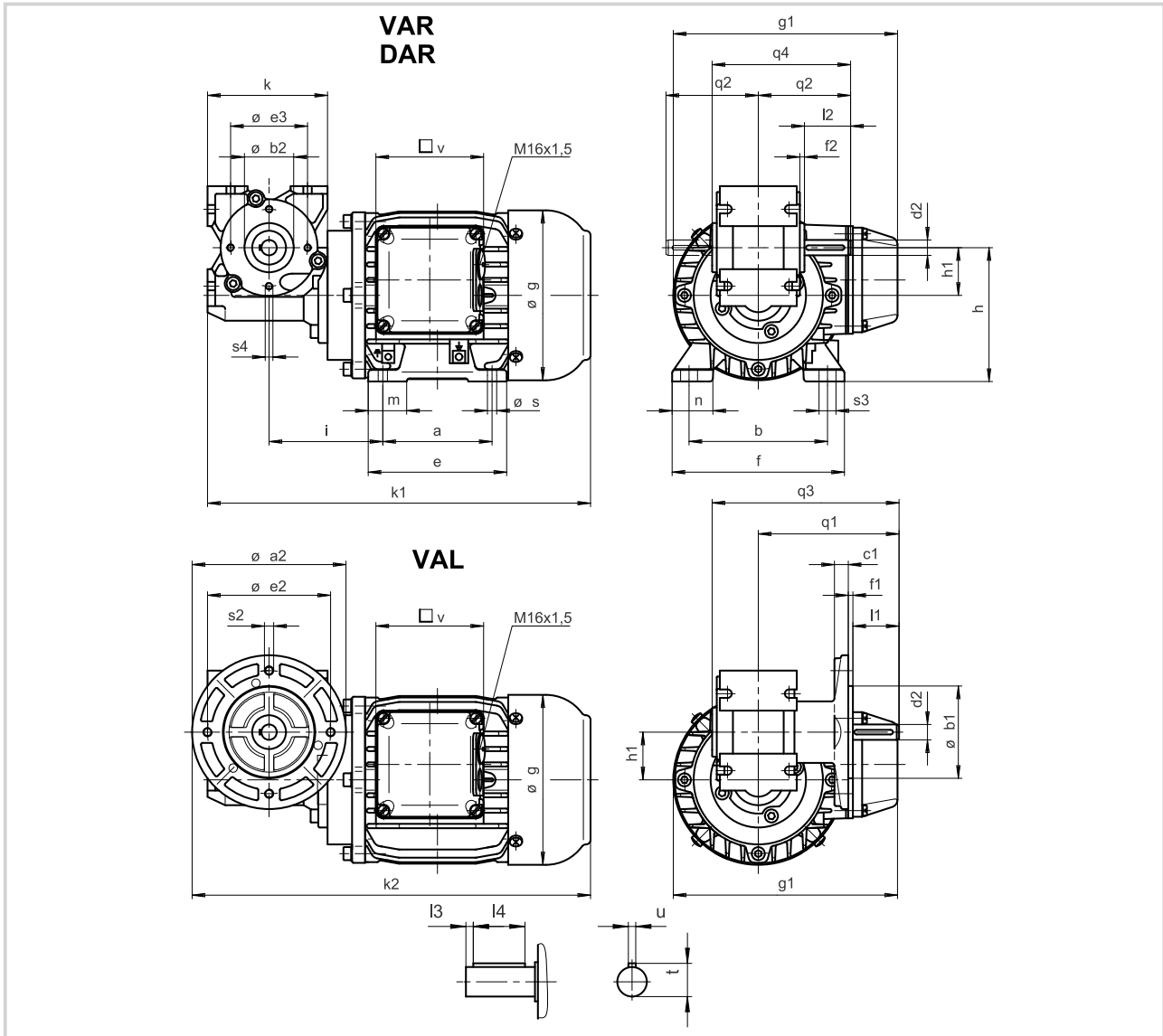
| | | | |
|--|--|----------------------------------|--------------------------------|
| Motor type | 2 = B14 5 = B3/B14 | | |
| B-side design | 0 = no built-on accessories 1 = with spring-applied brake 7 = for brake attachment | | |
| Brake supply voltage | 24 V DC 230 V AC with bridge rectifier | | |
| Enclosure | IP54 IP55 | | |
| Gearbox type | VAR | Shaft D10x30mm Shaft D12x40mm | |
| | VAL | Shaft D10x30mm Shaft D12x40mm | Flange D100mm Flange D120mm |
| | DAR | Shaft D10x30mm Shaft D12x40mm | |
| | HAR | | |
| | Shaft position on type VAR | | 3 5 |
| Flange/shaft position on type VAL | | 3 5 | |
| Mounting position | | A B C D E F | |
| Position of electrical connection on motor type B14 | | 2 3 4 5 | |
| Position of electrical connection on motor type B3/B14 | | 2 3 5 | |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SSN31-1UVA□-056C2□



| Geared motor | a | a ₂ | b | b ₁ j7 | b ₂ h8 | c ₁ | d ₂ h6 | e | e ₂ | e ₃ | f | f ₁ | f ₂ | g | g ₁ | h | h ₁ | i | k |
|--------------------|----|----------------|----|----------------------|----------------------|----------------|----------------------|----|----------------|----------------|-----|----------------|----------------|-----|----------------|----|----------------|----|----|
| SSN31-1UVA□-056C2□ | 71 | 100 | 90 | 60 | 32 | 9 | 10 | 90 | 80 | 50 | 112 | 3 | 3 | 111 | 148 | 87 | 31 | 74 | 78 |
| | 71 | 120 | 90 | 80 | 32 | 9 | 12 | 90 | 100 | 50 | 112 | 3 | 3 | 111 | 148 | 87 | 31 | 74 | 78 |

| Geared motor | k ₁ | k ₂ | l ₁ | l ₂ | l ₃ | l ₄ | m | n | q ₁ | q ₂ | q ₃ | q ₄ | s | s ₂ | s ₃ | s ₄ | t | u | v | Weight approx. kg |
|--------------------|----------------|----------------|----------------|----------------|----------------|----------------|----|----|----------------|----------------|----------------|----------------|---|----------------|----------------|----------------|------|---|----|-------------------|
| SSN31-1UVA□-056C2□ | 246 | 255 | 30 | 30 | 4 | 25 | 25 | 26 | 91.5 | 60 | 121.5 | 90 | 6 | M6 | 11 | M5 | 11.2 | 3 | 70 | 4.5 |
| | 246 | 265 | 40 | 40 | 4 | 28 | 25 | 26 | 101.5 | 70 | 131.5 | 100 | 6 | M6 | 11 | M5 | 13.5 | 4 | 70 | 4.6 |

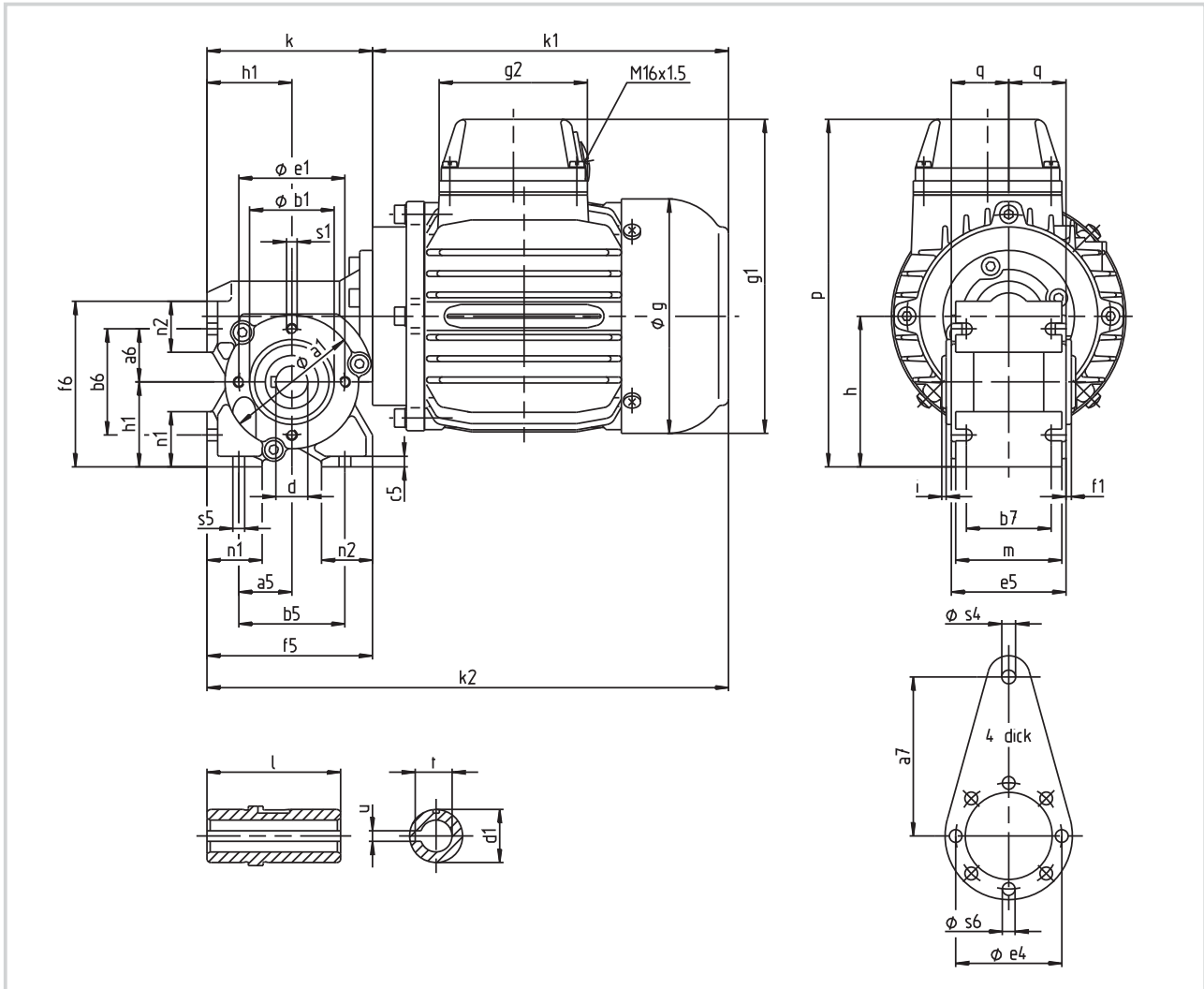
Dimensions in mm



Drive selection

AC worm geared motors (ribbed housing)

Dimensions Type SSN31-1UHAR-056C2□



| Geared motor | a_1 | a_5 | a_6 | a_7 | b_1 h_8 | b_5 | b_6 | b_7 | c_5 | d H_7 | d_1 | e_1 | e_4 | e_5 | f_1 | f_5 | f_6 | g | g_1 |
|--------------------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|--------------|-------|-------|-------|-------|-------|-------|-------|-----|-------|
| SSN31-1UHAR-056C2□ | 63 | 25 | 25 | 75 | 40 | 50 | 50 | 40 | 5 | 15 | 25 | 50 | 50 | 54 | 2.5 | 78 | 78 | 111 | 148 |

| Geared motor | g_2 | h | h_1 | i | k | k_1 | k_2 | l | m | n_1 | n_2 | p | q | s_1 | s_4 | s_5 | s_6 | t | u | Weight approx. kg |
|--------------------|-------|-----|-------|-----|-----|-------|-------|-----|-----|-------|-------|-----|-----|-------|-------|-------|-------|------|-----|----------------------|
| SSN31-1UHAR-056C2□ | 70 | 71 | 40 | 2 | 78 | 167 | 245 | 63 | 50 | 26 | 24 | 164 | 27 | M5 | 6.5 | 5.5 | 6 | 17.3 | 5 | 4.5 |

Dimensions in mm





Drive selection

AC worm geared motors (ribbed housing)

Selection table Type SSN40-1U□□□-063C2□

| Motor type | P _N W | 50 Hz | | | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|------|------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| 13.751.65.5.□.□ | 180 | 200 | 8.00 | 4.86 | 6.75 | |
| | | 135 | 11.40 | 3.40 | 10 | |
| | | 90 | 15.80 | 2.34 | 15 | |
| | | 68 | 20.10 | 1.89 | 20 | |
| | | 54 | 22.70 | 1.43 | 25 | |
| | | 45 | 26.40 | 1.52 | 30 | |
| | | 34 | 31.80 | 1.20 | 40 | |
| | | 27 | 32.00 | 0.93 | 50 | |
| | | 23 | 23.00 | 0.79 | 60 | |
| | | 17 | 24.00 | 0.61 | 80 | |
| 13.751.65.5.□.□ | 250 | 407 | 4.80 | 7.18 | 6.75 | |
| | | 270 | 6.90 | 5.02 | 10 | |
| | | 180 | 9.50 | 3.46 | 15 | |
| | | 135 | 12.20 | 2.78 | 20 | |
| | | 108 | 13.70 | 2.11 | 25 | |
| | | 90 | 15.90 | 2.25 | 30 | |
| | | 68 | 19.20 | 1.76 | 40 | |
| | | 54 | 23.20 | 1.38 | 50 | |
| | | 45 | 19.60 | 1.17 | 60 | |
| | | 34 | 24.00 | 0.89 | 80 | |

Additional order information

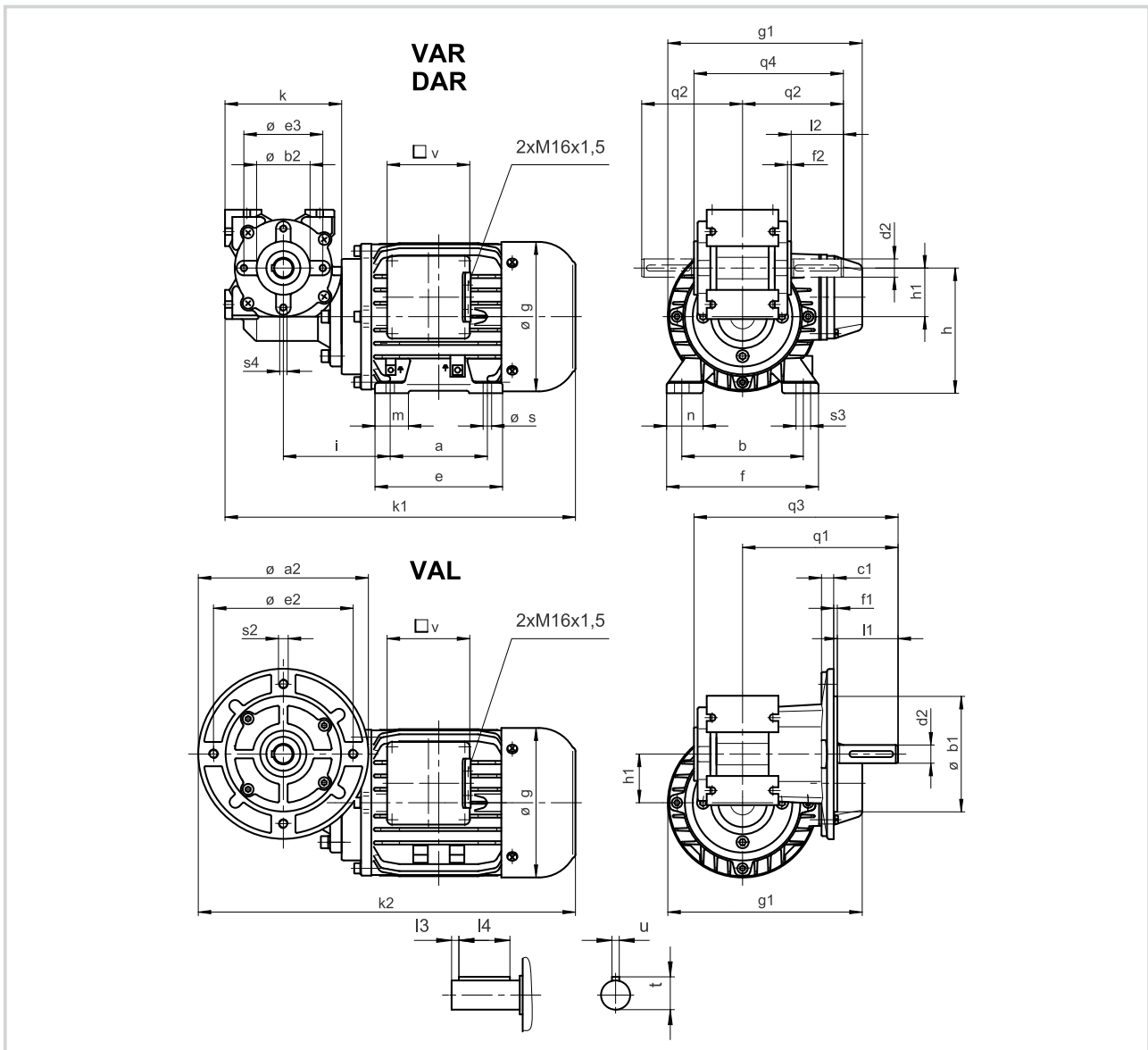
| | | |
|--|--|-------------|
| Motor type | 2 = B14 5 = B3/B14 | |
| B-side design | 0 = no built-on accessories 1 = with spring-applied brake 7 = for brake attachment | |
| Brake supply voltage | 24 V DC 230 V AC with bridge rectifier | |
| Enclosure | IP54 IP55 | |
| Gearbox type | VAR DAR VAL HAR | |
| Shaft position on type VAR | | 3 5 |
| Flange/shaft position on type VAL | | 3 5 |
| Mounting position | | A B C D E F |
| Position of electrical connection on motor type B14 | | 2 3 4 5 |
| Position of electrical connection on motor type B3/B14 | | 2 3 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SSN40-1UVA□-063C2□



| Geared motor | a | a ₂ | b | b ₁ j7 | b ₂ h10 | c ₁ | d ₂ h6 | e | e ₂ | e ₃ | f | f ₁ | f ₂ | g | g ₁ | h | h ₁ | i | k |
|--------------------|----|----------------|-----|----------------------|-----------------------|----------------|----------------------|-----|----------------|----------------|-----|----------------|----------------|-----|----------------|-----|----------------|----|----|
| SSN40-1UVA□-063C2□ | 80 | 140 | 100 | 95 | 44 | 10 | 15 | 105 | 115 | 65 | 125 | 3 | 3 | 123 | 160 | 103 | 40 | 88 | 96 |

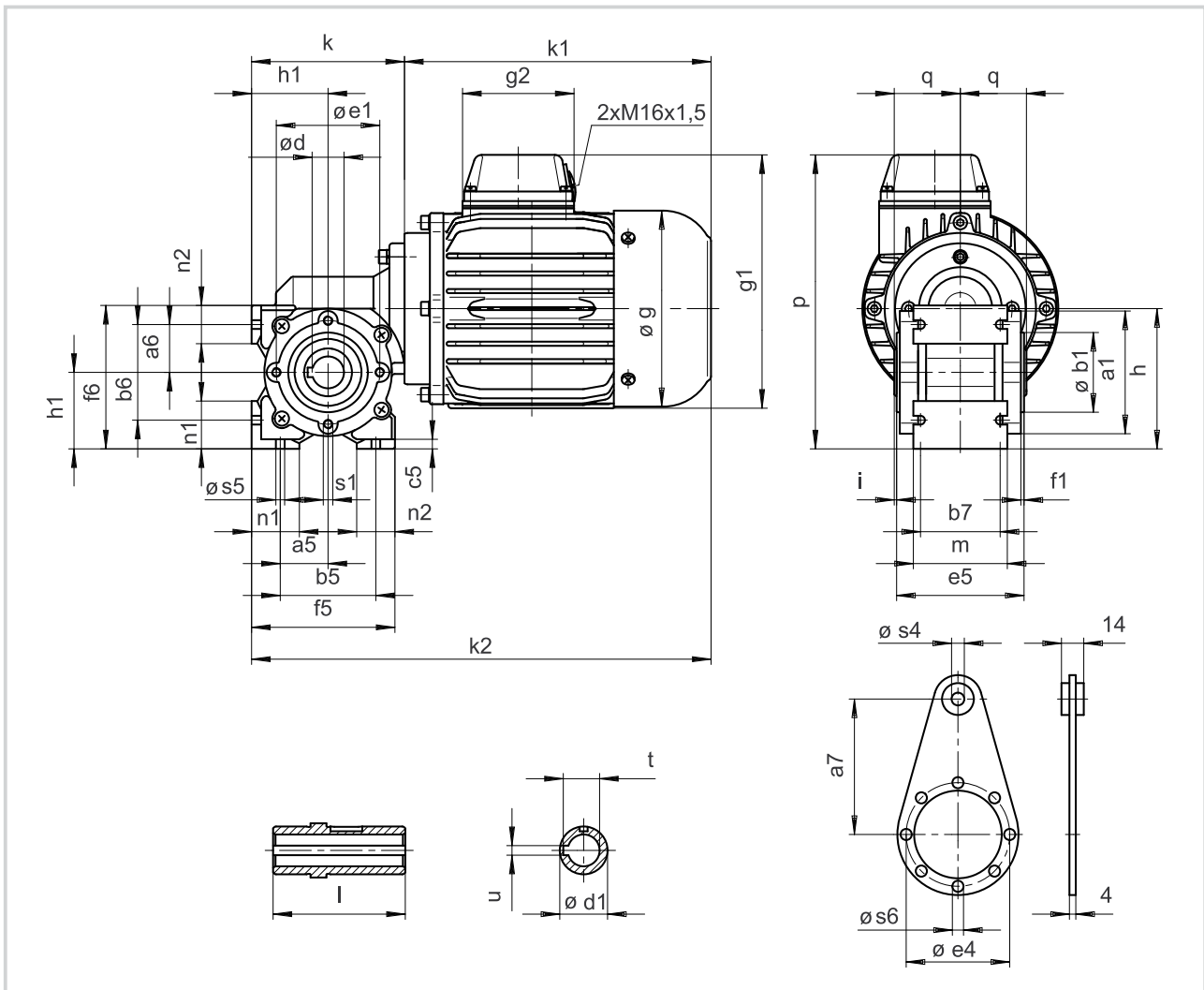
| Geared motor | k ₁ | k ₂ | l ₁ | l ₂ | l ₃ | l ₄ | m | n | q ₁ | q ₂ | q ₃ | q ₄ | s | s ₂ | s ₃ | s ₄ | t | u | v | Weight approx. kg |
|--------------------|----------------|----------------|----------------|----------------|----------------|----------------|------|----|----------------|----------------|----------------|----------------|---|----------------|----------------|----------------|----|---|----|----------------------|
| SSN40-1UVA□-063C2□ | 289 | 311 | 50 | 43 | 4 | 36 | 27.5 | 30 | 128 | 83 | 168 | 123 | 7 | M8 | 12 | M6 | 17 | 5 | 70 | 6.5 |

Dimensions in mm

Drive selection

AC worm geared motors (ribbed housing)

Dimensions Type SSN40-1UHAR-063C2□



| Geared motor | a_1 | a_5 | a_6 | a_7 | b_1 h_8 | b_5 | b_6 | b_7 | c_5 | d H_7 | d_1 | e_1 | e_4 | e_5 | f_1 | f_5 | f_6 | g | g_1 |
|--------------------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|--------------|-------|-------|-------|-------|-------|-------|-------|-----|-------|
| SSN40-1UHAR-063C2□ | 77 | 30 | 30 | 85 | 50 | 60 | 60 | 50 | 6 | 20 | 30 | 65 | 65 | 80 | 2 | 90 | 90 | 123 | 160 |

| Geared motor | g_2 | h | h_1 | i | k | k_1 | k_2 | l | m | n_1 | n_2 | p | q | s_1 | s_4 | s_5 | s_6 | t | u | Weight approx. kg |
|--------------------|-------|-----|-------|-----|-----|-------|-------|-----|-----|-------|-------|-----|------|-------|-------|-------|-------|------|-----|----------------------|
| SSN40-1UHAR-063C2□ | 70 | 88 | 48 | 1.5 | 96 | 193 | 289 | 83 | 59 | 30 | 24 | 185 | 41.5 | M6 | 8 | 5.5 | 7 | 22.8 | 6 | 6.5 |

Dimensions in mm





Drive selection

AC planetary geared motors (ribbed housing)

Selection table Type SPL52-□UVCR-056N2□

| Motor type | P _N W | 50 Hz | | | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| 13.750.55.1.2.□ | 90 | 365 | 1.89 | 4.22 | 3.7 | |
| | | 200 | 3.30 | 2.31 | 6.75 | |
| | | 98 | 6.59 | 3.79 | 13.73 | |
| | | 54 | 12.00 | 2.08 | 25.01 | |
| | | 38 | 16.78 | 1.49 | 34.97 | |
| | | 30 | 21.86 | 1.14 | 45.56 | |
| | | 26 | 22.78 | 2.19 | 50.89 | |
| | | 20 | 31.87 | 1.57 | 71.16 | |
| | | 14 | 44.57 | 1.12 | 99.5 | |
| | | 11 | 50.00 | 0.90 | 123.97 | |
| 13.750.55.1.2.□ | 150 | 730 | 1.56 | 5.10 | 3.7 | |
| | | 400 | 2.80 | 2.80 | 6.75 | |
| | | 197 | 5.45 | 4.58 | 13.73 | |
| | | 108 | 9.94 | 2.51 | 25.01 | |
| | | 77 | 16.78 | 1.80 | 34.97 | |
| | | 59 | 18.11 | 1.38 | 45.56 | |
| | | 53 | 18.86 | 2.65 | 50.89 | |
| | | 38 | 26.40 | 1.89 | 71.16 | |
| | | 27 | 36.91 | 1.35 | 99.5 | |
| | | 22 | 45.99 | 1.09 | 123.97 | |

Additional order information

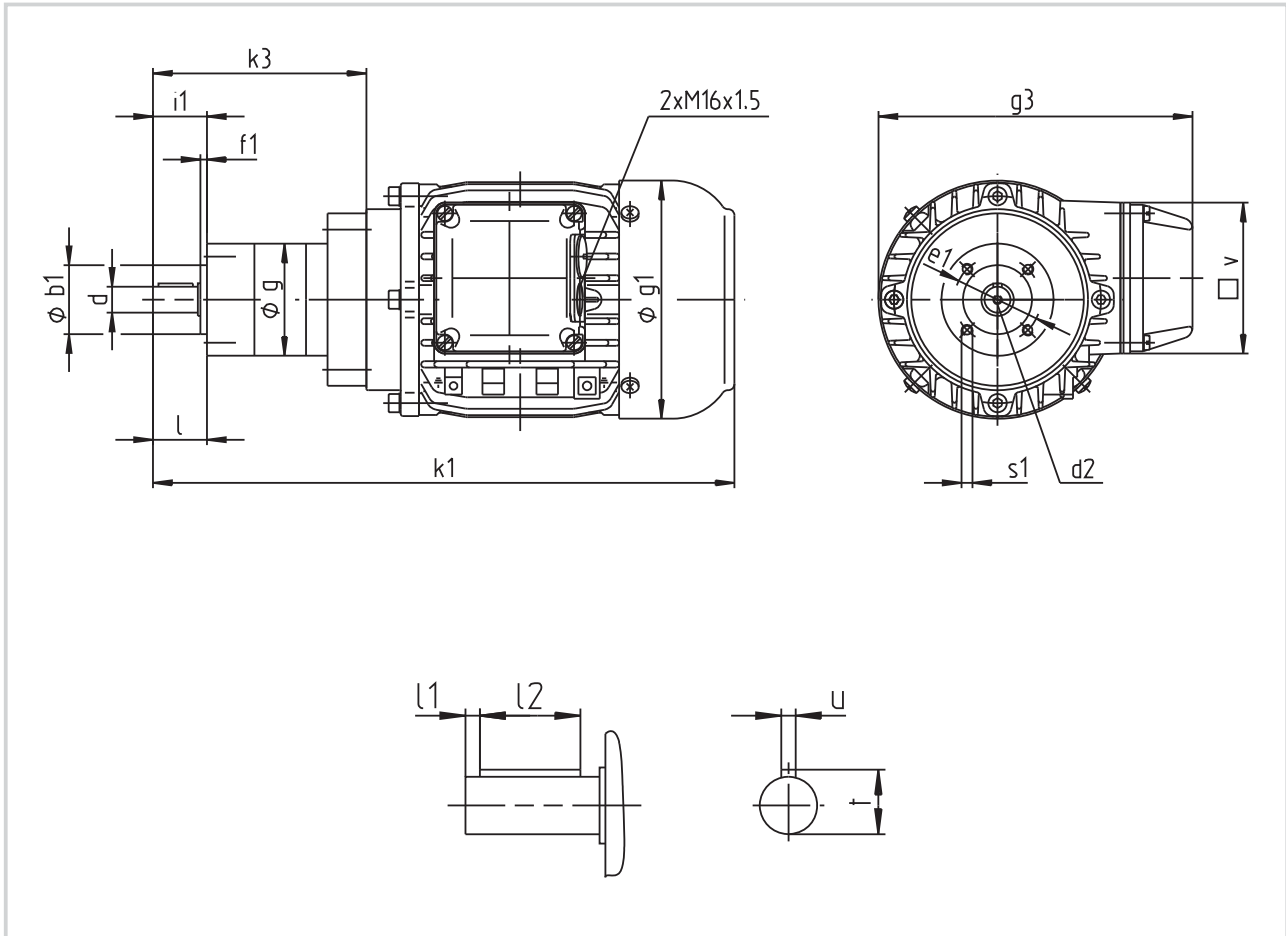
| | | |
|-----------------------------------|--------------------------------|---|
| B-side design | 0 = no built-on accessories | |
| | 1 = with spring-applied brake | |
| | 7 = for brake attachment | |
| Brake supply voltage | 24 V DC | |
| | 230 V AC with bridge rectifier | |
| Enclosure | IP54 | |
| | IP55 | |
| Position of electrical connection | | 2 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SPL52-□UVCR-056N2□



| Geared motor | Ratio i | b_1 | d h7 | d_2 | e_1 | f_1 | g | g_1 | g_3 | i_1 |
|--------------------|--------------|-------|-----------|-------|-------|-------|-----|-------|-------|-------|
| SPL52-□UVCR-056N2□ | 3.7 | 32 | 12 | M4 | 40 | 3 | 52 | 111 | 146 | 25 |
| | 14 ... 46 | | | | | | | | | |
| | 51...169 | | | | | | | | | |

| Geared motor | k_1 | k_3 | l | l_1 | l_2 | s_1 | t | u | v | Weight approx. kg |
|--------------------|-------|-------|------|-------|-------|-------|------|-----|-----|----------------------|
| SPL52-□UVCR-056N2□ | 265 | 99 | 20.8 | 2.5 | 16 | M5x10 | 13.5 | 4 | 70 | 4.7 |
| | 279 | 113 | | | | | | | | 4.9 |
| | 293 | 127 | | | | | | | | 5.1 |

Dimensions in mm



Drive selection

AC planetary geared motors (ribbed housing)

Selection table Type SPL62-□UVCR-056N2□

| Motor type | P _N W | 50 Hz | | | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| 13.750.55.1.2.□ | 90 | 365 | 1.89 | 4.22 | 3.7 | |
| | | 200 | 3.30 | 2.31 | 6.75 | |
| | | 98 | 6.59 | 3.79 | 13.73 | |
| | | 54 | 12.00 | 2.08 | 25.01 | |
| | | 38 | 16.78 | 1.49 | 34.97 | |
| | | 30 | 21.86 | 1.14 | 45.56 | |
| | | 26 | 22.78 | 2.19 | 50.89 | |
| | | 20 | 31.87 | 1.57 | 71.16 | |
| | | 14 | 44.57 | 1.12 | 99.5 | |
| | | 11 | 50.00 | 0.90 | 123.97 | |
| 13.750.55.1.2.□ | 150 | 730 | 1.56 | 5.10 | 3.7 | |
| | | 400 | 2.80 | 2.80 | 6.75 | |
| | | 197 | 5.45 | 4.58 | 13.73 | |
| | | 108 | 9.94 | 2.51 | 25.01 | |
| | | 77 | 16.78 | 1.80 | 34.97 | |
| | | 59 | 18.11 | 1.38 | 45.56 | |
| | | 53 | 18.86 | 2.65 | 50.89 | |
| | | 38 | 26.40 | 1.89 | 71.16 | |
| | | 27 | 36.91 | 1.35 | 99.5 | |
| | | 22 | 45.99 | 1.09 | 123.97 | |

Additional order information

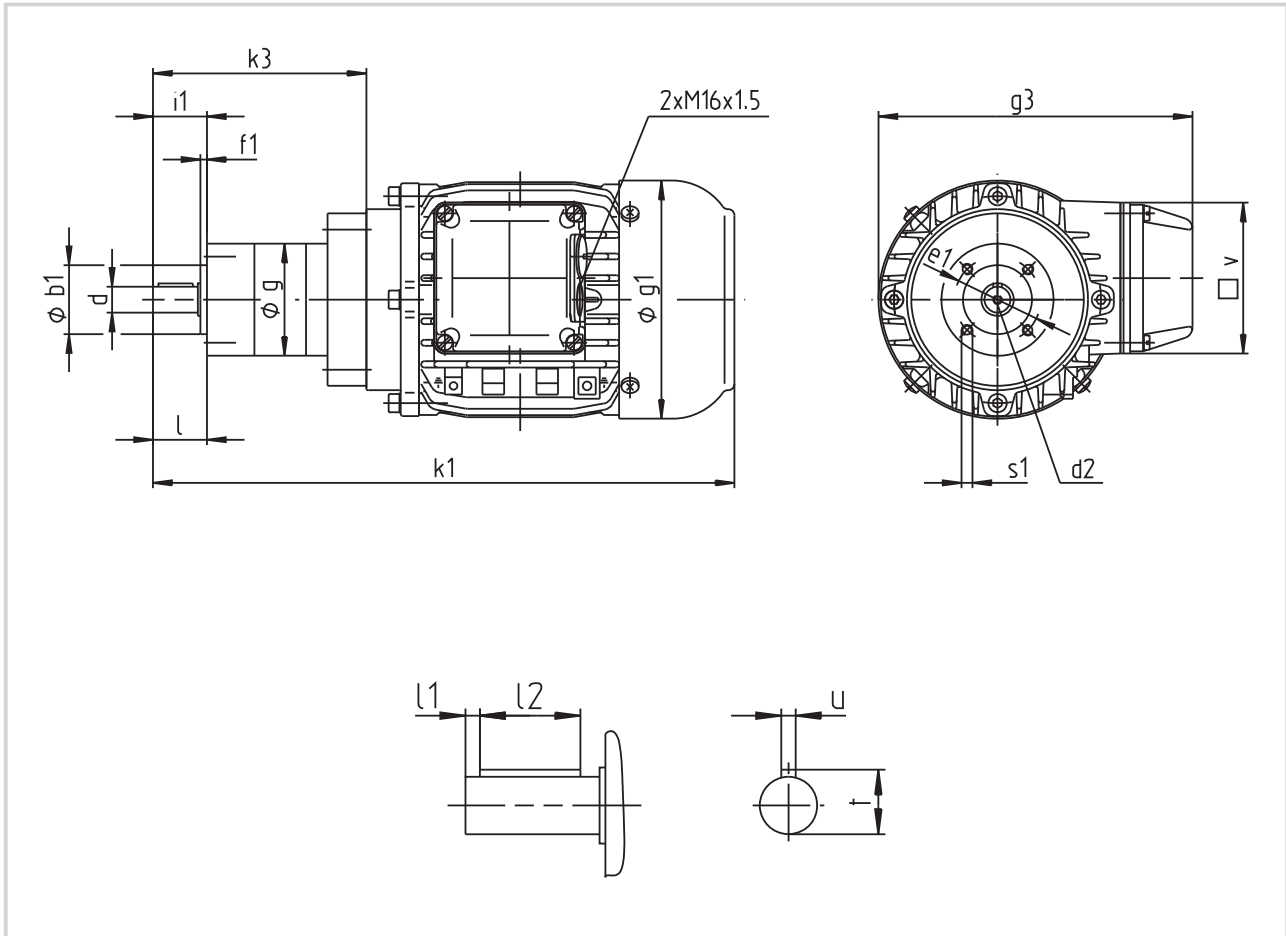
| | | |
|-----------------------------------|--------------------------------|---|
| B-side design | 0 = no built-on accessories | |
| | 1 = with spring-applied brake | |
| | 7 = for brake attachment | |
| Brake supply voltage | 24 V DC | |
| | 230 V AC with bridge rectifier | |
| Enclosure | IP54 | |
| | IP55 | |
| Position of electrical connection | | 2 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SPL62-□UVCR-056N2□



| Gearbox size | Ratio i | b_1 h_8 | d h_7 | d_2 | e_1 | f_1 | g | g_1 | g_3 | i_1 |
|--------------------|--------------|----------------|--------------|-------|-------|-------|-----|-------|-------|-------|
| SPL62-□UVCR-056N2□ | 3.7 | 40 | 14 | M5 | 52 | 5 | 62 | 111 | 146 | 39 |
| | 14 ... 46 | | | | | | | | | |
| | 51...124 | | | | | | | | | |

| Gearbox size | k_1 | k_3 | l | l_1 | l_2 | s_1 | t | u | v | Weight approx. kg |
|--------------------|-------|-------|-----|-------|-------|-------|-----|-----|-----|----------------------|
| SPL62-□UVCR-056N2□ | 281 | 115 | 30 | 5.5 | 18 | M5x10 | 16 | 5 | 70 | 4.6 |
| | 297 | 131 | | | | | | | | 5.0 |
| | 313 | 147 | | | | | | | | 5.4 |

Dimensions in mm



Drive selection

AC planetary geared motors (ribbed housing)

Selection table Type SPL62-UVCR-063N2□

| Motor type | P _N W | 50 Hz | | | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| 13.750.65.1.2.□ | 180 | 365 | 3.75 | 2.13 | 3.7 | |
| | | 200 | 6.80 | 1.17 | 6.75 | |
| | | 98 | 13.07 | 1.91 | 13.73 | |
| | | 54 | 23.92 | 1.05 | 25.01 | |
| | | 38 | 25.00 | 0.75 | 34.97 | |
| | | 30 | 25.00 | 0.58 | 45.56 | |
| | | 26 | 45.21 | 1.10 | 50.89 | |
| | | 20 | 50.00 | 0.79 | 71.16 | |
| | | 14 | 50.00 | 0.57 | 99.5 | |
| | | 11 | 50.00 | 0.45 | 123.97 | |
| 13.750.65.1.2.□ | 250 | 743 | 2.54 | 3.14 | 3.7 | |
| | | 407 | 4.60 | 1.72 | 6.75 | |
| | | 200 | 8.65 | 2.82 | 13.73 | |
| | | 110 | 16.13 | 1.55 | 25.01 | |
| | | 78 | 25.00 | 1.11 | 34.97 | |
| | | 60 | 25.00 | 0.85 | 45.56 | |
| | | 54 | 30.61 | 1.63 | 50.89 | |
| | | 39 | 42.83 | 1.17 | 71.16 | |
| | | 28 | 50.00 | 0.83 | 99.5 | |
| | | 22 | 50.00 | 0.67 | 123.97 | |

Additional order information

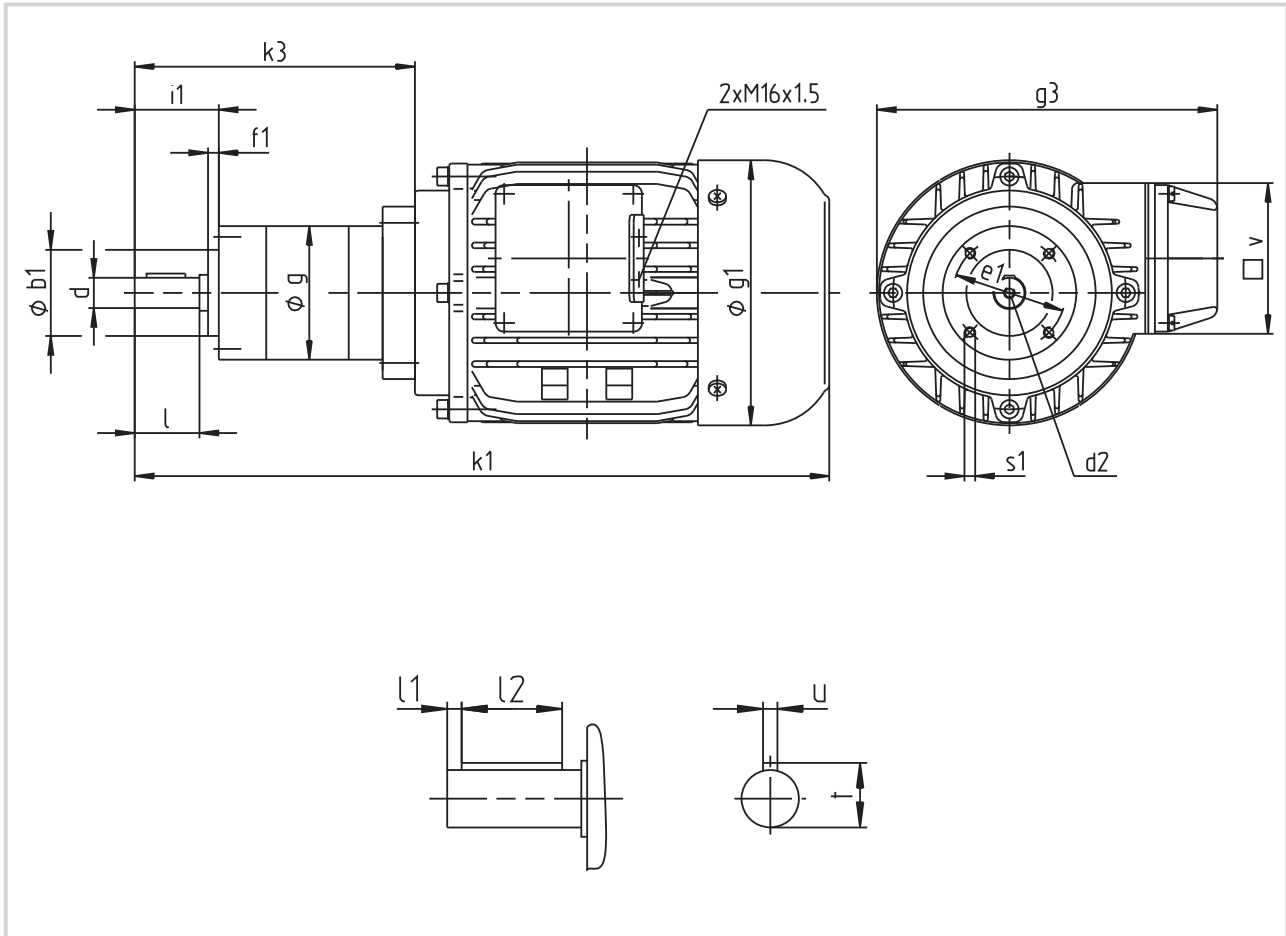
| | | |
|-----------------------------------|--------------------------------|---|
| B-side design | 0 = no built-on accessories | |
| | 1 = with spring-applied brake | |
| | 7 = for brake attachment | |
| Brake supply voltage | 24 V DC | |
| | 230 V AC with bridge rectifier | |
| Enclosure | IP54 | |
| | IP55 | |
| Position of electrical connection | | 2 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SPL62-UVCR-063N2□



| Gearbox size | Ratio i | b_1 j_7 | d h_7 | d_2 | e_1 | f_1 | g | g_1 | g_3 | i_1 |
|-------------------|--------------|----------------|--------------|-------|-------|-------|-----|-------|-------|-------|
| SPL62-UVCR-063N2□ | 3.7 | 40 | 14 | M5 | 52 | 5 | 62 | 111 | 160 | 39 |
| | 14 ... 46 | | | | | | | | | |
| | 51...124 | | | | | | | | | |

| Gearbox size | k_1 | k_3 | l | l_1 | l_2 | s_1 | t | u | v | Weight approx. kg |
|-------------------|-------|-------|-----|-------|-------|-------|-----|-----|-----|----------------------|
| SPL62-UVCR-063N2□ | 308 | 115 | 30 | 5.5 | 18 | M5x10 | 16 | 5 | 70 | 5.9 |
| | 324 | 131 | | | | | | | | 6.3 |
| | 340 | 147 | | | | | | | | 6.7 |

Dimensions in mm



Drive selection

AC planetary geared motors (ribbed housing)

Selection table Type SPL81-□UVCR-063N2□

| Motor type | P _N W | 50 Hz | | | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| 13.750.65.1.2.□ | 180 | 365 | 3.75 | 5.32 | 3.7 | |
| | | 200 | 6.80 | 2.92 | 6.75 | |
| | | 98 | 13.07 | 4.59 | 13.73 | |
| | | 54 | 23.82 | 2.52 | 25.01 | |
| | | 38 | 33.31 | 1.80 | 34.97 | |
| | | 30 | 43.39 | 1.38 | 45.56 | |
| | | 26 | 45.21 | 2.65 | 50.89 | |
| | | 20 | 60.00 | 0.90 | 71.16 | |
| | | 14 | 88.45 | 1.36 | 99.5 | |
| | | 11 | 110.20 | 1.09 | 123.97 | |
| 13.750.65.1.2.□ | 250 | 743 | 2.54 | 7.86 | 3.7 | |
| | | 407 | 4.60 | 4.31 | 6.75 | |
| | | 200 | 8.65 | 6.78 | 13.73 | |
| | | 110 | 16.13 | 3.72 | 25.01 | |
| | | 78 | 22.55 | 2.66 | 34.97 | |
| | | 60 | 29.38 | 2.04 | 45.56 | |
| | | 54 | 30.61 | 3.92 | 50.89 | |
| | | 39 | 42.83 | 2.80 | 71.16 | |
| | | 28 | 59.89 | 2.00 | 99.5 | |
| | | 22 | 74.62 | 1.61 | 123.97 | |

Additional order information

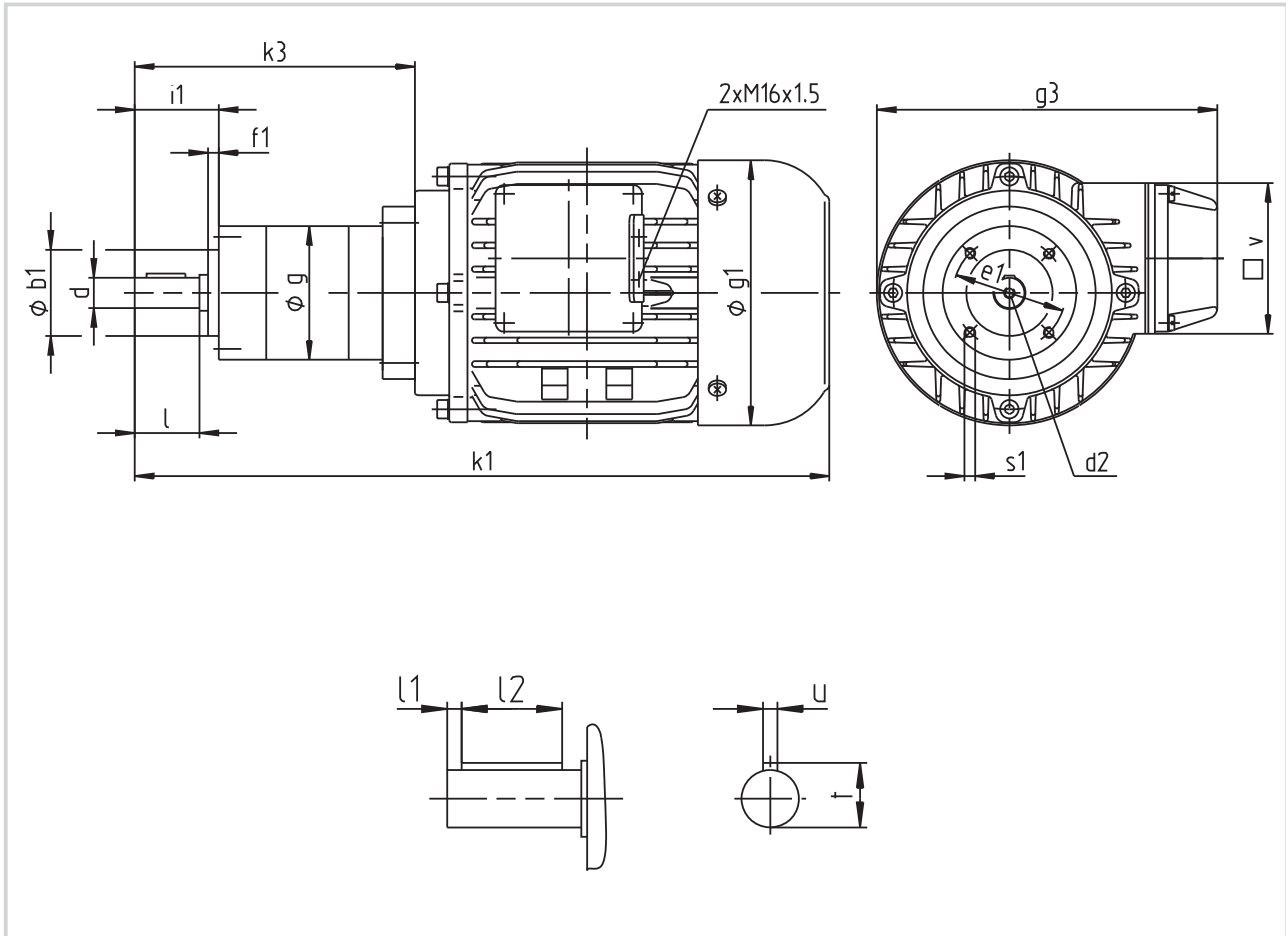
| | | |
|-----------------------------------|--------------------------------|---|
| B-side design | 0 = no built-on accessories | |
| | 1 = with spring-applied brake | |
| | 7 = for brake attachment | |
| Brake supply voltage | 24 V DC | |
| | 230 V AC with bridge rectifier | |
| Enclosure | IP54 | |
| | IP55 | |
| Position of electrical connection | | 2 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SPL81-□UVCR-063N2□



| Gearbox size | Ratio i | b_1 j_7 | d h_7 | d_2 | e_1 | f_1 | g | g_1 | g_3 | i_1 |
|--------------------|--------------|----------------|--------------|-------|-------|-------|-----|-------|-------|-------|
| SPL81-□UVCR-063N2□ | 3.7 | 50 | 19 | M6 | 65 | 5 | 81 | 123 | 160 | 49 |
| | 14 ... 46 | | | | | | | | | |
| | 51...124 | | | | | | | | | |

| Gearbox size | k_1 | k_3 | l | l_1 | l_2 | s_1 | t | u | v | Weight approx. kg |
|--------------------|-------|-------|-----|-------|-------|-------|------|-----|-----|----------------------|
| SPL81-□UVCR-063N2□ | 337 | 144 | 40 | 6 | 28 | M6x12 | 21.5 | 6 | 70 | 7.1 |
| | 358 | 165 | | | | | | | | 7.8 |
| | 380 | 187 | | | | | | | | 8.5 |

Dimensions in mm



Drive selection

Technical data AC asynchronous motors (inverter-optimised)

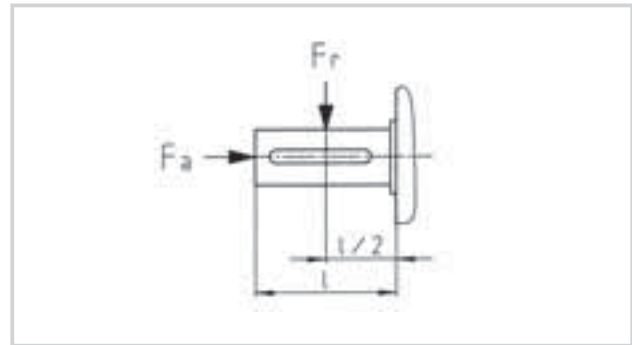
Description

Inverter-optimised motors are characterised by their smooth surface and variable applications. The reinforced insulation system is particularly dimensioned for inverter operation.



General data

| | |
|-------------------------|---|
| Motor type | SDSGA□□□□□□□□ |
| Enclosure | IP54 or IP 55 |
| Thermal class (VDE530) | F |
| Motor protection | Thermal contact or KTY Note options in the tables |
| Cooling | Naturally ventilated |
| Temperature range | -20 to +40 °C |
| Site altitude | Up to 1000 m a.m.s.l. |
| Electrical connection | Connector or terminal box Note options in the tables |
| Bearing | Deep-groove ball bearing |
| Operating mode (VDE530) | S1 |



Rated data

| Motor type | SDSGA□□□047-22 | SDSGA□□□056-22 | SDSGA□□□063-22 | SDSGA□□□063-32 |
|--|----------------|----------------|----------------|----------------|
| Rated power (W) | 75 | 240 | 400 | 600 |
| Rated torque (Nm) | 0.27 | 0.81 | 1.35 | 1.9 |
| Rated current (A) | 0.90/0.52 | 1.49/0.86 | 2.02/1.23 | 3.00/1.74 |
| Rated voltage (V) | 230/400 | 230/400 | 230/400 | 230/400 |
| Rated frequency (Hz) | 100 | 100 | 100 | 100 |
| Rated speed (rpm) | 2700 | 2790 | 2800 | 2825 |
| Max. speed (rpm) | 6000 | 6000 | 6000 | 6000 |
| Power factor | 0.5 | 0.714 | 0.7 | 0.7 |
| Moment of inertia (kgcm ²) | 0.41 | 1.404 | 2.796 | 4.21 |
| Max. radial force (N) F_r | 350 | 560 | 650 | 650 |
| Max. axial force (N) F_a | 750 | 430 | 510 | 510 |



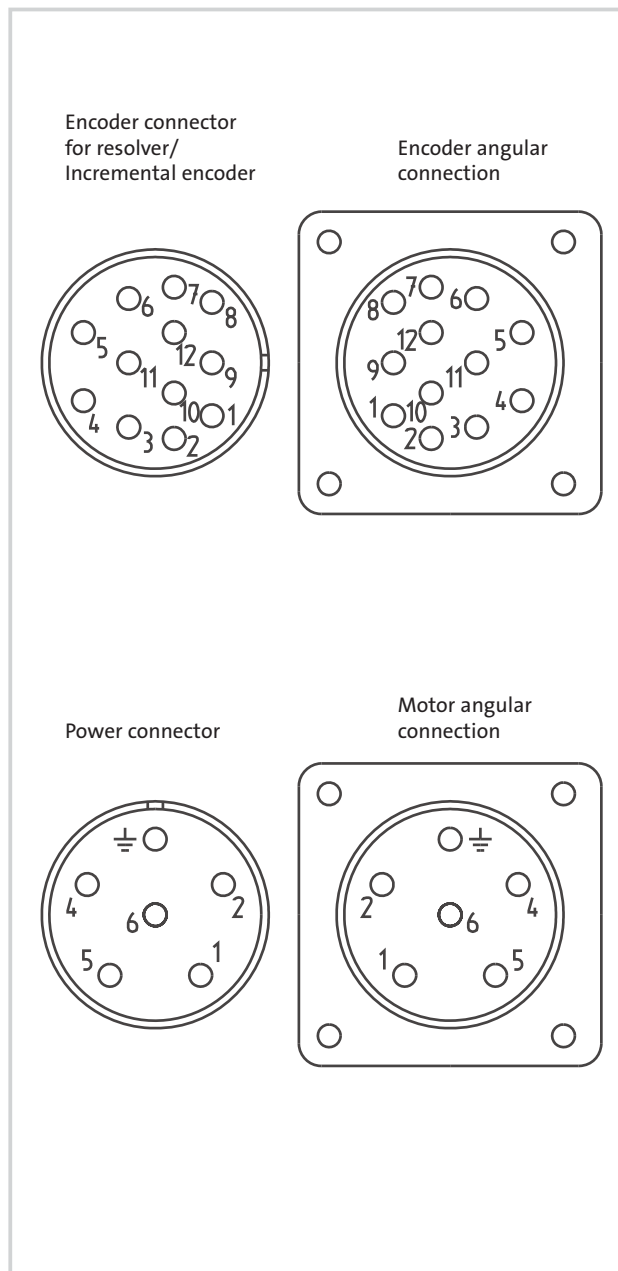
Connection plan for inverter motor SDSGA□□047-22

| Parameter setting for servo inverter 9321 | | | |
|---|---------|------|------------------------|
| Code | Setting | | Meaning |
| | | Y | |
| C0006 | 2 | 22 | Servo asynchronous (Y) |
| C0025 | RsX | | Resolver |
| C0070 | 5 | | |
| C0071 | 150 | | ms |
| C0075 | 0.35 | | |
| C0076 | 1.80 | | ms |
| C0081 | 0.075 | | Pn (kW) |
| C0084 | 72 | | Rphase (ohm) |
| C0085 | 267 | | Xleakage (mH) |
| C0086 | 0 | | COMMON |
| C0087 | 2700 | | nn (rpm) |
| C0088 | 0.52 | 0.90 | In (A) |
| C0089 | 100 | | fn (Hz) |
| C0090 | 390 | 230 | Un (V) |
| C0091 | 0.5 | | cos phi |

| Connector for resolver and thermal contact | | |
|--|-----------------|--------------------|
| Pin no. | Connection name | Connection to: |
| 1 | +Ref | Resolver |
| 2 | -Ref | Resolver |
| 3 | | |
| 4 | +cos | Resolver |
| 5 | -cos | Resolver |
| 6 | +sin | Resolver |
| 7 | -sin | Resolver |
| 8 | | |
| 9 | | |
| 10 | | |
| 11 | + | KTY/thermal switch |
| 12 | - | KTY/thermal switch |

| Connector for motor and brake | | |
|-------------------------------|-----------------|----------------|
| Pin no. | Connection name | Connection to: |
| 1 | Y1 | Brake |
| 2 | Y2 | Brake |
| PE | PE | Conductor |
| 4 | U | Motor phase |
| 5 | V | Motor phase |
| 6 | W | Motor phase |

| Connector for incremental encoder and thermal contact | | |
|---|-----------------|--------------------|
| Pin no. | Connection name | Connection to: |
| 1 | B | Track B |
| 2 | -A | Track A inv. |
| 3 | A | Track A |
| 4 | +UB | +5 V - +24 V |
| 5 | +0V | Grnd |
| 6 | -N | Track 0 inv. |
| 7 | N | Track 0 |
| 8 | | |
| 9 | -B | Track B inv. |
| 10 | | |
| 11 | + | KTY/thermal switch |
| 12 | - | KTY/thermal switch |



Drive selection

Technical data AC asynchronous motors (inverter-optimised)

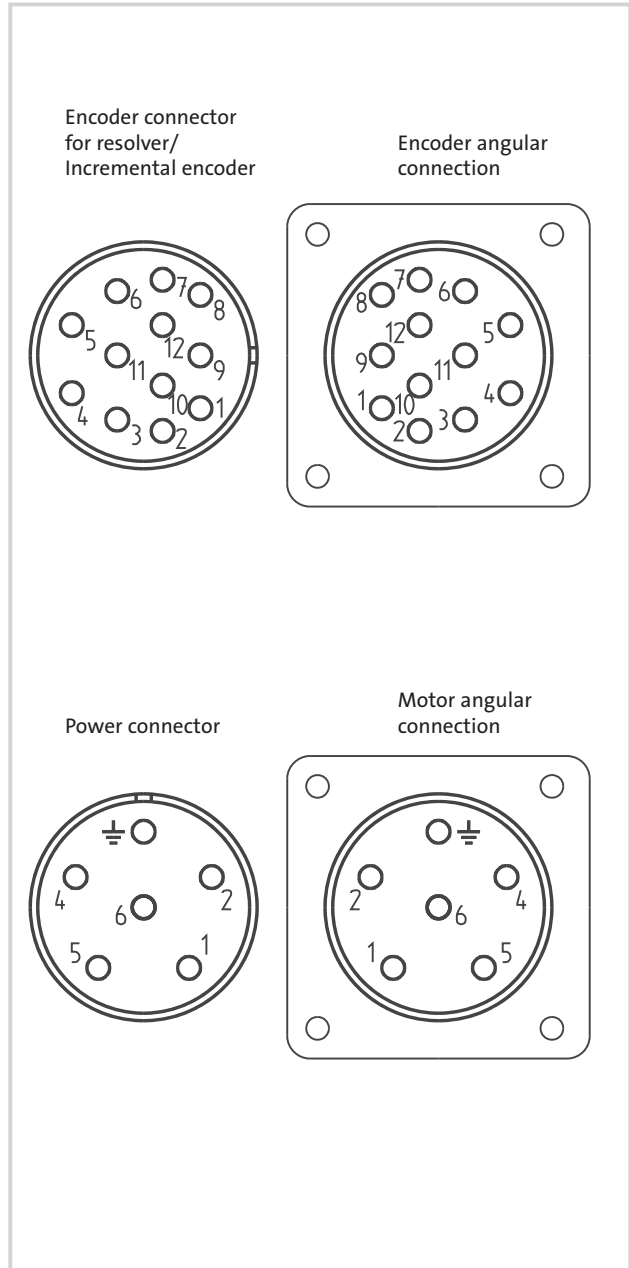
Connection plan for inverter motor SDSGA□□056-22

| Parameter setting for servo inverter 9321 | | | |
|---|---------|------|--------------------|
| Code | Setting | | Meaning |
| | Y | Δ | |
| C0006 | 2 | 22 | Servo asynchronous |
| C0025 | RsX | | Resolver |
| C0070 | 5 | | |
| C0071 | 150 | | ms |
| C0075 | 0.35 | | |
| C0076 | 1.80 | | ms |
| C0081 | 0.24 | | Pn (kW) |
| C0084 | 20.9 | | Rphase (ohm) |
| C0085 | 103 | | Xleakage (mH) |
| C0086 | 0 | | COMMON |
| C0087 | 2790 | | nn (rpm) |
| C0088 | 0.86 | 1.50 | In (A) |
| C0089 | 100 | | fn (Hz) |
| C0090 | 390 | 230 | Un (V) |
| C0091 | 0.70 | | cos phi |

| Connector for resolver and thermal contact | | |
|--|-----------------|--------------------|
| Pin no. | Connection name | Connection to: |
| 1 | +Ref | Resolver |
| 2 | -Ref | Resolver |
| 3 | | |
| 4 | +cos | Resolver |
| 5 | -cos | Resolver |
| 6 | +sin | Resolver |
| 7 | -sin | Resolver |
| 8 | | |
| 9 | | |
| 10 | | |
| 11 | + | KTY/thermal switch |
| 12 | - | KTY/thermal switch |

| Connector for motor and brake | | |
|-------------------------------|-----------------|----------------|
| Pin no. | Connection name | Connection to: |
| 1 | Y1 | Brake |
| 2 | Y2 | Brake |
| PE | PE | Conductor |
| 4 | U | Motor phase |
| 5 | V | Motor phase |
| 6 | W | Motor phase |

| Connector for incremental encoder and thermal contact | | |
|---|-----------------|--------------------|
| Pin no. | Connection name | Connection to: |
| 1 | B | Track B |
| 2 | -A | Track A inv. |
| 3 | A | Track A |
| 4 | +UB | +5 V - +24 V |
| 5 | +0V | Grnd |
| 6 | -N | Track 0 inv. |
| 7 | N | Track 0 |
| 8 | | |
| 9 | -B | Track B inv. |
| 10 | | |
| 11 | + | KTY/thermal switch |
| 12 | - | KTY/thermal switch |





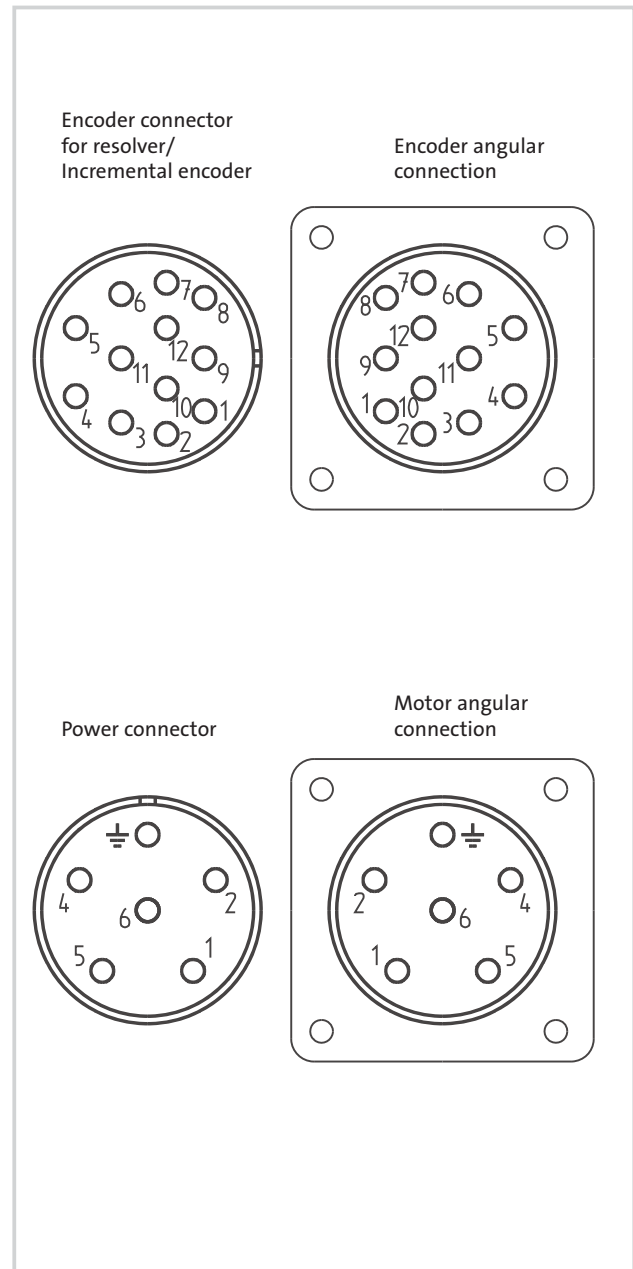
Connection plan for inverter motor SDSGA□□063-22

| Parameter setting for servo inverter 9321 | | | |
|---|---------|------|--------------------|
| Code | Setting | | Meaning |
| | | Y | |
| C0006 | 2 | 22 | Servo asynchronous |
| C0025 | RsX | | Resolver |
| C0070 | 5 | | |
| C0071 | 150 | | ms |
| C0075 | 0.35 | | |
| C0076 | 1.80 | | ms |
| C0081 | 0.40 | | Pn (kW) |
| C0084 | 10 | | Rphase (ohm) |
| C0085 | 50 | | Xleakage (mH) |
| C0086 | 0 | | COMMON |
| C0087 | 2800 | | nn (rpm) |
| C0088 | 1.23 | 2.12 | In (A) |
| C0089 | 100 | | fn (Hz) |
| C0090 | 390 | 230 | Un (V) |
| C0091 | 0.70 | | cos phi |

| Connector for resolver and thermal contact | | |
|--|-----------------|--------------------|
| Pin no. | Connection name | Connection to: |
| 1 | +Ref | Resolver |
| 2 | -Ref | Resolver |
| 3 | | |
| 4 | +cos | Resolver |
| 5 | -cos | Resolver |
| 6 | +sin | Resolver |
| 7 | -sin | Resolver |
| 8 | | |
| 9 | | |
| 10 | | |
| 11 | + | KTY/thermal switch |
| 12 | - | KTY/thermal switch |

| Connector for motor and brake | | |
|-------------------------------|-----------------|----------------|
| Pin no. | Connection name | Connection to: |
| 1 | Y1 | Brake |
| 2 | Y2 | Brake |
| PE | PE | Conductor |
| 4 | U | Motor phase |
| 5 | V | Motor phase |
| 6 | W | Motor phase |

| Connector for incremental encoder and thermal contact | | |
|---|-----------------|--------------------|
| Pin no. | Connection name | Connection to: |
| 1 | B | Track B |
| 2 | -A | Track A inv. |
| 3 | A | Track A |
| 4 | +UB | +5 V - +24 V |
| 5 | +0V | Grnd |
| 6 | -N | Track 0 inv. |
| 7 | N | Track 0 |
| 8 | | |
| 9 | -B | Track B inv. |
| 10 | | |
| 11 | + | KTY/thermal switch |
| 12 | - | KTY/thermal switch |



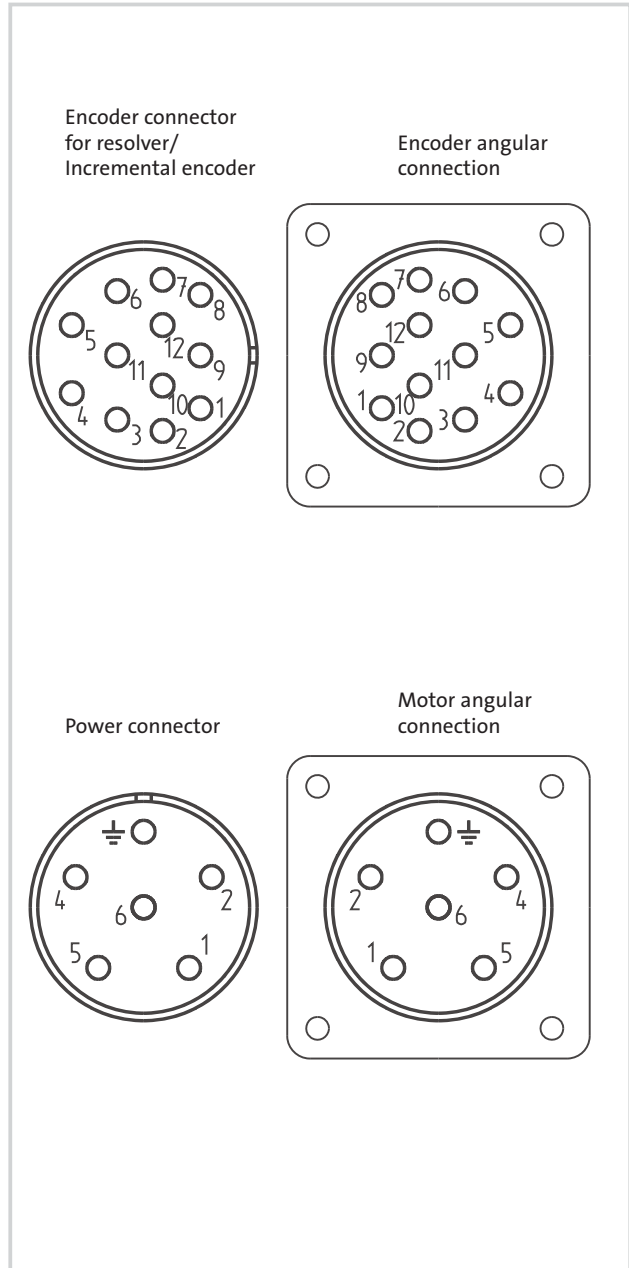
Connection plan for inverter motor SDSGA□063-32

| Parameter setting for servo inverter 9321 | | | |
|---|---------|-----|--------------------|
| Code | Setting | | Meaning |
| | Y | Δ | |
| C0006 | 2 | 22 | Servo asynchronous |
| C0025 | RsX | | Resolver |
| C0070 | 5 | | |
| C0071 | 150 | | ms |
| C0075 | 0.35 | | |
| C0076 | 1.80 | | ms |
| C0081 | 0.60 | | Pn (kW) |
| C0084 | 8.5 | | Rphase (ohm) |
| C0085 | 26 | | Xleakage (mH) |
| C0086 | 0 | | COMMON |
| C0087 | 2825 | | nn (rpm) |
| C0088 | 1.74 | 3 | In (A) |
| C0089 | 100 | | fn (Hz) |
| C0090 | 390 | 230 | Un (V) |
| C0091 | 0.70 | | cos phi |

| Connector for resolver and thermal contact | | |
|--|-----------------|--------------------|
| Pin no. | Connection name | Connection to: |
| 1 | +Ref | Resolver |
| 2 | -Ref | Resolver |
| 3 | | |
| 4 | +cos | Resolver |
| 5 | -cos | Resolver |
| 6 | +sin | Resolver |
| 7 | -sin | Resolver |
| 8 | | |
| 9 | | |
| 10 | | |
| 11 | + | KTY/thermal switch |
| 12 | - | KTY/thermal switch |

| Connector for motor and brake | | |
|-------------------------------|-----------------|----------------|
| Pin no. | Connection name | Connection to: |
| 1 | Y1 | Brake |
| 2 | Y2 | Brake |
| PE | PE | Conductor |
| 4 | U | Motor phase |
| 5 | V | Motor phase |
| 6 | W | Motor phase |

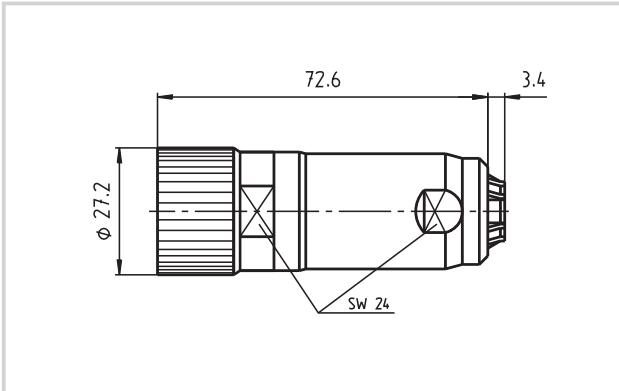
| Connector for incremental encoder and thermal contact | | |
|---|-----------------|--------------------|
| Pin no. | Connection name | Connection to: |
| 1 | B | Track B |
| 2 | -A | Track A inv. |
| 3 | A | Track A |
| 4 | +UB | +5 V - +24 V |
| 5 | +0V | Grnd |
| 6 | -N | Track 0 inv. |
| 7 | N | Track 0 |
| 8 | | |
| 9 | -B | Track B inv. |
| 10 | | |
| 11 | + | KTY/thermal switch |
| 12 | - | KTY/thermal switch |



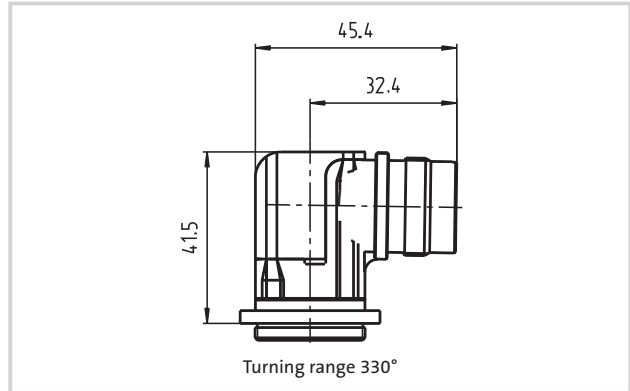


Dimensions of male and female connectors

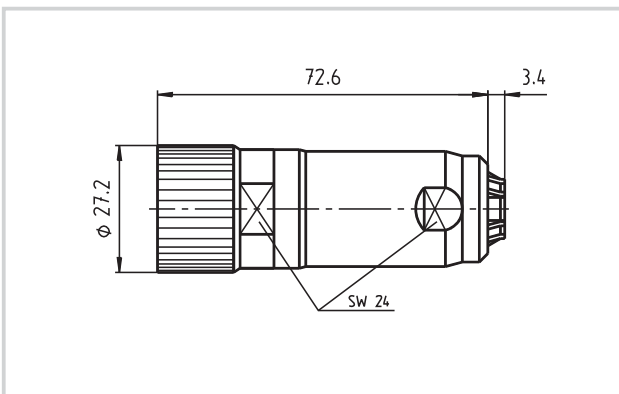
Power connector SDSGA□□047
SDSGA□□056
SDSGA□□063



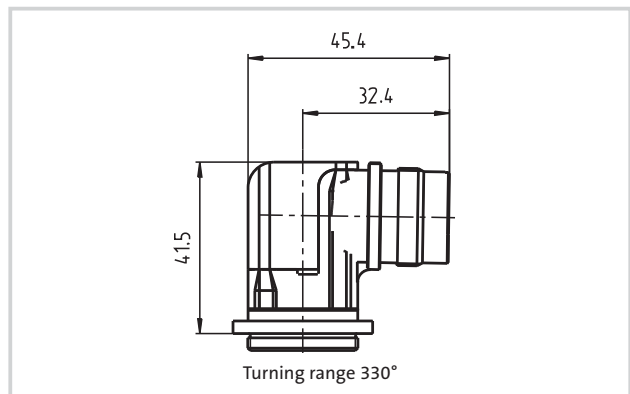
Motor angular connection SDSGA□□047
SDSGA□□063
SDSGA□□056



Encoder connector (resolver/incremental encoder)



Encoder angular connection

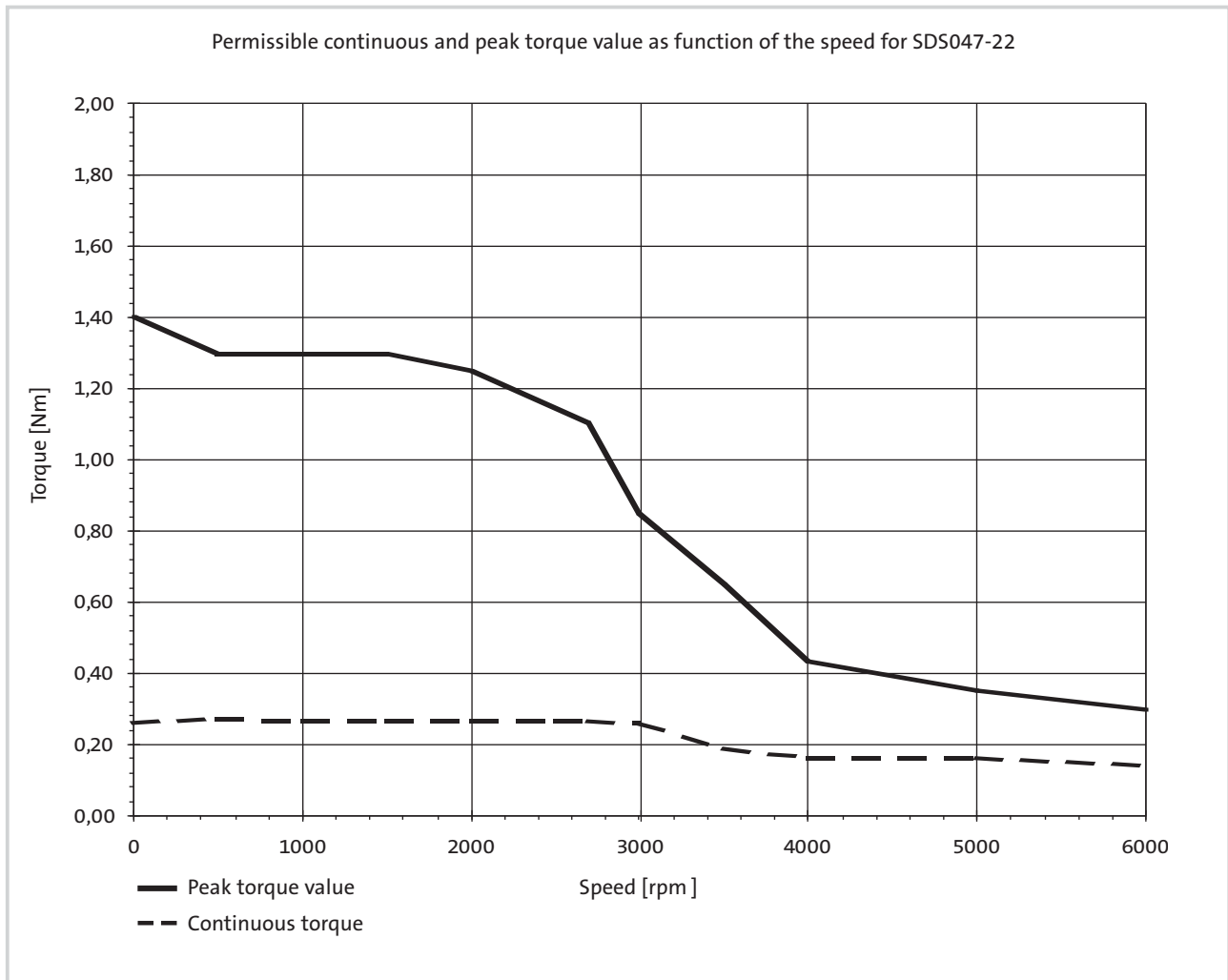




Drive selection

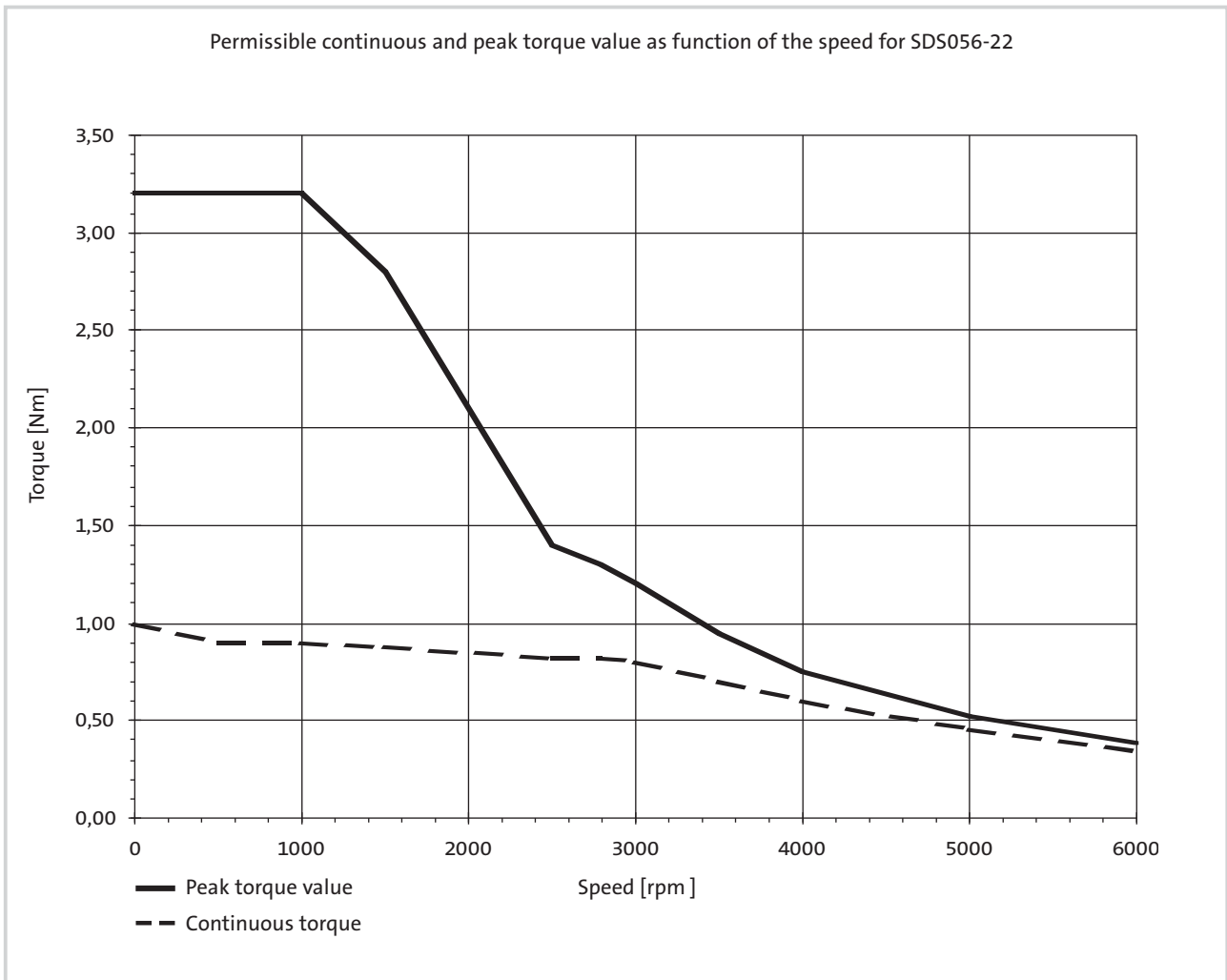
Technical data AC asynchronous motors (inverter-optimised)

Characteristics SDSGA□□047





Characteristics SDSGA□□056-22

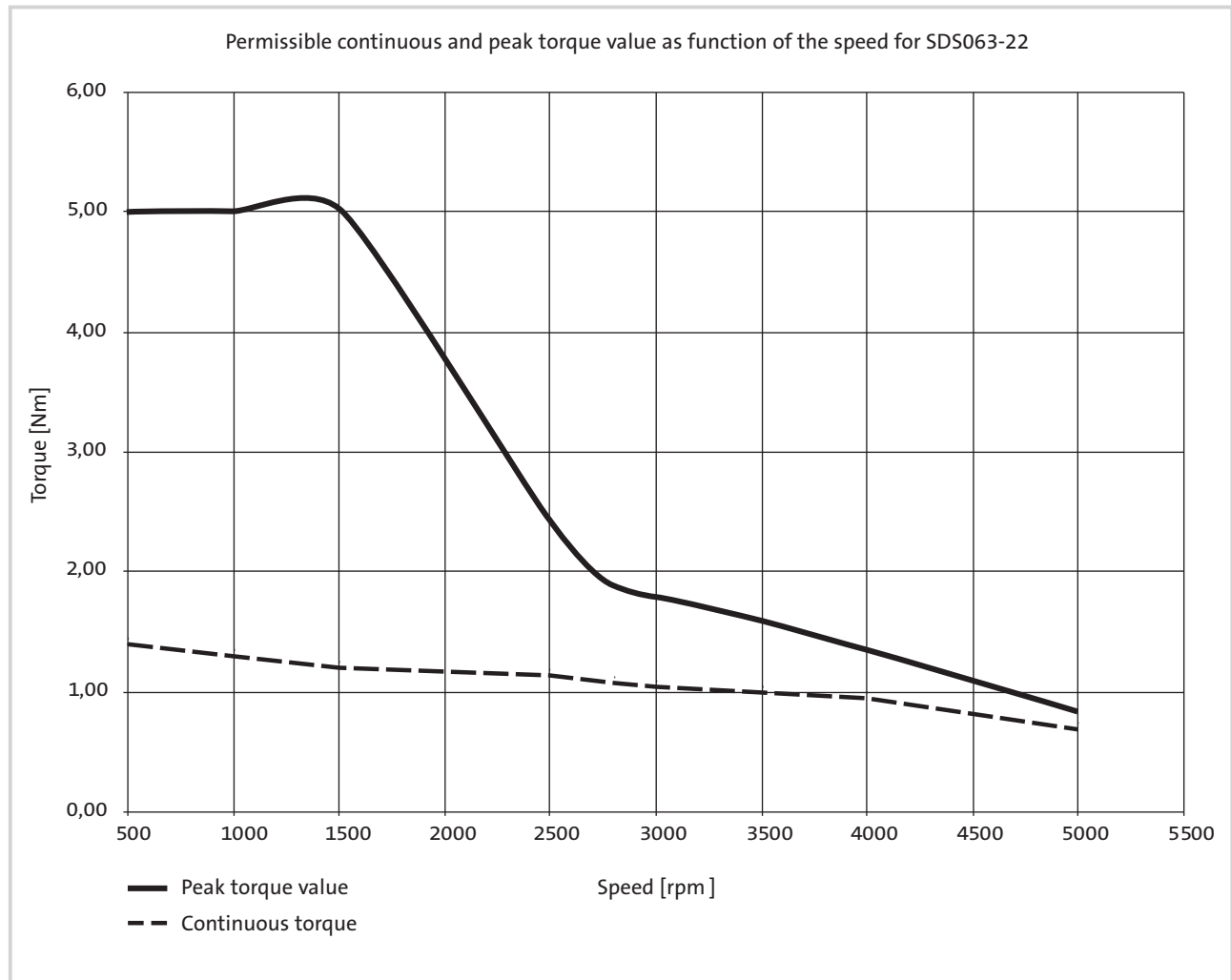




Drive selection

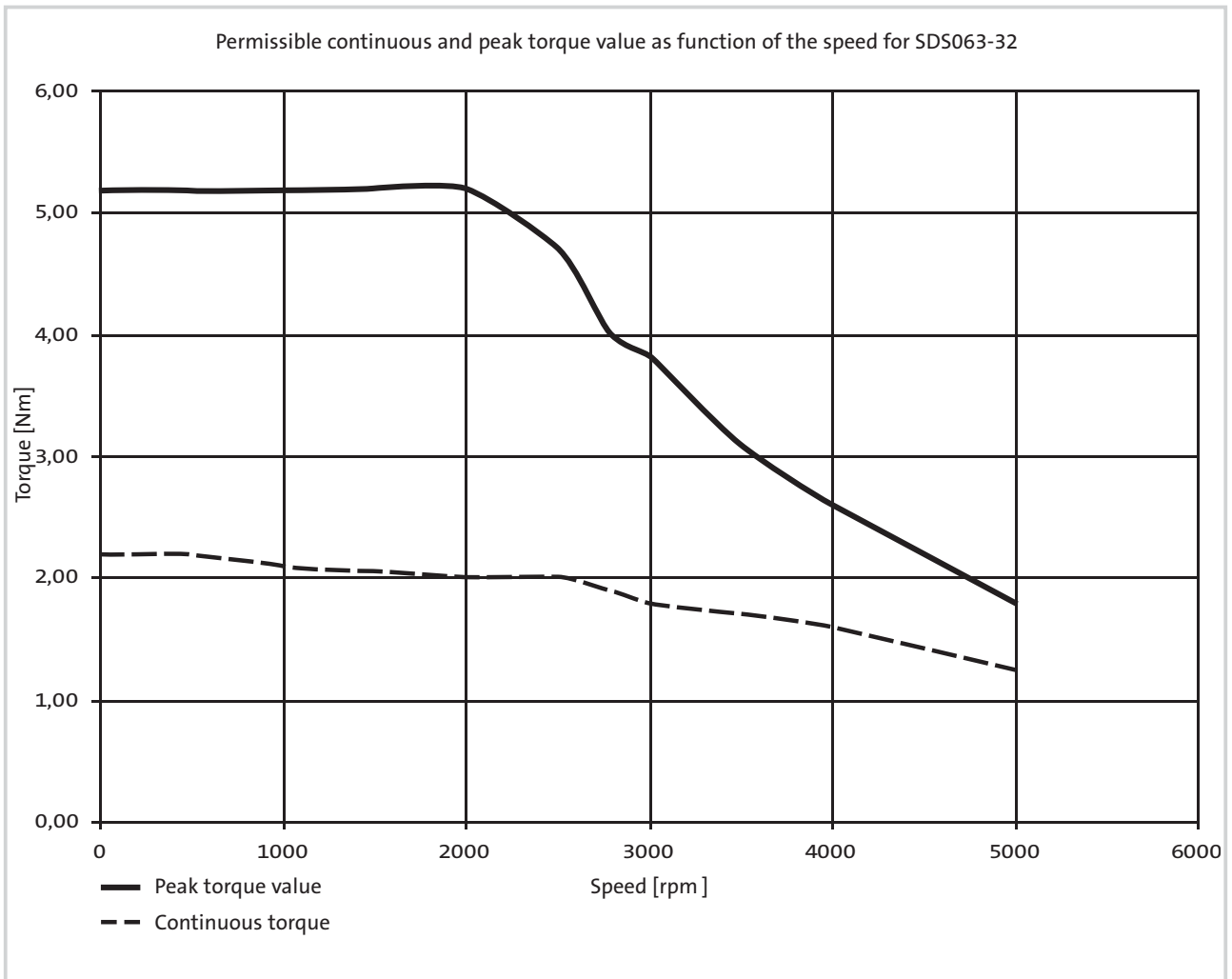
Technical data AC asynchronous motors (inverter-optimised)

Characteristics SDSGA□□063-22





Characteristics SDSGA□□063-32





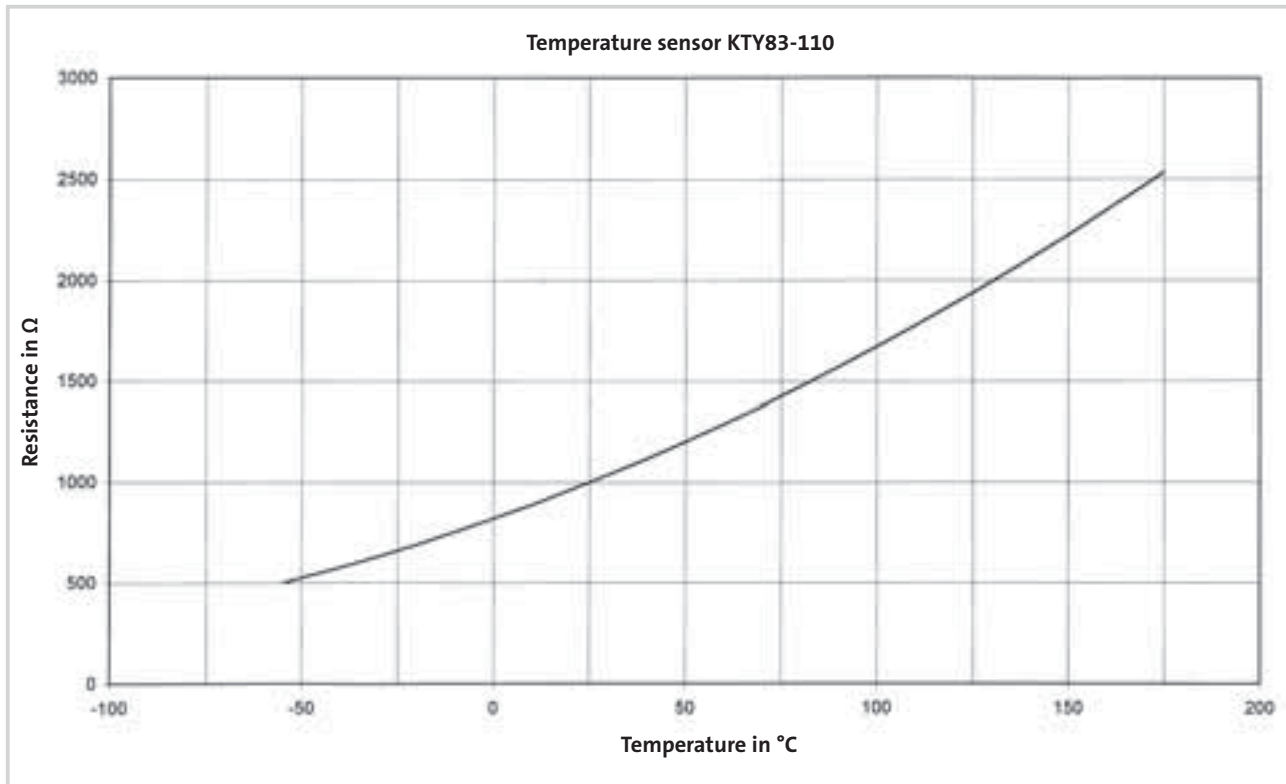
Drive selection

Technical data AC asynchronous motors (inverter-optimised)

Temperature encoder KTY 83-110 (integrated temperature detector)

The motor temperature is monitored continuously using the KTY temperature detector, although this does not offer full protection.

The feedback to the servo inverter 9300 is carried out using the feedback system cable. When the encoder is fed with a measuring current of 1 mA, the relationship between temperature and resistance will be as follows:



Thermostat – NC contact (TKÖ)

As an alternative to the continuous sensor KTY, a temperature contact can also be used to monitor the windings of motor series SDSGA.

Technical data

| | AC connection | DC connection | | |
|-----------------------|---------------|---------------|--------|-------|
| Operating temperature | 150 °C ± 5 °C | | | |
| Reset temperature | 90...135 °C | | | |
| Supply voltage | 250 V ≈ | 60 V | 48 V | 24 V |
| Rated current [A] | 2.5 A | 1.0 A | 1.25 A | 1.6 A |





Drive selection

AC asynchronous motor (inverter-optimised)

Selection table Type SDSGA□□□□□□-□□

| Motor type | P _N W | 100 Hz | | Design A-side | Selection (tick as required) |
|----------------|---------------------|-----------------------|----------------------|------------------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | | |
| SDSGA□□□047-22 | 75 | 2700 | 0.27 | IEC56 B14 C80 | |
| SDSGA□□□056-22 | 240 | 2790 | 0.81 | IEC63 B14 C90 | |
| SDSGA□□□063-22 | 400 | 2800 | 1.35 | IEC71 B14 C105 | |
| SDSGA□□□063-32 | 600 | 2825 | 1.90 | IEC71 B14 C105 | |

Additional order information

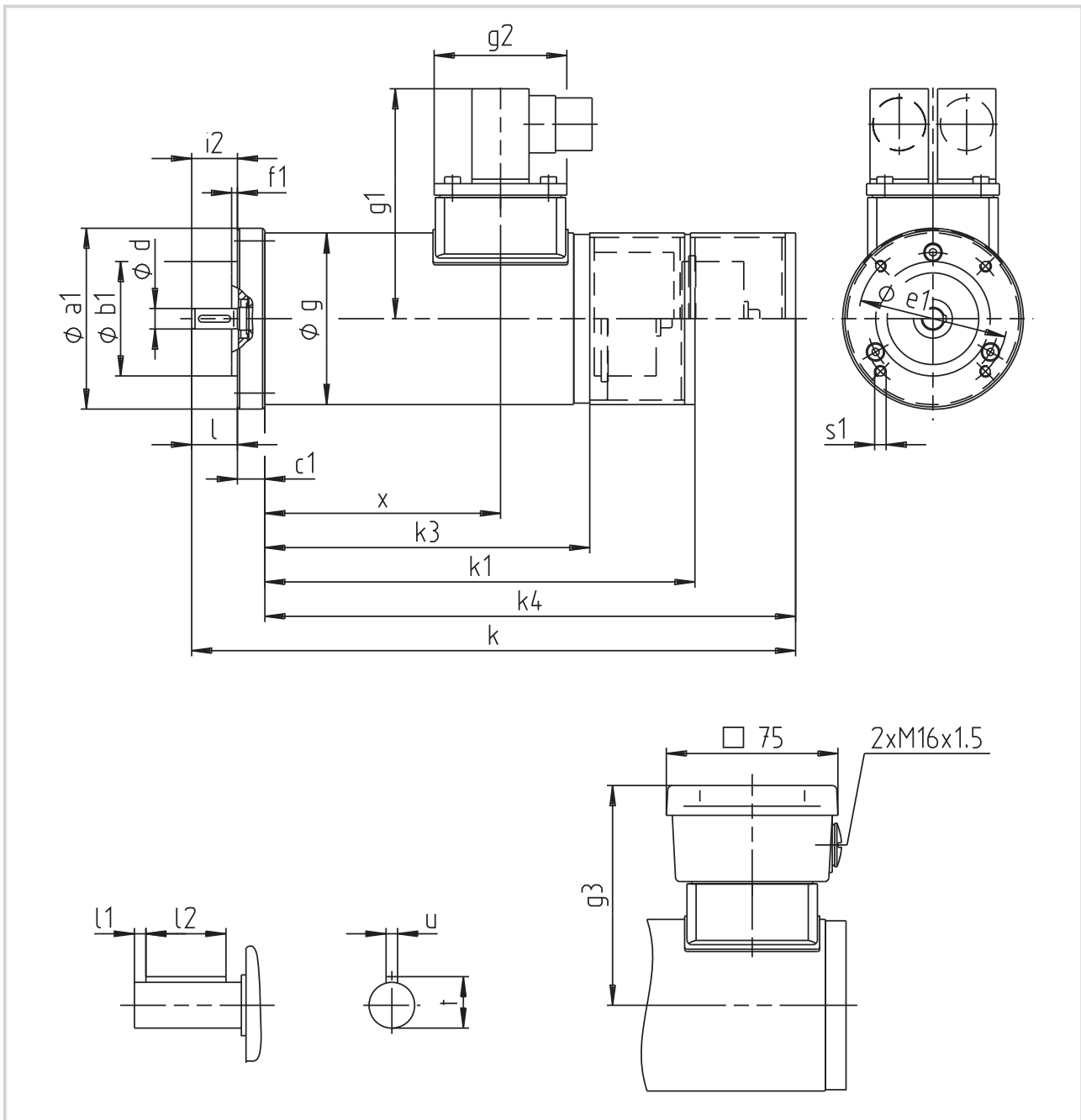
| | | | |
|-----------------------------------|--|---|---|
| Rated voltage | 230 V | connector version and motor frame size 047 only | |
| | 390 V | connector version and motor frame size 056-063 only | |
| | 230/400 V | terminal box version only | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Motor protection | KTY | connector version only | |
| | Thermal contact 'NC contact' | terminal box version only | |
| Electrical connection | Terminal box | | |
| | Connector | | |
| B-side design | XX=no built-on accessories | terminal box version only | |
| | RS=with resolver | connector version only | |
| | BR=with spring-applied brake | terminal box version only | |
| | RS=with incremental encoder | connector version only | |
| | BS=with spring-applied brake and resolver | connector version only | |
| | BI=with spring-applied brake and incremental encoder | connector version only | |
| | BV=for brake attachment | terminal box version only | |
| Brake supply voltage | 24 V DC | | |
| | 230 V AC with bridge rectifier | terminal box version only | |
| Position of electrical connection | | | 2 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SDSGA□□□□□-□2



| Motor type | Frame size | a_1 | b_1 j_7 | c_1 | d k_6 | e_1 | f_1 | g | g_1 | g_2 | g_3 | i_2 | k | k_1 | k_3 | k_4 | l | l_1 | l_2 | s_1 | t | u | x | Weight approx. kg |
|---------------|------------|-------|----------------|-------|--------------|-------|-------|-----|-------|-------|-------|-------|-----|-------|-------|-------|-----|-------|-------|-------|------|-----|-----|----------------------|
| SDSGA□□047-22 | IEC56C80 | 79 | 50 | 12 | 9 | 65 | 2.5 | 75 | 101 | 58 | 96 | 20 | 264 | 188 | 144 | 232 | 20 | 3 | 14 | M5 | 10.2 | 3 | 103 | 3.0-4.0 |
| SDSGA□□056-22 | IEC63C90 | 89 | 60 | 12 | 11 | 75 | 2.5 | 85 | 106 | 58 | 101 | 23 | 274 | 195 | 151 | 239 | 23 | 3 | 18 | M5 | 12.5 | 4 | 108 | 4.0-5.5 |
| SDSGA□□063-22 | IEC71C105 | 104 | 70 | 12 | 14 | 85 | 2.5 | 95 | 111 | 58 | 106 | 30 | 293 | 202 | 156 | 251 | 30 | 2.5 | 25 | M6 | 16 | 5 | 118 | 5.3-6.7 |
| SDSGA□□063-32 | IEC71C105 | 104 | 70 | 12 | 14 | 85 | 2.5 | 95 | 111 | 58 | 106 | 30 | 333 | 242 | 196 | 291 | 30 | 2.5 | 25 | M6 | 16 | 5 | 158 | 6.8-8.2 |

Dimensions in mm



Drive selection

AC asynchronous motor (inverter-optimised)

Selection table Type SDSGA□□0□□-□□

| Motor type | P _N W | 100 Hz | | Design A-side for gearbox attachment | Selection (tick as required) |
|---------------|---------------------|-----------------------|----------------------|--|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | | |
| SDSGA□□047-22 | 75 | 2700 | 0.27 | B14 for SSN31 | |
| | | | | B14 for SPL42 | |
| SDSGA□□056-22 | 240 | 2790 | 0.81 | B14 for SSN40 | |
| SDSGA□□063-22 | 400 | 2800 | 1.35 | B14 for SSN40 | |
| SDSGA□□063-32 | 600 | 2825 | 1.90 | B14 for SSN40 | |

Additional order information

| | | | |
|-----------------------------------|--|---|---|
| Rated voltage | 230 V | connector version and motor frame size 047 only | |
| | 390 V | connector version and motor frame size 056-063 only | |
| | 230/400 V | terminal box version only | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Motor protection | KTY | connector version only | |
| | Thermal contact 'NC contact' | terminal box version only | |
| Electrical connection | Terminal box | | |
| | Connector | | |
| B-side design | XX=no built-on accessories | terminal box version only | |
| | RS=with resolver | connector version only | |
| | BR=with spring-applied brake | terminal box version only | |
| | RS=with incremental encoder | connector version only | |
| | BS=with spring-applied brake and resolver | connector version only | |
| | BI=with spring-applied brake and incremental encoder | connector version only | |
| Brake supply voltage | 24 V DC | | |
| | 230 V AC with bridge rectifier | terminal box version only | |
| Position of electrical connection | | | 2 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.





Drive selection

AC worm geared motors (inverter-optimised)

Selection table Type SSN31-1G□□□-047C22

| Motor type | P _N W | 100 Hz | | | i | Selection (tick as required) |
|---------------|---------------------|-----------------------|----------------------|-------|-----|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| SDSGA□□047-22 | 75 | 540 | 1.05 | 12.20 | 5 | |
| | | 386 | 1.57 | 8.92 | 7 | |
| | | 270 | 2.08 | 6.73 | 10 | |
| | | 180 | 3.00 | 5.34 | 15 | |
| | | 135 | 3.73 | 4.03 | 20 | |
| | | 108 | 4.02 | 3.40 | 25 | |
| | | 90 | 4.78 | 3.04 | 30 | |
| | | 71 | 5.85 | 2.74 | 38 | |
| | | 54 | 6.21 | 2.09 | 50 | |
| | | 49 | 7.72 | 1.94 | 55 | |
| | | 36 | 7.29 | 1.51 | 75 | |
| | | 27 | 10.26 | 1.07 | 100 | |

Additional order information

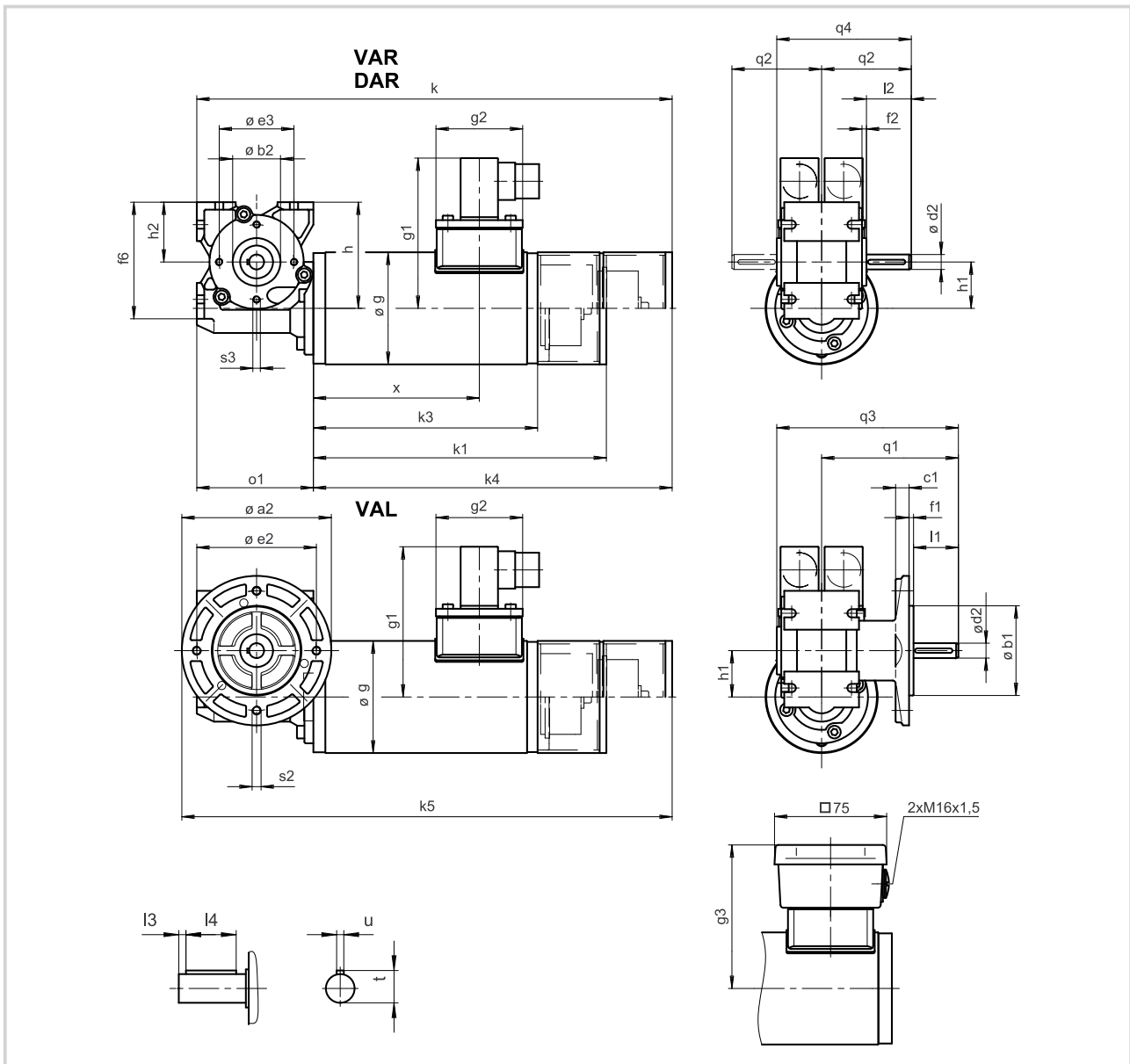
| | | | |
|-----------------------------------|--|------------------------------|-------------|
| Rated voltage | 230 V | connector version only | |
| | 230/400 V | terminal box version only | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Temperature monitoring | KTY | connector version only | |
| | Thermal contact 'NC contact' | terminal box version only | |
| Electrical connection | Connector | | |
| | Terminal box | | |
| B-side design | XX=no built-on accessories | terminal box version only | |
| | RS=with resolver | connector version only | |
| | BR=with spring-applied brake | terminal box version only | |
| | IG = Incremental encoder | connector version only | |
| | BS=with spring-applied brake and resolver | connector version only | |
| | BI=with spring-applied brake and incremental encoder | connector version only | |
| Brake supply voltage | BV=for brake attachment | terminal box version only | |
| | 24 V DC | | |
| Gearbox type | 230 V AC with bridge rectifier | terminal box version only | |
| | VAR | Shaft D10x30mm | |
| | | Shaft D12x40mm | |
| | DAR | Shaft D10x30mm | |
| | | Shaft D12x40mm | |
| | VAL | Shaft D10x30mm Flange D100mm | |
| | | Shaft D12x40mm Flange D120mm | |
| | HAR | | |
| Shaft position on type VAR | | | 3 5 |
| Flange/shaft position on type VAL | | | 3 5 |
| Mounting position | | | A B C D E F |
| Position of electrical connection | | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SSN31-1GVA□-047C22



| Geared motor | a_2 | b_1 j7 | b_2 h8 | c_1 | d_2 h6 | e_2 | e_3 | f_1 | f_2 | f_6 | g | g_1 | g_2 | g_3 | h | h_1 | h_2 |
|--------------------|-------|-------------|-------------|-------|-------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-----|-------|-------|
| SSN31-1GVA□-047C22 | 100 | 60 | 32 | 9 | 10 | 80 | 50 | 3 | 3 | 78 | 75 | 101 | 58 | 96 | 71 | 31 | 40 |
| | 120 | 80 | 32 | 9 | 12 | 100 | 50 | 3 | 3 | 78 | 75 | 101 | 58 | 96 | 71 | 31 | 40 |

| Geared motor | k | k_1 | k_3 | k_4 | k_5 | l_1 | l_2 | l_3 | l_4 | o_1 | q_1 | q_2 | q_3 | q_4 | s_2 | s_3 | t | u | x | Weight approx. kg |
|--------------------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-----|-----|-------------------|
| SSN31-1GVA□-047C22 | 318 | 196 | 152 | 240 | 328 | 30 | 30 | 4 | 25 | 78 | 91.5 | 60 | 121.5 | 90 | M6 | M5 | 11.2 | 3 | 111 | 3.7-4.7 |
| | 318 | 196 | 152 | 240 | 338 | 40 | 40 | 4 | 28 | 78 | 101.5 | 70 | 131.5 | 100 | M6 | M5 | 13.5 | 4 | 111 | 3.8-4.8 |

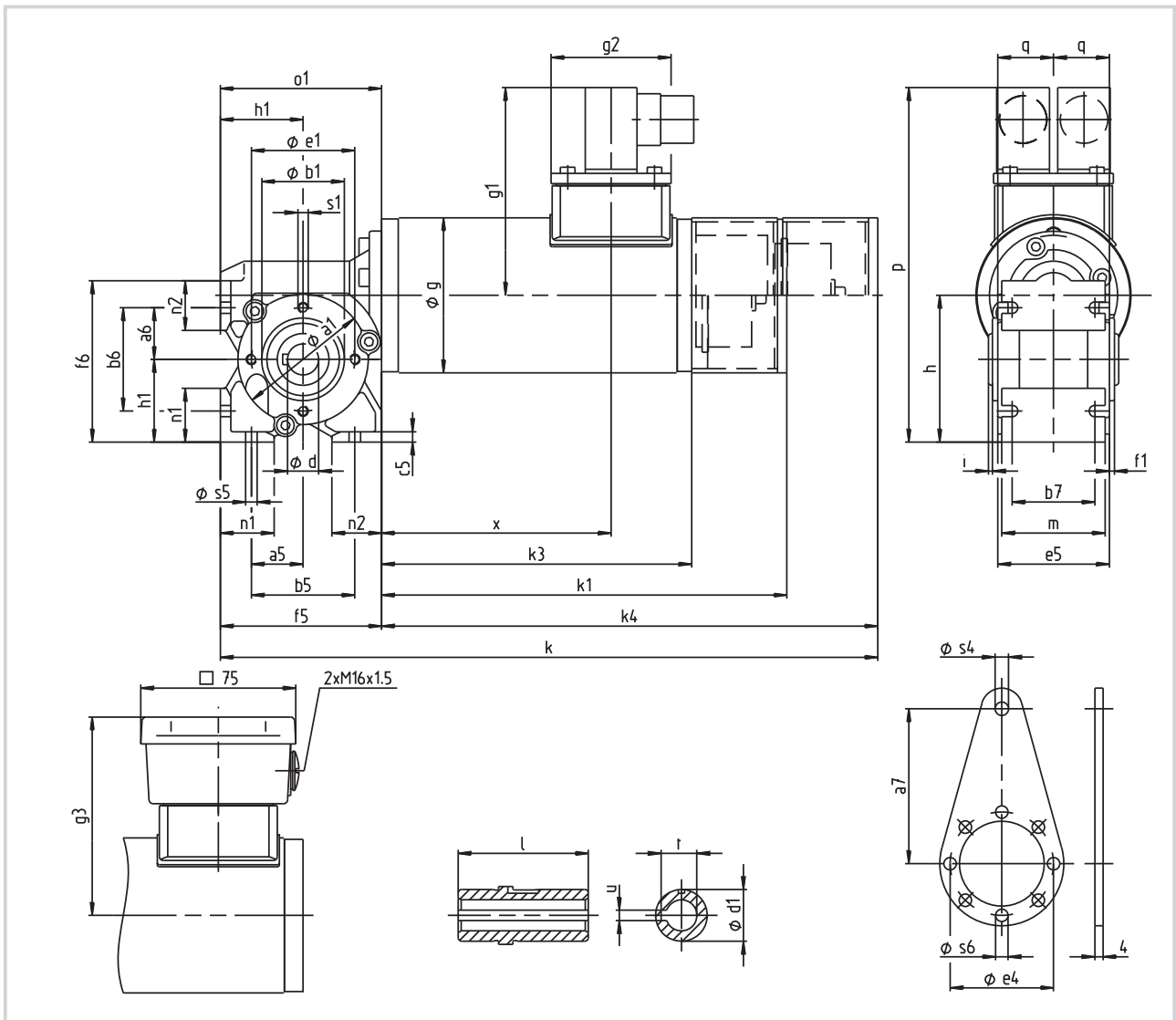
Dimensions in mm



Drive selection

AC worm geared motors (inverter-optimised)

Dimensions Type SSN31-1GHAR-047C22



| Geared motor | a ₁ | a ₅ | a ₆ | a ₇ | b ₁ h ₈ | b ₅ | b ₆ | b ₇ | c ₅ | d h ₇ | d ₁ | e ₁ | e ₄ | e ₅ | f ₁ | f ₅ | f ₆ | g | g ₁ | g ₂ | g ₃ | h | h ₁ |
|--------------------|----------------|----------------|----------------|----------------|----------------------------------|----------------|----------------|----------------|----------------|---------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----|----------------|
| SSN31-1GHAR-047C22 | 63 | 25 | 25 | 75 | 40 | 50 | 50 | 40 | 5 | 15 | 25 | 50 | 50 | 54 | 2.5 | 78 | 78 | 75 | 101 | 58 | 96 | 71 | 40 |

| Geared motor | i | k | k ₁ | k ₃ | k ₄ | l | m | n ₁ | n ₂ | o ₁ | p | q | s ₁ | s ₄ | s ₅ | s ₆ | t | u | x | Weight approx. kg |
|--------------------|---|-----|----------------|----------------|----------------|----|----|----------------|----------------|----------------|-----|----|----------------|----------------|----------------|----------------|------|---|-----|----------------------|
| SSN31-1GHAR-047C22 | 2 | 318 | 196 | 152 | 240 | 63 | 50 | 26 | 24 | 78 | 172 | 27 | M5 | 6.5 | 5.5 | 6 | 17.3 | 5 | 111 | 3.7-4.7 |

Dimensions in mm





Drive selection

AC worm geared motors (inverter-optimised)

Selection table Type SSN40-1G□□□-056C22

| Motor type | P _N W | 100 Hz | | | i | Selection (tick as required) |
|---------------|---------------------|-----------------------|----------------------|------|------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| SDSGA□□056-22 | 240 | 413 | 4.60 | 7.62 | 6.75 | |
| | | 279 | 6.50 | 5.33 | 10 | |
| | | 186 | 8.90 | 3.67 | 15 | |
| | | 139 | 11.50 | 2.96 | 20 | |
| | | 111 | 12.90 | 2.24 | 25 | |
| | | 93 | 15.00 | 2.39 | 30 | |
| | | 69 | 18.00 | 1.87 | 40 | |
| | | 56 | 21.80 | 1.46 | 50 | |
| | | 47 | 18.40 | 1.25 | 60 | |
| | | 35 | 24.00 | 0.95 | 80 | |

Additional order information

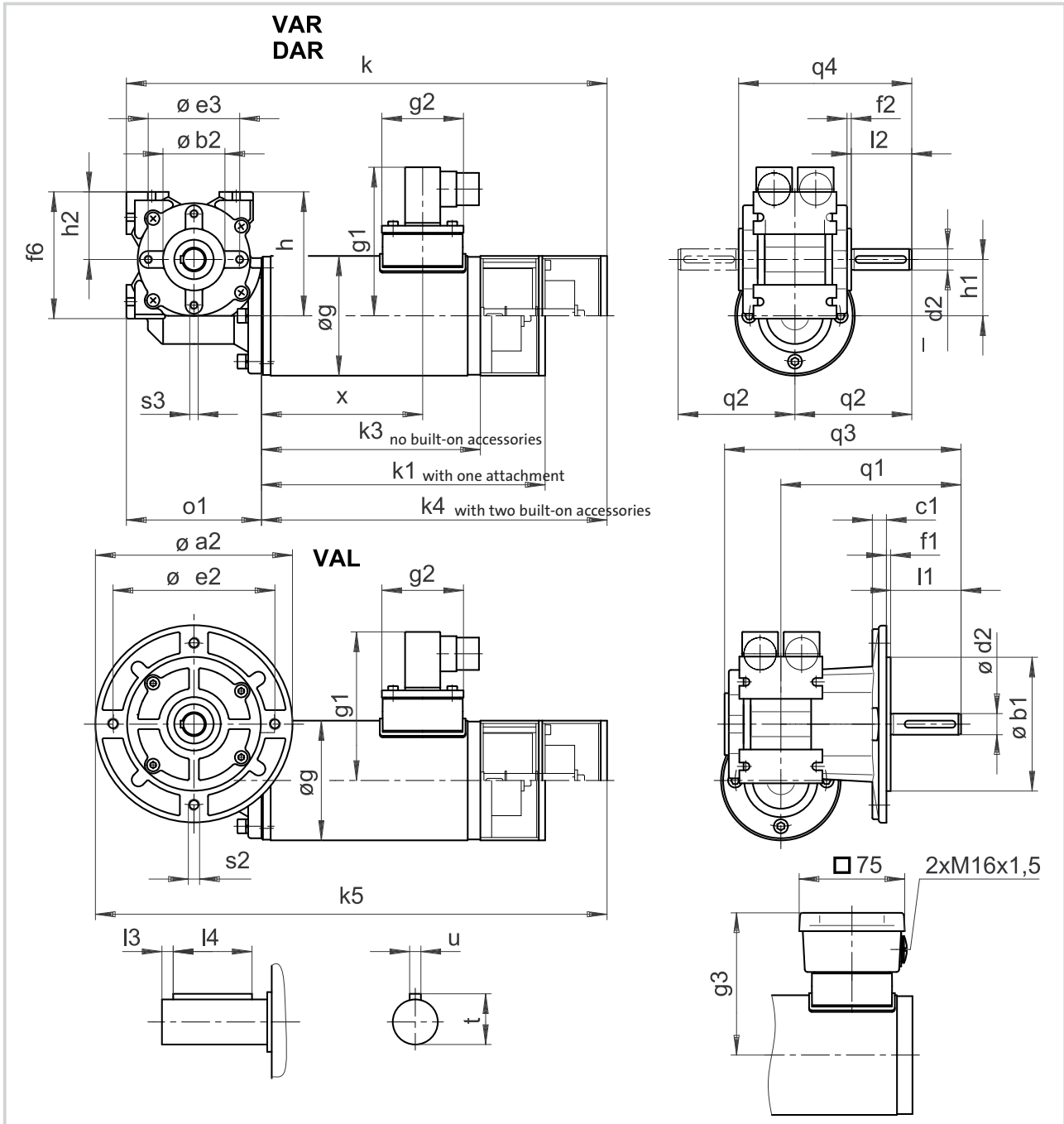
| | | | |
|-----------------------------------|--|---------------------------|-------------|
| Rated voltage | 390 V | connector version only | |
| | 230/400 V | terminal box version only | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Motor protection | KTY | connector version only | |
| | Thermal contact only with terminal box version | | |
| Electrical connection | Connector | | |
| | Terminal box | | |
| B-side design | XX=no built-on accessories | terminal box version only | |
| | RS=with resolver | connector version only | |
| | BR=with spring-applied brake | terminal box version only | |
| | RS=with incremental encoder | connector version only | |
| | BS=with spring-applied brake and resolver | connector version only | |
| | BI=with spring-applied brake and incremental encoder | connector version only | |
| Brake supply voltage | 24 V DC | | |
| | 230 V AC with bridge rectifier | terminal box version only | |
| Gearbox type | VAR | | |
| | DAR | | |
| | VAL | | |
| | HAR | | |
| Shaft position on type VAR | | | 3 5 |
| Flange/shaft position on type VAL | | | 3 5 |
| Mounting position | | | A B C D E F |
| Position of electrical connection | | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SSN40-1GVA□-056C22



| Geared motor | a ₂ | b ₁ j7 | b ₂ h10 | c ₁ | d ₂ h6 | e ₂ | e ₃ | f ₁ | f ₂ | f ₆ | g | g ₁ | g ₂ | g ₃ | h | h ₁ | h ₂ |
|--------------------|----------------|----------------------|-----------------------|----------------|----------------------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----|----------------|----------------|
| SSN40-1GVA□-056C22 | 140 | 95 | 44 | 10 | 15 | 115 | 65 | 3 | 3 | 90 | 85 | 106 | 58 | 101 | 88 | 40 | 48 |

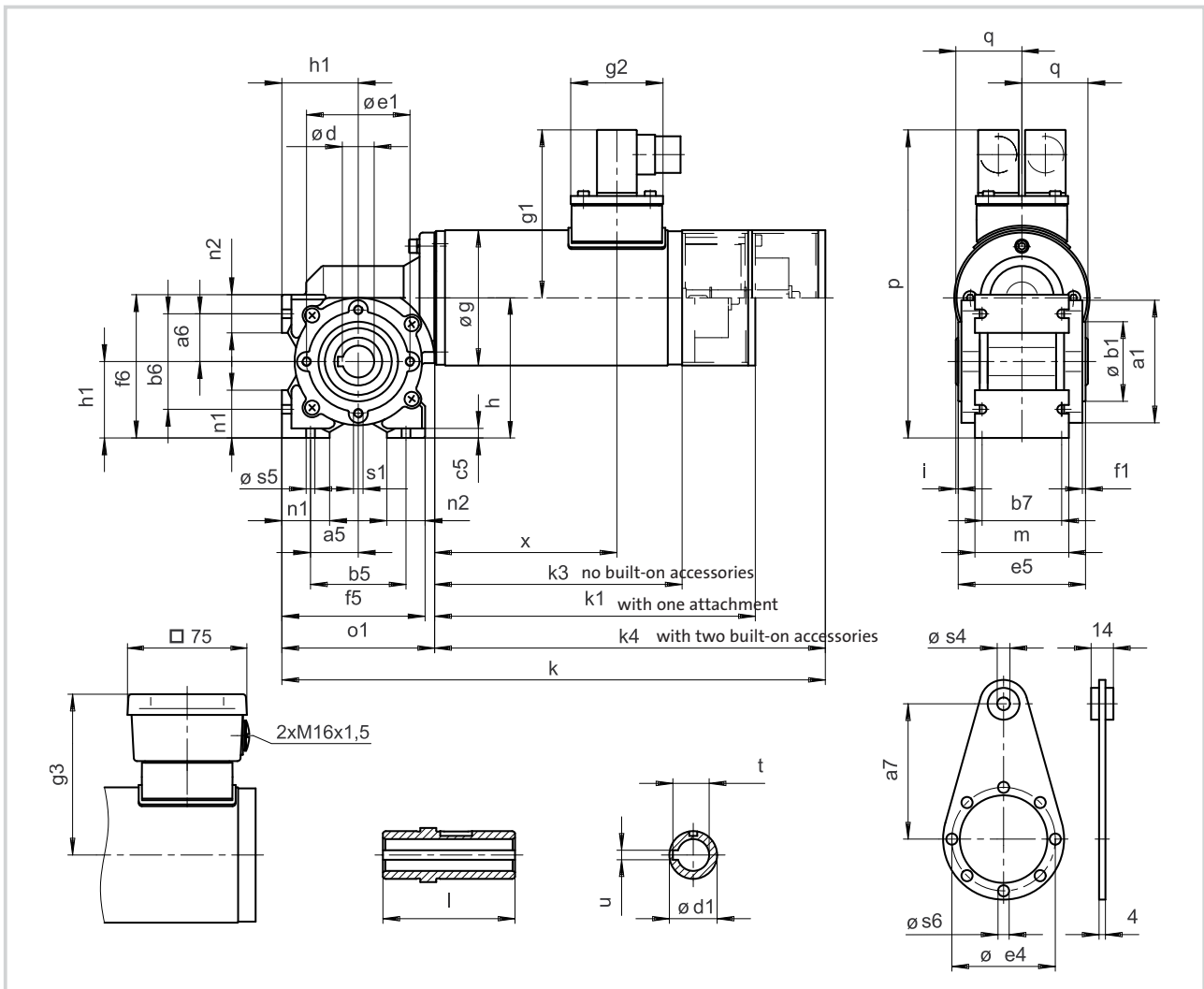
| Geared motor | k | k ₁ | k ₃ | k ₄ | k ₅ | l ₁ | l ₂ | l ₃ | l ₄ | o ₁ | q ₁ | q ₂ | q ₃ | q ₄ | s ₂ | s ₃ | t | u | x | Weight approx. kg |
|--------------------|-----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|---|-----|----------------------|
| SSN40-1GVA□-056C22 | 342 | 202 | 158 | 246 | 364 | 50 | 43 | 4 | 36 | 96 | 128 | 83 | 168 | 123 | M8 | M6 | 17 | 5 | 115 | 5.5-7.0 |

Dimensions in mm

Drive selection

AC worm geared motors (inverter-optimised)

Dimensions Type SSN40-1GHAR-056C22



| Geared motor | a ₁ | a ₅ | a ₆ | a ₇ | b ₁ h ₈ | b ₅ | b ₆ | b ₇ | c ₅ | d H7 | d ₁ | e ₁ | e ₄ | e ₅ | f ₁ | f ₅ | f ₆ | g | g ₁ | g ₂ | g ₃ | h |
|--------------------|----------------|----------------|----------------|----------------|----------------------------------|----------------|----------------|----------------|----------------|---------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----|
| SSN40-1GHAR-056C22 | 77 | 30 | 30 | 85 | 50 | 60 | 60 | 50 | 6 | 20 | 30 | 65 | 65 | 80 | 2 | 90 | 90 | 85 | 106 | 58 | 101 | 88 |

| Geared motor | h ₁ | i | k | k ₁ | k ₃ | k ₄ | l | m | n ₁ | n ₂ | o ₁ | p | q | s ₁ | s ₄ | s ₅ | s ₆ | t | u | x | Weight approx. kg |
|--------------------|----------------|-----|-----|----------------|----------------|----------------|----|----|----------------|----------------|----------------|-----|------|----------------|----------------|----------------|----------------|------|---|-----|----------------------|
| SSN40-1GHAR-056C22 | 48 | 1.5 | 342 | 202 | 158 | 246 | 83 | 59 | 30 | 24 | 96 | 194 | 41.5 | M6 | 8 | 5.5 | 7 | 22.8 | 6 | 115 | 5.5-6.5 |

Dimensions in mm





Drive selection

AC worm geared motors (inverter-optimised)

Selection table Type SSN40-1G□□□-063C22

| Motor type | P _N W | 100 Hz | | | i | Selection (tick as required) |
|---------------|---------------------|-----------------------|----------------------|------|------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| SDSGA□□063-22 | 400 | 413 | 7.65 | 4.57 | 6.75 | |
| | | 279 | 10.93 | 3.20 | 10 | |
| | | 186 | 14.98 | 2.20 | 15 | |
| | | 139 | 19.07 | 1.77 | 20 | |
| | | 111 | 21.60 | 1.34 | 25 | |
| | | 93 | 25.01 | 1.43 | 30 | |
| | | 69 | 30.24 | 1.02 | 40 | |
| | | 56 | 32.00 | 0.88 | 50 | |
| | | 47 | 23.00 | 0.75 | 60 | |
| | | 35 | 24.00 | 0.57 | 80 | |

Additional order information

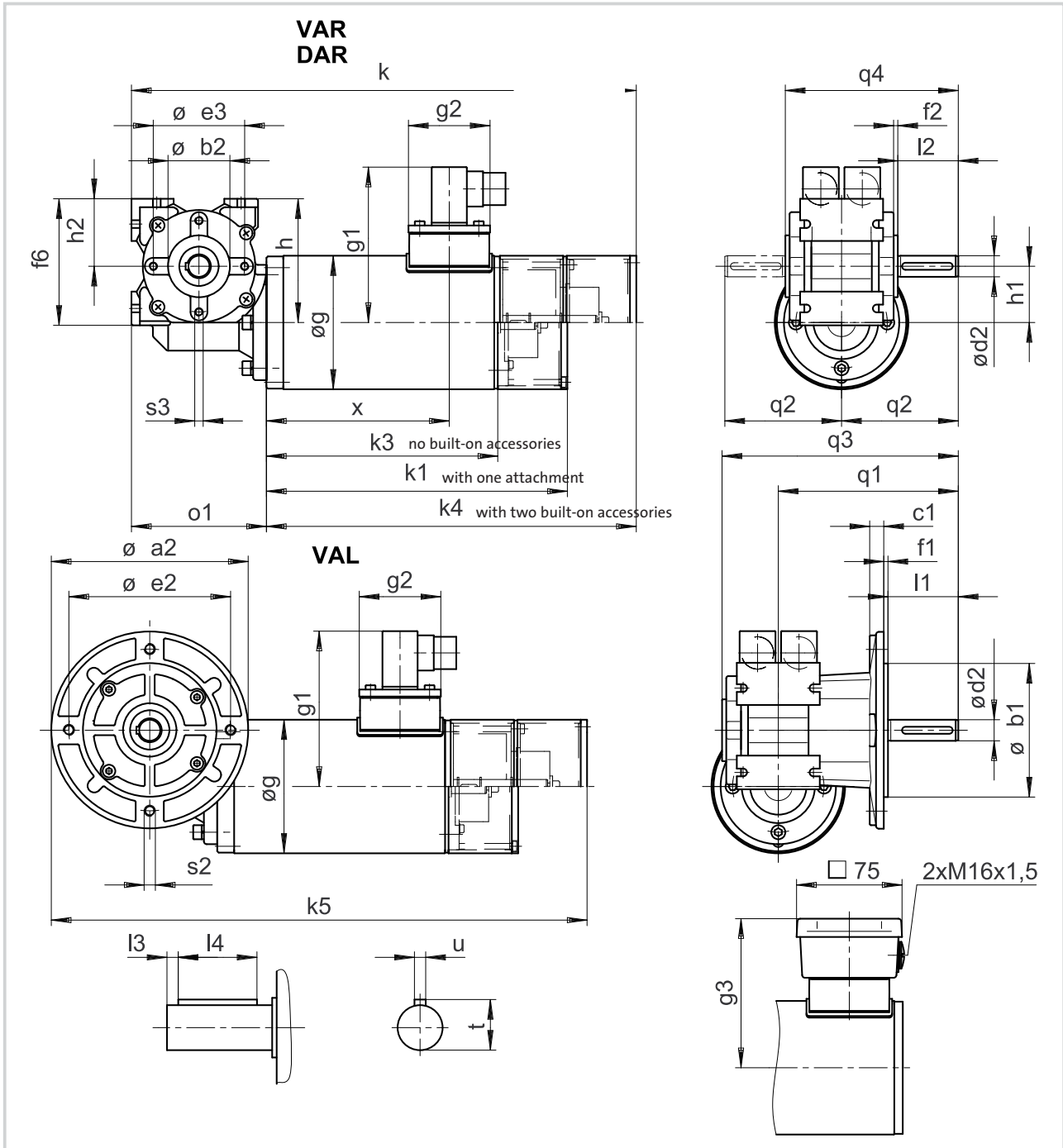
| | | | |
|-----------------------------------|--|---------------------------|-------------|
| Rated voltage | 390 V | connector version only | |
| | 230/400 V | terminal box version only | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Motor protection | KTY | connector version only | |
| | Thermal contact only with terminal box version | | |
| Electrical connection | Connector | | |
| | Terminal box | | |
| B-side design | XX=no built-on accessories | terminal box version only | |
| | RS=with resolver | connector version only | |
| | BR=with spring-applied brake | terminal box version only | |
| | RS=with incremental encoder | connector version only | |
| | BS=with spring-applied brake and resolver | connector version only | |
| | BI=with spring-applied brake and incremental encoder | connector version only | |
| Brake supply voltage | 24 V DC | | |
| | 230 V AC with bridge rectifier | terminal box version only | |
| Gearbox type | VAR | | |
| | DAR | | |
| | VAL | | |
| | HAR | | |
| Shaft position on type VAR | | | 3 5 |
| Flange/shaft position on type VAL | | | 3 5 |
| Mounting position | | | A B C D E F |
| Position of electrical connection | | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SSN40-1GVA□-063C22



| Geared motor | a ₂ | b ₁ j7 | b ₂ h10 | c ₁ | d ₂ h6 | e ₂ | e ₃ | f ₁ | f ₂ | f ₆ | g | g ₁ | g ₂ | g ₃ | h | h ₁ | h ₂ |
|--------------------|----------------|----------------------|-----------------------|----------------|----------------------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----|----------------|----------------|
| SSN40-1GVA□-063C22 | 140 | 95 | 44 | 10 | 15 | 115 | 65 | 3 | 3 | 90 | 95 | 111 | 58 | 106 | 88 | 40 | 48 |

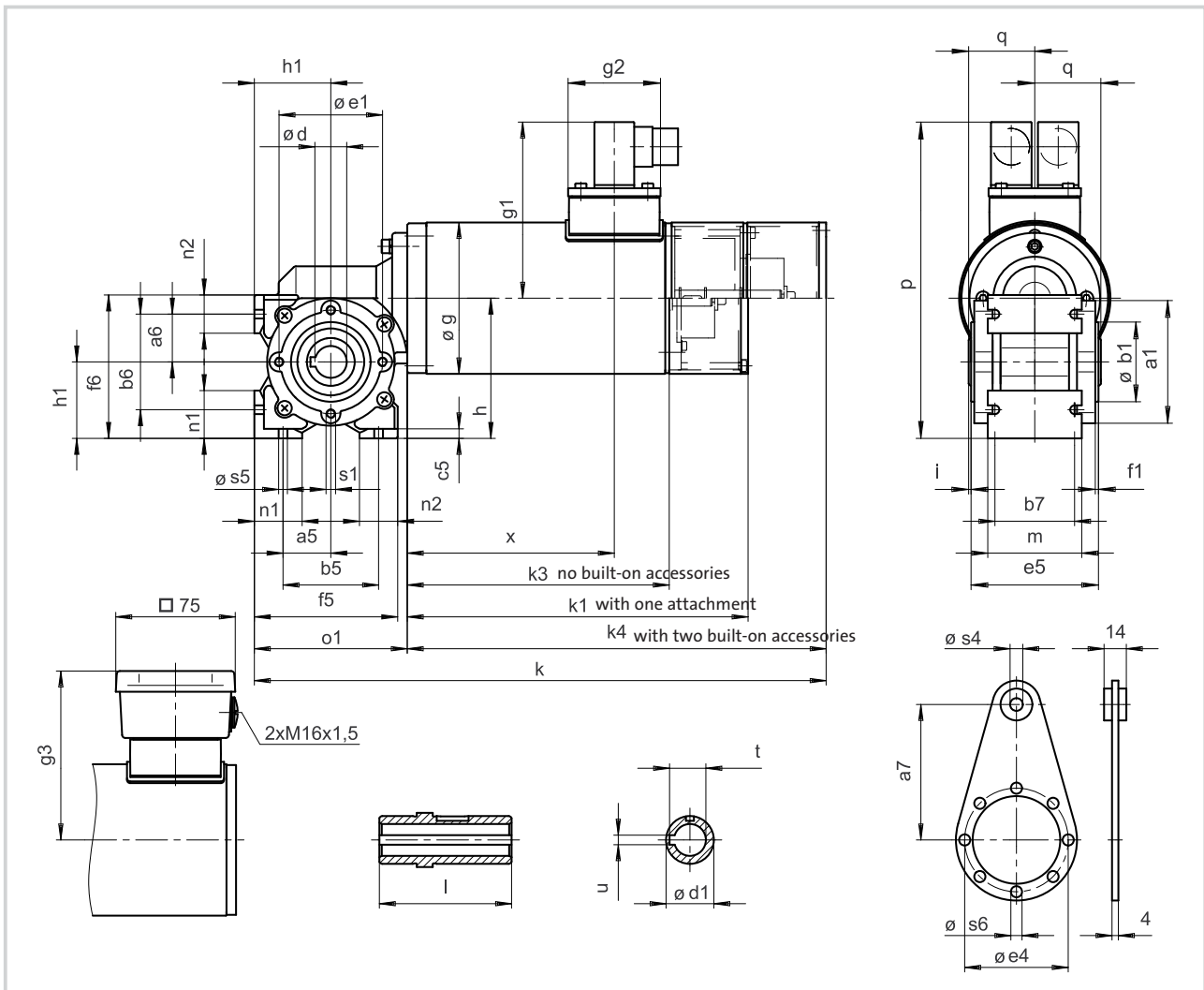
| Geared motor | k | k ₁ | k ₃ | k ₄ | k ₅ | l ₁ | l ₂ | l ₃ | l ₄ | o ₁ | q ₁ | q ₂ | q ₃ | q ₄ | s ₂ | s ₃ | t | u | x | Weight approx. kg |
|--------------------|-----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|---|-----|----------------------|
| SSN40-1GVA□-063C22 | 359 | 214 | 168 | 263 | 381 | 50 | 43 | 4 | 36 | 96 | 128 | 83 | 168 | 123 | M8 | M6 | 17 | 5 | 170 | 7.0-8.5 |

Dimensions in mm

Drive selection

AC worm geared motors (inverter-optimised)

Dimensions Type SSN40-1GHAR-063C22



| Geared motor | a ₁ | a ₅ | a ₆ | a ₇ | b ₁ h ₈ | b ₅ | b ₆ | b ₇ | c ₅ | d | d ₁ | e ₁ | e ₄ | e ₅ | f ₁ | f ₅ | f ₆ | g | g ₁ | g ₂ | g ₃ | h |
|--------------------|----------------|----------------|----------------|----------------|----------------------------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----|
| SSN40-1GHAR-063C22 | 77 | 30 | 30 | 85 | 50 | 60 | 60 | 50 | 6 | 20 | 30 | 65 | 65 | 80 | 2 | 90 | 90 | 95 | 111 | 58 | 106 | 88 |

| Geared motor | h ₁ | i | k | k ₁ | k ₃ | k ₄ | l | m | n ₁ | n ₂ | o ₁ | p | q | s ₁ | s ₄ | s ₅ | s ₆ | t | u | x | Weight approx. kg |
|--------------------|----------------|-----|-----|----------------|----------------|----------------|----|----|----------------|----------------|----------------|-----|------|----------------|----------------|----------------|----------------|------|---|-----|----------------------|
| SSN40-1GHAR-063C22 | 48 | 1.5 | 359 | 214 | 168 | 263 | 83 | 59 | 30 | 24 | 96 | 199 | 41.5 | M6 | 8 | 5.5 | 7 | 22.8 | 6 | 130 | 7.0-8.0 |

Dimensions in mm





Drive selection

AC worm geared motors (inverter-optimised)

Selection table Type SSN40-1G□□□-063C32

| Motor type | P _N W | 100 Hz | | | i | Selection (tick as required) |
|---------------|---------------------|-----------------------|----------------------|------|------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| SDSGA□□063-32 | 600 | 413 | 10.80 | 3.25 | 6.75 | |
| | | 279 | 15.40 | 2.27 | 10 | |
| | | 186 | 21.00 | 1.56 | 15 | |
| | | 139 | 27.00 | 1.26 | 20 | |
| | | 111 | 29.00 | 0.95 | 25 | |
| | | 93 | 35.30 | 1.02 | 30 | |
| | | 69 | 34.00 | 0.80 | 40 | |
| | | 56 | 32.00 | 0.62 | 50 | |
| | | 47 | 23.00 | 0.53 | 60 | |
| | | 35 | 24.00 | 0.40 | 80 | |

Additional order information

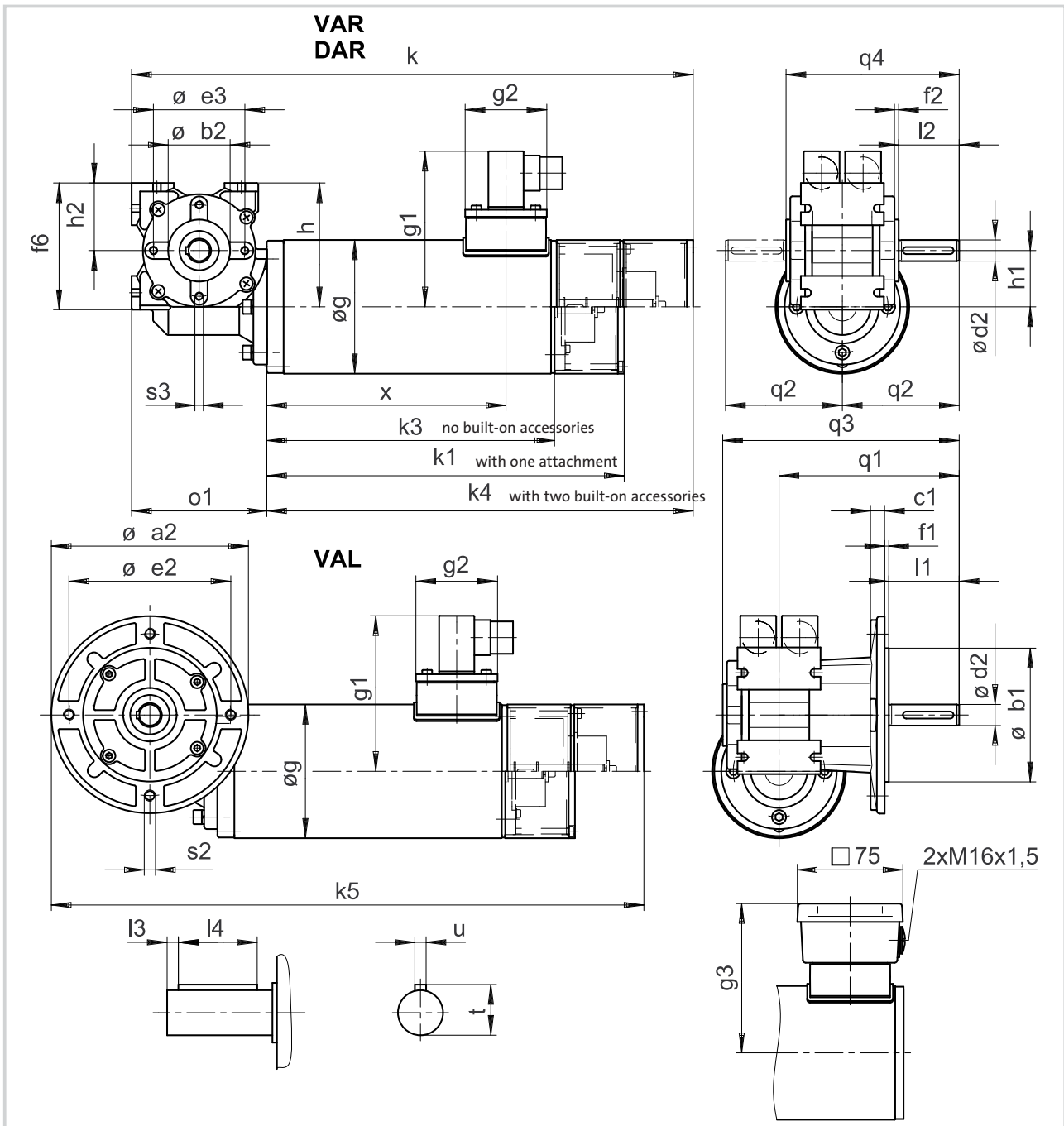
| | | | |
|-----------------------------------|--|---------------------------|-------------|
| Rated voltage | 390 V | connector version only | |
| | 230/400 V | terminal box version only | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Motor protection | KTY | connector version only | |
| | Thermal contact only with terminal box version | | |
| Electrical connection | Connector | | |
| | Terminal box | | |
| B-side design | XX=no built-on accessories | terminal box version only | |
| | RS=with resolver | connector version only | |
| | BR=with spring-applied brake | terminal box version only | |
| | RS=with incremental encoder | connector version only | |
| | BS=with spring-applied brake and resolver | connector version only | |
| | BI=with spring-applied brake and incremental encoder | connector version only | |
| Brake supply voltage | 24 V DC | | |
| | 230 V AC with bridge rectifier | terminal box version only | |
| Gearbox type | VAR | | |
| | DAR | | |
| | VAL | | |
| | HAR | | |
| Shaft position on type VAR | | | 3 5 |
| Flange/shaft position on type VAL | | | 3 5 |
| Mounting position | | | A B C D E F |
| Position of electrical connection | | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SSN40-1GVA□-063C32

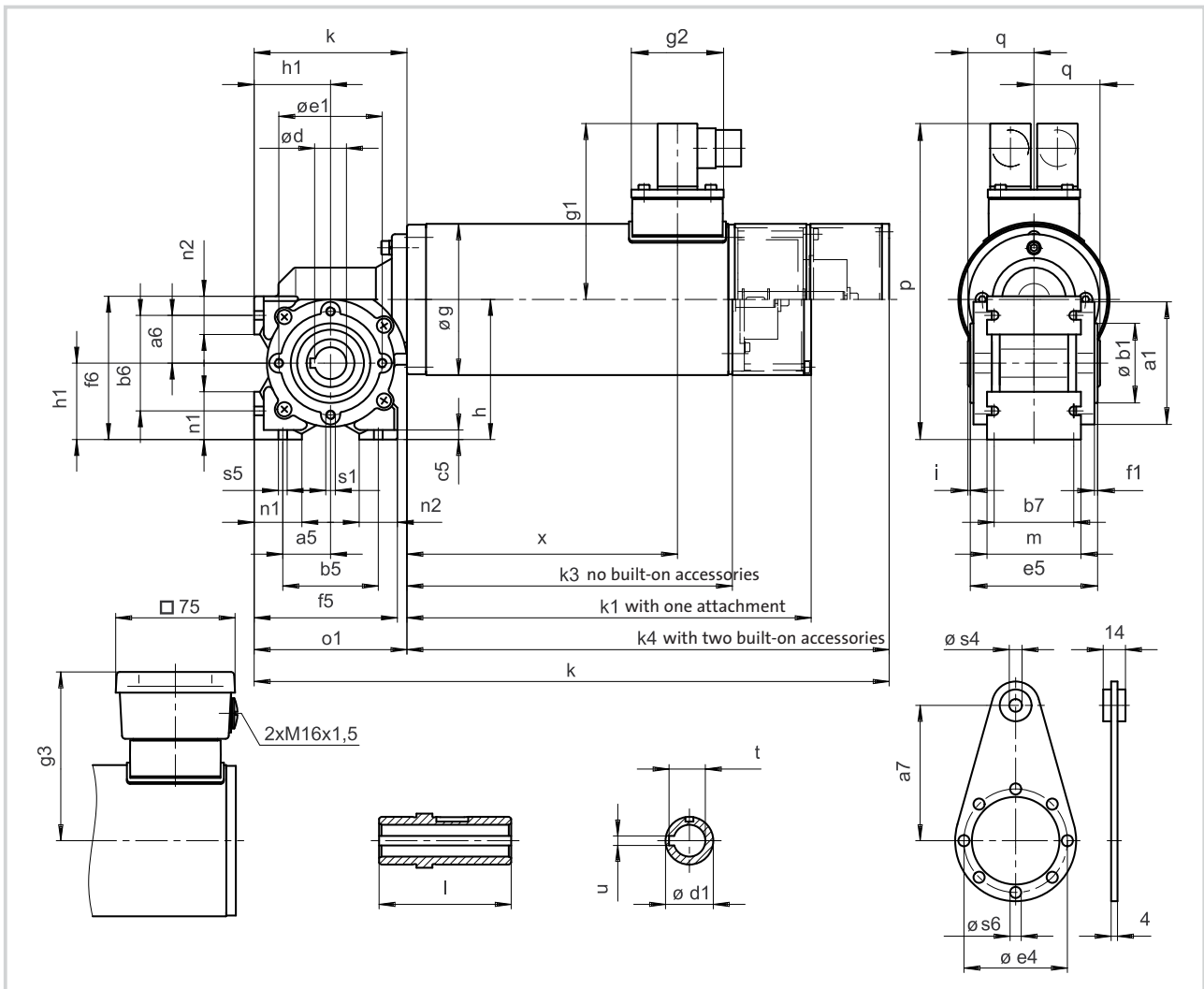


| Geared motor | a_2 | b_1 j_7 | b_2 h_{10} | c_1 | d_2 h_6 | e_2 | e_3 | f_1 | f_2 | f_6 | g | g_1 | g_2 | g_3 | h | h_1 | h_2 |
|--------------------|-------|----------------|-------------------|-------|----------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|-----|-------|-------|
| SSN40-1GVA□-063C32 | 140 | 95 | 44 | 10 | 15 | 115 | 65 | 3 | 3 | 90 | 95 | 111 | 58 | 106 | 88 | 40 | 48 |

| Geared motor | k | k_1 | k_3 | k_4 | k_5 | l_1 | l_2 | l_3 | l_4 | o_1 | q_1 | q_2 | q_3 | q_4 | s_2 | s_3 | t | u | x | Weight approx. kg |
|--------------------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-----|-----|----------------------|
| SSN40-1GVA□-063C32 | 399 | 254 | 208 | 303 | 421 | 50 | 43 | 4 | 36 | 96 | 128 | 83 | 168 | 123 | M8 | M6 | 17 | 5 | 170 | 9.0-9.7 |

Dimensions in mm

Dimensions Type SSN40-1GHAR-063C32



| Geared motor | a ₁ | a ₅ | a ₆ | a ₇ | b ₁ h ₈ | b ₅ | b ₆ | b ₇ | c ₅ | d | d ₁ | e ₁ | e ₄ | e ₅ | f ₁ | f ₅ | f ₆ | g | g ₁ | g ₂ | g ₃ | h |
|--------------------|----------------|----------------|----------------|----------------|----------------------------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----|
| SSN40-1GHAR-063C32 | 77 | 30 | 30 | 85 | 50 | 60 | 60 | 50 | 6 | 20 | 30 | 65 | 65 | 80 | 2 | 90 | 90 | 95 | 111 | 58 | 106 | 88 |

| Geared motor | h ₁ | i | k | k ₁ | k ₃ | k ₄ | l | m | n ₁ | n ₂ | o ₁ | p | q | s ₁ | s ₄ | s ₅ | s ₆ | t | u | x | Weight approx. kg |
|--------------------|----------------|-----|-----|----------------|----------------|----------------|----|----|----------------|----------------|----------------|-----|------|----------------|----------------|----------------|----------------|------|---|-----|----------------------|
| SSN40-1GHAR-063C32 | 48 | 1.5 | 399 | 254 | 208 | 303 | 83 | 59 | 30 | 24 | 96 | 199 | 41.5 | M6 | 8 | 5.5 | 7 | 22.8 | 6 | 170 | 9.0-9.7 |

Dimensions in mm





Drive selection

AC planetary geared motors (inverter-optimised)

Selection table Type SPL42-□GVCR-047C22

| Motor type | P _N W | 100 Hz | | | i | Selection (tick as required) |
|---------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| SDSGA□□047-22 | 75 | 729 | 0.80 | 3.75 | 3.7 | |
| | | 400 | 1.45 | 2.06 | 6.75 | |
| | | 196 | 2.78 | 2.69 | 13.73 | |
| | | 108 | 5.06 | 1.48 | 25.01 | |
| | | 59 | 9.22 | 0.81 | 45.56 | |
| | | 53 | 9.61 | 1.56 | 50.89 | |
| | | 29 | 15.00 | 0.85 | 92.7 | |
| | | 16 | 15.00 | 0.47 | 168.84 | |

Additional order information

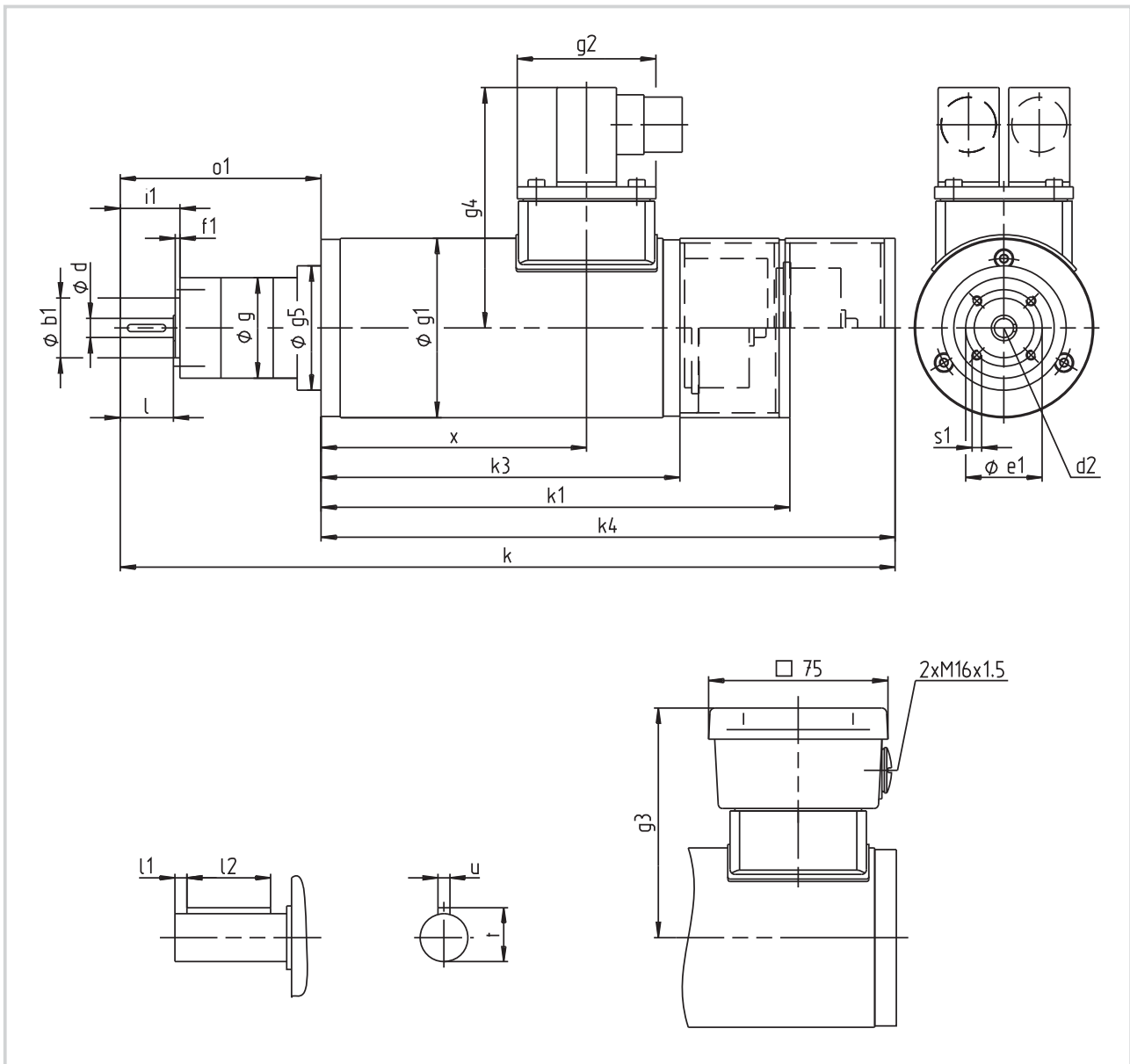
| | | | |
|-----------------------------------|--|---------------------------|---|
| Rated voltage | 230 V | connector version only | |
| | 230/400 V | terminal box version only | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Motor protection | KTY | connector version only | |
| | Thermal contact 'NC contact' | terminal box version only | |
| Electrical connection | Connector | | |
| | Terminal box | | |
| B-side design | XX=no built-on accessories | terminal box version only | |
| | RS=with resolver | connector version only | |
| | BR=with spring-applied brake | terminal box version only | |
| | RS=with incremental encoder | connector version only | |
| | BS=with spring-applied brake and resolver | connector version only | |
| | BI=with spring-applied brake and incremental encoder | connector version only | |
| | BV=for brake attachment | terminal box version only | |
| Brake supply voltage | 24 V DC | | |
| | 230 V AC with bridge rectifier | terminal box version only | |
| Position of electrical connection | | | 2 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SPL42-□GVCR-047C22



| Geared motor | Ratio i | b_1 h10 | d g6 | d_2 | e_1 | f_1 | g | g_1 | g_2 | g_3 | g_4 | g_5 | i_1 |
|--------------------|--------------|--------------|-----------|-------|-------|-------|-----|-------|-------|-------|-------|-------|-------|
| SPL42-□GVCR-047C22 | 3.7; 6.7 | 25 | 8 | M3 | 32 | 2 | 42 | 75 | 58 | 96 | 101 | 52 | 25 |
| | 14 ... 46 | | | | | | | | | | | | |
| | 51...169 | | | | | | | | | | | | |

| Geared motor | k | k_1 | k_3 | k_4 | l | l_1 | l_2 | o_1 | s_1 | t | u | x | Weight approx. kg |
|--------------------|-----|-------|-------|-------|------|-------|-------|---------|-------|-----|-----|-----|----------------------|
| SPL42-□GVCR-047C22 | 324 | 196 | 152 | 240 | 22.2 | 3 | 16 | 84 | M4x10 | 9.2 | 3 | 111 | 3.4-4.4 |
| | 337 | | | | | | | 3.6-4.6 | | | | | |
| | 350 | | | | | | | 3.8-4.8 | | | | | |

Dimensions in mm



Drive selection

AC planetary geared motors (inverter-optimised)

Selection table Type SPL52-□GVCR-047N22

| Motor type | P _N W | 100 Hz | | | i | Selection (tick as required) |
|---------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| SDSGA□□047-22 | 75 | 729 | 0.80 | 5.00 | 3.7 | |
| | | 400 | 1.45 | 2.75 | 6.75 | |
| | | 196 | 2.78 | 4.31 | 13.73 | |
| | | 108 | 5.06 | 2.37 | 25.01 | |
| | | 59 | 9.22 | 1.30 | 45.56 | |
| | | 53 | 9.61 | 2.60 | 50.89 | |
| | | 29 | 17.50 | 1.42 | 92.7 | |
| | | 16 | 25.00 | 0.78 | 168.84 | |

Additional order information

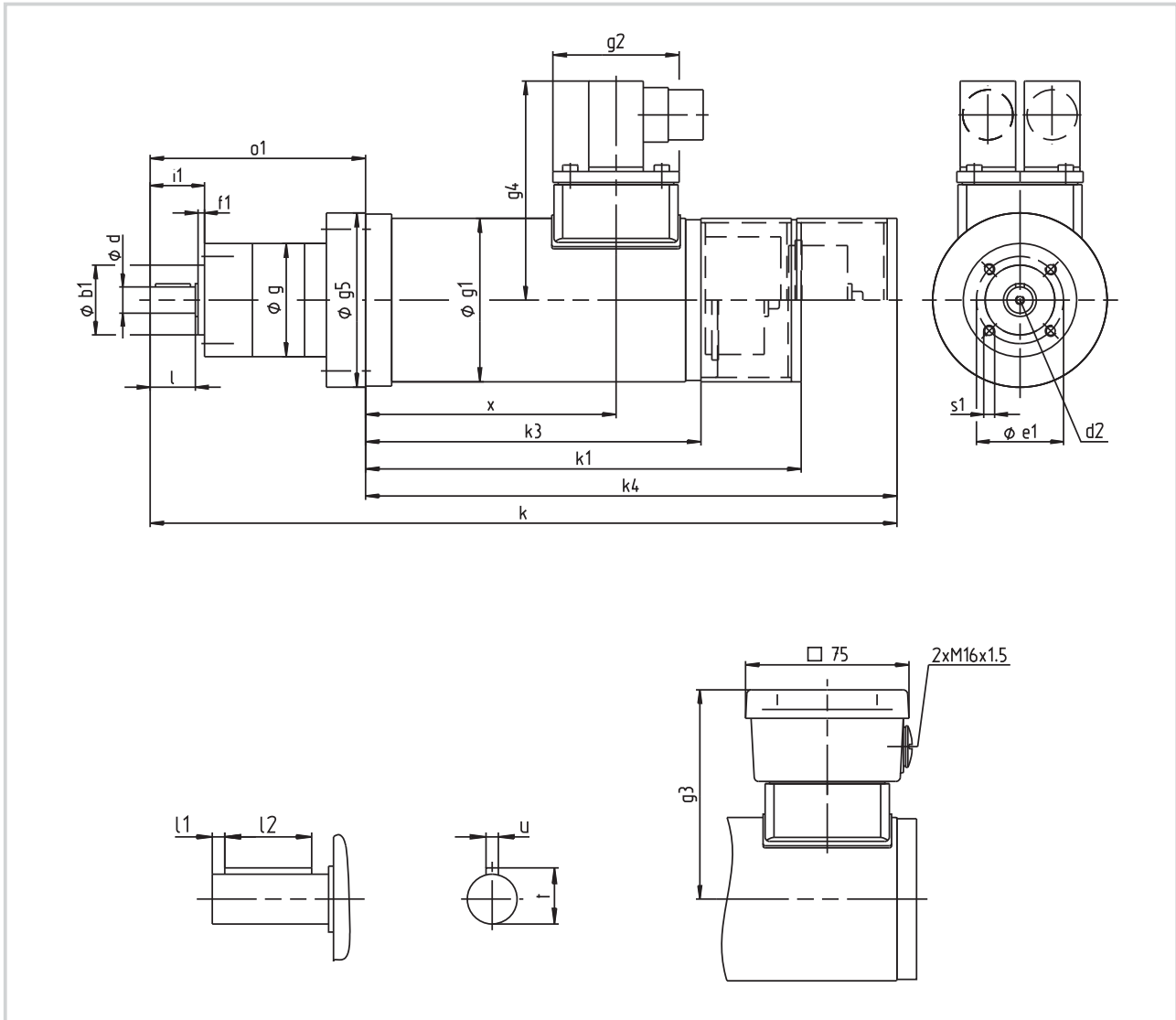
| | | | |
|-----------------------------------|--|---------------------------|---|
| Rated voltage | 230 V | connector version only | |
| | 230/400 V | terminal box version only | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Motor protection | KTY | connector version only | |
| | Thermal contact 'NC contact' | terminal box version only | |
| Electrical connection | Connector | | |
| | Terminal box | | |
| B-side design | XX=no built-on accessories | terminal box version only | |
| | RS=with resolver | connector version only | |
| | BR=with spring-applied brake | terminal box version only | |
| | RS=with incremental encoder | connector version only | |
| | BS=with spring-applied brake and resolver | connector version only | |
| | BI=with spring-applied brake and incremental encoder | connector version only | |
| | BV=for brake attachment | terminal box version only | |
| Brake supply voltage | 24 V DC | | |
| | 230 V AC with bridge rectifier | terminal box version only | |
| Position of electrical connection | | | 2 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SPL52-□GVCR-047N22



| Geared motor | Ratio i | b ₁ h8 | d h7 | d ₂ | e ₁ | f ₁ | g | g ₁ | g ₂ | g ₃ | g ₄ | g ₅ | i ₁ |
|--------------------|------------|----------------------|---------|----------------|----------------|----------------|----|----------------|----------------|----------------|----------------|----------------|----------------|
| SPL52-□GVCR-047N22 | 3.7; 6.7 | 32 | 12 | M4 | 40 | 3 | 52 | 75 | 58 | 96 | 101 | 80 | 25 |
| | 14 ... 46 | | | | | | | | | | | | |
| | 51...169 | | | | | | | | | | | | |

| Geared motor | k | k ₁ | k ₃ | k ₄ | l | l ₁ | l ₂ | o ₁ | s ₁ | t | u | x | Weight approx. kg |
|--------------------|-----|----------------|----------------|----------------|------|----------------|----------------|----------------|----------------|------|---|-----|----------------------|
| SPL52-□GVCR-047N22 | 343 | 200 | 156 | 244 | 20.8 | 2.5 | 16 | 99 | M5x10 | 13.5 | 4 | 115 | 3.7-4.7 |
| | 357 | | | | | | | 113 | | | | | 3.9-4.9 |
| | 371 | | | | | | | 127 | | | | | 4.0-5.0 |

Dimensions in mm



Drive selection

AC planetary geared motors (inverter-optimised)

Selection table Type SPL62-□GVCR-056N22

| Motor type | P _N W | 100 Hz | | | i | Selection (tick as required) |
|---------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| SDSGA□□056-22 | 240 | 754 | 2.40 | 3.34 | 3.7 | |
| | | 413 | 4.30 | 1.83 | 6.75 | |
| | | 203 | 8.30 | 3.00 | 13.73 | |
| | | 111 | 15.00 | 1.65 | 25.01 | |
| | | 80 | 21.20 | 1.08 | 34.97 | |
| | | 61 | 25.00 | 0.90 | 45.56 | |
| | | 55 | 28.80 | 1.73 | 50.89 | |
| | | 39 | 40.30 | 1.24 | 71.06 | |
| | | 28 | 50.00 | 0.89 | 99.5 | |
| | | 23 | 50.00 | 0.71 | 123.97 | |

Additional order information

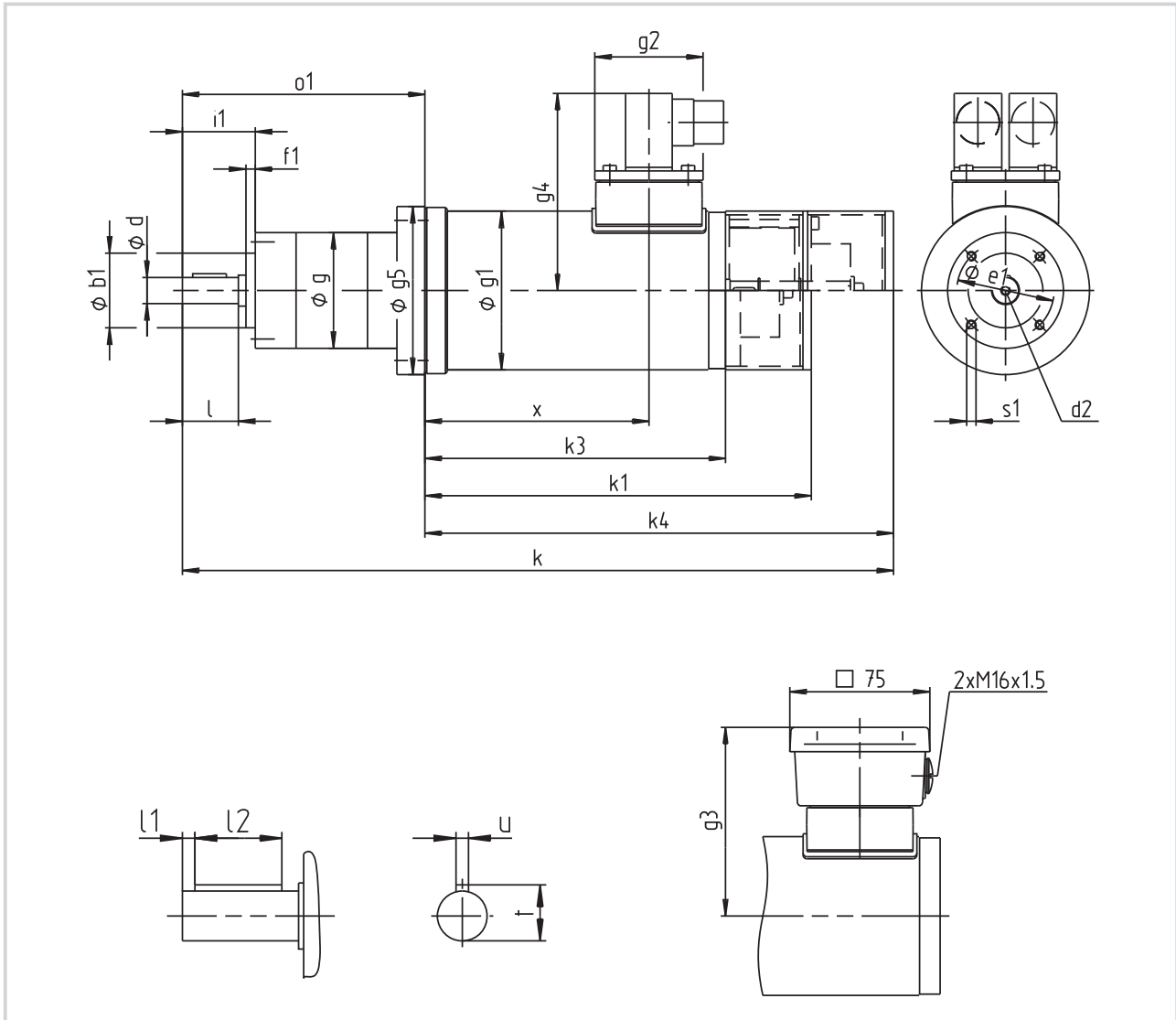
| | | | |
|-----------------------------------|--|---------------------------|---|
| Rated voltage | 390 V | connector version only | |
| | 230/400 V | terminal box version only | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Motor protection | KTY | connector version only | |
| | Thermal contact 'NC contact' | terminal box version only | |
| Electrical connection | Connector | | |
| | Terminal box | | |
| B-side design | XX=no built-on accessories | terminal box version only | |
| | RS=with resolver | connector version only | |
| | BR=with spring-applied brake | terminal box version only | |
| | RS=with incremental encoder | connector version only | |
| | BS=with spring-applied brake and resolver | connector version only | |
| | BI=with spring-applied brake and incremental encoder | connector version only | |
| Brake supply voltage | 24 V DC | | |
| | 230 V AC with bridge rectifier | terminal box version only | |
| Position of electrical connection | | | 2 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SPL62-□GVCR-056N22



| Geared motor | Ratio i | b ₁ j7 | d h7 | d ₂ | e ₁ | f ₁ | g | g ₁ | g ₂ | g ₃ | g ₄ | g ₅ | i ₁ |
|--------------------|------------|----------------------|---------|----------------|----------------|----------------|----|----------------|----------------|----------------|----------------|----------------|----------------|
| SPL62-□GVCR-056N22 | 3.7; 6.7 | 40 | 14 | M5 | 52 | 5 | 62 | 85 | 58 | 101 | 106 | 90 | 39 |
| | 14 ... 46 | | | | | | | | | | | | |
| | 51...124 | | | | | | | | | | | | |

| Geared motor | k | k ₁ | k ₃ | k ₄ | l | l ₁ | l ₂ | o ₁ | s ₁ | t | u | x | Weight approx. kg |
|--------------------|-----|----------------|----------------|----------------|----|----------------|----------------|----------------|----------------|----|---|-----|----------------------|
| SPL62-□GVCR-056N22 | 366 | 207 | 163 | 251 | 30 | 5.5 | 18 | 115 | M5x10 | 16 | 5 | 120 | 4.8-6.3 |
| | 382 | | | | | | | 131 | | | | | 5.2-6.7 |
| | 398 | | | | | | | 147 | | | | | 5.6-7.0 |

Dimensions in mm



Drive selection

AC planetary geared motors (inverter-optimised)

Selection table Type SPL81-□GVCR-056N22

| Motor type | P _N W | 100 Hz | | | i | Selection (tick as required) |
|---------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| SDSGA□□056-22 | 240 | 754 | 2.40 | 8.34 | 3.7 | |
| | | 413 | 4.30 | 4.57 | 6.75 | |
| | | 203 | 8.30 | 7.09 | 13.73 | |
| | | 111 | 15.00 | 3.95 | 25.01 | |
| | | 80 | 21.20 | 2.82 | 34.97 | |
| | | 61 | 27.70 | 2.07 | 45.56 | |
| | | 55 | 27.80 | 4.06 | 50.89 | |
| | | 39 | 40.30 | 2.97 | 71.06 | |
| | | 28 | 56.40 | 2.03 | 99.5 | |
| | | 23 | 70.30 | 1.71 | 123.97 | |

Additional order information

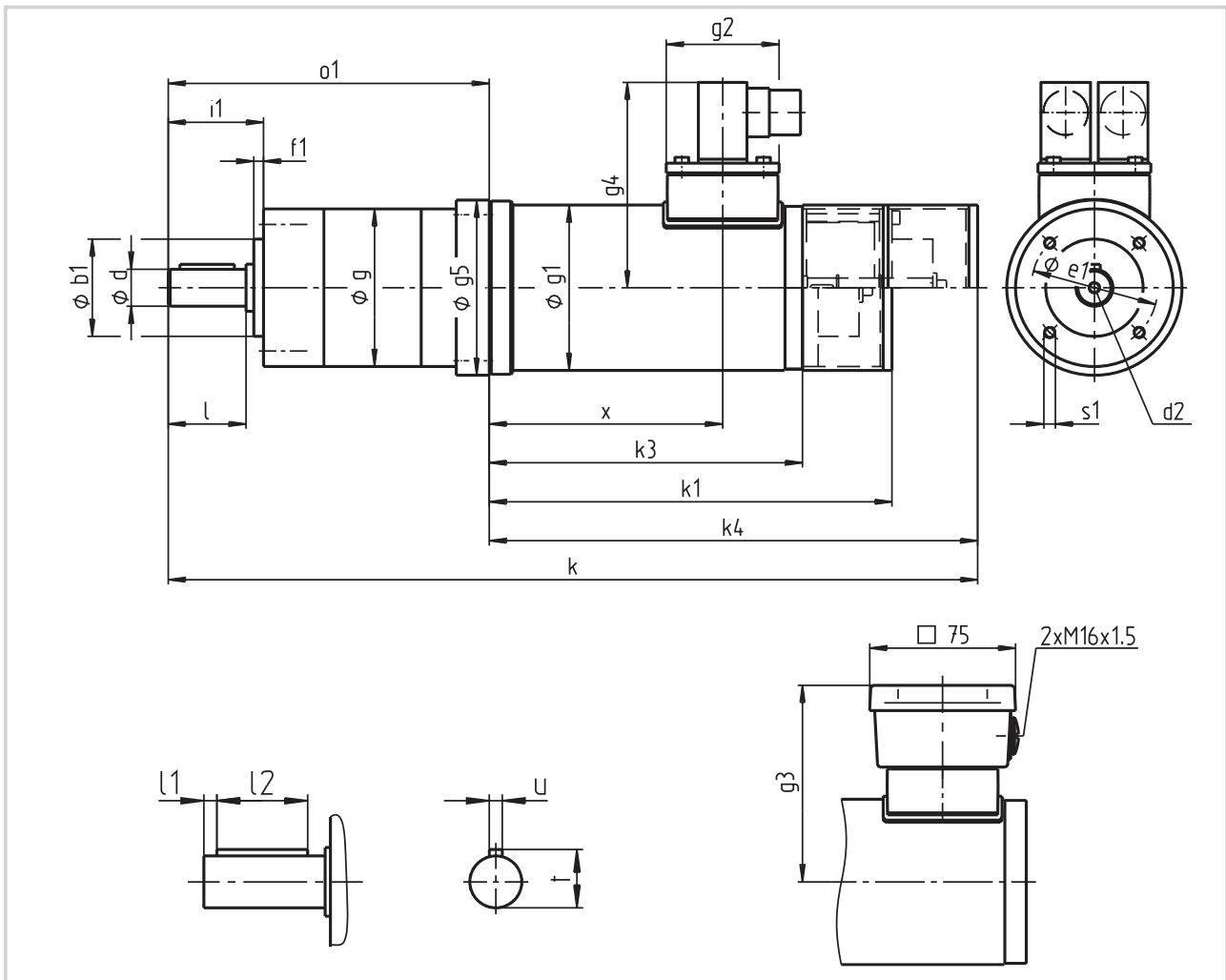
| | | | |
|-----------------------------------|--|---------------------------|---|
| Rated voltage | 390 V | connector version only | |
| | 230/400 V | terminal box version only | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Motor protection | KTY | connector version only | |
| | Thermal contact 'NC contact' | terminal box version only | |
| Electrical connection | Connector | | |
| | Terminal box | | |
| B-side design | XX=no built-on accessories | terminal box version only | |
| | RS=with resolver | connector version only | |
| | BR=with spring-applied brake | terminal box version only | |
| | RS=with incremental encoder | connector version only | |
| | BS=with spring-applied brake and resolver | connector version only | |
| | BI=with spring-applied brake and incremental encoder | connector version only | |
| Brake supply voltage | 24 V DC | | |
| | 230 V AC with bridge rectifier | terminal box version only | |
| Position of electrical connection | | | 2 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SPL81-□GVCR-056N22



| Geared motor | Ratio i | b ₁ j7 | d h7 | d ₂ | e ₁ | f ₁ | g | g ₁ | g ₃ | i ₁ |
|--------------------|------------|----------------------|---------|----------------|----------------|----------------|----|----------------|----------------|----------------|
| SPL81-□GVCR-056N22 | 3.7 | 50 | 19 | M6 | 65 | 5 | 81 | 85 | 151 | 49 |
| | 14 ... 46 | | | | | | | | | |
| | 51...124 | | | | | | | | | |

| Geared motor | k ₁ | k ₂ | k ₃ | l | l ₁ | l ₂ | s ₁ | t | u | Weight approx. kg |
|--------------------|----------------|----------------|----------------|----|----------------|----------------|----------------|------|---|----------------------|
| SPL81-□GVCR-056N22 | 351 | 395 | 144 | 40 | 6 | 28 | M6x12 | 21.5 | 6 | 7.6 |
| | 372 | 416 | 165 | | | | | | | 8.3 |
| | 394 | 438 | 187 | | | | | | | 9.0 |

Dimensions in mm



Drive selection

AC planetary geared motors (inverter-optimised)

Selection table Type SPL81-□GVCR-063N22

| Motor type | P _N W | 100 Hz | | | i | Selection (tick as required) |
|---------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| SDSGA□□063-22 | 400 | 757 | 4.00 | 5.01 | 3.7 | |
| | | 414 | 7.30 | 2.74 | 6.75 | |
| | | 204 | 13.90 | 4.32 | 13.73 | |
| | | 112 | 25.30 | 2.37 | 25.01 | |
| | | 80 | 35.40 | 1.69 | 34.97 | |
| | | 61 | 46.00 | 1.30 | 45.56 | |
| | | 55 | 48.00 | 2.50 | 50.89 | |
| | | 39 | 67.20 | 1.78 | 71.06 | |
| | | 28 | 94.00 | 1.28 | 99.5 | |
| | | 23 | 117.20 | 1.02 | 123.97 | |

Additional order information

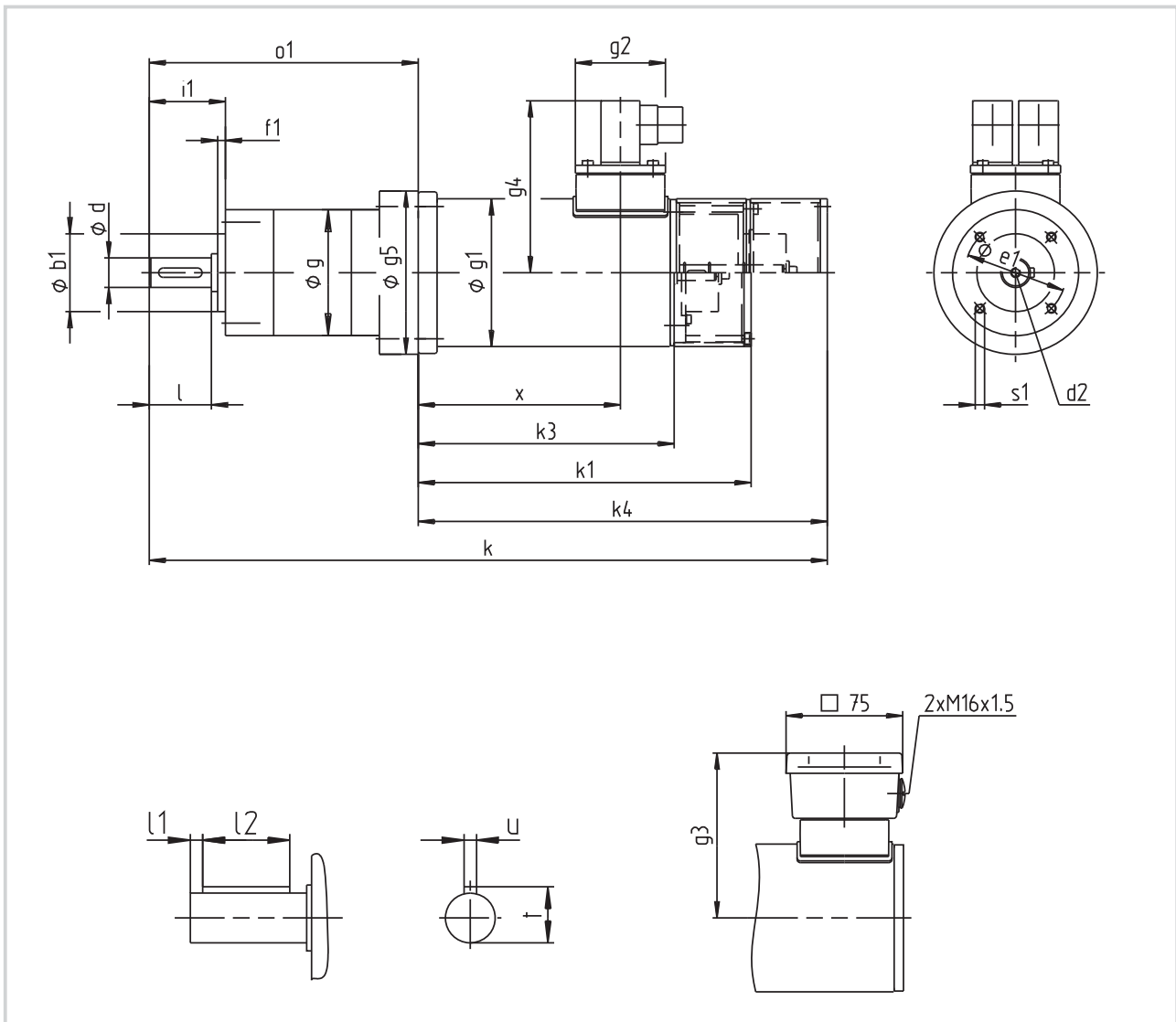
| | | | |
|-----------------------------------|--|---------------------------|---|
| Rated voltage | 390 V | connector version only | |
| | 230/400 V | terminal box version only | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Motor protection | KTY | connector version only | |
| | Thermal contact 'NC contact' | terminal box version only | |
| Electrical connection | Connector | | |
| | Terminal box | | |
| B-side design | XX=no built-on accessories | terminal box version only | |
| | RS=with resolver | connector version only | |
| | BR=with spring-applied brake | terminal box version only | |
| | RS=with incremental encoder | connector version only | |
| | BS=with spring-applied brake and resolver | connector version only | |
| | BI=with spring-applied brake and incremental encoder | connector version only | |
| Brake supply voltage | 24 V DC | | |
| | 230 V AC with bridge rectifier | terminal box version only | |
| Position of electrical connection | | | 2 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SPL81-□GVCR-063N22



| Geared motor | Ratio i | b ₁ j7 | d h7 | d ₂ | e ₁ | f ₁ | g | g ₁ | g ₂ | g ₃ | g ₄ | g ₅ | i ₁ |
|--------------------|------------|----------------------|---------|----------------|----------------|----------------|----|----------------|----------------|----------------|----------------|----------------|----------------|
| SPL81-□GVCR-063N22 | 3.7; 6.7 | 50 | 19 | M6 | 65 | 5 | 81 | 95 | 58 | 106 | 111 | 105 | 49 |
| | 14 ... 46 | | | | | | | | | | | | |
| | 51...169 | | | | | | | | | | | | |

| Geared motor | k | k ₁ | k ₃ | k ₄ | l | l ₁ | l ₂ | o ₁ | s ₁ | t | u | x | Weight approx. kg |
|--------------------|-----|----------------|----------------|----------------|----|----------------|----------------|----------------|----------------|------|---|-----|----------------------|
| SPL81-□GVCR-063N22 | 414 | 214 | 168 | 263 | 40 | 6 | 28 | 151 | M6x12 | 21.5 | 6 | 130 | 7.2-8.4 |
| | 436 | | | | | | | 173 | | | | | 7.9-9.0 |
| | 458 | | | | | | | 195 | | | | | 8.6-9.8 |

Dimensions in mm



Drive selection

AC planetary geared motors (inverter-optimised)

Selection table Type SPL81-□GVCR-063N32

| Motor type | P _N W | 100 Hz | | | i | Selection (tick as required) |
|---------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| SDSGA□□063-32 | 600 | 757 | 5.62 | 3.56 | 3.7 | |
| | | 414 | 10.20 | 1.95 | 6.75 | |
| | | 204 | 19.60 | 3.07 | 13.73 | |
| | | 112 | 35.60 | 1.68 | 25.01 | |
| | | 80 | 49.80 | 1.2 | 34.97 | |
| | | 61 | 60.00 | 0.92 | 45.56 | |
| | | 55 | 67.70 | 1.77 | 50.89 | |
| | | 39 | 94.60 | 1.27 | 71.06 | |
| | | 28 | 120.00 | 0.91 | 99.5 | |
| | | 23 | 120.00 | 0.73 | 123.97 | |

Additional order information

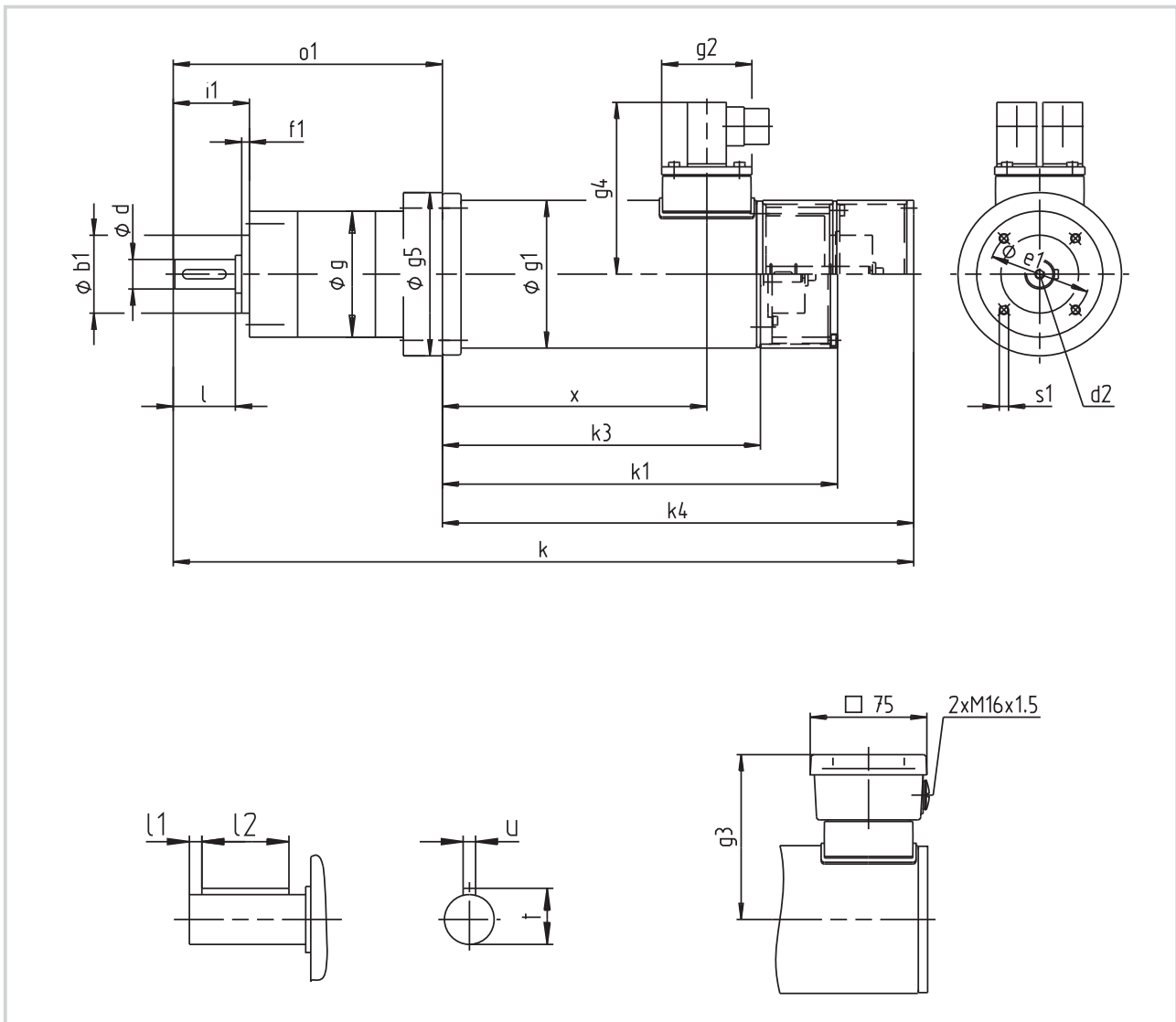
| | | | |
|-----------------------------------|--|---------------------------|---|
| Rated voltage | 390 V | connector version only | |
| | 230/400 V | terminal box version only | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Motor protection | KTY | connector version only | |
| | Thermal contact 'NC contact' | terminal box version only | |
| Electrical connection | Connector | | |
| | Terminal box | | |
| B-side design | XX=no built-on accessories | terminal box version only | |
| | RS=with resolver | connector version only | |
| | BR=with spring-applied brake | terminal box version only | |
| | RS=with incremental encoder | connector version only | |
| | BS=with spring-applied brake and resolver | connector version only | |
| | BI=with spring-applied brake and incremental encoder | connector version only | |
| Brake supply voltage | 24 V DC | | |
| | 230 V AC with bridge rectifier | terminal box version only | |
| Position of electrical connection | | | 2 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SPL81-□GVCR-063N32



| Geared motor | Ratio i | b ₁ j7 | d h7 | d ₂ | e ₁ | f ₁ | g | g ₁ | g ₂ | g ₃ | g ₄ | g ₅ | i ₁ |
|--------------------|------------|----------------------|---------|----------------|----------------|----------------|----|----------------|----------------|----------------|----------------|----------------|----------------|
| SPL81-□GVCR-063N32 | 3.7; 6.7 | 50 | 19 | M6 | 65 | 5 | 81 | 95 | 58 | 106 | 111 | 105 | 49 |
| | 14 ... 46 | | | | | | | | | | | | |
| | 51...169 | | | | | | | | | | | | |

| Geared motor | k | k ₁ | k ₃ | k ₄ | l | l ₁ | l ₂ | o ₁ | s ₁ | t | u | x | Weight approx. kg |
|--------------------|-----|----------------|----------------|----------------|----|----------------|----------------|----------------|----------------|------|---|-----|----------------------|
| SPL81-□GVCR-063N32 | 454 | 254 | 208 | 303 | 40 | 6 | 28 | 151 | M6x12 | 21.5 | 6 | 170 | 8.6-9.8 |
| | 476 | | | | | | | 9.3-10.5 | | | | | |
| | 498 | | | | | | | 10.0-11.2 | | | | | |

Dimensions in mm



Drive selection

AC planetary geared motors (inverter-optimised)

Selection table Type SPL12-□GVCR-063N22

| Motor type | P _N W | 100 Hz | | | i | Selection (tick as required) |
|---------------|---------------------|-----------------------|----------------------|-------|--------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| SDSGA□□063-22 | 400 | 757 | 4.00 | 12.51 | 3.7 | |
| | | 415 | 7.29 | 6.86 | 6.75 | |
| | | 204 | 13.90 | 10.79 | 13.73 | |
| | | 112 | 25.32 | 5.92 | 25.01 | |
| | | 61 | 46.03 | 3.25 | 45.56 | |
| | | 55 | 51.53 | 5.82 | 50.89 | |
| | | 30 | 87.60 | 3.42 | 92.7 | |
| | | 17 | 159.55 | 1.88 | 168.84 | |

Additional order information

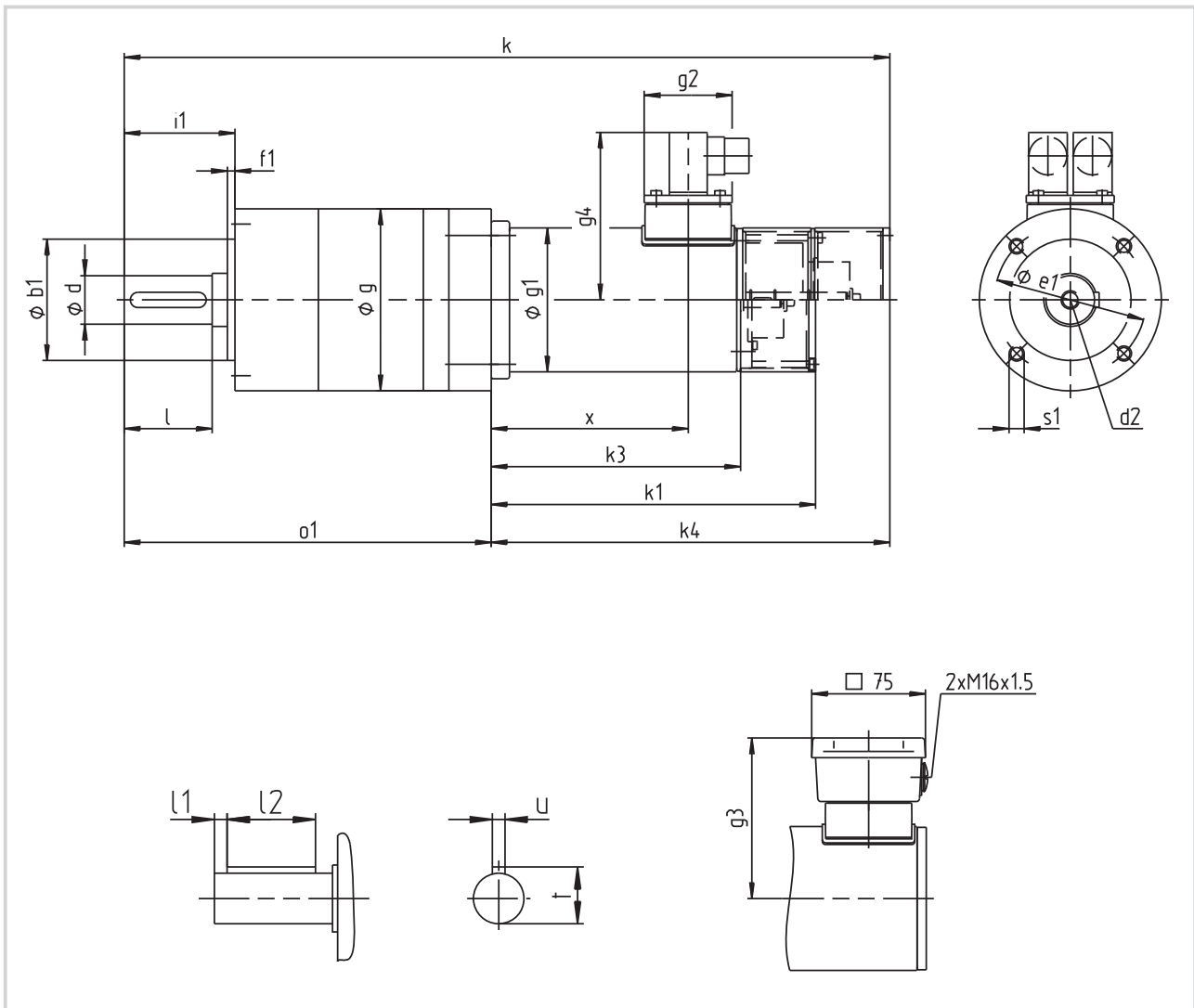
| | | | |
|-----------------------------------|--|---------------------------|---|
| Rated voltage | 390 V | connector version only | |
| | 230/400 V | terminal box version only | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Motor protection | KTY | connector version only | |
| | Thermal contact 'NC contact' | terminal box version only | |
| Electrical connection | Connector | | |
| | Terminal box | | |
| B-side design | XX=no built-on accessories | terminal box version only | |
| | RS=with resolver | connector version only | |
| | BR=with spring-applied brake | terminal box version only | |
| | RS=with incremental encoder | connector version only | |
| | BS=with spring-applied brake and resolver | connector version only | |
| | BI=with spring-applied brake and incremental encoder | connector version only | |
| | BV=for brake attachment | terminal box version only | |
| Brake supply voltage | 24 V DC | | |
| | 230 V AC with bridge rectifier | terminal box version only | |
| Position of electrical connection | | | 2 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SPL12-□GVCR-063N22



| Geared motor | Ratio i | b_1 j7 | d k6 | d_2 | e_1 | f_1 | g | g_1 | g_2 | g_3 | g_4 | i_1 |
|--------------------|------------|-------------|-----------|-------|-------|-------|-----|-------|-------|-------|-------|-------|
| SPL12-□GVCR-063N22 | 3.7; 6.7 | 80 | 32 | M12 | 100 | 5 | 120 | 95 | 58 | 106 | 111 | 73 |
| | 14 ... 46 | | | | | | | | | | | |
| | 51...169 | | | | | | | | | | | |

| Geared motor | k | k_1 | k_3 | k_4 | o_1 | l | l_1 | l_2 | s_1 | t | u | x | Weight approx. kg |
|--------------------|-----|-------|-------|-------|-------|----|-------|-------|--------|----|----|-----|----------------------|
| SPL12-□GVCR-063N22 | 471 | 214 | 168 | 263 | 208 | 58 | 4 | 50 | M10x22 | 35 | 10 | 130 | 11.0-12.2 |
| | 505 | | | | 242 | | | | | | | | 13.4-14.6 |
| | 539 | | | | 276 | | | | | | | | 15.8-17.0 |

Dimensions in mm



Drive selection

AC planetary geared motors (inverter-optimised)

Selection table Type SPL12-□GVCR-063N32

| Motor type | P _N W | 100 Hz | | | i | Selection (tick as required) |
|---------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| SDSGA□□063-32 | 600 | 757 | 5.62 | 8.89 | 3.7 | |
| | | 415 | 10.26 | 4.87 | 6.75 | |
| | | 204 | 19.57 | 7.67 | 13.73 | |
| | | 112 | 35.64 | 4.21 | 25.01 | |
| | | 61 | 64.92 | 2.31 | 45.56 | |
| | | 55 | 72.52 | 4.04 | 50.89 | |
| | | 30 | 123.29 | 2.43 | 92.7 | |
| | | 17 | 224.56 | 1.34 | 168.84 | |

Additional order information

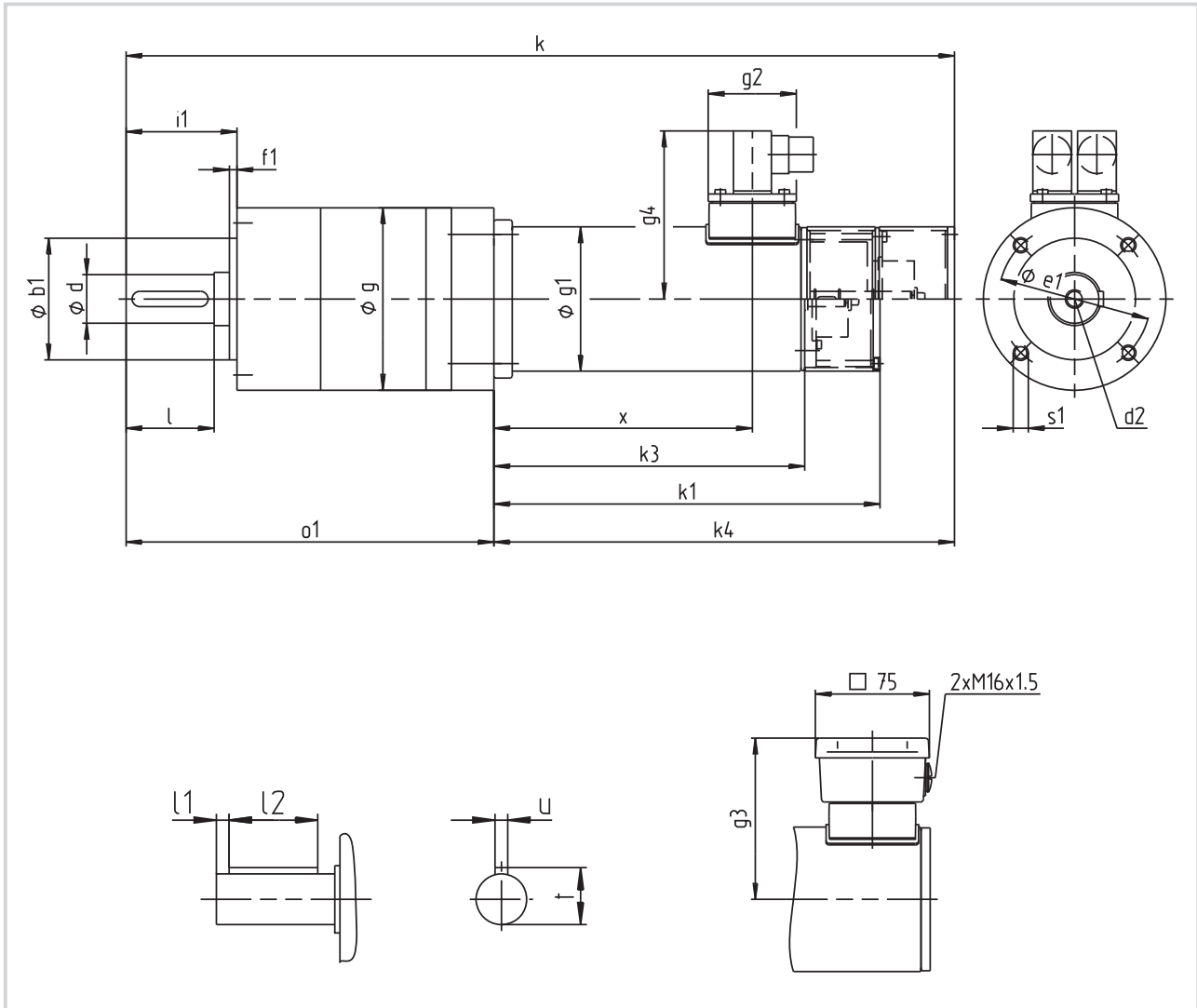
| | | | |
|-----------------------------------|--|---------------------------|---|
| Rated voltage | 390 V | connector version only | |
| | 230/400 V | terminal box version only | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Motor protection | KTY | connector version only | |
| | Thermal contact 'NC contact' | terminal box version only | |
| Electrical connection | Connector | | |
| | Terminal box | | |
| B-side design | XX=no built-on accessories | terminal box version only | |
| | RS=with resolver | connector version only | |
| | BR=with spring-applied brake | terminal box version only | |
| | RS=with incremental encoder | connector version only | |
| | BS=with spring-applied brake and resolver | connector version only | |
| | BI=with spring-applied brake and incremental encoder | connector version only | |
| | BV=for brake attachment | terminal box version only | |
| Brake supply voltage | 24 V DC | | |
| | 230 V AC with bridge rectifier | terminal box version only | |
| Position of electrical connection | | | 2 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SPL12-□GVCR-063N32



| Geared motor | Ratio i | b ₁ j7 | d k6 | d ₂ | e ₁ | f ₁ | g | g ₁ | g ₂ | g ₃ | g ₄ | i ₁ |
|--------------------|------------|----------------------|---------|----------------|----------------|----------------|-----|----------------|----------------|----------------|----------------|----------------|
| SPL12-□GVCR-063N32 | 3.7; 6.7 | 80 | 32 | M12 | 100 | 5 | 120 | 95 | 58 | 106 | 111 | 73 |
| | 14 ... 46 | | | | | | | | | | | |
| | 51...169 | | | | | | | | | | | |

| Geared motor | k | k ₁ | k ₃ | k ₄ | o ₁ | l | l ₁ | l ₂ | s ₁ | t | u | x | Weight approx. kg |
|--------------------|-----|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----|----|-----|----------------------|
| SPL12-□GVCR-063N32 | 511 | 254 | 208 | 303 | 208 | 58 | 4 | 50 | M10x22 | 35 | 10 | 170 | 12.4-13.6 |
| | 545 | | | | 242 | | | | | | | | 14.8-16.0 |
| | 579 | | | | 276 | | | | | | | | 17.2-18.4 |

Dimensions in mm



Drive selection

AC helical geared motors (inverter-optimised)

Selection table Type GST03-2GV□□-056C22

| Motor type | P _N W | 100 Hz | | | i | Selection (tick as required) |
|---------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| SDSGA□□056-22 | 240 | 817 | 2.68 | 5.45 | 3.413 | |
| | | 639 | 3.43 | 4.97 | 4.368 | |
| | | 400 | 5.49 | 4.44 | 6.982 | |
| | | 356 | 6.06 | 4.22 | 7.840 | |
| | | 312 | 7.02 | 3.82 | 8.935 | |
| | | 278 | 7.88 | 3.61 | 10.033 | |
| | | 244 | 8.98 | 3.06 | 11.429 | |
| | | 217 | 10.08 | 3.06 | 12.833 | |
| | | 188 | 11.66 | 2.72 | 14.836 | |
| | | 167 | 13.09 | 2.90 | 16.660 | |
| | | 147 | 14.94 | 2.60 | 19.013 | |
| | | 131 | 16.77 | 2.43 | 21.350 | |
| | | 113 | 19.32 | 2.05 | 24.595 | |
| | | 101 | 21.70 | 1.92 | 27.618 | |
| | | 87 | 25.04 | 1.66 | 32.000 | |
| | | 78 | 28.23 | 1.47 | 35.933 | |
| | | 67 | 32.57 | 1.38 | 41.455 | |
| | | 60 | 36.57 | 1.23 | 46.550 | |
| 53 | 41.57 | 1.08 | 52.909 | | | |
| 47 | 45.00 | 0.96 | 59.413 | | | |

Additional order information

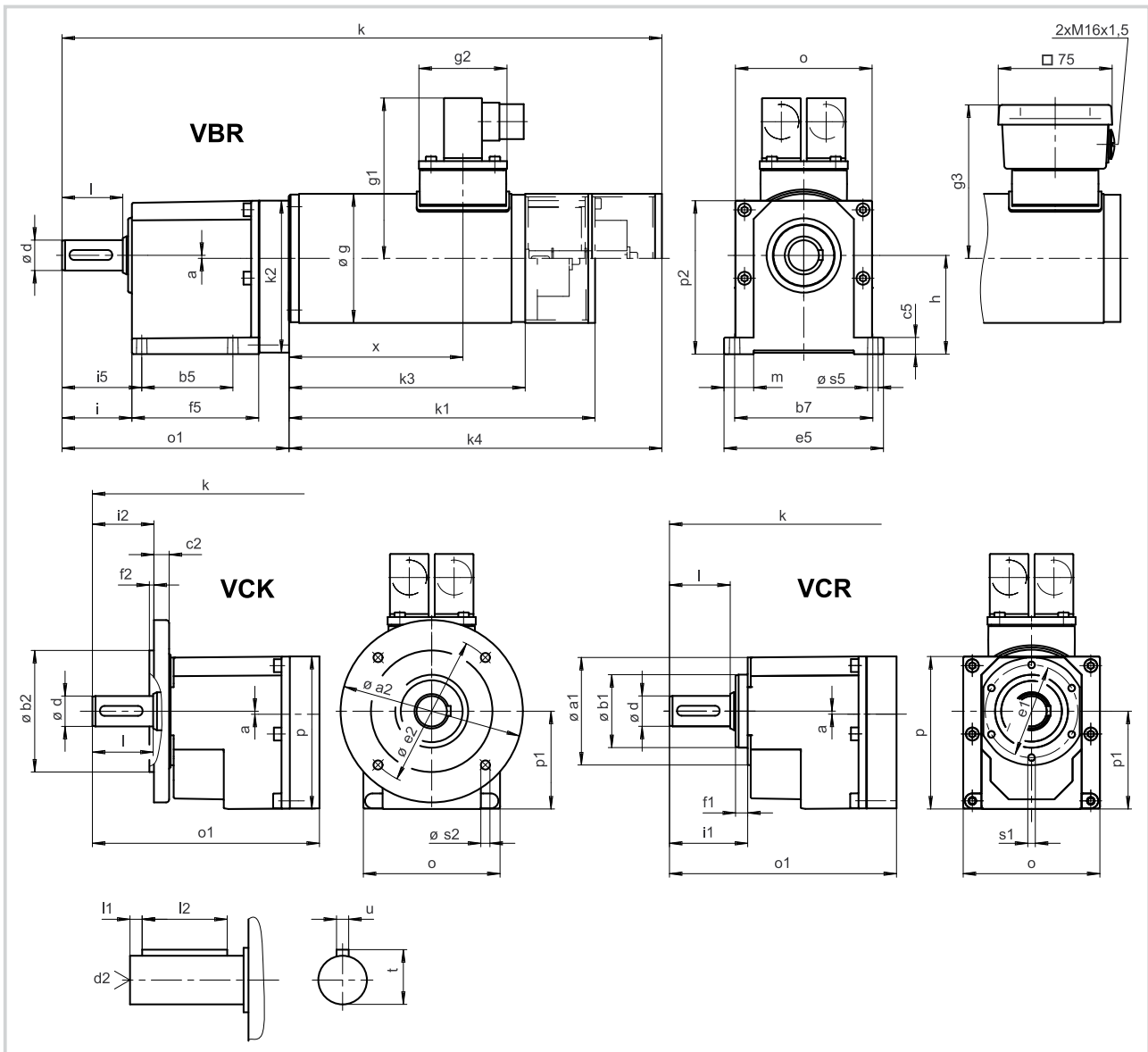
| | | | |
|-----------------------------------|--|---------------------------|-------------|
| Rated voltage | 390 V | connector version only | |
| | 230/400 V | terminal box version only | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Motor protection | KTY | connector version only | |
| | Thermal contact 'NC contact' | terminal box version only | |
| Electrical connection | Connector | | |
| | Terminal box | | |
| B-side design | XX=no built-on accessories | terminal box version only | |
| | RS=with resolver | connector version only | |
| | BR=with spring-applied brake | terminal box version only | |
| | RS=with incremental encoder | connector version only | |
| | BS=with spring-applied brake and resolver | connector version only | |
| | BI=with spring-applied brake and incremental encoder | connector version only | |
| Brake supply voltage | 24 V DC | | |
| | 230 V AC with bridge rectifier | terminal box version only | |
| Gearbox type | VBR | | |
| | VCR | | |
| | VCK | | |
| Output-side flange diameter | D = 120 mm | | |
| | D = 140 mm | | |
| | D = 160 mm | | |
| Mounting position | | | A B C D E F |
| Position of electrical connection | | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type GST03-2GV□□-056C22



| Geared motor | a | a ₁ | a ₂ | b ₁ h7 | b ₂ j7 | b ₅ | b ₇ | c ₂ | c ₅ | d | d ₂ | e ₁ | e ₂ | e ₅ | f ₁ | f ₂ | f ₅ | g | g ₁ | g ₂ | g ₃ | h | i | i ₁ | i ₂ | i ₅ | | | |
|--------------------|---|----------------|----------------|----------------------|----------------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----|----|----------------|----------------|----------------|-----|-----|-----|
| GST03-2GV□□-056C22 | 2 | 71 | 120 | 80 | 60 | 91 | 10 | 11 | 20 | M6 | 61 | 100 | 115 | 105 | 8 | 3 | 84 | 85 | 106 | 58 | 101 | 65 | 46 | 51 | 40 | 52 | | | |
| | | | 140 | 95 | | | | | | | | | | | | | | | | | | | | | | | 110 | 130 | 3.5 |
| | | | 160 | 110 | | | | | | | | | | | | | | | | | | | | | | | | | |

| Geared motor | k | k ₁ | k ₂ | k ₃ | k ₄ | l | l ₁ | l ₂ | m | o | o ₁ | p | p ₁ | p ₂ | s ₁ | s ₂ | s ₅ | t | u | x | Weight approx. kg |
|--------------------|-----|----------------|----------------|----------------|----------------|----|----------------|----------------|----|----|----------------|-----|----------------|----------------|----------------|----------------|----------------|------|---|-------|-------------------|
| GST03-2GV□□-056C22 | 395 | 201.5 | 100 | 157.5 | 245.5 | 40 | 5 | 28 | 20 | 90 | 149.5 | 100 | 64 | 101 | M5 | 7 | 6.6 | 22.5 | 6 | 114.5 | 7.5-9.0 |
| | | | | | | | | | | | | | | | | 9 | | | | | |

Dimensions in mm



Drive selection

AC helical geared motors (inverter-optimised)

Selection table Type GST04-1GV□□-056C22

| Motor type | P _N W | 100 Hz | | | i | Selection (tick as required) |
|---------------|---------------------|-----------------------|----------------------|------|-------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| SDSGA□□056-22 | 240 | 634 | 2.67 | 5.70 | 4.400 | |
| | | 492 | 3.44 | 4.42 | 5.667 | |
| | | 388 | 4.37 | 3.49 | 7.082 | |
| | | 310 | 5.47 | 2.59 | 9.000 | |

Additional order information

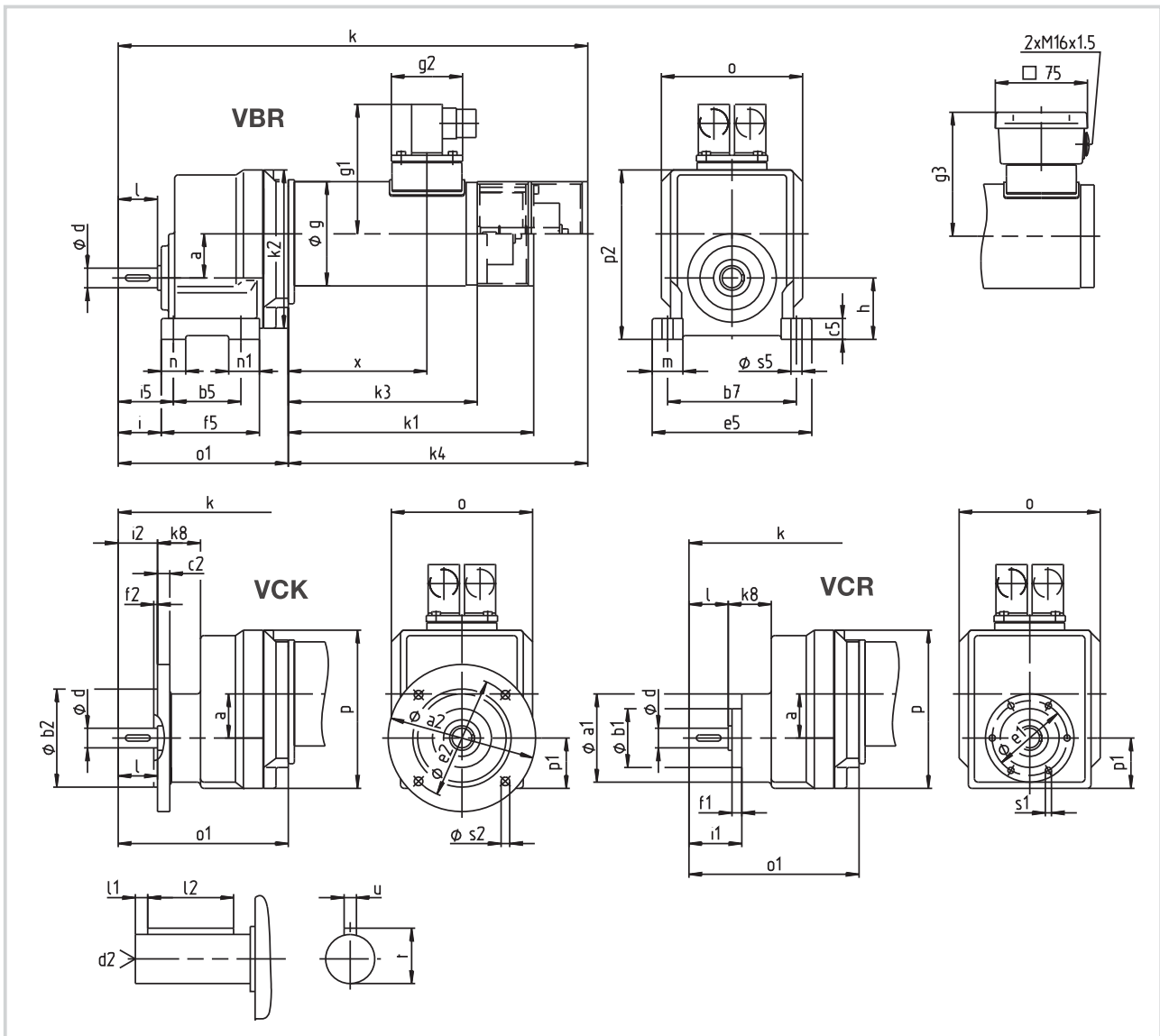
| | | | |
|-----------------------------------|--|---------------------------|--|
| Rated voltage | 390 V | connector version only | |
| | 230/400 V | terminal box version only | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Motor protection | KTY | connector version only | |
| | Thermal contact 'NC contact' | terminal box version only | |
| Electrical connection | Connector | | |
| | Terminal box | | |
| B-side design | XX=no built-on accessories | terminal box version only | |
| | RS=with resolver | connector version only | |
| | BR=with spring-applied brake | terminal box version only | |
| | RS=with incremental encoder | connector version only | |
| | BS=with spring-applied brake and resolver | connector version only | |
| | BI=with spring-applied brake and incremental encoder | connector version only | |
| Brake supply voltage | 24 V DC | | |
| | 230 V AC with bridge rectifier | terminal box version only | |
| Gearbox type | VBR | | |
| | VCR | | |
| | VCK | | |
| Output-side flange diameter | D = 120 mm | | |
| | D = 140 mm | | |
| | D = 160 mm | | |
| Mounting position | | A B C D E F | |
| Position of electrical connection | | 2 3 4 5 | |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type GST04-1GV□□-056C22



| Geared motor | a | a ₁ | a ₂ | b ₁ h ₇ | b ₂ j ₇ | b ₅ | b ₇ | c ₂ | c ₅ | d | d ₂ | e ₁ | e ₂ | e ₅ | f ₁ | f ₂ | f ₅ | g | g ₁ | g ₂ | g ₃ | h | i | i ₁ | i ₂ | i ₅ |
|--------------------|----|----------------|----------------|----------------------------------|----------------------------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----|----|----------------|----------------|----------------|
| GST04-1GV□□-056C22 | 36 | 72 | 120 | 80 | 55 | 105 | 10 | 17 | 16 | M5 | 61 | 100 | 115 | 130 | 8 | 3 | 80 | 85 | 106 | 58 | 101 | 50 | 35 | 43 | 32 | 45 |
| | | | 140 | 95 | | | | | | | | 115 | | | | | | | | | | | | | | |
| | | | 160 | 110 | | | | | | | | 130 | | | | | | | | | | | | | | |

| Geared motor | k | k ₁ | k ₂ | k ₃ | k ₄ | k ₈ | l | l ₁ | l ₂ | m | n | n ₁ | o | o ₁ | p | p ₁ | p ₂ | s ₁ | s ₂ | s ₅ | t | u | x | Weight approx. kg | |
|--------------------|-------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----|----|----------------|-----|----------------|-----|----------------|----------------|----------------|----------------|----------------|---|----|---|----------------------|---------|
| GST04-1GV□□-056C22 | 382.5 | 200 | 129 | 156 | 244 | 35 | 32 | 6 | 20 | 25 | 20 | 25 | 115 | 138.5 | 129 | 41 | 138 | M5 | 7 | 9 | 9 | 18 | 5 | 113 | 7.5-9.0 |
| | | | | | | | | | | | | | | | | | | | 9 | | | | | | |

Dimensions in mm



Drive selection

AC helical geared motors (inverter-optimised)

Selection table Type GST04-2GV□□-056C22

| Motor type | P _N W | 100 Hz | | | i | Selection (tick as required) |
|---------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| SDSGA□□056-22 | 240 | 144 | 13.69 | 3.70 | 19.360 | |
| | | 127 | 15.56 | 2.88 | 22.000 | |
| | | 112 | 17.63 | 2.90 | 24.933 | |
| | | 98 | 20.04 | 2.28 | 28.333 | |
| | | 88 | 22.35 | 2.33 | 31.600 | |
| | | 78 | 25.39 | 1.82 | 35.909 | |
| | | 70 | 28.00 | 1.88 | 39.600 | |
| | | 62 | 35.36 | 1.48 | 45.000 | |

Additional order information

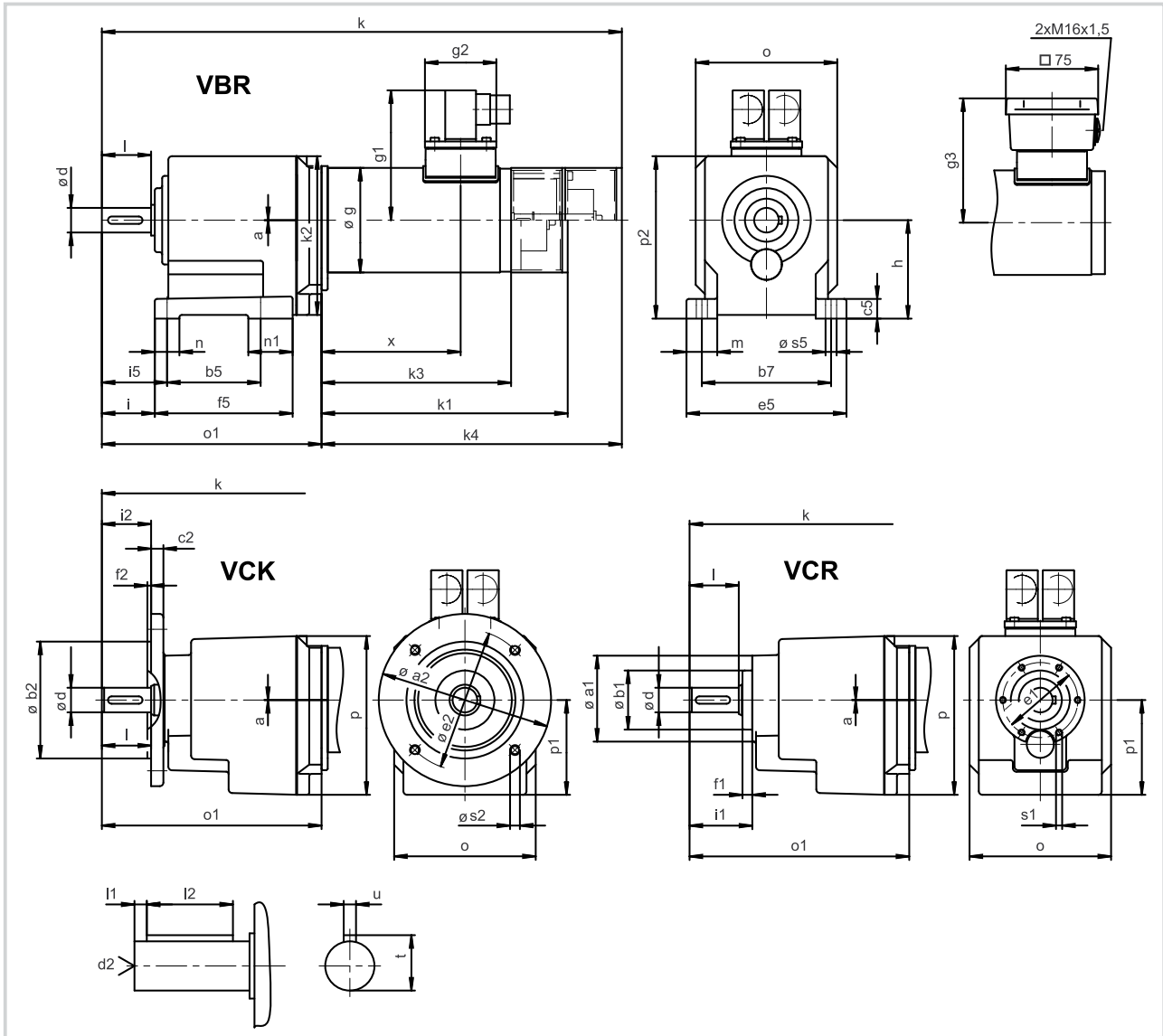
| | | | |
|-----------------------------------|--|---------------------------|-------------|
| Rated voltage | 390 V | connector version only | |
| | 230/400 V | terminal box version only | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Motor protection | KTY | connector version only | |
| | Thermal contact 'NC contact' | terminal box version only | |
| Electrical connection | Connector | | |
| | Terminal box | | |
| B-side design | XX=no built-on accessories | terminal box version only | |
| | RS=with resolver | connector version only | |
| | BR=with spring-applied brake | terminal box version only | |
| | RS=with incremental encoder | connector version only | |
| | BS=with spring-applied brake and resolver | connector version only | |
| | BI=with spring-applied brake and incremental encoder | connector version only | |
| | BV=for brake attachment | terminal box version only | |
| Brake supply voltage | 24 V DC | | |
| | 230 V AC with bridge rectifier | terminal box version only | |
| Gearbox type | VBR | | |
| | VCR | | |
| | VCK | | |
| Output-side flange diameter | D = 120 mm | | |
| | D = 140 mm | | |
| | D = 160 mm | | |
| Mounting position | | | A B C D E F |
| Position of electrical connection | | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type GST04-2GV□□-056C22



| Geared motor | a | a ₁ | a ₂ | b ₁ h7 | b ₂ j7 | b ₅ | b ₇ | c ₂ | c ₅ | d | d ₂ | e ₁ | e ₂ | e ₅ | f ₁ | f ₂ | f ₅ | g | g ₁ | g ₂ | g ₃ | h | i | i ₁ | i ₂ | i ₅ | | |
|--------------------|---|----------------|----------------|----------------------|----------------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----|----|----------------|----------------|----------------|-----|-----|
| GST04-2GV□□-056C22 | 0 | 72 | 120 | 80 | 76 | 105 | 10 | 16 | 20 | M6 | 61 | 100 | 115 | 130 | 8 | 3 | 112 | 85 | 106 | 58 | 101 | 80 | 43 | 51 | 40 | 53 | | |
| | | | 140 | 95 | | | | | | | | | | | | | | | | | | | | | | | 115 | 3.5 |
| | | | 160 | 110 | | | | | | | | | | | | | | | | | | | | | | | 130 | |

| Geared motor | k | k ₁ | k ₂ | k ₃ | k ₄ | l | l ₁ | l ₂ | m | n | n ₁ | o | o ₁ | p | p ₁ | p ₂ | s ₁ | s ₂ | s ₅ | t | u | x | Weight approx. kg |
|--------------------|-------|----------------|----------------|----------------|----------------|----|----------------|----------------|----|----|----------------|-----|----------------|-----|----------------|----------------|----------------|----------------|----------------|------|---|-----|-------------------|
| GST04-2GV□□-056C22 | 422.5 | 200 | 129 | 156 | 244 | 40 | 5 | 28 | 25 | 20 | 36 | 115 | 178.5 | 129 | 77 | 132 | M5 | 7 | 9 | 22.5 | 6 | 113 | 7.5-9.0 |
| | | | | | | | | | | | | | | | | | | 9 | | | | | |

Dimensions in mm



Drive selection

AC helical geared motors (inverter-optimised)

Selection table Type GST05-1GV□□-056C22

| Motor type | P _N W | 100 Hz | | | i | Selection (tick as required) |
|---------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| SDSGA□□056-22 | 240 | 492 | 3.44 | 7.85 | 5.667 | |
| | | 380 | 4.46 | 6.39 | 7.333 | |
| | | 313 | 5.41 | 4.74 | 8.900 | |
| | | 245 | 6.91 | 2.71 | 11.375 | |

Additional order information

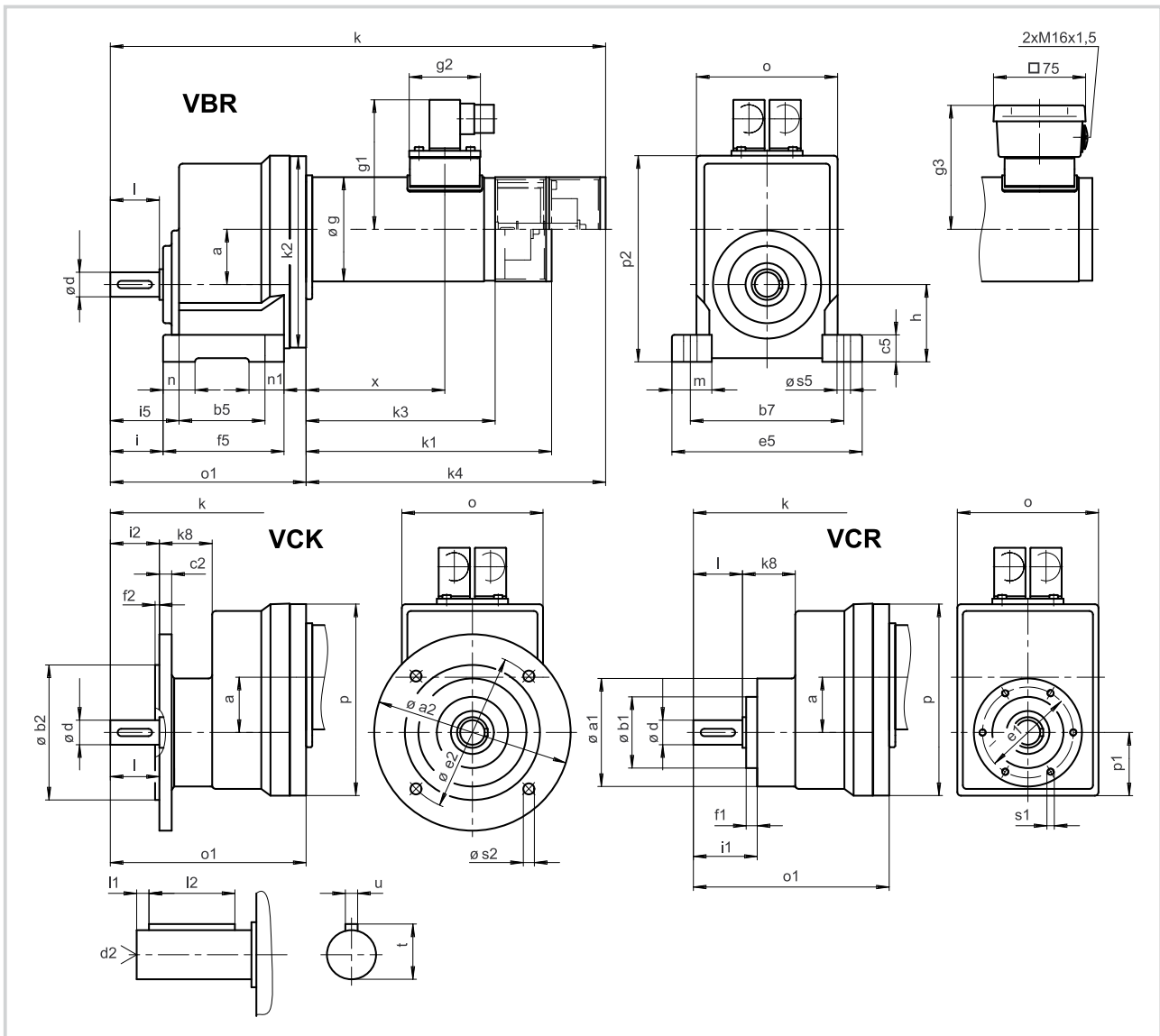
| | | | |
|-----------------------------------|--|---------------------------|-------------|
| Rated voltage | 390 V | connector version only | |
| | 230/400 V | terminal box version only | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Motor protection | KTY | connector version only | |
| | Thermal contact 'NC contact' | terminal box version only | |
| Electrical connection | Connector | | |
| | Terminal box | | |
| B-side design | XX=no built-on accessories | terminal box version only | |
| | RS=with resolver | connector version only | |
| | BR=with spring-applied brake | terminal box version only | |
| | RS=with incremental encoder | connector version only | |
| | BS=with spring-applied brake and resolver | connector version only | |
| | BI=with spring-applied brake and incremental encoder | connector version only | |
| | BV=for brake attachment | terminal box version only | |
| Brake supply voltage | 24 V DC | | |
| | 230 V AC with bridge rectifier | terminal box version only | |
| Gearbox type | VBR | | |
| | VCR | | |
| | VCK | | |
| Output-side flange diameter | D = 120 mm | | |
| | D = 140 mm | | |
| | D = 160 mm | | |
| | D = 200 mm | | |
| Mounting position | | | A B C D E F |
| Position of electrical connection | | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type GST05-1GV□□-056C22



| Geared motor | a | a ₁ | a ₂ | b ₁ h7 | b ₂ j7 | b ₅ | b ₇ | c ₂ | c ₅ | d k6 | d ₂ | e ₁ | e ₂ | e ₅ | f ₁ | f ₂ | f ₅ | g | g ₁ | g ₂ | g ₃ | h | i | i ₁ | i ₂ | i ₅ |
|--------------------|----|----------------|----------------|----------------------|----------------------|----------------|----------------|----------------|----------------|---------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----|----|----------------|----------------|----------------|
| GST05-1GV□□-056C22 | 45 | 88 | 120 | 80 | 58 | 70 | 125 | 10 | 22 | 20 | M6 | 74 | 100 | 155 | 9 | 3 | 99 | 85 | 106 | 58 | 101 | 63 | 43 | 52 | 40 | 56 |
| | | | 140 | 95 | | | | | | | | | 115 | | | | | | | | | | | | | |
| | | | 160 | 110 | | | | | | | | | 130 | | | | | | | | | | | | | |
| | | | 200 | 130 | | | | | | | | | 165 | | | | | | | | | | | | | |

| Geared motor | k | k ₁ | k ₂ | k ₃ | k ₄ | k ₈ | l | l ₁ | l ₂ | m | n | n ₁ | o | o ₁ | p | p ₁ | p ₂ | s ₁ | s ₂ | s ₅ | t | u | x | Weight approx. kg | |
|--------------------|-------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----|----|----------------|-----|----------------|-----|----------------|----------------|----------------|----------------|----------------|----|------|---|----------------------|-------|
| GST05-1GV□□-056C22 | 403.5 | 200 | 156 | 156 | 244 | 43 | 40 | 6 | 28 | 33 | 26 | 29 | 115 | 159.5 | 156 | 51.5 | 168 | M6 | 7 | 9 | 11 | 22.5 | 6 | 113 | 10-12 |
| | | | | | | | | | | | | | | | | | | | 11 | | | | | | |
| | | | | | | | | | | | | | | | | | | | 11 | | | | | | |

Dimensions in mm



Drive selection

AC helical geared motors (inverter-optimised)

Selection table Type GST05-2GV□□-056C22

| Motor type | P _N W | 100 Hz | | | i | Selection (tick as required) |
|---------------|---------------------|--------------------------|----------------|--------|--------|---------------------------------|
| | | n ₂ rpm Nm | M ₂ | c | | |
| SDSGA□□056-22 | 240 | 194 | 8.91 | 7.85 | 14.356 | |
| | | 172 | 11.45 | 7.85 | 16.091 | |
| | | 112 | 17.63 | 6.61 | 24.933 | |
| | | 98 | 20.04 | 5.28 | 28.333 | |
| | | 86 | 22.82 | 5.07 | 32.267 | |
| | | 76 | 25.93 | 4.01 | 36.667 | |
| | | 71 | 27.69 | 4.29 | 39.060 | |
| | | 63 | 34.96 | 3.41 | 44.500 | |
| | | 56 | 39.32 | 2.76 | 50.050 | |
| | 49 | 44.69 | 2.68 | 56.875 | | |

Additional order information

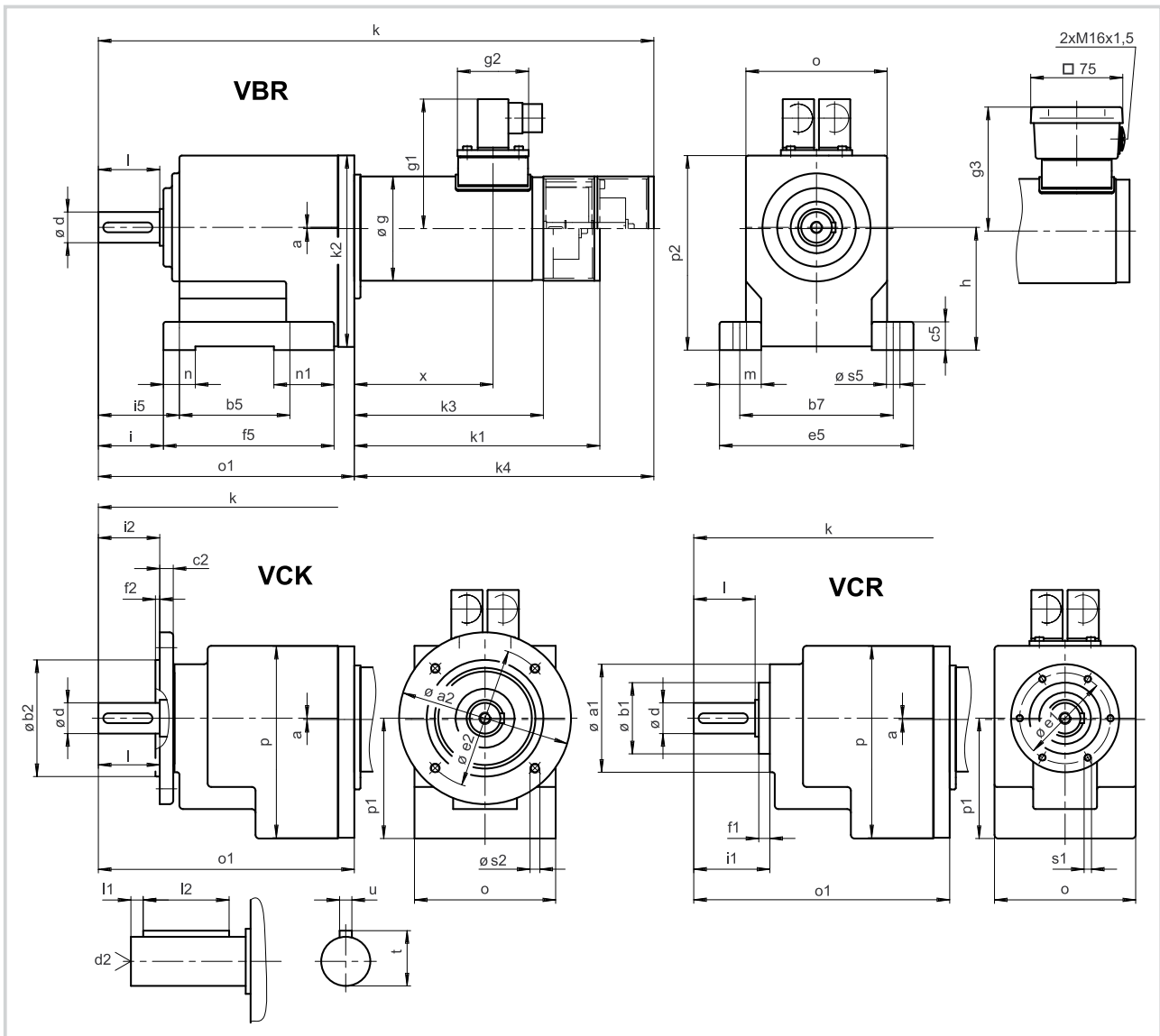
| | | | |
|-----------------------------------|--|---------------------------|-------------|
| Rated voltage | 390 V | connector version only | |
| | 230/400 V | terminal box version only | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Motor protection | KTY | connector version only | |
| | Thermal contact 'NC contact' | terminal box version only | |
| Electrical connection | Connector | | |
| | Terminal box | | |
| B-side design | XX=no built-on accessories | terminal box version only | |
| | RS=with resolver | connector version only | |
| | BR=with spring-applied brake | terminal box version only | |
| | RS=with incremental encoder | connector version only | |
| | BS=with spring-applied brake and resolver | connector version only | |
| | BI=with spring-applied brake and incremental encoder | connector version only | |
| Brake supply voltage | 24 V DC | | |
| | 230 V AC with bridge rectifier | terminal box version only | |
| Gearbox type | VBR | | |
| | VCR | | |
| | VCK | | |
| Output-side flange diameter | D = 120 mm | | |
| | D = 140 mm | | |
| | D = 160 mm | | |
| | D = 200 mm | | |
| Mounting position | | | A B C D E F |
| Position of electrical connection | | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type GST05-2GV□□-056C22



| Geared motor | a | a ₁ | a ₂ | b ₁ h7 | b ₂ j7 | b ₅ | b ₇ | c ₂ | c ₅ | d | d ₂ | e ₁ | e ₂ | e ₅ | f ₁ | f ₂ | f ₅ | g | g ₁ | g ₂ | g ₃ | h | i | i ₁ | i ₂ | i ₅ | | |
|--------------------|---|----------------|----------------|----------------------|----------------------|----------------|----------------|----------------|----------------|-----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----|----|----------------|----------------|----------------|--|-----|
| GST05-2GV□□-056C22 | 1 | 88 | 120 | 80 | 58 | 125 | 10 | 23 | 25 | M10 | 74 | 100 | 158 | 9 | 139 | 85 | 106 | 58 | 101 | 100 | 53 | 62 | 50 | 66 | | | | |
| | | | 140 | 95 | | | 11 | | | | | 115 | | | | | | | | | | | | | | | | 3 |
| | | | 160 | 110 | | | 10 | | | | | 130 | | | | | | | | | | | | | | | | 3.5 |
| | | | 200 | 130 | | | 12 | | | | | 165 | | | | | | | | | | | | | | | | |

| Geared motor | k | k ₁ | k ₂ | k ₃ | k ₄ | l | l ₁ | l ₂ | m | n | n ₁ | o | o ₁ | p | p ₁ | p ₂ | s ₁ | s ₂ | s ₅ | t | u | x | Weight approx. kg |
|--------------------|-------|----------------|----------------|----------------|----------------|----|----------------|----------------|----|----|----------------|-----|----------------|-----|----------------|----------------|----------------|----------------|----------------|----|---|-----|----------------------|
| GST05-2GV□□-056C22 | 452.5 | 200 | 156 | 156 | 244 | 50 | 4 | 40 | 30 | 26 | 49 | 115 | 208.5 | 156 | 98 | 158.5 | M6 | 7 | 11 | 28 | 8 | 113 | 14-16 |
| | | | | | | | | | | | | | | | | | | 9 | | | | | |
| | | | | | | | | | | | | | | | | | | 11 | | | | | |

Dimensions in mm



Drive selection

AC helical geared motors (inverter-optimised)

Selection table Type GST04-1GV□□-063C22

| Motor type | P _N W | 100 Hz | | | i | Selection (tick as required) |
|---------------|---------------------|-----------------------|----------------------|------|-------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| SDSGA□□063-22 | 400 | 636 | 4.46 | 3.42 | 4.400 | |
| | | 494 | 5.74 | 2.65 | 5.667 | |
| | | 390 | 7.28 | 2.09 | 7.082 | |
| | | 311 | 9.02 | 1.55 | 9.000 | |

Additional order information

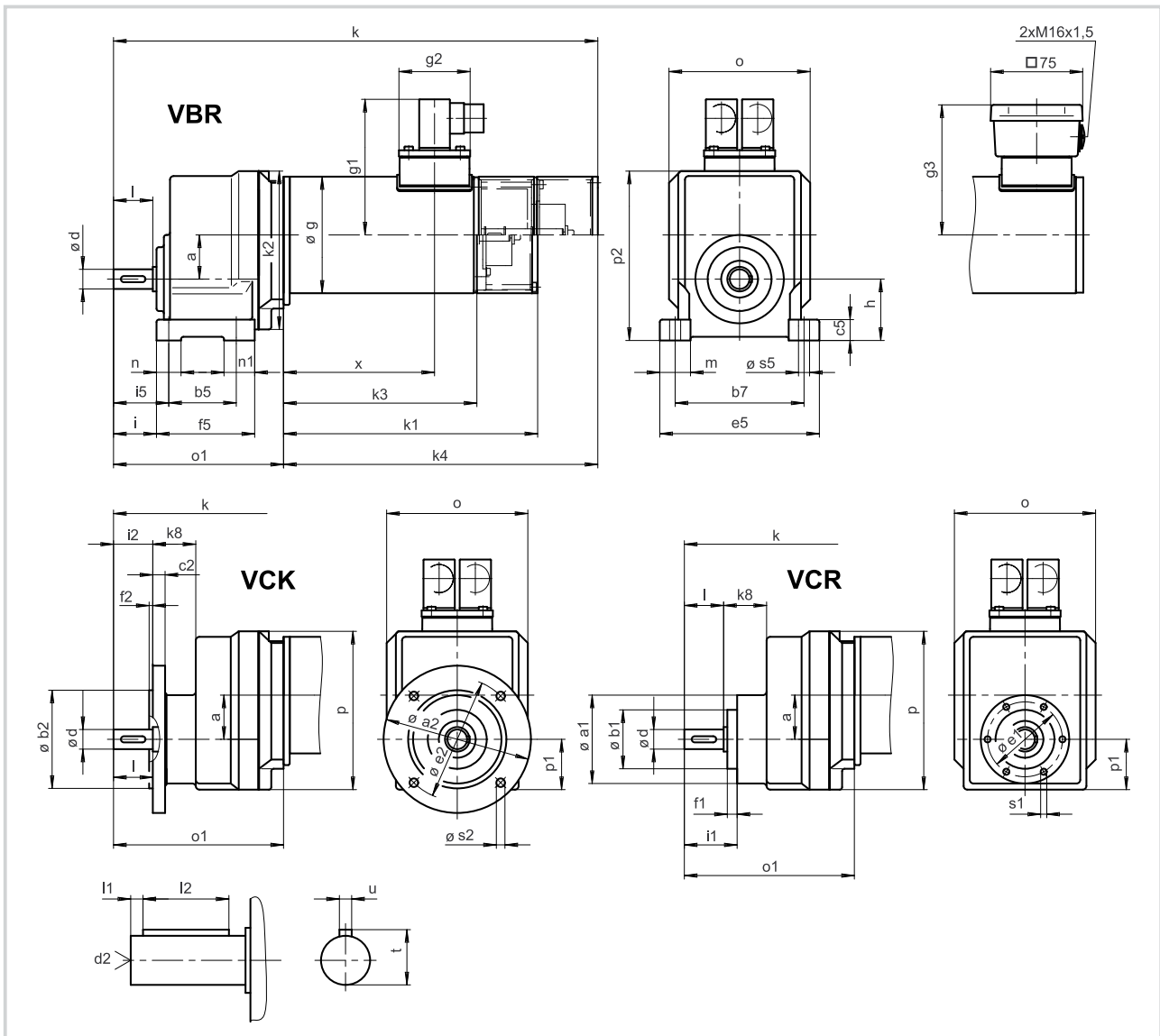
| | | | |
|-----------------------------------|--|---------------------------|--|
| Rated voltage | 390 V | connector version only | |
| | 230/400 V | terminal box version only | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Motor protection | KTY | connector version only | |
| | Thermal contact 'NC contact' | terminal box version only | |
| Electrical connection | Connector | | |
| | Terminal box | | |
| B-side design | XX=no built-on accessories | terminal box version only | |
| | RS=with resolver | connector version only | |
| | BR=with spring-applied brake | terminal box version only | |
| | RS=with incremental encoder | connector version only | |
| | BS=with spring-applied brake and resolver | connector version only | |
| | BI=with spring-applied brake and incremental encoder | connector version only | |
| | BV=for brake attachment | terminal box version only | |
| Brake supply voltage | 24 V DC | | |
| | 230 V AC with bridge rectifier | terminal box version only | |
| Gearbox type | VBR | | |
| | VCR | | |
| | VCK | | |
| Output-side flange diameter | D = 120 mm | | |
| | D = 140 mm | | |
| | D = 160 mm | | |
| Mounting position | | A B C D E F | |
| Position of electrical connection | | 2 3 4 5 | |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type GST04-1GV□□-063C22



| Geared motor | a | a ₁ | a ₂ | b ₁ h7 | b ₂ j7 | b ₅ | b ₇ | c ₂ | c ₅ | d k6 | d ₂ | e ₁ | e ₂ | e ₅ | f ₁ | f ₂ | f ₅ | g | g ₁ | g ₂ | g ₃ | h | i | i ₁ | i ₂ | i ₅ | |
|--------------------|----|----------------|----------------|----------------------|----------------------|----------------|----------------|----------------|----------------|---------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----|----|----------------|----------------|----------------|-----|
| GST04-1GV□□-063C22 | 36 | 72 | 120 | 80 | 55 | 105 | 10 | 17 | 16 | M5 | 61 | 100 | 115 | 130 | 8 | 3 | 80 | 95 | 111 | 58 | 106 | 50 | 35 | 43 | 32 | 45 | |
| | | | 140 | 95 | | | | | | | | | | | | | | | | | | | | | | | 115 |
| | | | 160 | 110 | | | | | | | | | | | | | | | | | | | | | | | 130 |

| Geared motor | k | k ₁ | k ₂ | k ₃ | k ₄ | k ₈ | l | l ₁ | l ₂ | m | n | n ₁ | o | o ₁ | p | p ₁ | p ₂ | s ₁ | s ₂ | s ₅ | t | u | x | Weight approx. kg | |
|--------------------|-------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----|----|----------------|-----|----------------|-----|----------------|----------------|----------------|----------------|----------------|---|----|---|----------------------|----------|
| GST04-1GV□□-063C22 | 394.5 | 207 | 129 | 161 | 256 | 35 | 32 | 6 | 20 | 25 | 20 | 25 | 115 | 138.5 | 129 | 41 | 138 | M5 | 7 | 9 | 9 | 18 | 5 | 123 | 9.5-11.0 |
| | | | | | | | | | | | | | | | | | | | 9 | | | | | | |

Dimensions in mm



Drive selection

AC helical geared motors (inverter-optimised)

Selection table Type GST04-2GV□□-063C22

| Motor type | P _N W | 100 Hz | | | i | Selection (tick as required) |
|---------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| SDSGA□□063-22 | 400 | 145 | 22.82 | 2.22 | 19.360 | |
| | | 127 | 25.93 | 1.73 | 22.000 | |
| | | 112 | 29.39 | 1.74 | 24.933 | |
| | | 99 | 33.39 | 1.37 | 28.333 | |
| | | 89 | 37.24 | 1.40 | 31.600 | |
| | | 78 | 42.32 | 1.09 | 35.909 | |
| | | 71 | 46.67 | 1.03 | 39.600 | |
| | | 62 | 52.00 | 0.89 | 45.000 | |

Additional order information

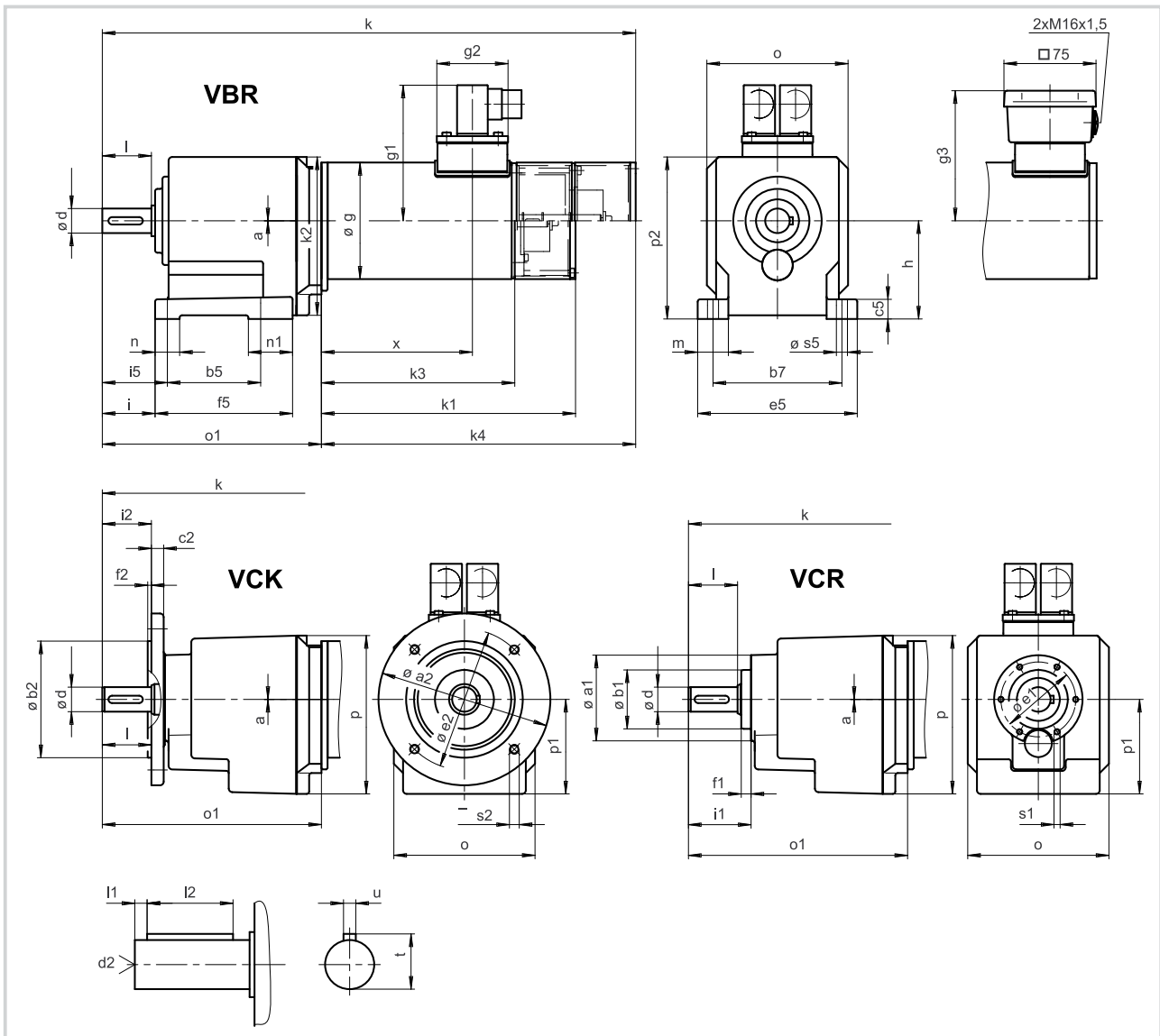
| | | | |
|-----------------------------------|--|---------------------------|-------------|
| Rated voltage | 390 V | connector version only | |
| | 230/400 V | terminal box version only | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Motor protection | KTY | connector version only | |
| | Thermal contact 'NC contact' | terminal box version only | |
| Electrical connection | Connector | | |
| | Terminal box | | |
| B-side design | XX=no built-on accessories | terminal box version only | |
| | RS=with resolver | connector version only | |
| | BR=with spring-applied brake | terminal box version only | |
| | RS=with incremental encoder | connector version only | |
| | BS=with spring-applied brake and resolver | connector version only | |
| | BI=with spring-applied brake and incremental encoder | connector version only | |
| | BV=for brake attachment | terminal box version only | |
| Brake supply voltage | 24 V DC | | |
| | 230 V AC with bridge rectifier | terminal box version only | |
| Gearbox type | VBR | | |
| | VCR | | |
| | VCK | | |
| Output-side flange diameter | D = 120 mm | | |
| | D = 140 mm | | |
| | D = 160 mm | | |
| Mounting position | | | A B C D E F |
| Position of electrical connection | | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type GST04-2GV□□-063C22



| Geared motor | a | a ₁ | a ₂ | b ₁ h ₇ | b ₂ j ₇ | b ₅ | b ₇ | c ₂ | c ₅ | d | d ₂ | e ₁ | e ₂ | e ₅ | f ₁ | f ₂ | f ₅ | g | g ₁ | g ₂ | g ₃ | h | i | i ₁ | i ₂ | i ₅ | | | |
|--------------------|---|----------------|----------------|----------------------------------|----------------------------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----|----|----------------|----------------|----------------|-----|-----|-----|
| GST04-2GV□□-063C22 | 0 | 72 | 120 | 80 | 76 | 105 | 10 | 16 | 20 | M6 | 61 | 100 | 115 | 130 | 8 | 3 | 112 | 95 | 111 | 58 | 106 | 80 | 43 | 51 | 40 | 53 | | | |
| | | | 140 | 95 | | | | | | | | | | | | | | | | | | | | | | | 115 | 130 | 3.5 |
| | | | 160 | 110 | | | | | | | | | | | | | | | | | | | | | | | 130 | 3.5 | |

| Geared motor | k | k ₁ | k ₂ | k ₃ | k ₄ | l | l ₁ | l ₂ | m | n | n ₁ | o | o ₁ | p | p ₁ | p ₂ | s ₁ | s ₂ | s ₅ | t | u | x | Weight approx. kg |
|--------------------|-------|----------------|----------------|----------------|----------------|----|----------------|----------------|----|----|----------------|-----|----------------|-----|----------------|----------------|----------------|----------------|----------------|------|---|-----|-------------------|
| GST04-2GV□□-063C22 | 434.5 | 207 | 129 | 161 | 256 | 40 | 5 | 28 | 25 | 20 | 36 | 115 | 178.5 | 129 | 77 | 132 | M5 | 7 9 | 9 | 22.5 | 6 | 123 | 11.5-12.5 |

Dimensions in mm



Drive selection

AC helical geared motors (inverter-optimised)

Selection table Type GST04-1GV□□-063C32

| Motor type | P _N W | 100 Hz | | | i | Selection (tick as required) |
|---------------|---------------------|-----------------------|----------------------|------|-------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| SDSGA□□063-32 | 600 | 636 | 6.27 | 2.43 | 4.400 | |
| | | 494 | 8.08 | 1.89 | 5.667 | |
| | | 390 | 10.24 | 1.49 | 7.082 | |
| | | 311 | 12.83 | 1.00 | 9.000 | |

Additional order information

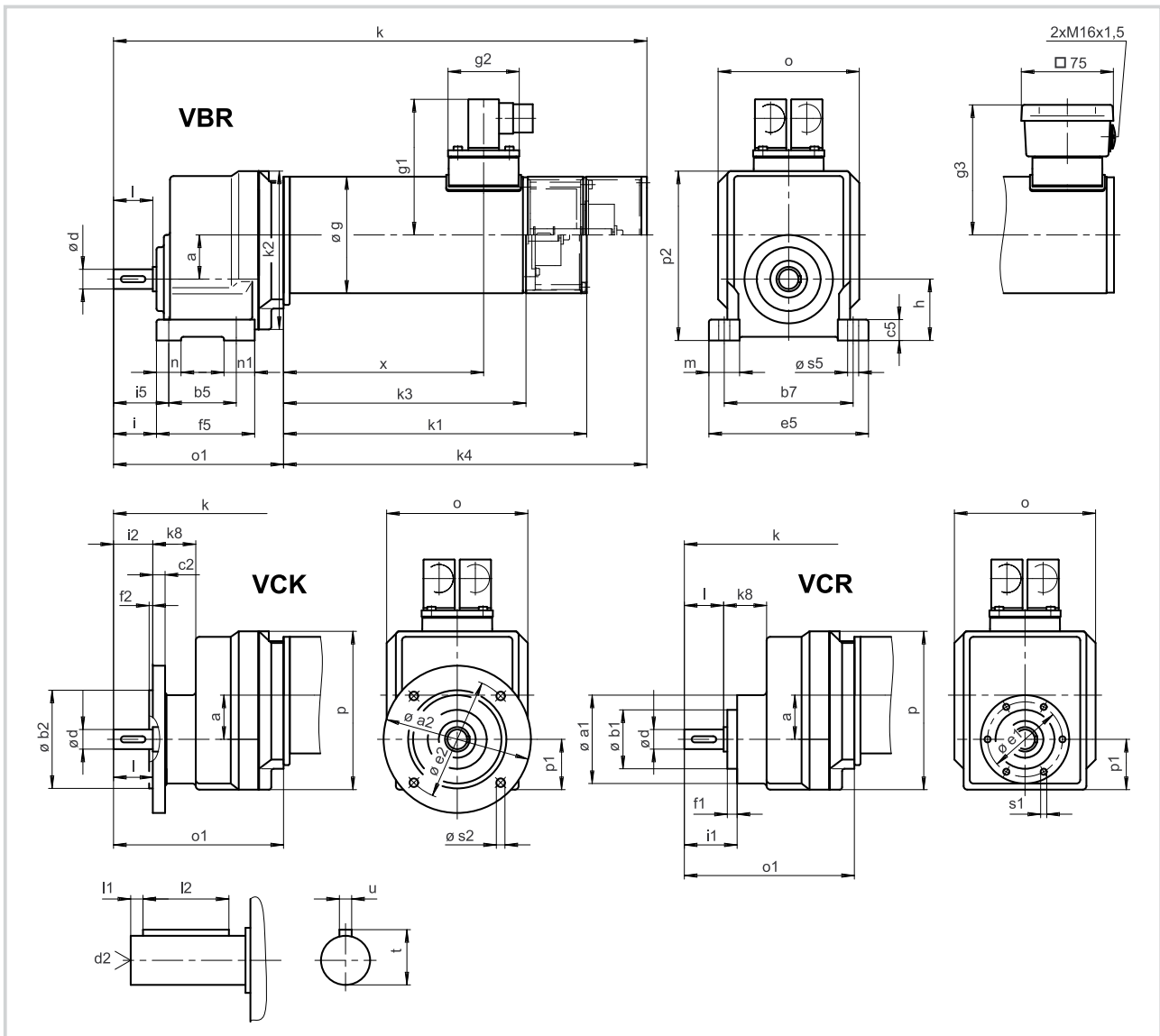
| | | | |
|-----------------------------------|--|---------------------------|--|
| Rated voltage | 390 V | connector version only | |
| | 230/400 V | terminal box version only | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Motor protection | KTY | connector version only | |
| | Thermal contact 'NC contact' | terminal box version only | |
| Electrical connection | Connector | | |
| | Terminal box | | |
| B-side design | XX=no built-on accessories | terminal box version only | |
| | RS=with resolver | connector version only | |
| | BR=with spring-applied brake | terminal box version only | |
| | RS=with incremental encoder | connector version only | |
| | BS=with spring-applied brake and resolver | connector version only | |
| | BI=with spring-applied brake and incremental encoder | connector version only | |
| Brake supply voltage | 24 V DC | | |
| | 230 V AC with bridge rectifier | terminal box version only | |
| Gearbox type | VBR | | |
| | VCR | | |
| | VCK | | |
| Output-side flange diameter | D = 120 mm | | |
| | D = 140 mm | | |
| | D = 160 mm | | |
| Mounting position | | A B C D E F | |
| Position of electrical connection | | 2 3 4 5 | |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type GST04-1GV□□-063C32



| Geared motor | a | a ₁ | a ₂ | b ₁ h ₇ | b ₂ j ₇ | b ₅ | b ₇ | c ₂ | c ₅ | d k ₆ | d ₂ | e ₁ | e ₂ | e ₅ | f ₁ | f ₂ | f ₅ | g | g ₁ | g ₂ | g ₃ | h | i | i ₁ | i ₂ | i ₅ | |
|--------------------|----|----------------|----------------|----------------------------------|----------------------------------|----------------|----------------|----------------|----------------|---------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----|----|----------------|----------------|----------------|-----|
| GST04-1GV□□-063C32 | 36 | 72 | 120 | 80 | 55 | 105 | 10 | 17 | 16 | M5 | 61 | 100 | 115 | 130 | 8 | 3 | 80 | 95 | 111 | 58 | 106 | 50 | 35 | 43 | 32 | 45 | |
| | | | 140 | 95 | | | | | | | | | | | | | | | | | | | | | | | 115 |
| | | | 160 | 110 | | | | | | | | | | | | | | | | | | | | | | | 130 |

| Geared motor | k | k ₁ | k ₂ | k ₃ | k ₄ | k ₈ | l | l ₁ | l ₂ | m | n | n ₁ | o | o ₁ | p | p ₁ | p ₂ | s ₁ | s ₂ | s ₅ | t | u | x | Weight approx. kg | |
|--------------------|-------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----|----|----------------|-----|----------------|-----|----------------|----------------|----------------|----------------|----------------|---|----|---|----------------------|-----------|
| GST04-1GV□□-063C32 | 434.5 | 247 | 129 | 201 | 296 | 35 | 32 | 6 | 20 | 25 | 20 | 25 | 115 | 138.5 | 129 | 41 | 138 | M5 | 7 | 9 | 9 | 18 | 5 | 163 | 11.0-12.5 |
| | | | | | | | | | | | | | | | | | | | 9 | | | | | | |

Dimensions in mm



Drive selection

AC helical geared motors (inverter-optimised)

Selection table Type GST04-2GV□□-063C32

| Motor type | P _N W | 100 Hz | | | i | Selection (tick as required) |
|---------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| SDSGA□□063-32 | 600 | 145 | 32.01 | 1.58 | 19.360 | |
| | | 127 | 36.49 | 1.23 | 22.000 | |
| | | 112 | 41.36 | 1.24 | 24.933 | |
| | | 99 | 42.00 | 0.97 | 28.333 | |
| | | 89 | 52.00 | 0.99 | 31.600 | |
| | | 78 | 46.00 | 0.77 | 35.909 | |
| | | 71 | 52.00 | 0.80 | 39.600 | |
| | | 62 | 52.00 | 0.63 | 45.000 | |

Additional order information

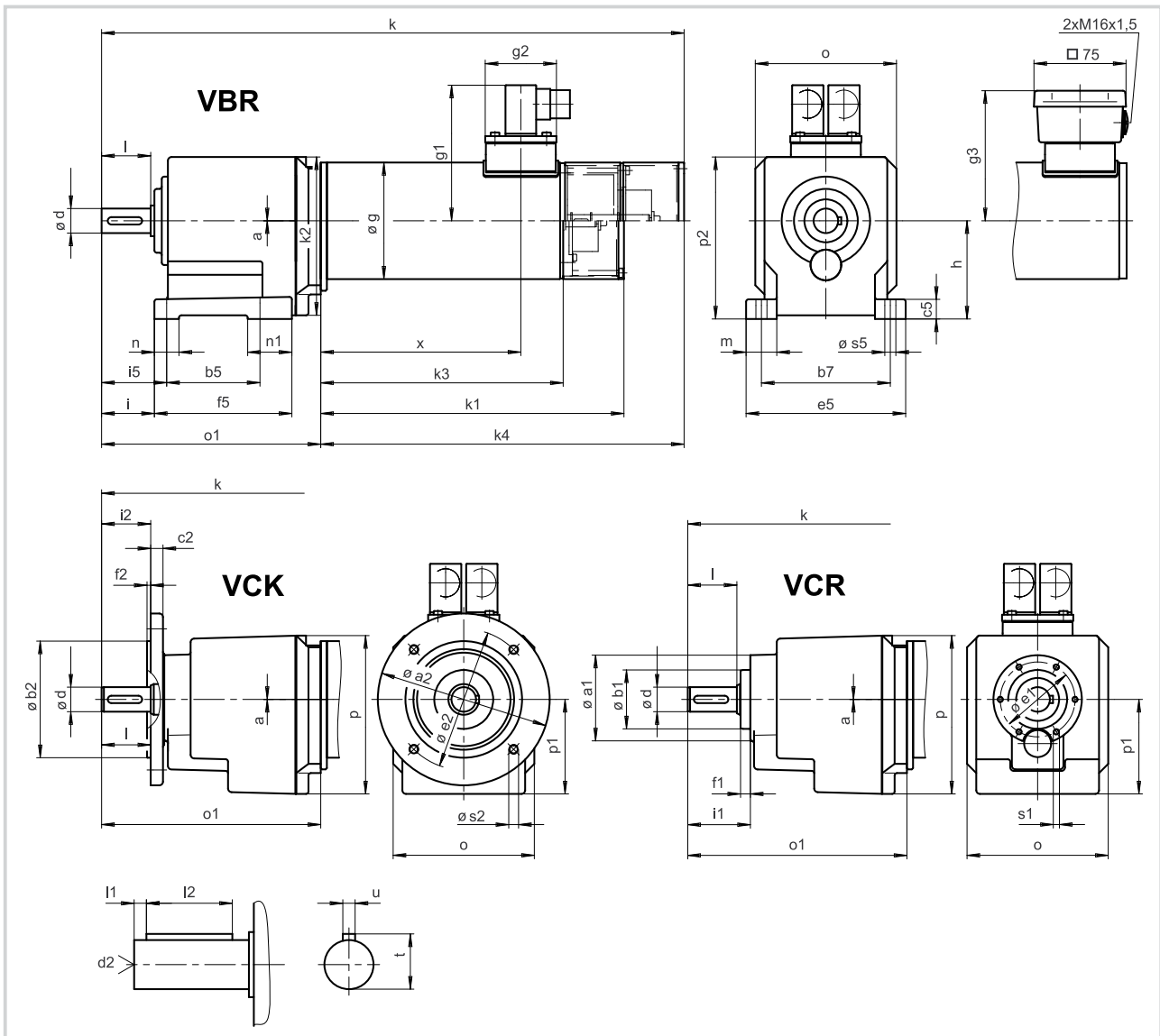
| | | | |
|-----------------------------------|--|---------------------------|-------------|
| Rated voltage | 390 V | connector version only | |
| | 230/400 V | terminal box version only | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Motor protection | KTY | connector version only | |
| | Thermal contact 'NC contact' | terminal box version only | |
| Electrical connection | Connector | | |
| | Terminal box | | |
| B-side design | XX=no built-on accessories | terminal box version only | |
| | RS=with resolver | connector version only | |
| | BR=with spring-applied brake | terminal box version only | |
| | RS=with incremental encoder | connector version only | |
| | BS=with spring-applied brake and resolver | connector version only | |
| | BI=with spring-applied brake and incremental encoder | connector version only | |
| Brake supply voltage | 24 V DC | | |
| | 230 V AC with bridge rectifier | terminal box version only | |
| Gearbox type | VBR | | |
| | VCR | | |
| | VCK | | |
| Output-side flange diameter | D = 120 mm | | |
| | D = 140 mm | | |
| | D = 160 mm | | |
| Mounting position | | | A B C D E F |
| Position of electrical connection | | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type GST04-2GV□□-063C32



| Geared motor | a | a ₁ | a ₂ | b ₁ h7 | b ₂ j7 | b ₅ | b ₇ | c ₂ | c ₅ | d k6 | d ₂ | e ₁ | e ₂ | e ₅ | f ₁ | f ₂ | f ₅ | g | g ₁ | g ₂ | g ₃ | h | i | i ₁ | i ₂ | i ₅ | | | |
|--------------------|---|----------------|----------------|----------------------|----------------------|----------------|----------------|----------------|----------------|---------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----|----|----------------|----------------|----------------|-----|-----|-----|
| GST04-2GV□□-063C32 | 0 | 72 | 120 | 80 | 76 | 105 | 10 | 16 | 20 | M6 | 61 | 100 | 115 | 130 | 8 | 3 | 112 | 95 | 111 | 58 | 106 | 80 | 43 | 51 | 40 | 53 | | | |
| | | | 140 | 95 | | | | | | | | | | | | | | | | | | | | | | | 115 | 130 | 3.5 |
| | | | 160 | 110 | | | | | | | | | | | | | | | | | | | | | | | 130 | | |

| Geared motor | k | k ₁ | k ₂ | k ₃ | k ₄ | l | l ₁ | l ₂ | m | n | n ₁ | o | o ₁ | p | p ₁ | p ₂ | s ₁ | s ₂ | s ₅ | t | u | x | Weight approx. kg |
|--------------------|-------|----------------|----------------|----------------|----------------|----|----------------|----------------|----|----|----------------|-----|----------------|-----|----------------|----------------|----------------|----------------|----------------|------|---|-----|----------------------|
| GST04-2GV□□-063C32 | 474.5 | 247 | 129 | 201 | 296 | 40 | 5 | 28 | 25 | 20 | 36 | 115 | 178.5 | 129 | 77 | 132 | M5 | 7 9 | 9 | 22.5 | 6 | 163 | 13-14 |

Dimensions in mm



Drive selection

AC helical geared motors (inverter-optimised)

Selection table Type GST05-1GV□□-063C22

| Motor type | P _N W | 100 Hz | | | i | Selection (tick as required) |
|---------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| SDSGA□□063-22 | 400 | 494 | 5.74 | 4.71 | 5.667 | |
| | | 382 | 7.43 | 3.83 | 7.333 | |
| | | 315 | 9.02 | 2.85 | 8.900 | |
| | | 246 | 11.52 | 1.63 | 11.375 | |

Additional order information

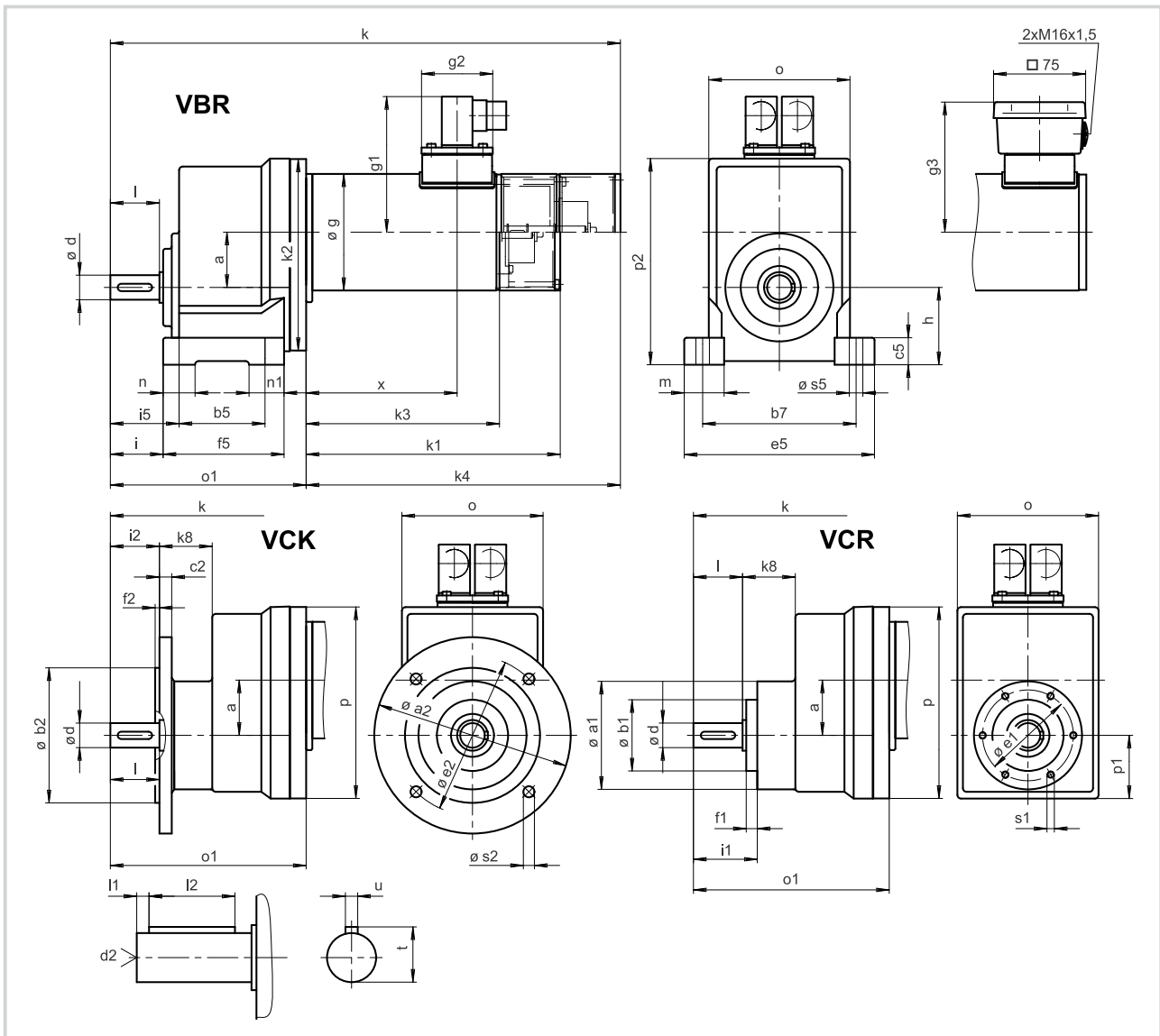
| | | | |
|-----------------------------------|--|---------------------------|-------------|
| Rated voltage | 390 V | connector version only | |
| | 230/400 V | terminal box version only | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Motor protection | KTY | connector version only | |
| | Thermal contact 'NC contact' | terminal box version only | |
| Electrical connection | Connector | | |
| | Terminal box | | |
| B-side design | XX=no built-on accessories | terminal box version only | |
| | RS=with resolver | connector version only | |
| | BR=with spring-applied brake | terminal box version only | |
| | RS=with incremental encoder | connector version only | |
| | BS=with spring-applied brake and resolver | connector version only | |
| | BI=with spring-applied brake and incremental encoder | connector version only | |
| Brake supply voltage | 24 V DC | | |
| | 230 V AC with bridge rectifier | terminal box version only | |
| Gearbox type | VBR | | |
| | VCR | | |
| | VCK | | |
| Output-side flange diameter | D = 120 mm | | |
| | D = 140 mm | | |
| | D = 160 mm | | |
| | D = 200 mm | | |
| Mounting position | | | A B C D E F |
| Position of electrical connection | | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type GST05-1GV□□-063C22



| Geared motor | a | a ₁ | a ₂ | b ₁ h ₇ | b ₂ j ₇ | b ₅ | b ₇ | c ₂ | c ₅ | d | d ₂ | e ₁ | e ₂ | e ₅ | f ₁ | f ₂ | f ₅ | g | g ₁ | g ₂ | g ₃ | h | i | i ₁ | i ₂ | i ₅ |
|--------------------|----|----------------|----------------|----------------------------------|----------------------------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----|----|----------------|----------------|----------------|
| GST05-1GV□□-063C22 | 45 | 88 | 120 | 80 | 58 | 70 | 125 | 10 | 22 | 20 | M6 | 74 | 100 | 155 | 9 | 3 | 99 | 95 | 111 | 58 | 106 | 63 | 43 | 52 | 40 | 56 |
| | | | 140 | 95 | | | | | | | | | 115 | | | | | | | | | | | | | |
| | | | 160 | 110 | | | | | | | | | 130 | | | | | | | | | | | | | |
| | | | 200 | 130 | | | | | | | | | 165 | | | | | | | | | | | | | |

| Geared motor | k | k ₁ | k ₂ | k ₃ | k ₄ | k ₈ | l | l ₁ | l ₂ | m | n | n ₁ | o | o ₁ | p | p ₁ | p ₂ | s ₁ | s ₂ | s ₅ | t | u | x | Weight approx. kg | |
|--------------------|-------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----|----|----------------|-----|----------------|-----|----------------|----------------|----------------|----------------|----------------|----|------|---|-------------------|-----------|
| GST05-1GV□□-063C22 | 415.5 | 207 | 156 | 161 | 256 | 43 | 40 | 6 | 28 | 33 | 26 | 29 | 115 | 159.5 | 156 | 51.5 | 168 | M6 | 7 | 9 | 11 | 22.5 | 6 | 123 | 11.5-13.5 |
| | | | | | | | | | | | | | | | | | | | 11 | | | | | | |
| | | | | | | | | | | | | | | | | | | | 11 | | | | | | |

Dimensions in mm



Drive selection

AC helical geared motors (inverter-optimised)

Selection table Type GST05-2GV□□-063C22

| Motor type | P _N W | 100 Hz | | | i | Selection (tick as required) |
|---------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| SDSGA□□063-22 | 400 | 195 | 14.85 | 4.71 | 14.356 | |
| | | 173 | 19.08 | 4.71 | 16.091 | |
| | | 112 | 29.39 | 3.97 | 24.933 | |
| | | 99 | 33.39 | 3.07 | 28.333 | |
| | | 87 | 38.03 | 3.00 | 32.267 | |
| | | 76 | 43.21 | 2.47 | 36.667 | |
| | | 72 | 46.05 | 2.57 | 39.060 | |
| | | 63 | 58.27 | 2.05 | 44.500 | |
| | | 56 | 65.54 | 1.65 | 50.050 | |
| | | 49 | 74.48 | 1.61 | 56.875 | |

Additional order information

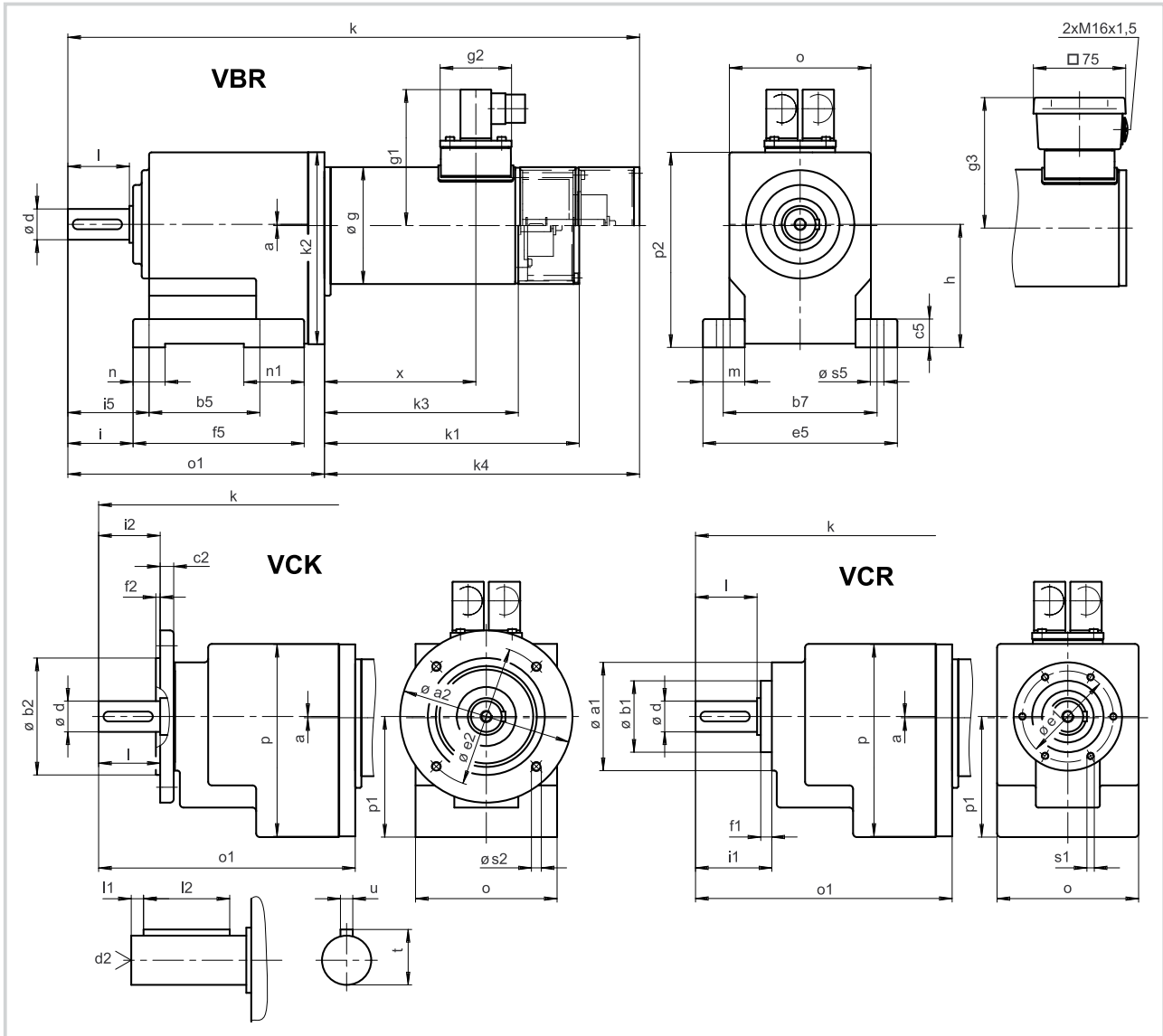
| | | | |
|-----------------------------------|--|---------------------------|--|
| Rated voltage | 390 V | connector version only | |
| | 230/400 V | terminal box version only | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Motor protection | KTY | connector version only | |
| | Thermal contact 'NC contact' | terminal box version only | |
| Electrical connection | Connector | | |
| | Terminal box | | |
| B-side design | XX=no built-on accessories | terminal box version only | |
| | RS=with resolver | connector version only | |
| | BR=with spring-applied brake | terminal box version only | |
| | RS=with incremental encoder | connector version only | |
| | BS=with spring-applied brake and resolver | connector version only | |
| | BI=with spring-applied brake and incremental encoder | connector version only | |
| Brake supply voltage | 24 V DC | | |
| | 230 V AC with bridge rectifier | terminal box version only | |
| Gearbox type | VBR | | |
| | VCR | | |
| | VCK | | |
| Output-side flange diameter | D = 140 mm | | |
| | D = 160 mm | | |
| | D = 200 mm | | |
| Mounting position | | A B C D E F | |
| Position of electrical connection | | 2 3 4 5 | |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type GST05-2GV□□-063C22



| Geared motor | a | a ₁ | a ₂ | b ₁ h7 | b ₂ j7 | b ₅ | b ₇ | c ₂ | c ₅ | d | d ₂ | e ₁ | e ₂ | e ₅ | f ₁ | f ₂ | f ₅ | g | g ₁ | g ₂ | g ₃ | h | i | i ₁ | i ₂ | i ₅ | |
|--------------------|---|----------------|----------------|----------------------|----------------------|----------------|----------------|----------------|----------------|-----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----|----------------|----------------|----------------|----|----|----------------|----------------|----------------|--|
| GST05-2GV□□-063C22 | 1 | 88 | 120 | 80 | 58 | 125 | 10 | 23 | 25 | M10 | 74 | 100 | 158 | 9 | 3 | 139 | 95 | 111 | 58 | 106 | 100 | 53 | 62 | 50 | 66 | | |
| | | | 140 | 95 | | | 115 | | | | | | | | | | | | | | | | | | | | |
| | | | 160 | 110 | | | 130 | | | | | | | | | | | | | | | | | | | | |
| | | | 200 | 130 | | | 165 | | | | | | | | | | | | | | | | | | | | |

| Geared motor | k | k ₁ | k ₂ | k ₃ | k ₄ | l | l ₁ | l ₂ | m | n | n ₁ | o | o ₁ | p | p ₁ | p ₂ | s ₁ | s ₂ | s ₅ | t | u | x | Weight approx. kg | |
|--------------------|-------|----------------|----------------|----------------|----------------|----|----------------|----------------|----|----|----------------|-----|----------------|-----|----------------|----------------|----------------|----------------|----------------|----|----|---|----------------------|-----------|
| GST05-2GV□□-063C22 | 464.5 | 207 | 156 | 161 | 256 | 50 | 4 | 40 | 30 | 26 | 49 | 115 | 208.5 | 156 | 98 | 158.5 | M6 | 7 | 9 | 11 | 28 | 8 | 123 | 15.5-17.5 |
| | | | | | | | | | | | | | | | | | | 11 | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |

Dimensions in mm



Drive selection

AC helical geared motors (inverter-optimised)

Selection table Type GST05-1GV□□-063C32

| Motor type | P _N W | 100 Hz | | | i | Selection (tick as required) |
|---------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| SDSGA□□063-32 | 600 | 494 | 8.08 | 3.35 | 5.667 | |
| | | 382 | 10.46 | 2.72 | 7.333 | |
| | | 315 | 12.69 | 2.02 | 8.900 | |
| | | 246 | 16.22 | 1.06 | 11.375 | |

Additional order information

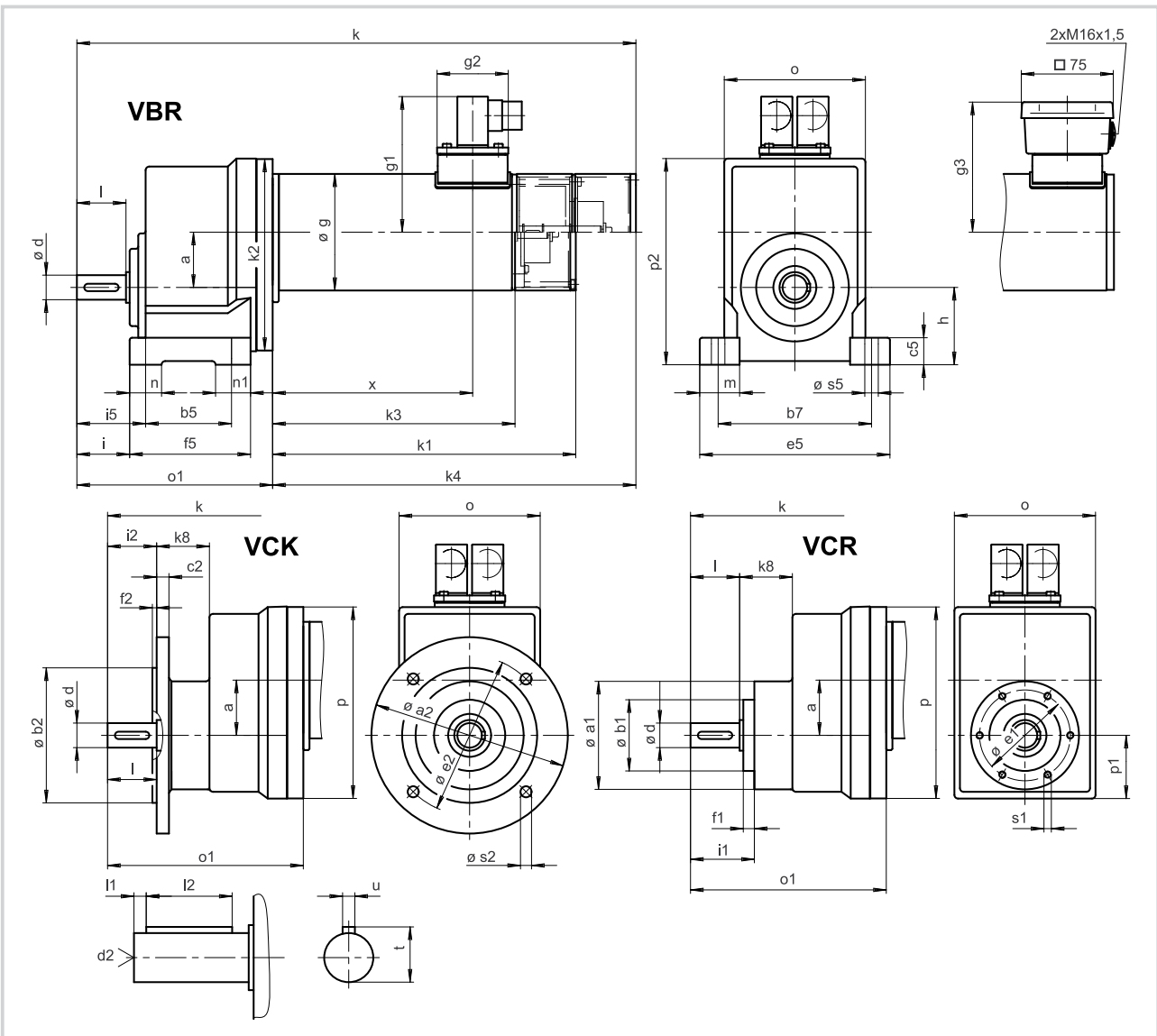
| | | | |
|-----------------------------------|--|---------------------------|-------------|
| Rated voltage | 390 V | connector version only | |
| | 230/400 V | terminal box version only | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Motor protection | KTY | connector version only | |
| | Thermal contact 'NC contact' | terminal box version only | |
| Electrical connection | Connector | | |
| | Terminal box | | |
| B-side design | XX=no built-on accessories | terminal box version only | |
| | RS=with resolver | connector version only | |
| | BR=with spring-applied brake | terminal box version only | |
| | RS=with incremental encoder | connector version only | |
| | BS=with spring-applied brake and resolver | connector version only | |
| | BI = with spring-applied brake and incremental encoder | connector version only | |
| Brake supply voltage | 24 V DC | | |
| | 230 V AC with bridge rectifier | terminal box version only | |
| Gearbox type | VBR | | |
| | VCR | | |
| | VCK | | |
| Output-side flange diameter | D = 120 mm | | |
| | D = 140 mm | | |
| | D = 160 mm | | |
| | D = 200 mm | | |
| Mounting position | | | A B C D E F |
| Position of electrical connection | | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type GST05-1GV□□-063C32



| Geared motor | a | a ₁ | a ₂ | b ₁ h ₇ | b ₂ j ₇ | b ₅ | b ₇ | c ₂ | c ₅ | d k ₆ | d ₂ | e ₁ | e ₂ | e ₅ | f ₁ | f ₂ | f ₅ | g | g ₁ | g ₂ | g ₃ | h | i | i ₁ | i ₂ | i ₅ |
|--------------------|----|----------------|----------------|----------------------------------|----------------------------------|----------------|----------------|----------------|----------------|---------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----|----|----------------|----------------|----------------|
| GST05-1GV□□-063C32 | 45 | 88 | 120 | 80 | 58 | 70 | 125 | 10 | 22 | 20 | M6 | 74 | 100 | 155 | 9 | 3 | 99 | 95 | 111 | 58 | 106 | 63 | 43 | 52 | 40 | 56 |
| | | | 140 | 95 | | | | | | | | | 115 | | | | | | | | | | | | | |
| | | | 160 | 110 | | | | | | | | | 130 | | | | | | | | | | | | | |
| | | | 200 | 130 | | | | | | | | | 165 | | | | | | | | | | | | | |

| Geared motor | k | k ₁ | k ₂ | k ₃ | k ₄ | k ₈ | l | l ₁ | l ₂ | m | n | n ₁ | o | o ₁ | p | p ₁ | p ₂ | s ₁ | s ₂ | s ₅ | t | u | x | Weight approx. kg | |
|--------------------|-------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----|----|----------------|-----|----------------|-----|----------------|----------------|----------------|----------------|----------------|----|------|---|-------------------|-------|
| GST05-1GV□□-063C32 | 455.5 | 247 | 156 | 201 | 296 | 43 | 40 | 6 | 28 | 33 | 26 | 29 | 115 | 159.5 | 156 | 51.5 | 168 | M6 | 7 | 9 | 11 | 22.5 | 6 | 163 | 13-15 |
| | | | | | | | | | | | | | | | | | | | 11 | | | | | | |
| | | | | | | | | | | | | | | | | | | | 11 | | | | | | |

Dimensions in mm



Drive selection

AC helical geared motors (inverter-optimised)

Selection table Type GST05-2GV□□-063C32

| Motor type | P _N W | 100 Hz | | | i | Selection (tick as required) |
|---------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| SDSGA□□063-32 | 600 | 195 | 20.90 | 3.35 | 14.356 | |
| | | 173 | 26.86 | 3.35 | 16.091 | |
| | | 112 | 41.36 | 2.82 | 24.933 | |
| | | 99 | 47.00 | 2.25 | 28.333 | |
| | | 87 | 53.52 | 2.21 | 32.267 | |
| | | 76 | 60.82 | 1.75 | 36.667 | |
| | | 72 | 64.95 | 1.83 | 39.060 | |
| | | 63 | 82.01 | 1.45 | 44.500 | |
| | | 56 | 92.24 | 1.08 | 50.050 | |
| 49 | 104.82 | 1.04 | 56.875 | | | |

Additional order information

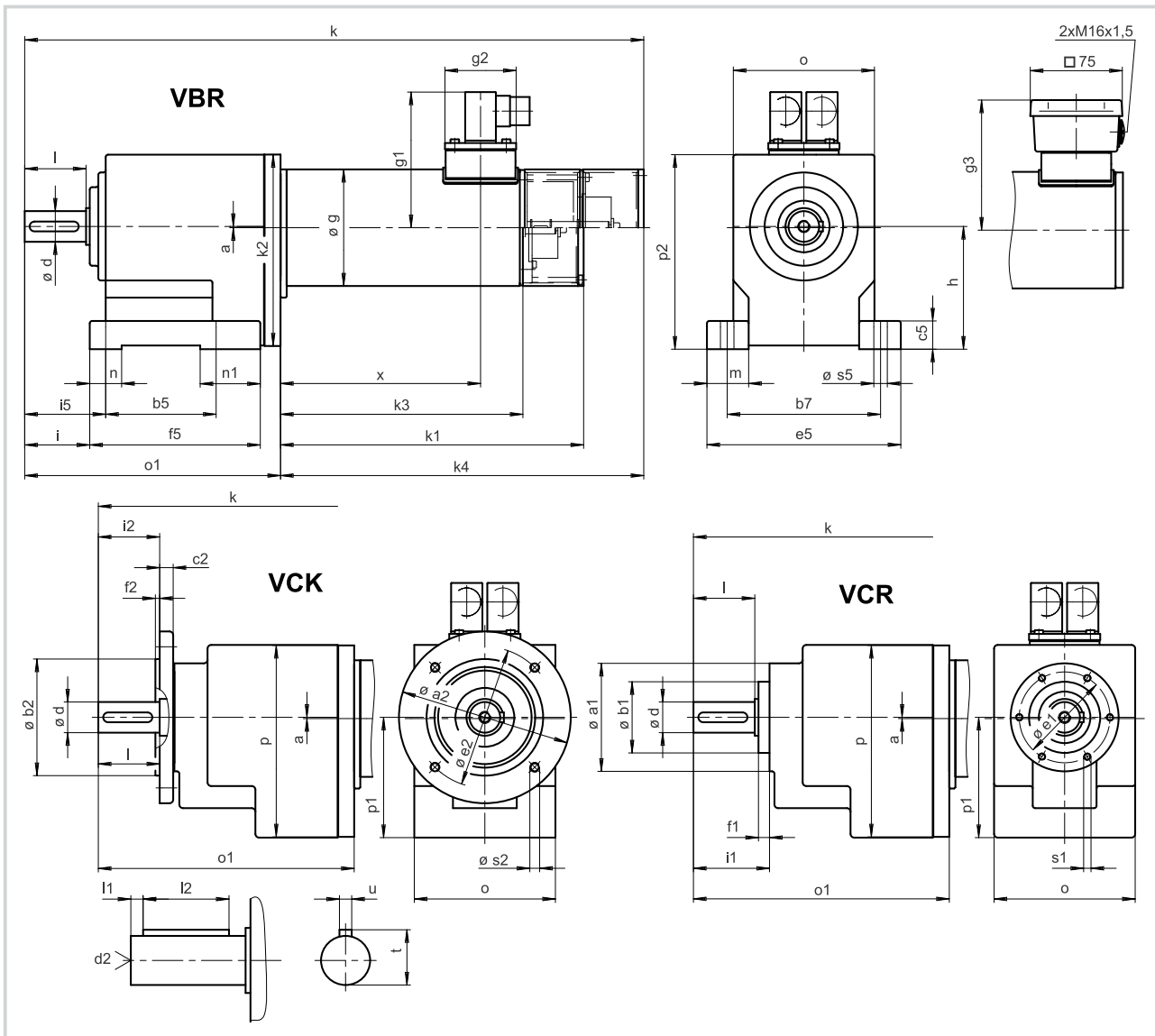
| | | | |
|-----------------------------------|--|---------------------------|-------------|
| Rated voltage | 390 V | connector version only | |
| | 230/400 V | terminal box version only | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Motor protection | KTY | connector version only | |
| | Thermal contact 'NC contact' | terminal box version only | |
| Electrical connection | Connector | | |
| | Terminal box | | |
| B-side design | XX=no built-on accessories | terminal box version only | |
| | RS=with resolver | connector version only | |
| | BR=with spring-applied brake | terminal box version only | |
| | RS=with incremental encoder | connector version only | |
| | BS=with spring-applied brake and resolver | connector version only | |
| | BI = with spring-applied brake and incremental encoder | connector version only | |
| Brake supply voltage | 24 V DC | | |
| | 230 V AC with bridge rectifier | terminal box version only | |
| Gearbox type | VBR | | |
| | VCR | | |
| | VCK | | |
| Output-side flange diameter | D = 120 mm | | |
| | D = 140 mm | | |
| | D = 160 mm | | |
| | D = 200 mm | | |
| Mounting position | | | A B C D E F |
| Position of electrical connection | | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type GST05-2GV□□-063C32



| Geared motor | a | a ₁ | a ₂ | b ₁ h ₇ | b ₂ j ₇ | b ₅ | b ₇ | c ₂ | c ₅ | d | d ₂ | e ₁ | e ₂ | e ₅ | f ₁ | f ₂ | f ₅ | g | g ₁ | g ₂ | g ₃ | h | i | i ₁ | i ₂ | i ₅ | |
|--------------------|---|----------------|----------------|----------------------------------|----------------------------------|----------------|----------------|----------------|----------------|-----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----|----------------|----------------|----------------|----|----|----------------|----------------|----------------|--|
| GST05-2GV□□-063C32 | 1 | 88 | 120 | 80 | 58 | 125 | 10 | 23 | 25 | M10 | 74 | 100 | 158 | 9 | 3 | 139 | 95 | 111 | 58 | 106 | 100 | 53 | 62 | 50 | 66 | | |
| | | | 140 | 95 | | | 11 | | | | | 115 | | | | | | | | | | | | | | | |
| | | | 160 | 110 | | | 10 | | | | | 130 | | | | | | | | | | | | | | | |
| | | | 200 | 130 | | | 12 | | | | | 165 | | | | | | | | | | | | | | | |

| Geared motor | k | k ₁ | k ₂ | k ₃ | k ₄ | l | l ₁ | l ₂ | m | n | n ₁ | o | o ₁ | p | p ₁ | p ₂ | s ₁ | s ₂ | s ₅ | t | u | x | Weight approx. kg | |
|--------------------|-------|----------------|----------------|----------------|----------------|----|----------------|----------------|----|----|----------------|-----|----------------|-----|----------------|----------------|----------------|----------------|----------------|----|----|---|-------------------|-------|
| GST05-2GV□□-063C32 | 504.5 | 247 | 156 | 201 | 296 | 50 | 4 | 40 | 30 | 26 | 49 | 115 | 208.5 | 156 | 98 | 158.5 | M6 | 7 | 9 | 11 | 28 | 8 | 163 | 17-19 |
| | | | | | | | | | | | | | | | | | | 11 | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |

Dimensions in mm

Drive selection

AC bevel geared motors (inverter-optimised)

Selection table Type GKR03-2G□□□-056C22

| Motor type | P _N W | 100 Hz | | | i | Selection (tick as required) |
|---------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| | | n ₂ rpm | M ₂ Nm | c | | |
| SDSGA□□056-22 | 240 | 516 | 4.06 | 5.02 | 5.411 | |
| | | 448 | 4.79 | 4.59 | 6.222 | |
| | | 392 | 5.47 | 4.26 | 7.011 | |
| | | 341 | 6.29 | 3.81 | 8.078 | |
| | | 307 | 7.00 | 3.48 | 9.001 | |
| | | 267 | 8.05 | 3.03 | 10.466 | |
| | | 240 | 8.96 | 2.72 | 11.640 | |
| | | 208 | 10.30 | 2.37 | 13.386 | |
| | | 185 | 11.63 | 2.08 | 15.011 | |
| | | 161 | 13.37 | 1.89 | 17.378 | |
| | | 144 | 14.90 | 1.70 | 19.365 | |
| | | 125 | 17.04 | 1.48 | 22.270 | |
| | | 111 | 19.28 | 1.31 | 25.051 | |
| | | 97 | 22.07 | 1.04 | 28.808 | |
| | | 86 | 25.08 | 1.01 | 32.593 | |
| | | 74 | 25.00 | 0.88 | 37.481 | |
| | | 66 | 29.00 | 0.92 | 42.222 | |
| | | 57 | 29.00 | 0.80 | 48.556 | |
| 52 | 29.00 | 0.73 | 53.889 | | | |
| 45 | 29.00 | 0.66 | 61.972 | | | |

Additional order information

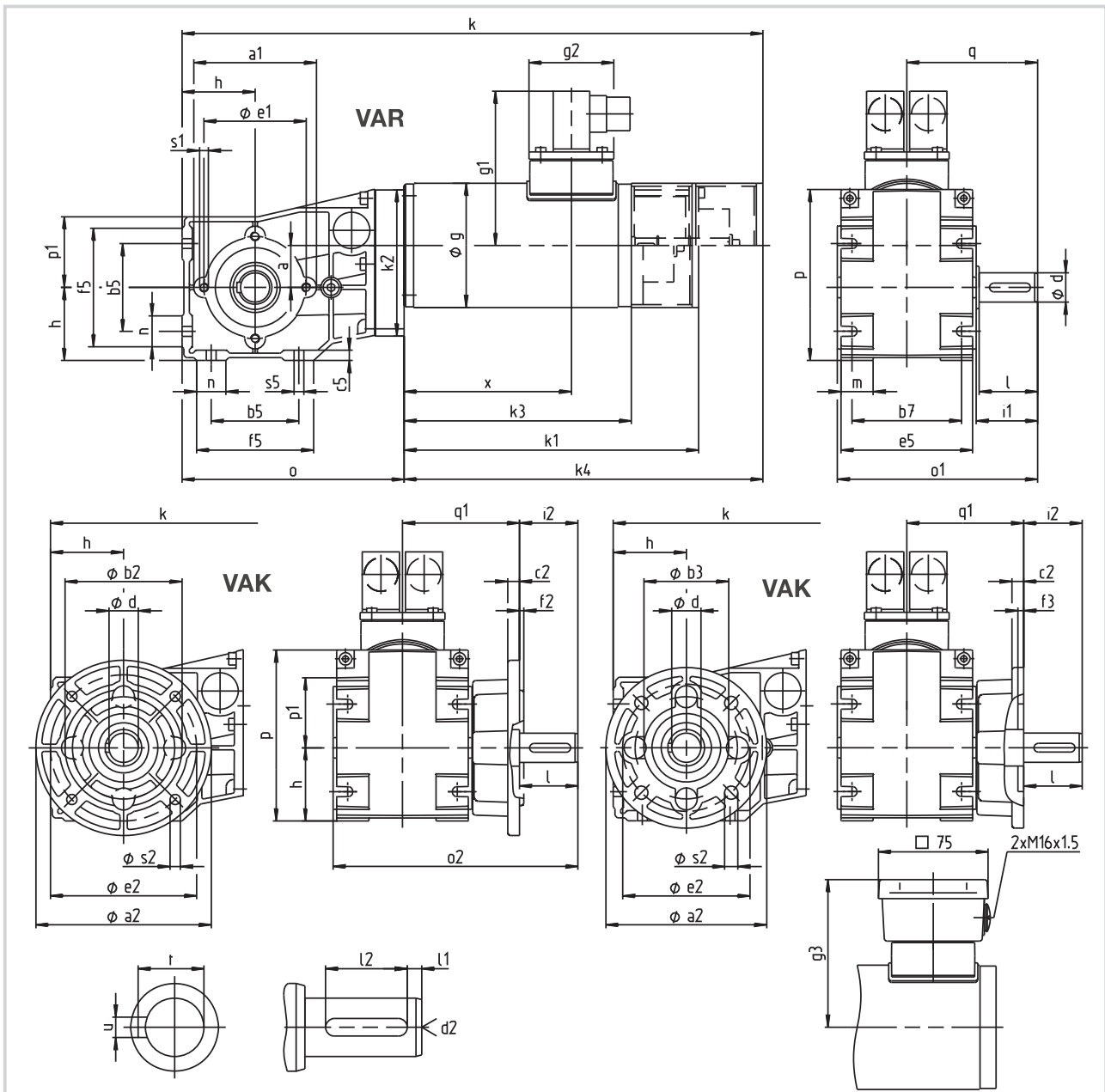
| | | | |
|-----------------------------------|--|---------------------------|-------------|
| Rated voltage | 390 V | connector version only | |
| | 230/400 V | terminal box version only | |
| Enclosure | IP54 | | |
| | IP55 | | |
| Motor protection | KTY | connector version only | |
| | Thermal contact 'NC contact' | terminal box version only | |
| Electrical connection | Connector | | |
| | Terminal box | | |
| B-side design | XX=no built-on accessories | terminal box version only | |
| | RS=with resolver | connector version only | |
| | BR=with spring-applied brake | terminal box version only | |
| | RS=with incremental encoder | connector version only | |
| | BS=with spring-applied brake and resolver | connector version only | |
| | BI=with spring-applied brake and incremental encoder | connector version only | |
| Brake supply voltage | 24 V DC | | |
| | 230 V AC 205 V DC with bridge rectifier | terminal box version only | |
| Gearbox type | VAR | | |
| | VAK | | |
| | HAR | | |
| | HAK | | |
| Output-side flange diameter | D = 110 mm | | |
| | D = 120 mm | | |
| Hollow shaft | D=18 mm | | |
| | D=20 mm | | |
| Shaft position on type VAR | | | 3 5 8 |
| Flange/shaft position on type VAK | | | 3 5 |
| Flange position on type HAK | | | 3 5 |
| Mounting position | | | A B C D E F |
| Position of electrical connection | | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type GKR03-2GVA□-056C22



| Geared motor | a | a ₁ | a ₂ | b ₂ j7 | b ₃ h7 | b ₅ | b ₇ | c ₂ | c ₅ | d k6 | d ₂ | e ₁ | e ₂ | e ₅ | f ₂ | f ₃ | f ₅ | g | g ₁ | g ₂ | g ₃ | h | i ₁ | i ₂ | k | k ₁ |
|--------------------|----|----------------|----------------|----------------------|----------------------|----------------|----------------|----------------|----------------|---------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----|----------------|----------------|-------|----------------|
| GKR03-2GVA□-056C22 | 29 | 84 | 120 110 | 80 - | - 60 | 60 | 75 | 8 | 7 | 20 | M6 | 70 | 100 87 | 90 | 3 - | - 4 | 80 | 85 | 106 | 58 | 101 | 50 | 42.5 | 40 | 397.5 | 201.5 |

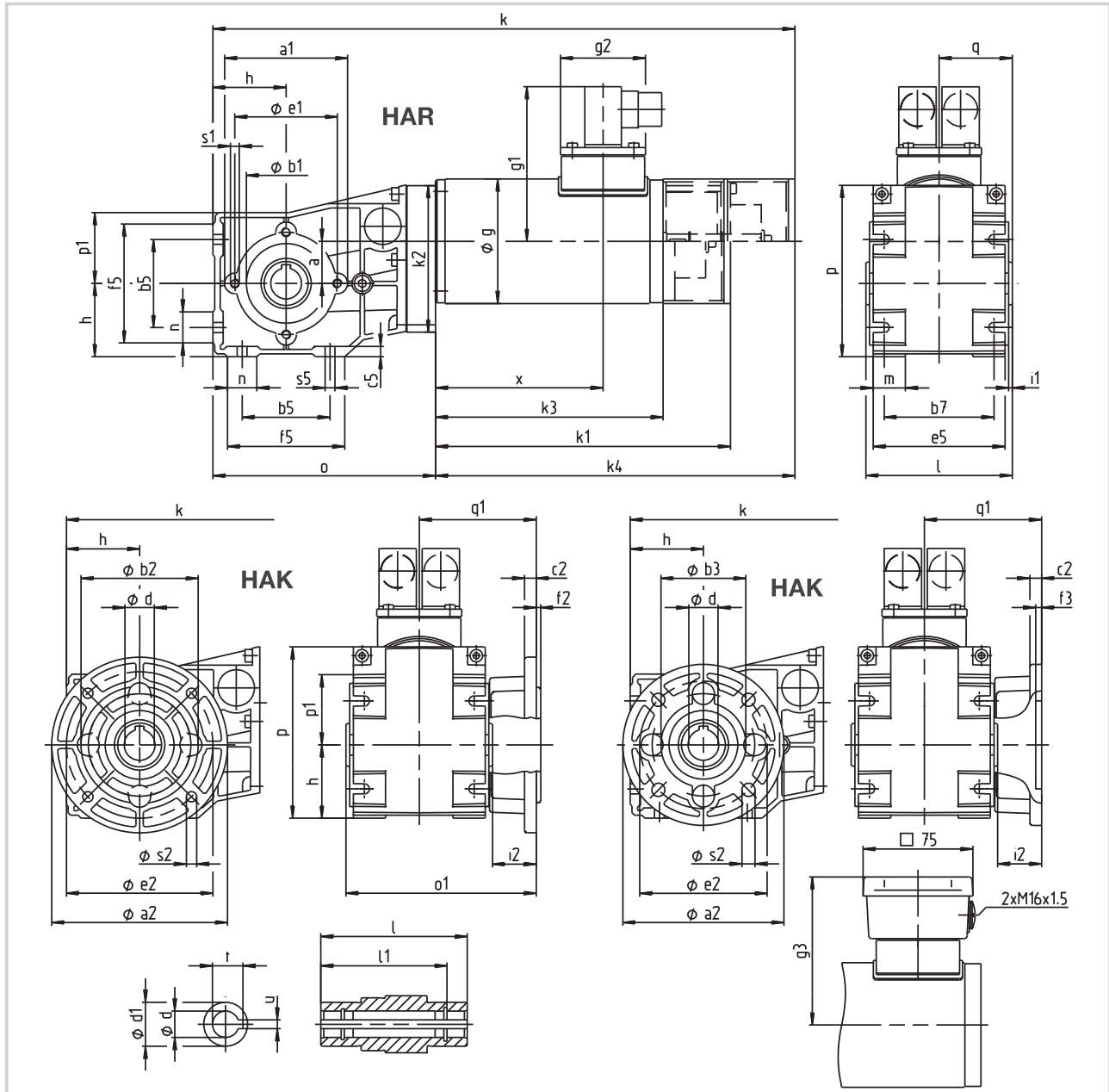
| Geared motor | k ₂ | k ₃ | k ₄ | l | l ₁ | l ₂ | m | n | o | o ₁ | o ₂ | p | p ₁ | q | q ₁ | s ₁ | s ₂ | s ₅ | t | u | x | Weight approx. kg |
|--------------------|----------------|----------------|----------------|----|----------------|----------------|----|----|-----|----------------|----------------|-----|----------------|----|----------------|----------------|----------------|----------------|------|---|-------|----------------------|
| GKR03-2GVA□-056C22 | 100 | 157.5 | 245.5 | 40 | 5 | 28 | 22 | 20 | 152 | 137.5 | 167.5 | 117 | 48 | 90 | 80 | M6 | 7 9 | 6.6 | 22.5 | 6 | 114.5 | 7-9 |

Dimensions in mm

Drive selection

AC bevel geared motors (inverter-optimised)

Dimensions Type GKR03-2GHA□-056C22



| Geared motor | a | a ₁ | a ₂ | b ₁ J7 | b ₂ j7 | b ₃ H7 | b ₅ | b ₇ | c ₂ | c ₅ | d H7 | d ₁ | e ₁ | e ₂ | e ₅ | f ₂ | f ₃ | f ₅ | g | g ₁ | g ₂ | g ₃ | h | i ₁ | i ₂ |
|--------------------|----|----------------|----------------|----------------------|----------------------|----------------------|----------------|----------------|----------------|----------------|----------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----|----------------|----------------|
| GKR03-2GHA□-056C22 | 29 | 84 | 120 110 | 55 | 80 - | - 60 | 60 | 75 | 8 | 7 | 18 20 | 30 | 70 | 100 87 | 90 | 3 - | - 4 | 80 | 85 | 106 | 58 | 101 | 50 | 2.5 | 30 |

| Geared motor | k | k ₁ | k ₂ | k ₃ | k ₄ | l | l ₁ | m | n | o | o ₁ | p | p ₁ | q | q ₁ | s ₁ | s ₂ | s ₅ | t | u | x | Weight |
|--------------------|-------|----------------|----------------|----------------|----------------|-----|----------------|----|----|-----|----------------|-----|----------------|----|----------------|----------------|----------------|----------------|--------------|---|-------|--------|
| GKR03-2GHA□-056C22 | 397.5 | 201.5 | 100 | 157.5 | 245.5 | 100 | 86 | 22 | 20 | 152 | 130 | 117 | 48 | 50 | 80 | M6 | 7 9 | 6.6 | 20.8 22.8 | 6 | 114.5 | 7-9 |

Dimensions in mm





Drive selection

Technical data DC permanent magnet motors

Description

DC permanent magnet motors have a torque-speed characteristic with shunt characteristics. Thanks to a particular dimensioning of the armature winding (copper filling factor) there is only a low speed reduction under load.

The magnetic flux necessary to generate the torque is produced by permanent magnets.

A special field excitation winding and thus an element that would cause additional heat loss is not required. This means that the efficiency of a DC permanent magnet motor is better than the efficiency of a comparable field-wound DC motor. As permanent magnets are smaller than a comparable field winding, a DC permanent magnet motor is approximately one frame size smaller than a field-wound DC motor with the same rated power.

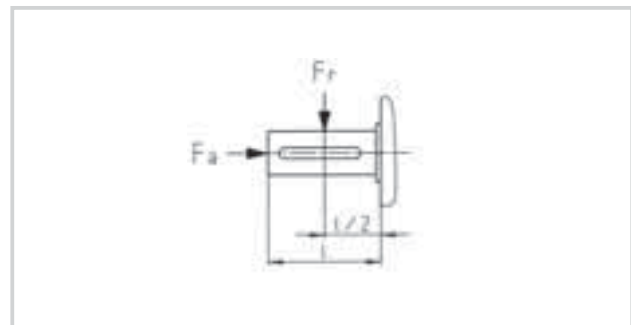


2

General data

| | |
|--------------------------|--|
| Motor type | 13.120.00.0.0.0 |
| Enclosure | IP54 |
| Thermal class (VDE 530) | F |
| Motor protection | Thermal contact (normally-closed contact) |
| Cooling | naturally ventilated |
| Temperature range | 0 to +40 °C |
| Site altitude | Up to 1000 m a.m.s.l. |
| Electrical connection | Cable / terminal box Note options in the tables |
| Bearing | Deep-groove ball bearing |
| Operating mode (VDE 530) | S1 |

DC permanent magnet motor

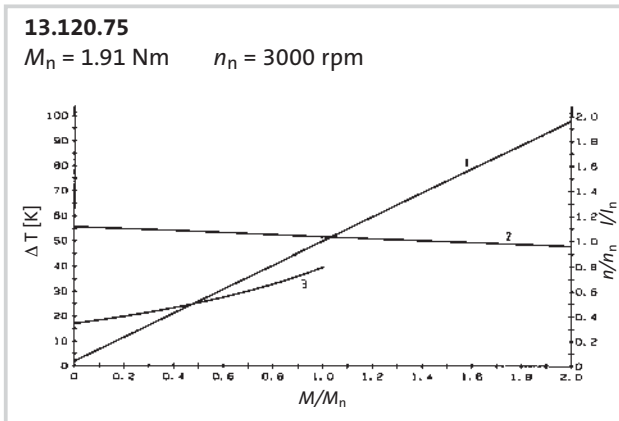
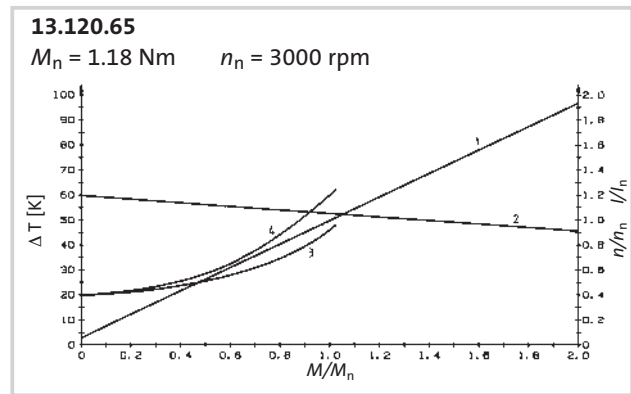
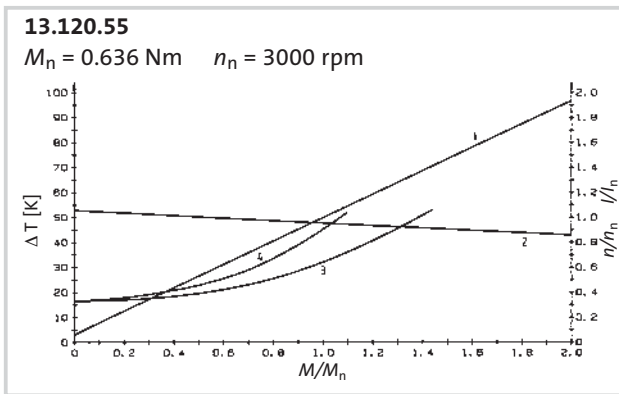
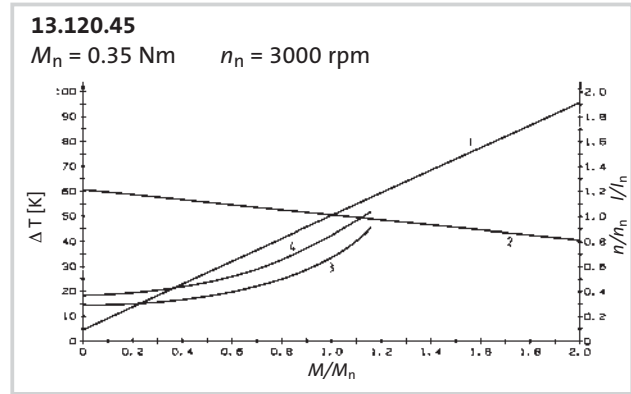
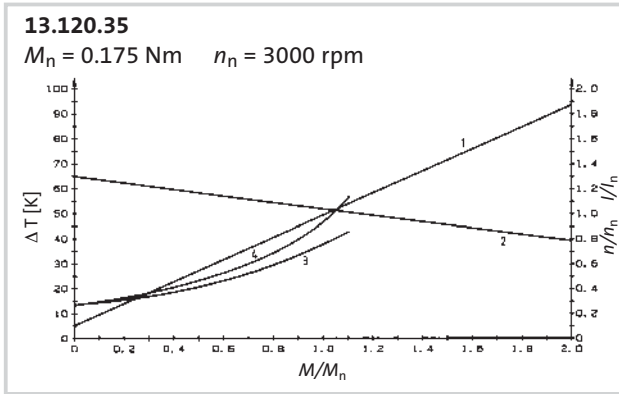


Rated data

| Motor type | 13.120.35 | | 13.120.45 | | 13.120.55 | | 13.120.65 | | 13.120.75 | |
|--|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|
| Rated power (W) | 55 | | 110 | | 200 | | 370 | | 540 | 600 |
| Rated torque (Nm) | 0.07 | | 0.35 | | 0.64 | | 1.08 | | 1.7 | 1.9 |
| Rated armature voltage (V) | 24 | 180 | 24 | 180 | 24 | 180 | 24 | 180 | 24 | 160 |
| Rated current (A) | 3.7 | 0.46 | 6.7 | 0.86 | 11.8 | 1.4 | 18.6 | 2.5 | 27 | 4.5 |
| Max. demagnetisation current (A) | 41 | 5 | 44 | 6 | 71 | 9 | 90 | 11.2 | 130 | 20 |
| Armature resistance (Ω) | 1.3 | 71 | 0.47 | 27.5 | 0.09 | 9.8 | 0.09 | 4.6 | 0.06 | 1.9 |
| Armature inductance (mH) | 1.8 | 98 | 1.4 | 52 | 0.54 | 31.5 | 0.4 | 25 | 9 | 0.26 |
| Rated speed (rpm) | 3000 | | 3000 | | 3000 | | 3000 | | 3000 | |
| Moment of inertia (kgcm ²) | 0.458 | | 1.03 | | 3.8 | | 10.69 | | 16.8 | |
| Max. radial force (N) F_r | 220 | | 320 | | 340 | | 580 | | 570 | |
| Max. axial force (N) F_a | 200 | | 280 | | 280 | | 330 | | 460 | |



Characteristics



Explanations

- 1: Armature current (mean value) as function of torque
- 2: Speed as function of torque at rated voltage
- 3: Housing temperature increase as function of torque at $F_F = 1$ for 160 V and 180 V motors
- 4: As 3, for 24 V motors

M/M_n , I/I_n , n/n_n : standardised values referred to the rated value

For a detailed dimensioning of the drives please consult your Lenze sales representative.



Drive selection

DC permanent magnet motors

Selection table Type 13.120.□□.□.□.□

| Motor type | P _N W | U V | n ₂ rpm | M ₂ Nm | Design A-side | Selection (tick as required) |
|-----------------|---------------------|-----------|-----------------------|----------------------|------------------|---------------------------------|
| 13.120.35.0.3.0 | 55 | 24 or 180 | 3000 | 0.07 | B3 | |
| 13.120.35.0.2.0 | | | | | B14 | |
| 13.120.45.0.2.□ | 110 | 24 or 180 | 3000 | 0.35 | B14 | |
| 13.120.45.1.2.□ | | | | | IEC56 B14C80 | |
| 13.120.45.0.3.□ | | | | | B3 | |
| 13.120.55.1.3.□ | 200 | 24 or 180 | 3000 | 0.64 | IEC56 B3 | |
| 13.120.55.1.2.□ | | | | | IEC56 B14C80 | |
| 13.120.55.1.2.□ | | | | | IEC63 B14C90 | |
| 13.120.65.1.3.□ | 370 | 24 or 180 | 3000 | 1.08 | IEC63 B3 | |
| 13.120.65.1.2.□ | | | | | IEC63 B14C90 | |
| 13.120.65.1.2.□ | | | | | IEC63 B14C120 | |
| 13.120.65.1.2.□ | | | | | IEC71 B14C105 | |
| 13.120.75.1.3.□ | 540 | 24 | 3000 | 1.71 | IEC71 B3 | |
| 13.120.75.1.2.□ | | | | | IEC71 B14C105 | |
| 13.120.75.1.3.□ | 600 | 160 | 3000 | 1.91 | IEC71 B3 | |
| 13.120.75.1.2.□ | | | | | IEC71 B14C105 | |

Additional order information

| | | |
|--|---|-----------------------|
| B-side design | 0 = no built-on accessories | |
| | 1 = with spring-applied brake | frame size 45-75 only |
| | 4 = with DC tacho | frame size 45-75 only |
| | 5 = with AC tacho | frame size 45-75 only |
| | 6 = for tacho attachment | frame size 45-75 only |
| | 7 = for brake attachment | frame size 45-75 only |
| | Rated armature voltage | 24 V |
| 160 V | | frame size 75 only |
| 180 V | | frame size 35-65 only |
| Brake supply voltage | 24 V DC | |
| | 205 V DC only with armature voltage of 160 V or 180 V | |
| Electrical connection | Cable | |
| | Terminal box with motor frame size 45-75 only | |
| Position of electrical connection B3 | | 2 3 4 5 |
| Position of electrical connection B14 | | 2 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Selection table Type 13.12□.□□.□.□.□

| Motor type | P _N W | U V | n ₂ rpm | M ₂ Nm | Design A-side for gearbox attachment | Selection (tick as required) |
|-----------------|---------------------|-----------|-----------------------|----------------------|--|---------------------------------|
| 13.120.35.9.2.0 | 55 | 24 or 180 | 3000 | 0.07 | B14 for SPL42 | |
| 13.121.35.2.2.0 | | | | | B14 for SSN25 | |
| 13.121.35.2.5.0 | | | | | B3/B14 for SSN25 | |
| 13.121.45.3.2.□ | 110 | 24 or 180 | 3000 | 0.35 | B14 for SSN31 | |
| 13.121.45.3.5.□ | | | | | B3/B14 for SSN31 | |
| 13.121.55.3.2.□ | 200 | 24 or 180 | 3000 | 0.64 | B14 for SSN31 | |
| 13.121.55.3.5.□ | | | | | B3/B14 for SSN31 | |
| 13.121.65.5.2.□ | 370 | 24 or 180 | 3000 | 1.08 | B14 for SSN40 | |
| 13.121.65.5.5.□ | | | | | B3/B14 for SSN40 | |
| 13.121.75.5.2.□ | 540 | 24 | 3000 | 1.71 | B14 for SSN40 | |
| 13.121.75.5.5.□ | | | | | B3/B14 for SSN40 | |
| 13.121.75.5.2.□ | 600 | 160 | 3000 | 1.91 | B14 for SSN40 | |
| 13.121.75.5.5.□ | | | | | B3/B14 for SSN40 | |

Additional order information

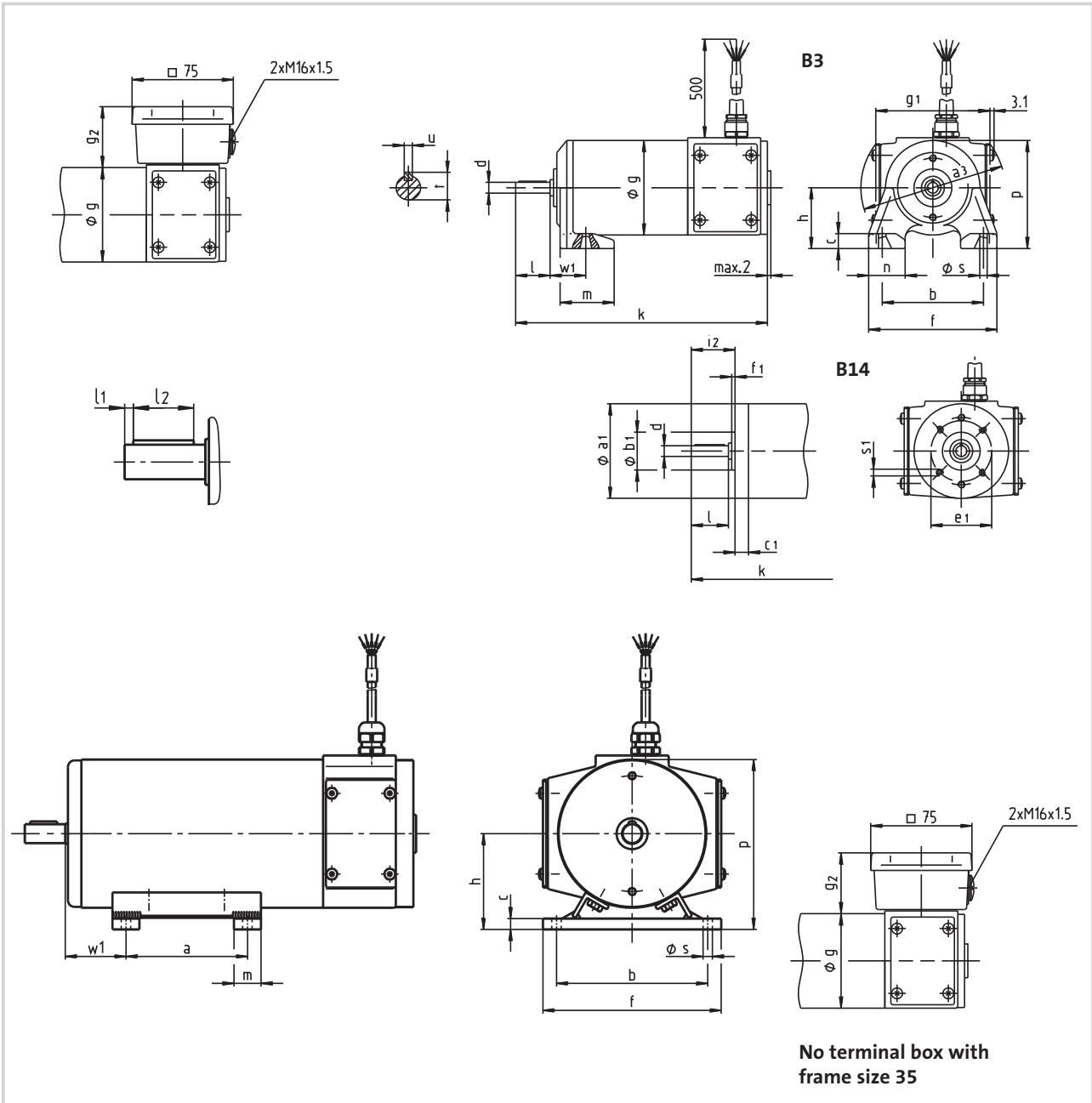
| | | |
|--|---|-----------------------|
| B-side design | 0 = no built-on accessories | |
| | 1 = with spring-applied brake | frame size 45-75 only |
| | 4 = with DC tachometer | frame size 45-75 only |
| | 5 = with AC tachometer | frame size 45-75 only |
| | 6 = for tachometer attachment | frame size 45-75 only |
| | 7 = for brake attachment | frame size 45-75 only |
| | Rated armature voltage | 24 V |
| 160 V | | frame size 75 only |
| 180 V | | |
| Brake supply voltage | 24 V DC | |
| | 205 V DC only with armature voltage of 160 V or 180 V | |
| Electrical connection | Cable | |
| | Terminal box (not frame size 35) | |
| Position of electrical connection B3/B14 | | 2 3 4 5 |
| Position of electrical connection B14 | | 2 |



Drive selection

DC permanent magnet motors

Dimensions Type 13.120.□□.□.□.□





Dimensions Type 13.120.□□.□.□.□

| Motor type | Frame size | a | a ₁ | a ₃ | b j7 | b ₁ | c | c ₁ | d | e ₁ |
|-----------------|---------------|----|----------------|----------------|---------|----------------|------|----------------|------|----------------|
| 13.120.35.0.□.□ | B3 | - | - | 79 | 55 | - | 8 | - | 7h6 | - |
| | B14 | | 50.5 | | - | 28 | - | 8 | | 40 |
| 13.120.45.□.□.□ | B3 | - | - | 107 | 75 | - | 11 | - | 8h6 | - |
| | B14 | | 69 | | - | 28 | - | 12 | | 45 |
| | IEC56 B14C80 | | 80 | | 50 | 14 | 9k6 | 65 | | |
| 13.120.55.□.□.□ | IEC56 B3 | - | - | 115 | 90 | - | 13 | - | 9k6 | - |
| | IEC56 B14C80 | | 80 | | 50 | - | 17 | 65 | | |
| | IEC63 B14C90 | | 90 | | - | 15 | 11k6 | 75 | | |
| | IEC63 B14C120 | | 120 | | 80 | - | 15 | 100 | | |
| 13.120.65.□.□.□ | IEC63 B3 | - | - | 140 | 100 | - | 15 | - | 11k6 | - |
| | IEC63 B14C90 | | 98 | | 60 | - | 18.5 | 75 | | |
| | IEC63 B14C120 | | 120 | | 80 | - | 16.5 | 100 | | |
| | IEC71 B14C105 | | 105 | | 70 | - | 16.5 | 14k6 | 85 | |
| 13.120.75.□.□.□ | IEC71 B3 | 90 | - | 154 | 112 | - | 8 | - | 14k6 | - |
| | IEC71 B14C105 | - | 110 | | - | 70 | - | 14.5 | | 85 |

| Motor type | f max. | f ₁ | g | g ₁ | g ₂ | h | i ₂ | k | l*) | l ₁ | l ₂ | m | n | p | s | s ₁ | t | u | w ₁ | Weight approx. kg | | | | | | |
|-----------------|-----------|----------------|-----|----------------|----------------|----|----------------|-------|-----|----------------|----------------|-------|----|-----|-----|----------------|------|---|----------------|----------------------|------|---|----|------|------|---|
| 13.120.35.0.□.□ | 71 | - | 54 | 62 | - | 32 | - | 172 | 31 | | | 24 | 20 | 59 | 5.5 | - | - | - | - | 18 | 1.4 | | | | | |
| | - | 2.5 | | | | - | 33.5 | | | | | - | - | - | M4 | - | | | | | | | | | | |
| 13.120.45.□.□.□ | 96 | - | 70 | 84.5 | 45 | 45 | - | 186.5 | 29 | | | 40 | 28 | 80 | 5.5 | - | - | - | - | 23 | 2.4 | | | | | |
| | - | 2.5 | | | | - | 32.5 | | | | | - | - | - | M4 | - | | | | | | | | | | |
| | | | | | | | 20 | | | | | 178 | 20 | 3.5 | 14 | - | | | | - | | - | - | M5 | 10.2 | 3 |
| 13.120.55.□.□.□ | 112 | - | 80 | 95 | 45 | 56 | - | 213 | 20 | 3.5 | 14 | 60 | 34 | 96 | 6.5 | - | 10.2 | 3 | - | 36 | 3.7 | | | | | |
| | - | 2.5 | | | | - | 20 | | | | | - | - | - | M5 | - | | | | | | | | | | |
| | - | 2.5 | | | | - | 23 | | | | | 216 | 23 | 3 | 16 | - | | | | - | | - | M5 | 12.5 | 4 | - |
| | - | 3 | | | | - | | | | | | | | | | M6 | | | | | | | | | | |
| 13.120.65.□.□.□ | 137 | - | 98 | 115 | 45 | 63 | - | 259.5 | 23 | 3 | 16 | 67 | 42 | 112 | 9 | - | 12.5 | 4 | - | 40 | 8 | | | | | |
| | - | 2.5 | | | | - | 23 | | | | | 266.5 | 30 | 4 | 20 | - | | | | - | | - | M5 | 16 | 5 | - |
| | - | 3 | | | | - | | | | | | | | | | M6 | | | | | | | | | | |
| 13.120.75.□.□.□ | 132 | - | 110 | 132 | 46 | 71 | - | 288 | 30 | 4 | 20 | 20 | | 126 | 7 | - | 16 | 5 | - | 45 | 10.2 | | | | | |
| | - | 2.5 | | | | - | 30 | | | | | - | - | - | M6 | - | | | | | | | | | | |

*) Motors 13.120.35 / 45 do not have a shaft collar.

Dimensions in mm



Drive selection

DC worm geared motors

Selection table Type SSN25-1PVC□-035C21

| Motor type | P_N W | n_2 rpm | M_2 Nm | c | i | Selection (tick as required) |
|-----------------|------------|--------------|-------------|-------|----|---------------------------------|
| 13.121.35.2.□.0 | 55 | 600 | 0.70 | 10.07 | 5 | |
| | | 375 | 1.00 | 7.26 | 8 | |
| | | 300 | 1.30 | 6.53 | 10 | |
| | | 200 | 1.70 | 4.60 | 15 | |
| | | 150 | 2.00 | 4.06 | 20 | |
| | | 100 | 2.50 | 3.06 | 30 | |
| | | 75 | 3.00 | 2.39 | 40 | |
| | | 60 | 3.20 | 1.96 | 50 | |
| | | 50 | 3.50 | 1.83 | 60 | |

Additional order information

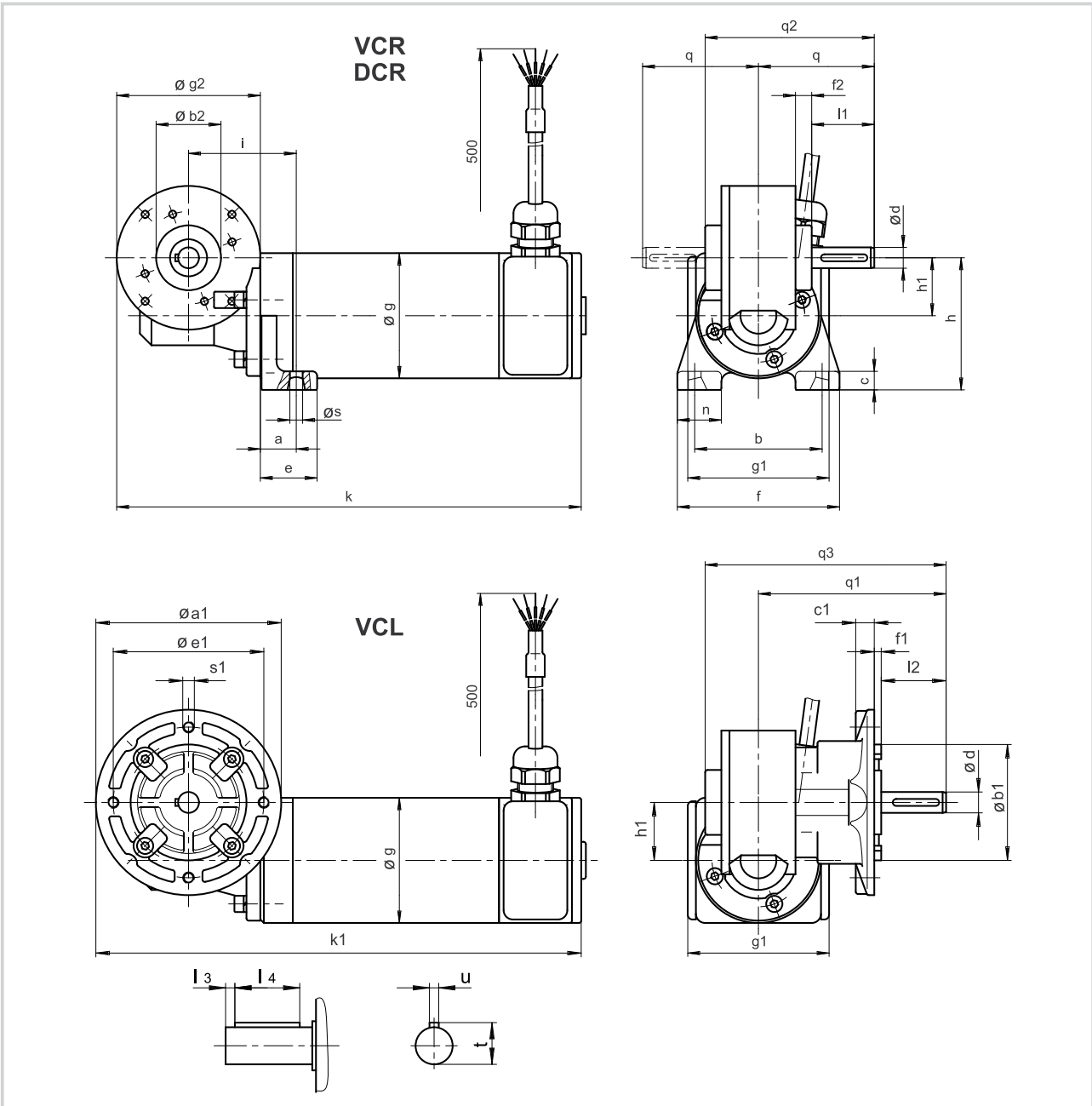
| | | |
|-----------------------------------|------------|-------------|
| Motor type | 2 = B14 | |
| | 5 = B3/B14 | |
| Rated armature voltage | 24 V | |
| | 180 V | |
| Electrical connection | Cable | |
| Gearbox type | VCR | |
| | VCL | |
| | DCR | |
| Shaft position on type VCR | | 3 5 |
| Flange/shaft position on type VCL | | 3 5 |
| Mounting position | | A B C D E F |
| Position of electrical connection | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SSN25-1PVCD-035C21



| Geared motor | a | a ₁ | b | b ₁ | b ₂ | c | c ₁ | d | e | e ₁ | f | f ₁ | f ₂ | g | g ₁ | g ₂ | h | h ₁ |
|--------------------|------|----------------|----|----------------|----------------|----|----------------|----|------|----------------|----|----------------|----------------|----|----------------|----------------|----|----------------|
| | B3 | B14 | B3 | B14 | B3 | B3 | B14 | h6 | B3 | B14 | B3 | B14 | B3 | | | B3 | B3 | ø |
| SSN25-1PVCD-035C21 | 15.5 | 80 | 55 | 50 | 28 | 8 | 8 | 9 | 24.5 | 65 | 71 | 3 | 7 | 54 | 62 | 62 | 57 | 25 |

| Geared motor | i | k | k ₁ | l ₁ | l ₂ | l ₃ | l ₄ | n | q | q ₁ | q ₂ | q ₃ | s | s ₁ | t | u | Weight |
|--------------------|------|-----|----------------|----------------|----------------|----------------|----------------|----|----|----------------|----------------|----------------|-----|----------------|------|---|------------|
| | B3 | B3 | B14 | B3 | B14 | | | B3 | B3 | B14 | B3 | B14 | B3 | B14 | | | approx. kg |
| SSN25-1PVCD-035C21 | 46.5 | 200 | 209.5 | 27 | 28 | 3 | 20 | 20 | 50 | 81 | 73 | 104 | 5.5 | M5 | 10.2 | 3 | 1.95 |

Dimensions in mm



Drive selection

DC worm geared motors

Selection table Type SSN31-1P□□□-045C21

| Motor type | P _N W | n ₂ rpm | M ₂ Nm | c | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|------|-----|---------------------------------|
| 13.121.45.3.□.□ | 110 | 600 | 1.50 | 9.41 | 5 | |
| | | 429 | 2.00 | 6.88 | 7 | |
| | | 300 | 2.70 | 5.09 | 10 | |
| | | 200 | 3.90 | 4.02 | 15 | |
| | | 150 | 4.80 | 3.01 | 20 | |
| | | 120 | 5.30 | 2.62 | 25 | |
| | | 100 | 6.20 | 2.42 | 30 | |
| | | 79 | 7.60 | 2.01 | 38 | |
| | | 60 | 8.00 | 1.61 | 50 | |
| | | 55 | 10.00 | 1.50 | 55 | |
| | | 40 | 9.50 | 1.06 | 75 | |
| | | 30 | 11.00 | 0.83 | 100 | |

Additional order information

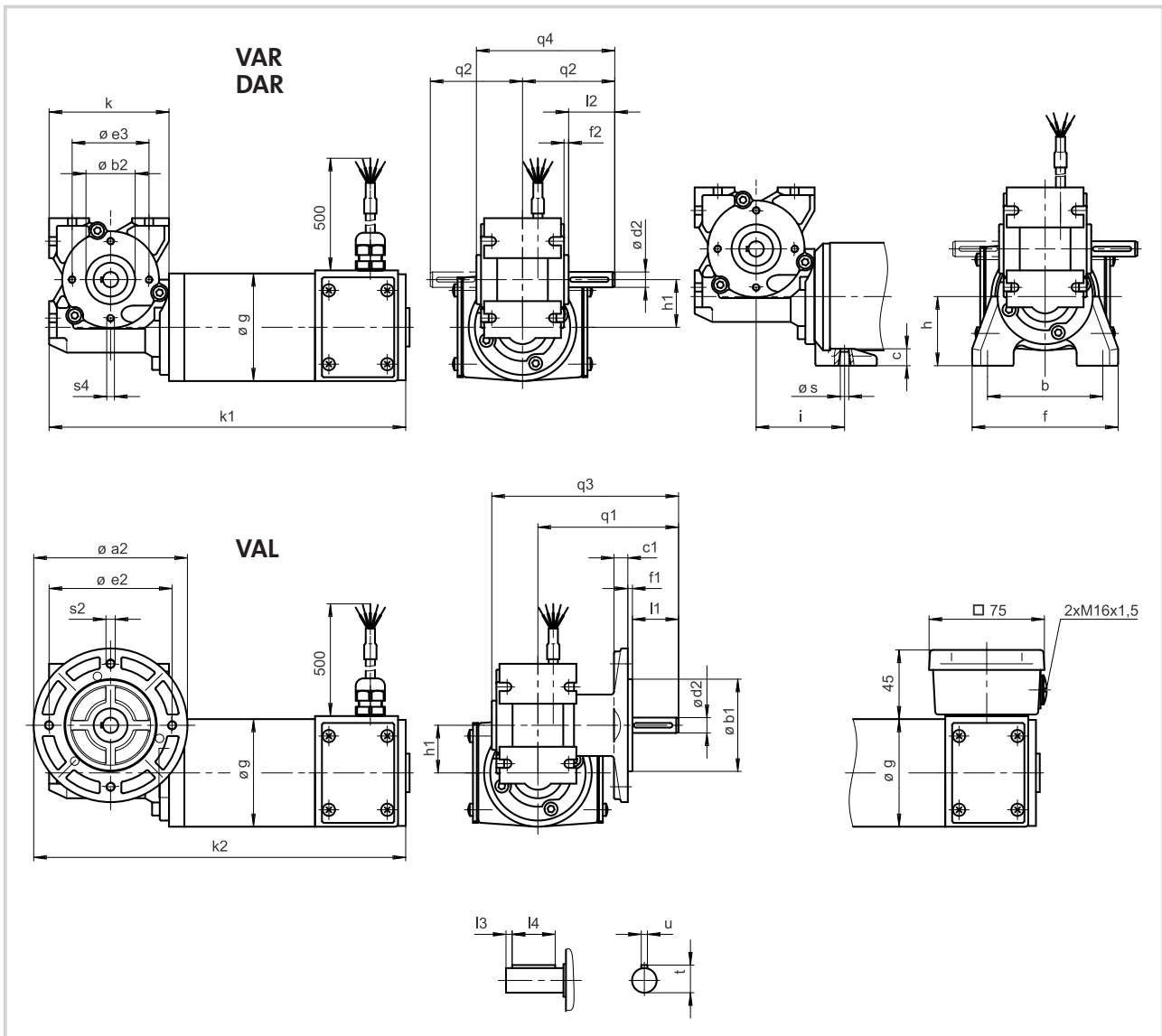
| | | | |
|---|--|--------------------------------------|--|
| Motor type | 2 = B14 | | |
| | 5 = B3/B14 | | |
| B-side design | 0 = no built-on accessories | | |
| | 1 = with spring-applied brake | | |
| | 4 = with DC tachometer | | |
| | 5 = with AC tachometer | | |
| | 6 = for tachometer attachment | | |
| | 7 = for brake attachment | | |
| Rated armature voltage: | 24 V | | |
| | 180 V | | |
| Brake supply voltage | 24 V DC | | |
| | 205 V DC only with armature voltage of 180 V | | |
| Electrical connection | Cable | | |
| | Terminal box | | |
| Gearbox type | VAR | Shaft D = 10x30 mm | |
| | | Shaft D = 12x40 mm | |
| | DAR | Shaft D = 10x30 mm | |
| | | Shaft D = 12x40 mm | |
| | VAL | Shaft D = 10x30 mm Flange D = 100 mm | |
| Shaft D = 12x40 mm Flange D = 120 mm | | | |
| HAR | | | |
| Shaft position on gearbox type VAR | | 3 5 | |
| Flange/shaft position on gearbox type VAL | | 3 5 | |
| Mounting position | | A B C D E F | |
| Position of electrical connection | | 2 3 4 5 | |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SSN31-1PVA□-045C21



| Geared motor | a ₂ | b | b ₁ j7 | b ₂ h8 | c | c ₁ | d ₂ h6 | e ₂ | e ₃ | f | f ₁ | f ₂ | g | h | h ₁ | i |
|--------------------|----------------|----|----------------------|----------------------|----|----------------|----------------------|----------------|----------------|----|----------------|----------------|----|----|----------------|------|
| SSN31-1PVA□-045C21 | 100 | 75 | 60 | 32 | 11 | 9 | 10 | 80 | 50 | 95 | 3 | 3 | 70 | 45 | 31 | 57.5 |
| | 120 | 75 | 80 | 32 | 11 | 9 | 12 | 100 | 50 | 95 | 3 | 3 | 70 | 45 | 31 | 57.5 |

| Geared motor | k | k ₁ | k ₂ | l ₁ | l ₂ | l ₃ | l ₄ | q ₁ | q ₂ | q ₃ | q ₄ | s | s ₂ | s ₄ | t | u | Weight approx. kg |
|--------------------|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----|----------------|----------------|------|---|----------------------|
| SSN31-1PVA□-045C21 | 78 | 232 | 242 | 30 | 30 | 4 | 25 | 91.5 | 60 | 121.5 | 90 | 5.5 | M6 | M5 | 11.2 | 3 | 3.0 |
| | 78 | 232 | 252 | 40 | 40 | 4 | 28 | 101.5 | 70 | 131.5 | 100 | 5.5 | M6 | M5 | 13.5 | 4 | 3.2 |

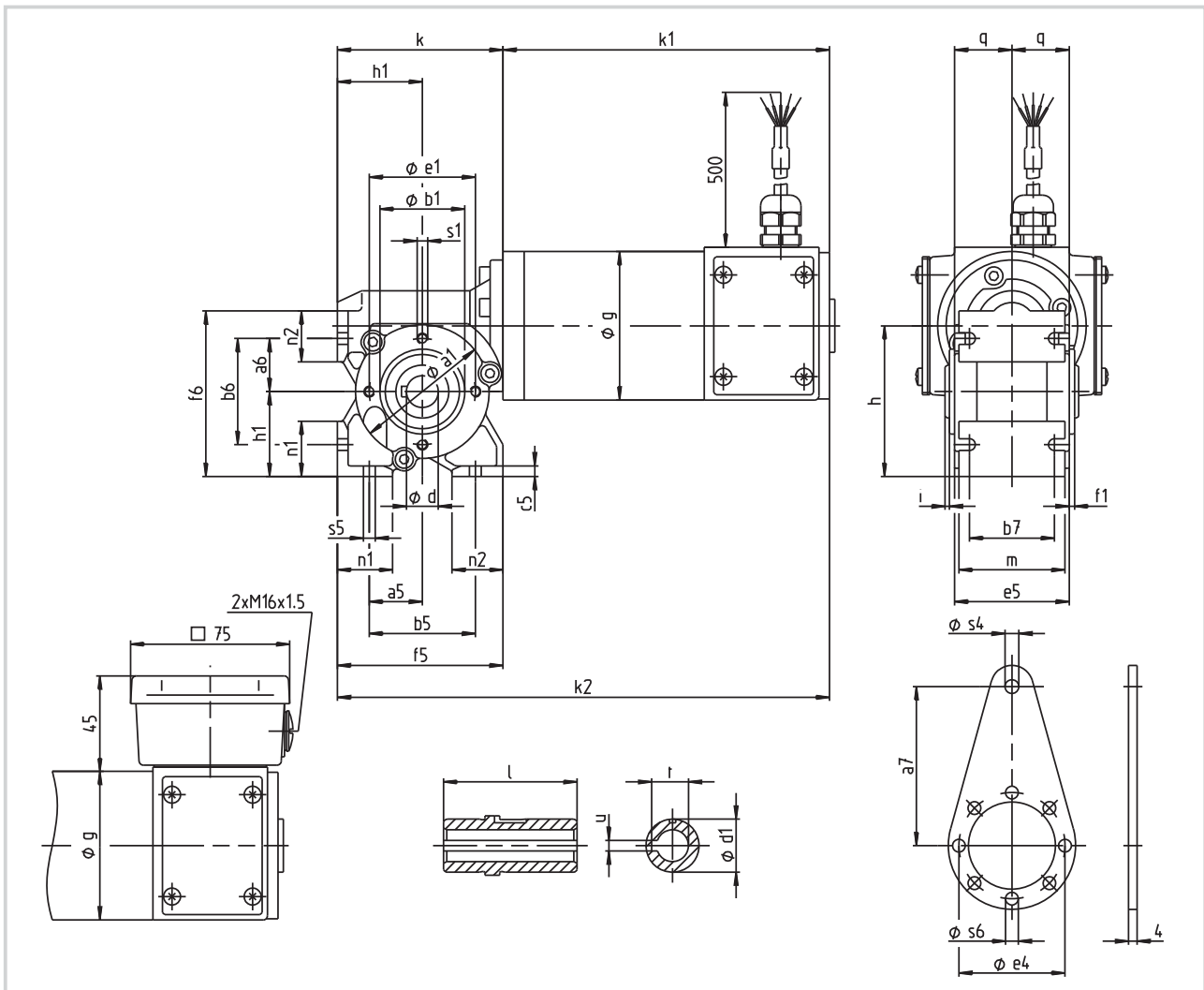
Dimensions in mm



Drive selection

DC worm geared motors

Dimensions Type SSN31-1PHAR-045C21



| Geared motor | a ₁ | a ₅ | a ₆ | a ₇ | b ₁ h ₈ | b ₅ | b ₆ | b ₇ | c ₅ | d | d ₁ | e ₁ | e ₄ | e ₅ | f ₁ | f ₅ | f ₆ | g |
|--------------------|----------------|----------------|----------------|----------------|----------------------------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|
| SSN31-1PHAR-045C21 | 63 | 25 | 25 | 75 | 40 | 50 | 50 | 40 | 5 | 15 | 25 | 50 | 50 | 54 | 2.5 | 78 | 78 | 70 |

| Geared motor | h | h ₁ | i | k | k ₁ | k ₂ | l | m | n ₁ | n ₂ | q | s ₁ | s ₄ | s ₅ | s ₆ | t | u | Weight approx. kg |
|--------------------|----|----------------|---|----|----------------|----------------|----|----|----------------|----------------|----|----------------|----------------|----------------|----------------|------|---|----------------------|
| SSN31-1PHAR-045C21 | 71 | 40 | 2 | 78 | 154 | 232 | 63 | 50 | 26 | 24 | 27 | M5 | 6.5 | 5.5 | 6 | 17.3 | 5 | 3.0 |

Dimensions in mm





Drive selection

DC worm geared motors

Selection table Type SSN31-1P□□□-056C21

KMAT 456906

| Motor type | P _N W | n ₂ rpm | M ₂ Nm | c | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|------|-----|---------------------------------|
| 13.121.55.3.□.□ | 200 | 600 | 2.70 | 5.05 | 5 | |
| | | 430 | 3.70 | 3.78 | 7 | |
| | | 300 | 4.90 | 2.84 | 10 | |
| | | 200 | 7.00 | 2.25 | 15 | |
| | | 150 | 8.80 | 1.70 | 20 | |
| | | 120 | 9.80 | 1.43 | 25 | |
| | | 100 | 11.30 | 1.32 | 30 | |
| | | 80 | 13.90 | 1.05 | 38 | |
| | | 60 | 13.00 | 0.88 | 50 | |
| | | 55 | 15.00 | 0.82 | 55 | |
| | | 40 | 11.00 | 0.64 | 75 | |
| | | 30 | 11.00 | 0.45 | 100 | |

Additional order information

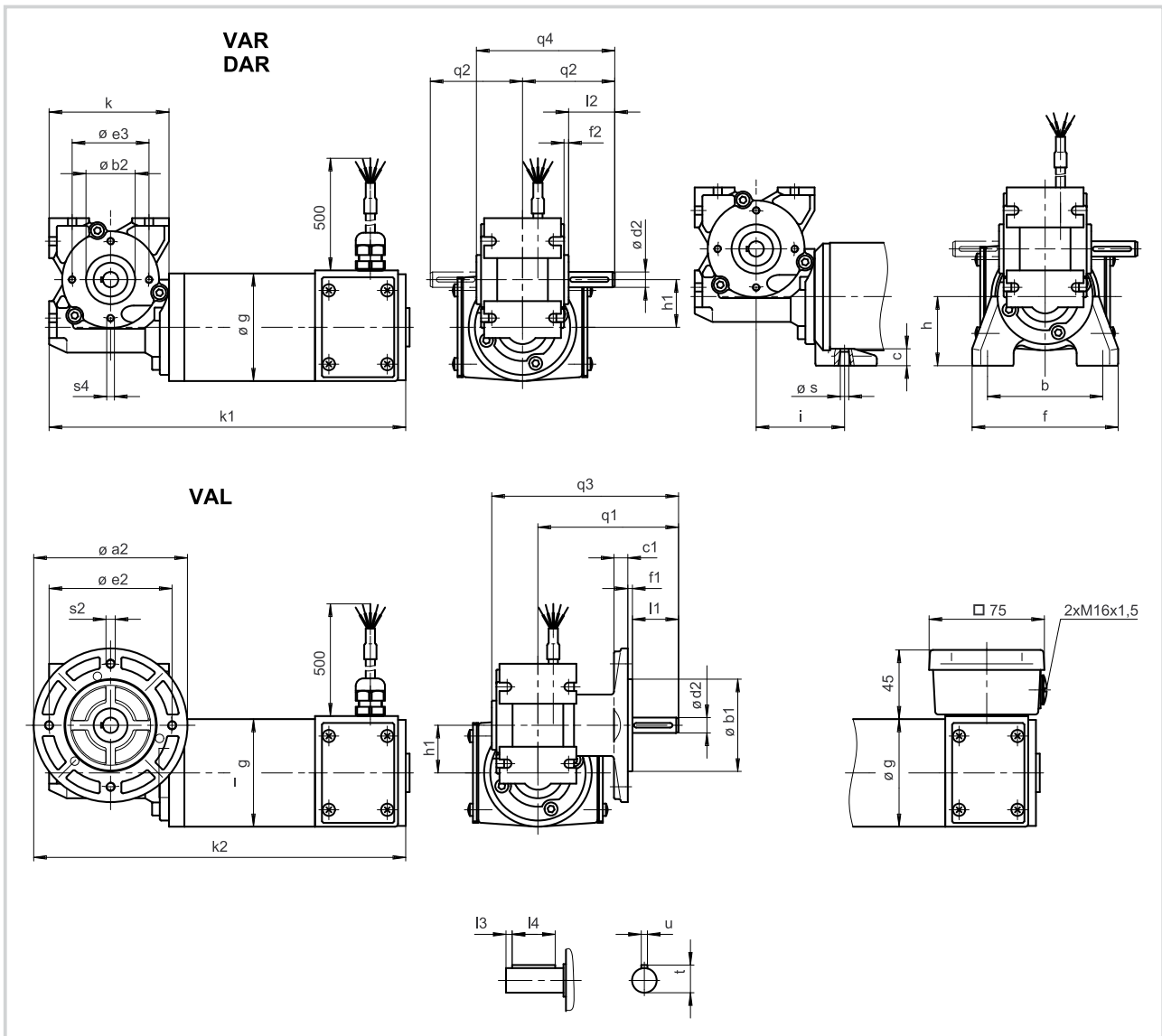
| | | | |
|---|--|--------------------------------------|--|
| Motor type | 2 = B14 | | |
| | 5 = B3/B14 | | |
| B-side design | 0 = no built-on accessories | | |
| | 1 = with spring-applied brake | | |
| | 4 = with DC tachometer | | |
| | 5 = with AC tachometer | | |
| | 6 = for tachometer attachment | | |
| | 7 = for brake attachment | | |
| Rated armature voltage: | 24 V | | |
| | 180 V | | |
| Brake supply voltage | 24 V DC | | |
| | 205 V DC only with armature voltage of 180 V | | |
| Electrical connection | Cable | | |
| | Terminal box | | |
| Gearbox type | VAR | Shaft D = 10x30 mm | |
| | | Shaft D = 12x40 mm | |
| | DAR | Shaft D = 10x30 mm | |
| | | Shaft D = 12x40 mm | |
| | VAL | Shaft D = 10x30 mm Flange D = 100 mm | |
| | | Shaft D = 12x40 mm Flange D = 120 mm | |
| HAR | | | |
| Shaft position on gearbox type VAR | | 3 5 | |
| Flange/shaft position on gearbox type VAL | | 3 5 | |
| Mounting position | | A B C D E F | |
| Position of electrical connection | | 2 3 4 5 | |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SSN31-1PVA□-056C21

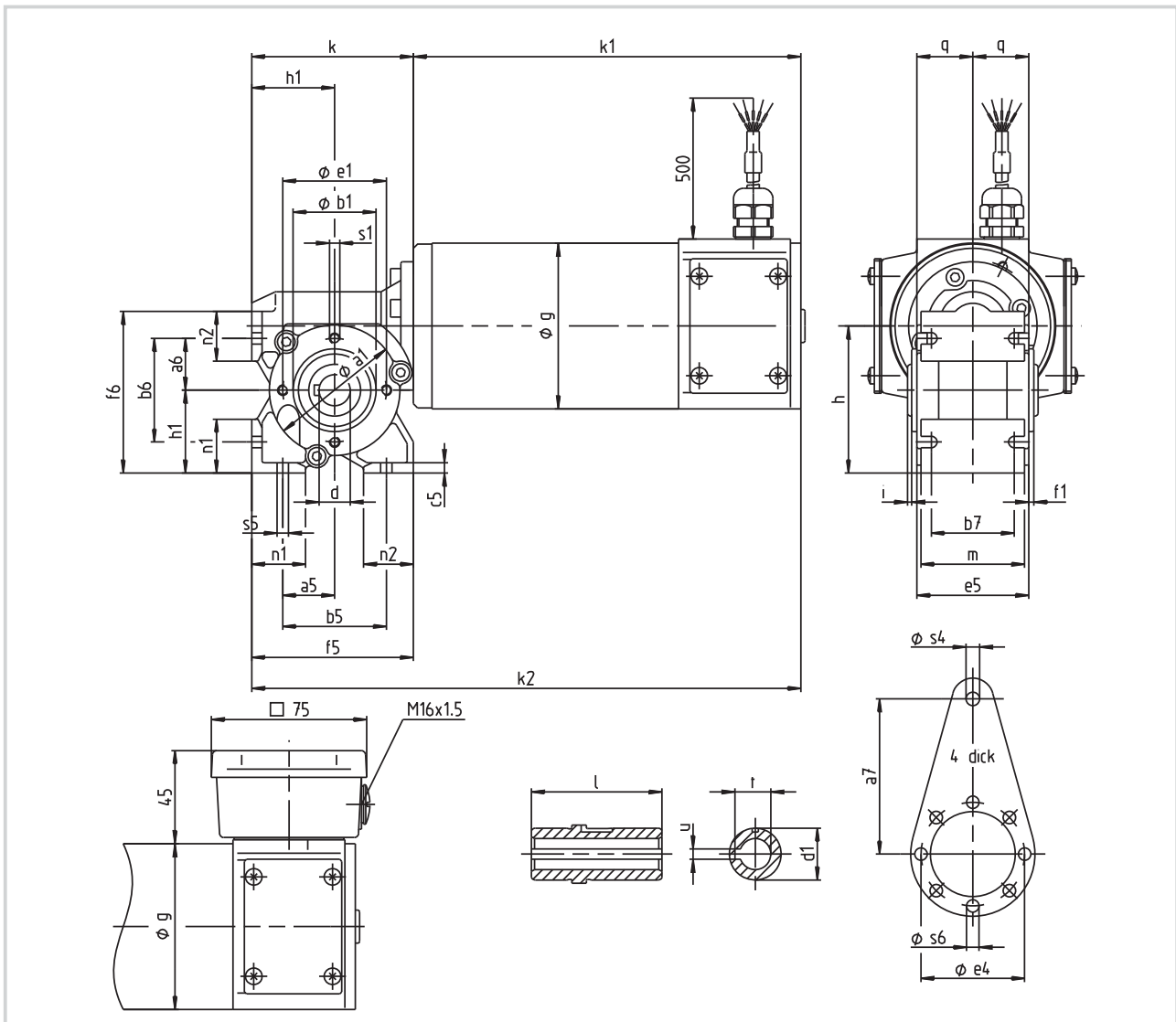


| Geared motor | a ₂ | b | b ₁ j7 | b ₂ h8 | c | c ₁ | d ₂ h6 | e ₂ | e ₃ | f | f ₁ | f ₂ | g | h | h ₁ | i |
|--------------------|----------------|----|----------------------|----------------------|----|----------------|----------------------|----------------|----------------|-----|----------------|----------------|----|----|----------------|----|
| SSN31-1PVA□-056C21 | 100 | 90 | 60 | 32 | 13 | 9 | 10 | 80 | 50 | 110 | 3 | 3 | 80 | 56 | 31 | 68 |
| | 120 | 90 | 80 | 32 | 13 | 9 | 12 | 100 | 50 | 110 | 3 | 3 | 80 | 56 | 31 | 68 |

| Geared motor | k | k ₁ | k ₂ | l ₁ | l ₂ | l ₃ | l ₄ | q ₁ | q ₂ | q ₃ | q ₄ | s | s ₂ | s ₄ | t | u | Weight approx. kg |
|--------------------|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----|----------------|----------------|------|---|----------------------|
| SSN31-1PVA□-056C21 | 78 | 265 | 275 | 30 | 30 | 4 | 25 | 91.5 | 60 | 121.5 | 90 | 6.5 | M6 | M5 | 11.2 | 3 | 4.4 |
| | 78 | 265 | 285 | 40 | 40 | 4 | 28 | 101.5 | 70 | 131.5 | 100 | 6.5 | M6 | M5 | 13.5 | 4 | 4.5 |

Dimensions in mm

Dimensions Type SSN31-1PHAR-056C21



| Geared motor | a ₁ | a ₅ | a ₆ | a ₇ | b ₁ h8 | b ₅ | b ₆ | b ₇ | c ₅ | d H7 | d ₁ | e ₁ | e ₄ | e ₅ | f ₁ | f ₅ | f ₆ | g |
|--------------------|----------------|----------------|----------------|----------------|----------------------|----------------|----------------|----------------|----------------|---------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|
| SSN31-1PHAR-056C21 | 63 | 25 | 25 | 75 | 40 | 50 | 50 | 40 | 5 | 15 | 25 | 50 | 50 | 54 | 2.5 | 78 | 78 | 80 |

| Geared motor | h | h ₁ | i | k | k ₁ | k ₂ | l | m | n ₁ | n ₂ | q | s ₁ | s ₄ | s ₅ | s ₆ | t | u | Weight approx. kg |
|--------------------|----|----------------|---|----|----------------|----------------|----|----|----------------|----------------|----|----------------|----------------|----------------|----------------|------|---|----------------------|
| SSN31-1PHAR-056C21 | 71 | 40 | 2 | 78 | 187 | 265 | 63 | 50 | 26 | 24 | 27 | M5 | 6.5 | 5.5 | 6 | 17.3 | 5 | 4.4 |

Dimensions in mm





Drive selection

DC worm geared motors

Selection table Type SSN40-1P□□□-063C21

| Motor type | P _N W | n ₂ rpm | M ₂ Nm | c | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|------|------|---------------------------------|
| 13.121.65.5.□.□ | 370 | 444 | 6.70 | 5.22 | 6.75 | |
| | | 300 | 9.60 | 3.64 | 10 | |
| | | 200 | 13.00 | 2.52 | 15 | |
| | | 150 | 16.70 | 2.03 | 20 | |
| | | 120 | 18.80 | 1.54 | 25 | |
| | | 100 | 21.90 | 1.65 | 30 | |
| | | 75 | 26.40 | 1.29 | 40 | |
| | | 60 | 31.80 | 1.01 | 50 | |
| | | 50 | 23.00 | 0.85 | 60 | |
| | 38 | 24.00 | 0.65 | 80 | | |

Additional order information

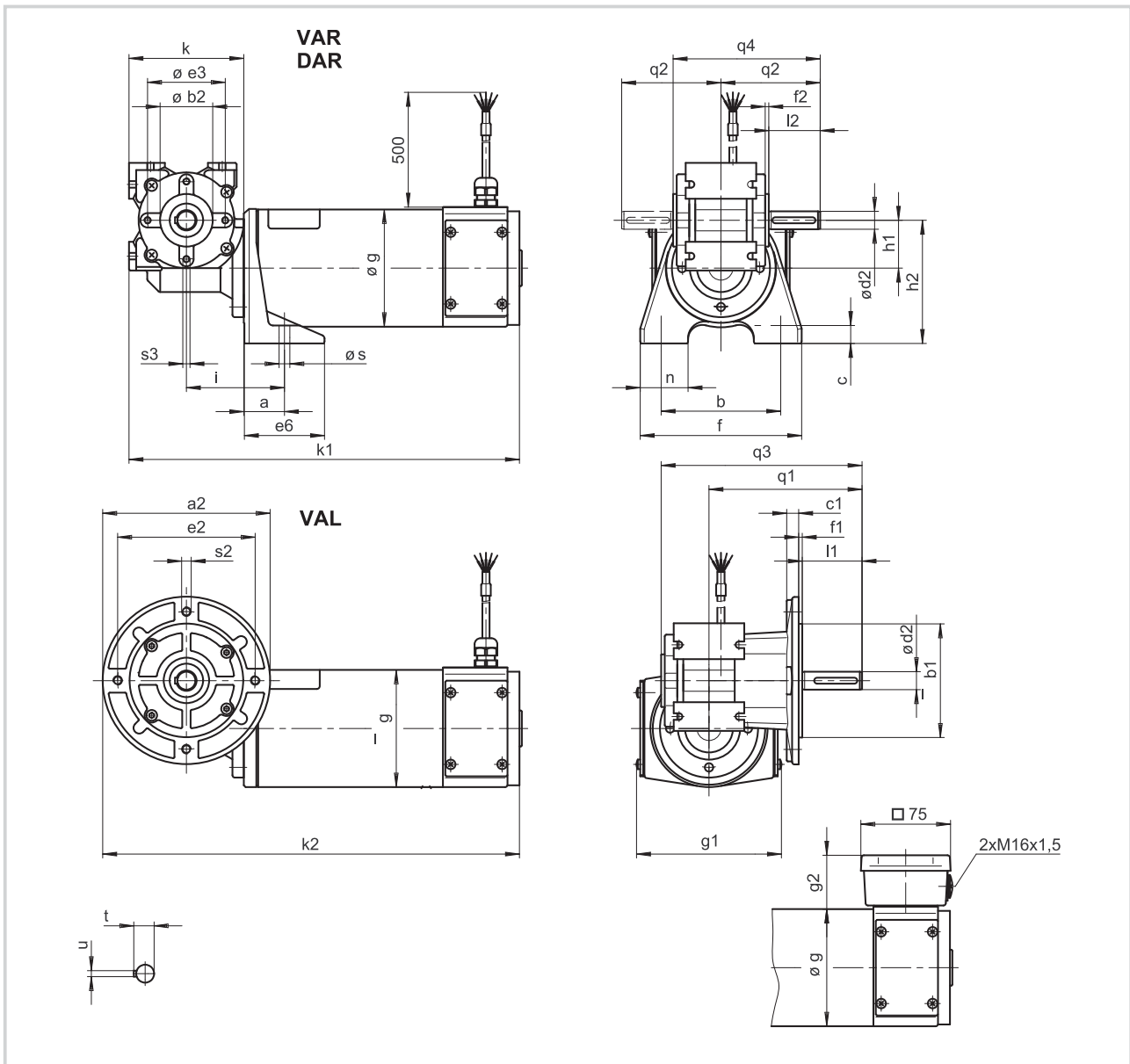
| | | |
|---|---|-------------|
| Motor type | 2 = B14 5 = B3/B14 | |
| B-side design | 0 = no built-on accessories 1 = with spring-applied brake 4 = with DC tachometer 5 = with AC tachometer 6 = for tachometer attachment 7 = for brake attachment | |
| Rated armature voltage: | 24 V 180 V | |
| Brake supply voltage | 24 V DC 205 V DC only with armature voltage of 180 V | |
| Electrical connection | Cable Terminal box | |
| Gearbox type | VAR DAR VAL HAR | |
| Shaft position on gearbox type VAR | | 3 5 |
| Flange/shaft position on gearbox type VAL | | 3 5 |
| Mounting position | | A B C D E F |
| Position of electrical connection | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SSN40-1PVA□-063C21

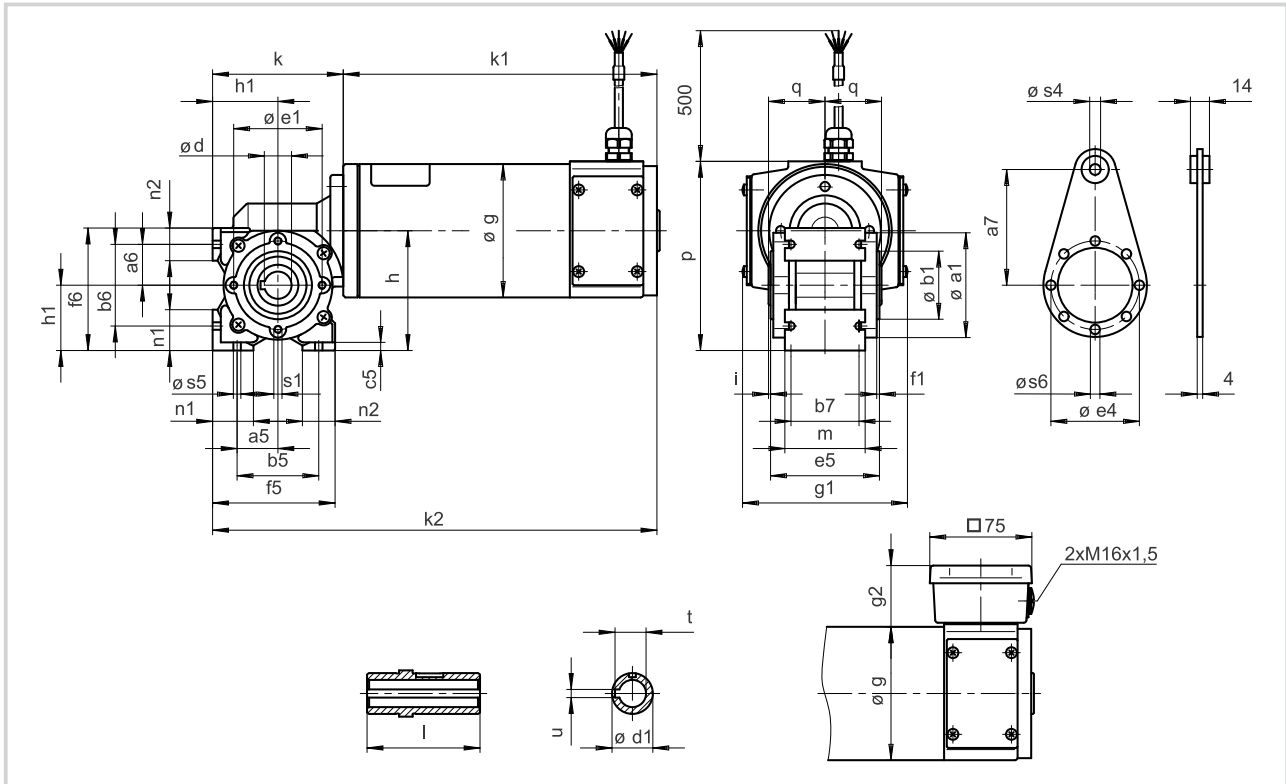


| Geared motor | a | a ₂ | a ₃ | b | b ₁ j7 | b ₂ h10 | c | c ₁ | d ₂ h6 | e ₂ | e ₃ | e ₆ | f | f ₁ | f ₂ | g | g ₁ | g ₂ | h ₁ | h ₂ |
|--------------------|----|----------------|----------------|-----|----------------------|-----------------------|----|----------------|----------------------|----------------|----------------|----------------|-----|----------------|----------------|----|----------------|----------------|----------------|----------------|
| SSN40-1PVA□-063C21 | 34 | 140 | - | 100 | 95 | 44 | 15 | 10 | 15 | 115 | 65 | 67.5 | 137 | 3 | 3 | 98 | 121 | 45 | 40 | 103 |

| Geared motor | i | k | k ₁ | k ₂ | l ₁ | l ₂ | m ₁ | n | q ₁ | q ₂ | q ₃ | q ₄ | s | s ₂ | s ₃ | t | u | Weight approx. kg |
|--------------------|----|----|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----------------|---|----------------|----------------|----|---|----------------------|
| SSN40-1PVA□-063C21 | 82 | 96 | 327 | 349 | 50 | 43 | - | 42 | 128 | 83 | 168 | 123 | 9 | M8 | M6 | 17 | 5 | 9.5 |

Dimensions in mm

Dimensions Type SSN40-1PHAR-063C21



| Geared motor | a ₁ | a ₅ | a ₆ | a ₇ | b ₁ h ₈ | b ₅ | b ₆ | b ₇ | c ₅ | d | d ₁ | e ₁ | e ₄ | e ₅ | f ₁ | f ₅ | f ₆ | g | g ₁ | g ₂ |
|--------------------|----------------|----------------|----------------|----------------|----------------------------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|
| SSN40-1PHAR-063C21 | 77 | 30 | 30 | 85 | 50 | 60 | 60 | 50 | 6 | 20 | 30 | 65 | 65 | 80 | 2 | 90 | 90 | 98 | 121 | 45 |

| Geared motor | h | h ₁ | i | k | k ₁ | k ₂ | l | m | n ₁ | n ₂ | p | q | s ₁ | s ₄ | s ₅ | s ₆ | t | u | Weight approx. kg |
|--------------------|----|----------------|-----|----|----------------|----------------|----|----|----------------|----------------|-----|------|----------------|----------------|----------------|----------------|------|---|----------------------|
| SSN40-1PHAR-063C21 | 88 | 48 | 1.5 | 96 | 231 | 327 | 83 | 59 | 30 | 24 | 139 | 41.5 | M6 | 8 | 5.5 | 7 | 22.8 | 6 | 9.5 |

Dimensions in mm





Drive selection

DC worm geared motors

Selection table Type SSN40-1P□□□-071C21

| Motor type | P _N W | n ₂ rpm | M ₂ Nm | c | i | Selection (tick as required) | |
|-----------------|---------------------|-----------------------|----------------------|-------|------|---------------------------------|--|
| 13.121.75.5.□.□ | 540 | 444 | 9.60 | 3.63 | 6.75 | | |
| | | 300 | 13.70 | 2.54 | 10 | | |
| | | 24 V | 200 | 18.80 | 1.75 | 15 | |
| | | | 150 | 24.00 | 1.41 | 20 | |
| | | | 120 | 27.20 | 1.07 | 25 | |
| | | | 100 | 31.60 | 1.04 | 30 | |
| | | | 75 | 34.00 | 0.89 | 40 | |
| | | | 60 | 32.00 | 0.69 | 50 | |
| | | | 50 | 23.00 | 0.59 | 60 | |
| 38 | 24.00 | 0.45 | 80 | | | | |
| 13.121.75.5.□.□ | 600 | 444 | 10.80 | 3.23 | 6.75 | | |
| | | 300 | 15.40 | 2.26 | 10 | | |
| | | 160 V | 200 | 21.20 | 1.56 | 15 | |
| | | | 150 | 27.00 | 1.25 | 20 | |
| | | | 120 | 29.00 | 0.95 | 25 | |
| | | | 100 | 35.50 | 1.01 | 30 | |
| | | | 75 | 34.00 | 0.79 | 40 | |
| | | | 60 | 32.00 | 0.62 | 50 | |
| | | | 50 | 23.00 | 0.53 | 60 | |
| 38 | 24.00 | 0.40 | 80 | | | | |

Additional order information

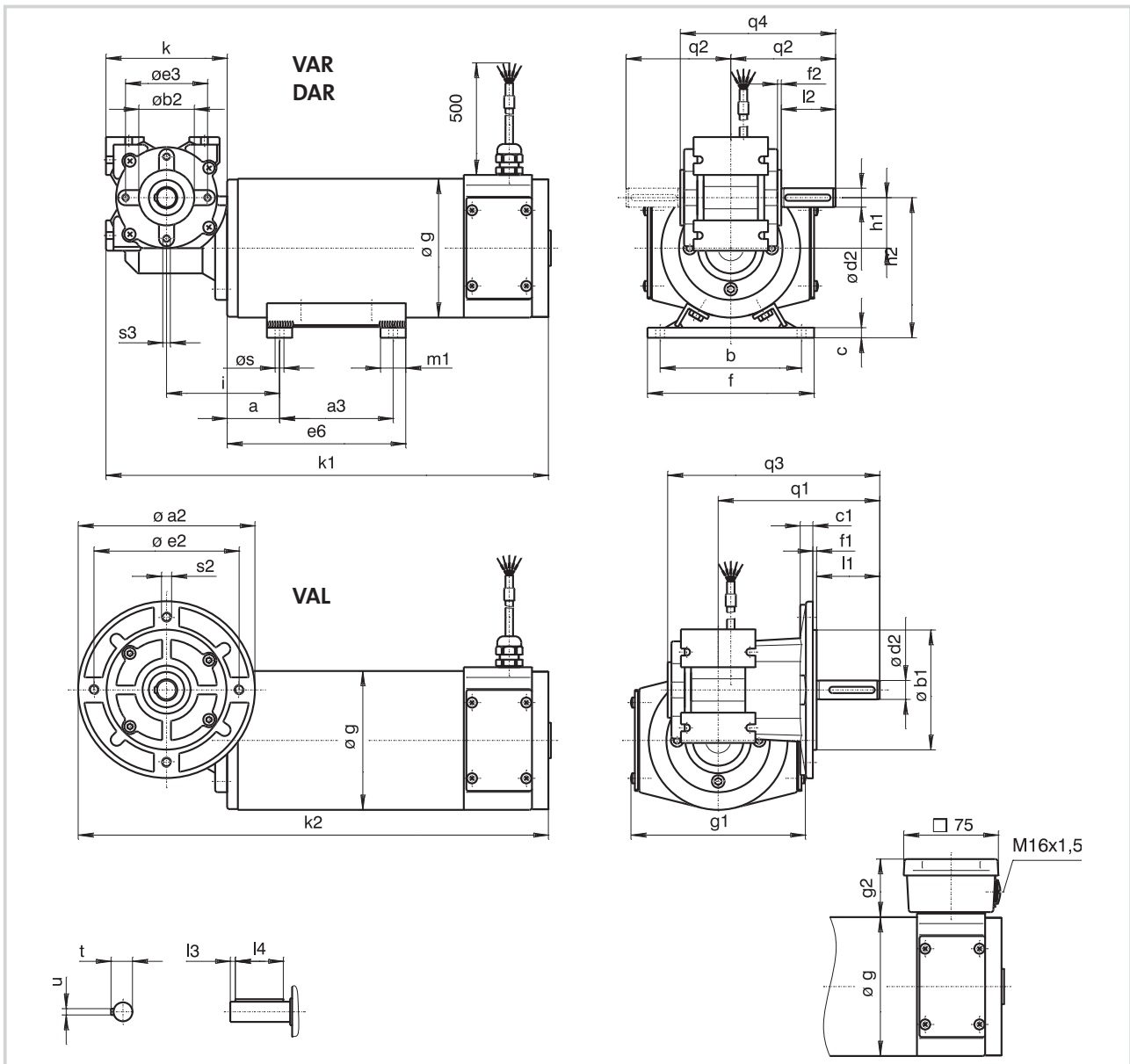
| | | |
|---|--|-------------|
| Motor type | 2 = B14 | |
| | 5 = B3/B14 | |
| B-side design | 0 = no built-on accessories | |
| | 1 = with spring-applied brake | |
| | 4 = with DC tachometer | |
| | 5 = with AC tachometer | |
| | 6 = for tachometer attachment | |
| | 7 = for brake attachment | |
| | Rated armature voltage: | 24 V |
| 160 V | | |
| Brake supply voltage | 24 V DC | |
| | 205 V DC only with armature voltage of 160 V | |
| Electrical connection | Cable | |
| | Terminal box | |
| Gearbox type | VAR | |
| | DAR | |
| | VAL | |
| | HAR | |
| Shaft position on gearbox type VAR | | 3 5 |
| Flange/shaft position on gearbox type VAL | | 3 5 |
| Mounting position | | A B C D E F |
| Position of electrical connection | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SSN40-1PVA□-071C21



| Geared motor | a | a ₂ | a ₃ | b | b ₁ j7 | b ₂ h10 | c | c ₁ | d ₂ h6 | e ₂ | e ₃ | e ₆ | f | f ₁ | f ₂ | g | g ₁ | g ₂ | h ₁ | h ₂ |
|--------------------|------|----------------|----------------|-----|----------------------|-----------------------|---|----------------|----------------------|----------------|----------------|----------------|-----|----------------|----------------|-----|----------------|----------------|----------------|----------------|
| SSN40-1PVA□-071C21 | 41.5 | 140 | 90 | 112 | 95 | 44 | 8 | 10 | 15 | 115 | 65 | 141.5 | 132 | 3 | 3 | 110 | 138 | 46 | 40 | 111 |

| Geared motor | i | k | k ₁ | k ₂ | l ₁ | l ₂ | m ₁ | n | q ₁ | q ₂ | q ₃ | q ₄ | s | s ₂ | s ₃ | t | u | Weight approx. kg |
|-------------------|------|----|----------------|----------------|----------------|----------------|----------------|---|----------------|----------------|----------------|----------------|---|----------------|----------------|----|---|----------------------|
| SSN25-1PV□-071C21 | 89.5 | 96 | 351 | 373 | 50 | 43 | 20 | - | 128 | 83 | 168 | 123 | 7 | M8 | M6 | 17 | 5 | 11.7 |

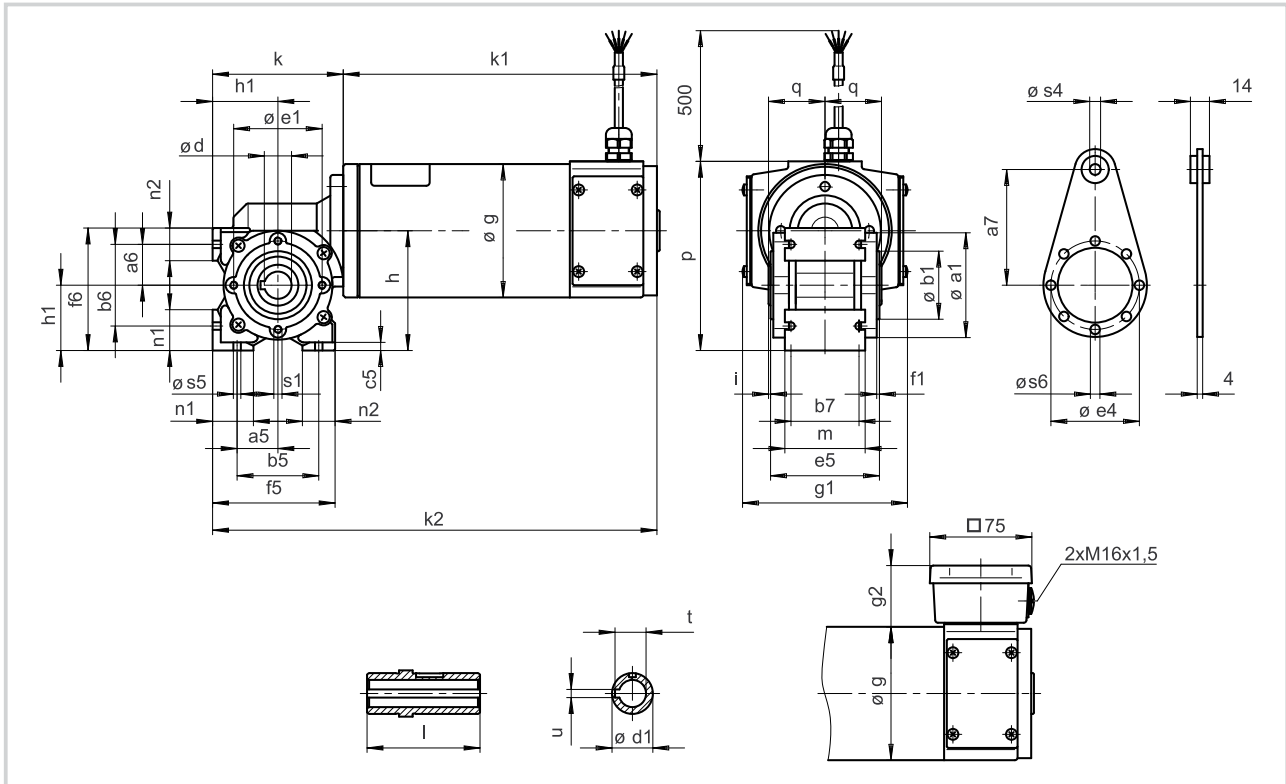
Dimensions in mm



Drive selection

DC worm geared motors

Dimensions Type SSN40-1PHAR-071C21



| Geared motor | a ₁ | a ₅ | a ₆ | a ₇ | b ₁ h ₈ | b ₅ | b ₆ | b ₇ | c ₅ | d | d ₁ | e ₁ | e ₄ | e ₅ | f ₁ | f ₅ | f ₆ | g | g ₁ | g ₂ |
|--------------------|----------------|----------------|----------------|----------------|----------------------------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----|----------------|----------------|
| SSN40-1PHAR-071C21 | 77 | 30 | 30 | 85 | 50 | 60 | 60 | 50 | 6 | 20 | 30 | 65 | 65 | 80 | 2 | 90 | 90 | 110 | 138 | 46 |

| Geared motor | h | h ₁ | i | k | k ₁ | k ₂ | l | m | n ₁ | n ₂ | p | q | s ₁ | s ₄ | s ₅ | s ₆ | t | u | Weight approx. kg |
|--------------------|----|----------------|-----|----|----------------|----------------|----|----|----------------|----------------|-----|------|----------------|----------------|----------------|----------------|------|---|----------------------|
| SSN40-1PHAR-071C21 | 88 | 48 | 1.5 | 96 | 255 | 351 | 83 | 59 | 30 | 24 | 146 | 41.5 | M6 | 8 | 5.5 | 7 | 22.8 | 6 | 11.7 |

Dimensions in mm





Drive selection

DC planetary geared motors

Selection table Type SPL42-□PVCR-035C21

| Motor type | P _N W | n ₂ rpm | M ₂ Nm | c | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| 13.120.35.9.2.0 | 55 | 811 | 0.50 | 5.96 | 3.7 | |
| | | 444 | 0.90 | 3.27 | 6.75 | |
| | | 218 | 1.80 | 4.28 | 13.73 | |
| | | 120 | 3.30 | 2.35 | 25.01 | |
| | | 66 | 6.00 | 1.29 | 45.56 | |
| | | 59 | 6.30 | 2.48 | 50.89 | |
| | | 32 | 11.40 | 1.36 | 92.7 | |
| | | 18 | 15.00 | 0.75 | 168.84 | |

Additional order information

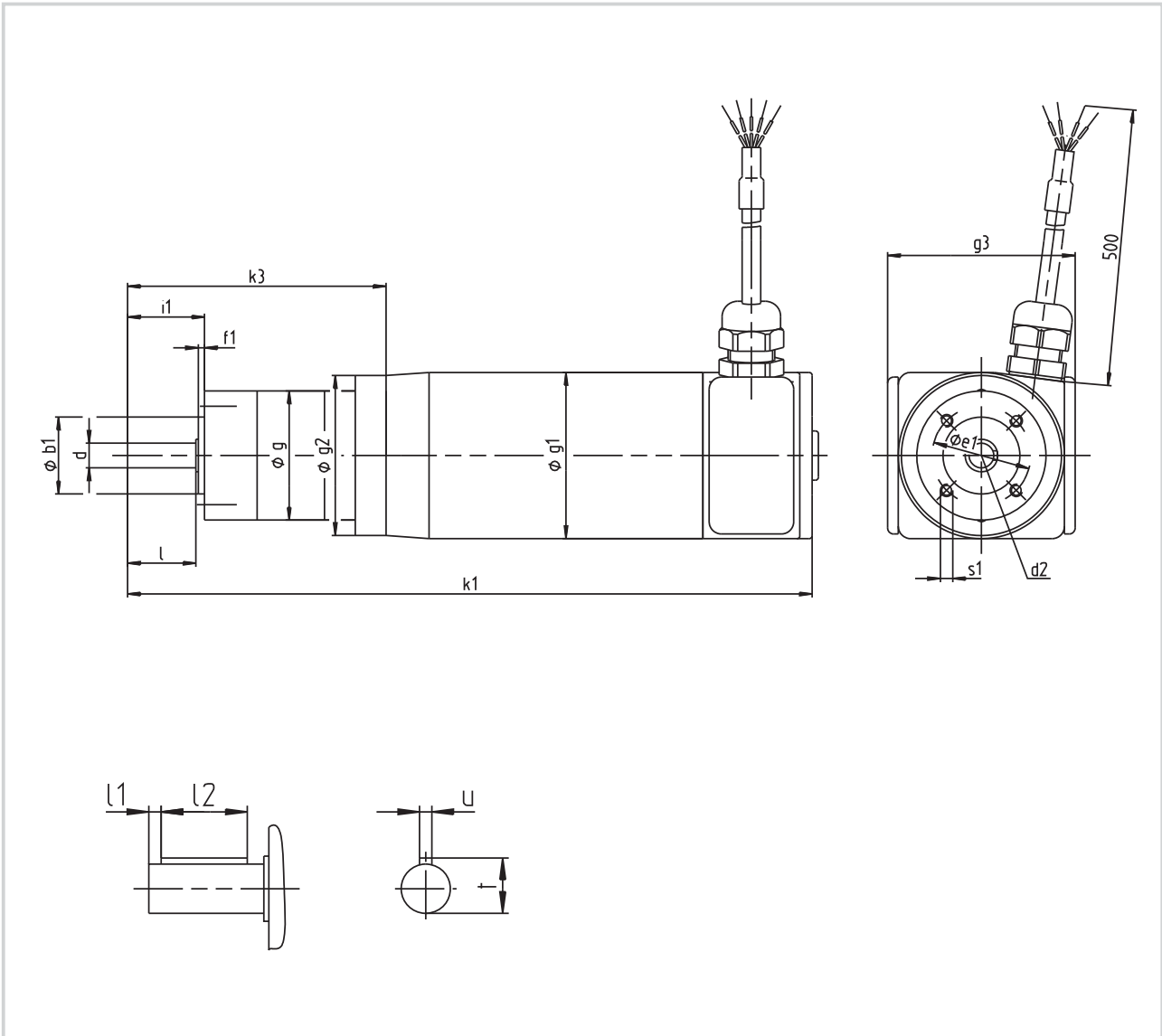
| | | |
|-----------------------------------|-------|---|
| Rated armature voltage: | 24 V | |
| | 180 V | |
| Electrical connection | Cable | |
| Position of electrical connection | | 2 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SPL42-□PVCR-035C21



| Geared motor | Ratio i | b ₁ h10 | d g6 | d ₂ | e ₁ | f ₁ | g | g ₁ | g ₂ | g ₃ | i ₁ | k ₁ | k ₃ | l | l ₁ | l ₂ | s ₁ | t | u | Weight approx. kg |
|--------------------|------------|-----------------------|---------|----------------|----------------|----------------|----|----------------|----------------|----------------|----------------|----------------|----------------|------|----------------|----------------|----------------|-----|---|----------------------|
| SPL42-□PVCR-035C21 | 3.7 | 25 | 8 | M3 | 32 | 2 | 42 | 54 | 52 | 62 | 25 | 223 | 84 | 22.2 | 3 | 16 | M4 x10 | 9.2 | 3 | 1.8 |
| | 14 ... 46 | | | | | | | | | | | 236 | 97 | | | | | | | 1.9 |
| | 51 ... 169 | | | | | | | | | | | 249 | 110 | | | | | | | 2.0 |

Dimensions in mm



Drive selection

DC planetary geared motors

Selection table Type SPL52-□PVCR-045C21

| Motor type | P _N W | n ₂ rpm | M ₂ Nm | c | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| 13.120.45.1.2.□ | 110 | 811 | 1.03 | 3.86 | 3.7 | |
| | | 444 | 1.87 | 2.02 | 6.75 | |
| | | 218 | 3.60 | 3.33 | 13.73 | |
| | | 120 | 6.56 | 1.83 | 25.01 | |
| | | 66 | 11.95 | 1.01 | 45.56 | |
| | | 59 | 12.46 | 2.01 | 50.89 | |
| | | 32 | 22.71 | 1.00 | 92.7 | |
| | | 18 | 25.00 | 0.60 | 168.84 | |

Additional order information

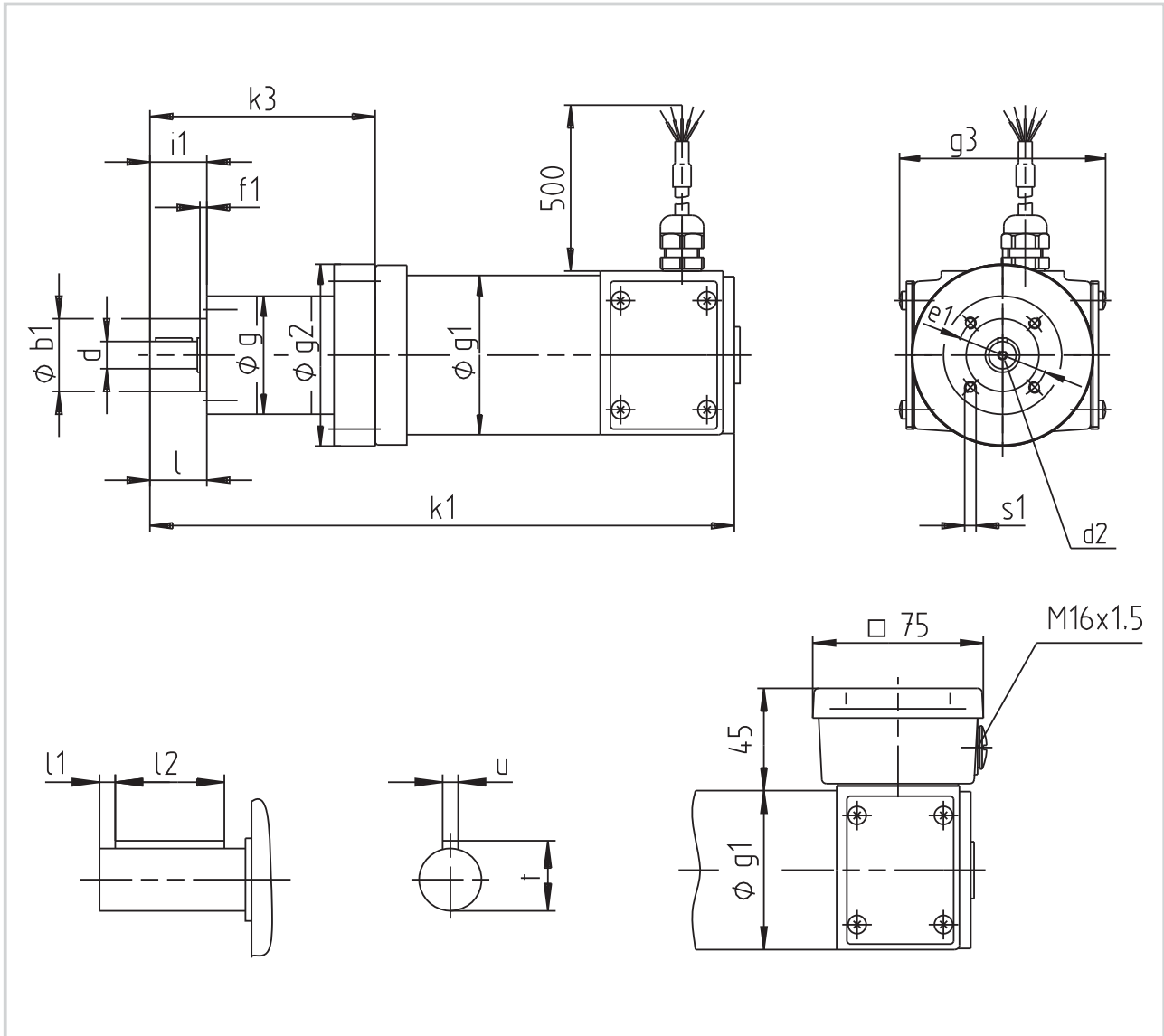
| | | |
|--|--|------|
| B-side design | 0 = no built-on accessories | |
| | 1 = with spring-applied brake | |
| | 4 = with DC tachometer | |
| | 5 = with AC tachometer | |
| | 6 = for tachometer attachment | |
| | 7 = for brake attachment | |
| | Rated armature voltage | 24 V |
| 180 V | | |
| Brake supply voltage | 24 V DC | |
| | 205 V DC only with armature voltage of 180 V | |
| Electrical connection | Cable | |
| | Terminal box | |
| Position of electrical connection | | 2 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SPL52-□PVCR-045N21



| Geared motor | Ratio i | b ₁ h8 | d h7 | d ₂ | e ₁ | f ₁ | g | g ₁ | g ₂ | g ₃ | i ₁ | k ₁ | k ₃ | l | l ₁ | l ₂ | s ₁ | t | u | Weight approx. kg |
|--------------------|------------|----------------------|---------|----------------|----------------|----------------|----|----------------|----------------|----------------|----------------|----------------|----------------|------|----------------|----------------|----------------|------|---|----------------------|
| SPL52-□PVCR-045N21 | 3.7 | 32 | 12 | M4 | 40 | 3 | 52 | 70 | 80 | 91 | 25 | 257 | 99 | 20.8 | 2.5 | 16 | M5 x10 | 13.5 | 4 | 3.4 |
| | 14 ... 46 | | | | | | | | | | | 271 | 113 | | | | | | | 3.6 |
| | 51 ... 169 | | | | | | | | | | | 285 | 127 | | | | | | | 3.8 |

Dimensions in mm



Drive selection

DC planetary geared motors

Selection table Type SPL62-□PVCR-056N21

| Motor type | P _N W | n ₂ rpm | M ₂ Nm | c | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|------|-------|---------------------------------|
| 13.120.55.1.2.□ | 200 | 811 | 1.90 | 4.22 | 3.7 | |
| | | 444 | 3.40 | 2.31 | 6.75 | |
| | | 218 | 6.59 | 3.79 | 13.73 | |
| | | 120 | 12.00 | 2.08 | 25.01 | |
| | | 86 | 18.20 | 1.49 | 34.97 | |
| | | 66 | 20.40 | 1.04 | 45.56 | |
| | | 59 | 22.80 | 2.09 | 50.89 | |
| | | 42 | 31.80 | 1.57 | 71.06 | |
| | | 30 | 44.50 | 1.02 | 99.5 | |
| 24 | 50.00 | 0.90 | 123.97 | | | |

Selection table Type SPL81-□PVCR-063N21

| Motor type | P _N W | n ₂ rpm | M ₂ Nm | c | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|------|-------|---------------------------------|
| 13.120.65.1.2.□ | 370 | 811 | 3.49 | 5.73 | 3.7 | |
| | | 444 | 6.36 | 3.04 | 6.75 | |
| | | 218 | 12.05 | 4.94 | 13.73 | |
| | | 120 | 22.03 | 2.71 | 25.01 | |
| | | 86 | 30.94 | 1.94 | 34.97 | |
| | | 66 | 40.32 | 1.49 | 45.56 | |
| | | 59 | 42.03 | 2.85 | 50.89 | |
| | | 42 | 58.77 | 2.04 | 71.06 | |
| | | 30 | 82.08 | 1.46 | 99.5 | |
| 24 | 102.00 | 1.07 | 123.97 | | | |

Additional order information

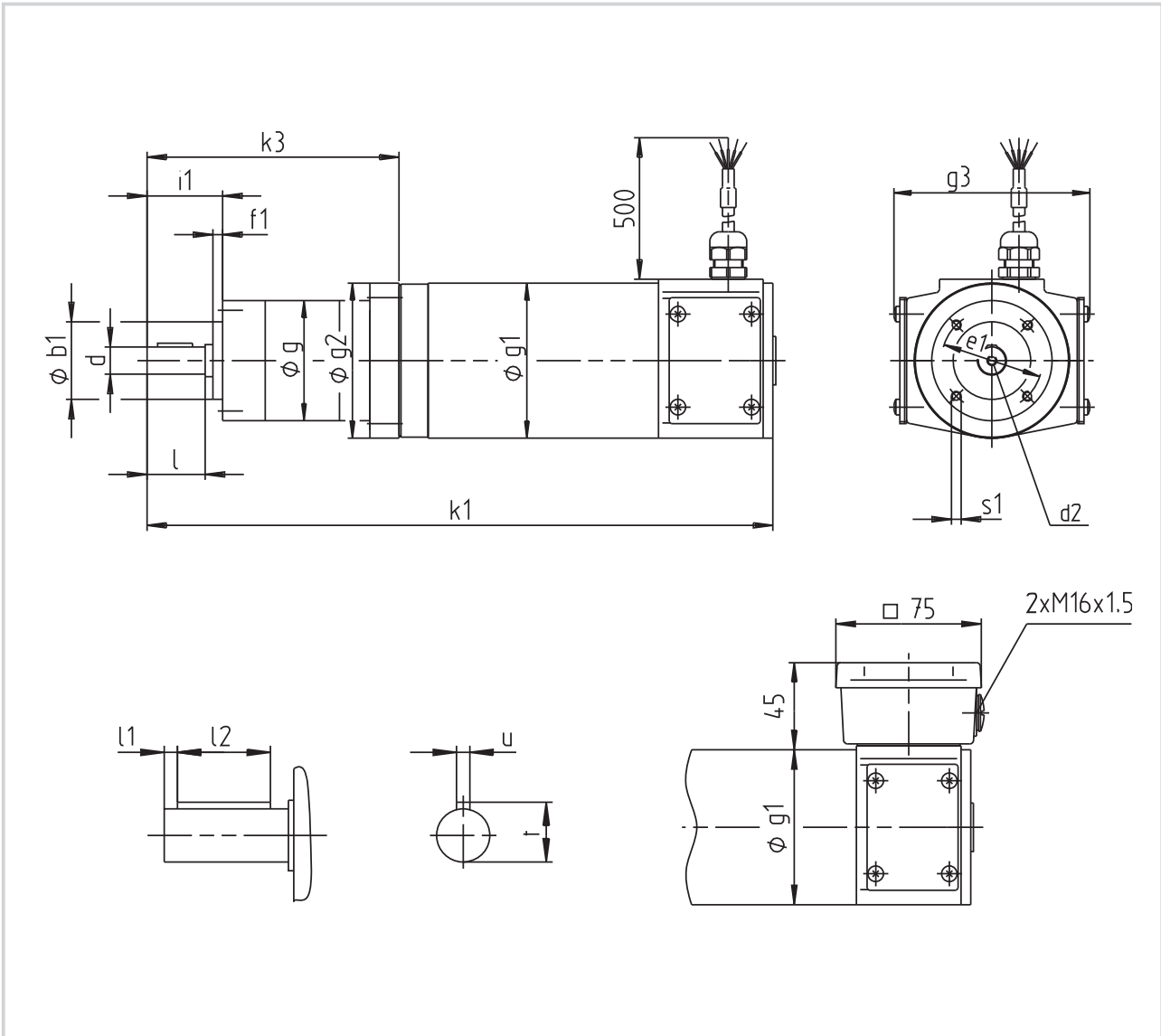
| | | |
|-----------------------------------|--|------|
| B-side design | 0 = no built-on accessories | |
| | 1 = with spring-applied brake | |
| | 4 = with DC tachometer | |
| | 5 = with AC tachometer | |
| | 6 = for tachometer attachment | |
| | 7 = for brake attachment | |
| | Rated armature voltage | 24 V |
| 180 V | | |
| Brake supply voltage | 24 V DC | |
| | 205 V DC only with armature voltage of 180 V | |
| Electrical connection | Cable | |
| | Terminal box | |
| Position of electrical connection | | 2 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SPL[62...81]-□PVCR-[056...063]N21



| Geared motor | Ratio i | b_1 j7 | d h7 | d_2 | e_1 | f_1 | g | g_1 | g_2 | g_3 | i_1 | k_1 | k_3 | l | l_1 | l_2 | s_1 | t | u | Weight approx. kg |
|--------------------|------------|-------------|---------|-------|-------|-------|----|-------|-------|-------|-------|-------|-------|----|-------|-------|-----------|------|---|----------------------|
| SPL62-□PVCR-056N21 | 3.7 | 40 | 14 | M5 | 52 | 5 | 62 | 80 | 80 | 101 | 39 | 308 | 115 | 30 | 5.5 | 18 | M5 x10 | 16 | 5 | 4.6 |
| | 14 ... 46 | | | | | | | | | | | 324 | 131 | | | | | | | 5.0 |
| | 51 ... 124 | | | | | | | | | | | 340 | 147 | | | | | | | 5.4 |
| SPL81-□PVCR-063N21 | 3.7 | 50 | 19 | M6 | 65 | 5 | 81 | 98 | 90 | 121 | 49 | 381 | 144 | 40 | 6 | 28 | M6 x12 | 21.5 | 6 | 10.0 |
| | 14 ... 46 | | | | | | | | | | | 402 | 165 | | | | | | | 10.8 |
| | 51 ... 124 | | | | | | | | | | | 424 | 187 | | | | | | | 11.5 |

Dimensions in mm



Drive selection

DC planetary geared motors

Selection table Type SPL81-□PVCR-071N21

| Motor type | P _N W | n ₂ rpm | M ₂ Nm | c | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| 13.120.75.1.2.□ | 540 | 811 | 5.03 | 3.97 | 3.7 | |
| | | 444 | 9.00 | 2.08 | 6.75 | |
| | 24 V | 218 | 17.50 | 3.43 | 13.73 | |
| | | 120 | 31.88 | 1.88 | 25.01 | |
| | | 86 | 44.58 | 1.35 | 34.97 | |
| | | 66 | 58.08 | 1.03 | 45.56 | |
| | | 59 | 60.55 | 1.98 | 50.89 | |
| | | 42 | 84.68 | 1.42 | 71.06 | |
| | | 30 | 118.00 | 1.01 | 99.5 | |
| | | 24 | 120.00 | 0.81 | 123.97 | |
| 13.120.75.1.2.□ | 600 | 811 | 5.65 | 3.54 | 3.7 | |
| | | 444 | 9.00 | 1.94 | 6.75 | |
| | 160 V | 218 | 19.66 | 3.05 | 13.73 | |
| | | 120 | 35.82 | 1.67 | 25.01 | |
| | | 86 | 50.09 | 1.20 | 34.97 | |
| | | 66 | 60.00 | 0.92 | 45.56 | |
| | | 59 | 68.03 | 1.76 | 50.89 | |
| | | 42 | 95.04 | 1.26 | 71.06 | |
| | | 30 | 120.00 | 0.90 | 99.5 | |
| | | 24 | 120.00 | 0.72 | 123.97 | |

Additional order information

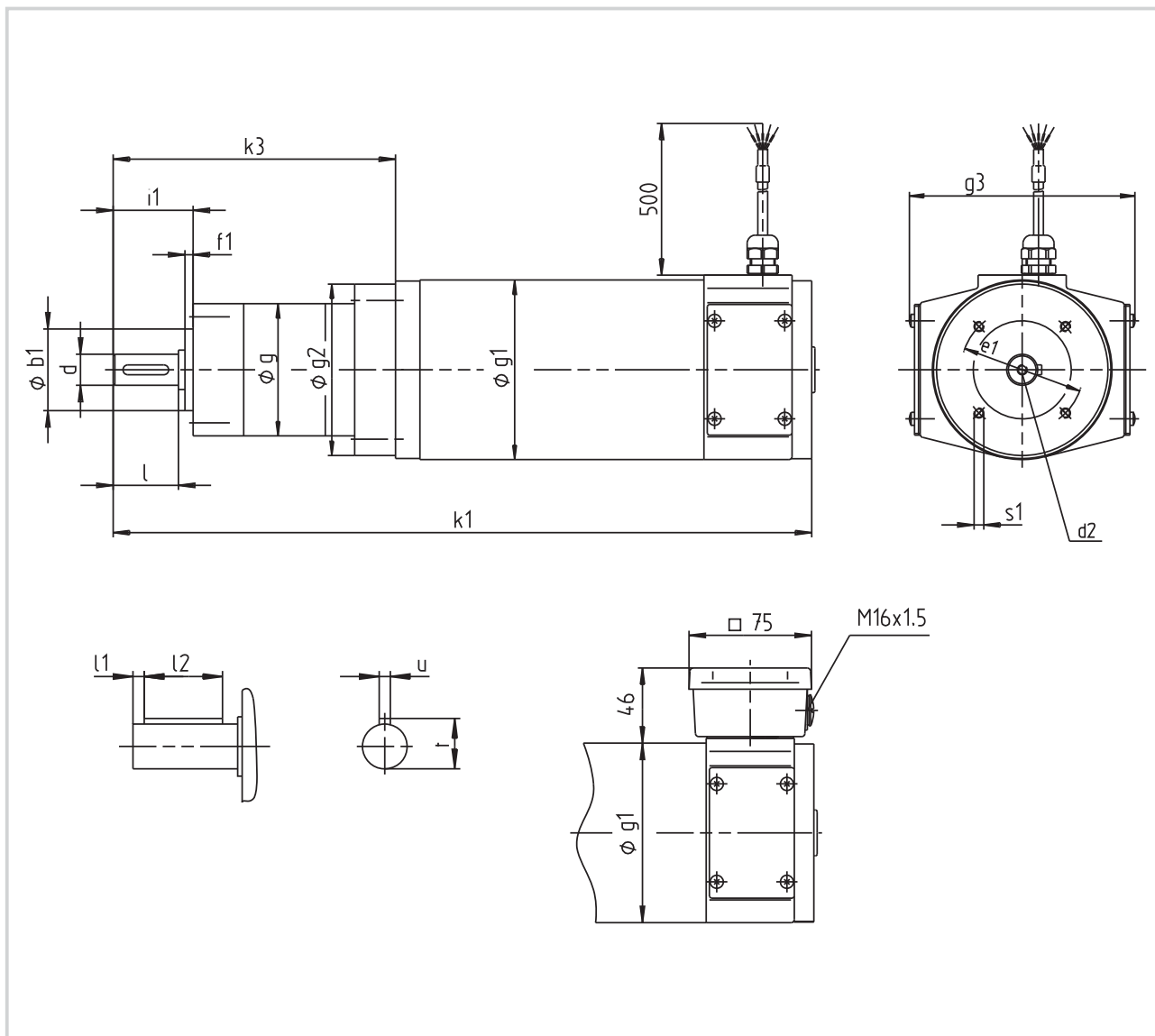
| | | |
|-----------------------------------|--|---------------|
| B-side design | 0 = no built-on accessories | |
| | 1 = with spring-applied brake | |
| | 4 = with DC tachometer | |
| | 5 = with AC tachometer | |
| | 6 = for tachometer attachment | |
| | 7 = for brake attachment | |
| | Rated armature voltage | 24 V 160 V |
| Brake supply voltage | 24 V DC | |
| | 205 V DC only with armature voltage of 160 V | |
| Electrical connection | Cable | |
| | Terminal box | |
| Position of electrical connection | | 2 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SPL81-□PVCR-071N21



| Geared motor | Ratio i | b ₁ h8 | d h7 | d ₂ | e ₁ | f ₁ | g | g ₁ | g ₂ | g ₃ | i ₁ | k ₁ | k ₃ | l | l ₁ | l ₂ | s ₁ | t | u | Weight approx. kg |
|--------------------|------------|----------------------|---------|----------------|----------------|----------------|----|----------------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|------|---|----------------------|
| SPL81-□PVCR-071N21 | 3.7 | 50 | 19 | M6 | 65 | 5 | 81 | 110 | 105 | 138 | 49 | 409 | 151 | 40 | 6 | 28 | M6 x12 | 21.5 | 6 | 12.6 |
| | 14 ... 46 | | | | | | | | | | | 431 | 173 | | | | | | | 13.3 |
| | 51 ... 124 | | | | | | | | | | | 452 | 194 | | | | | | | 14.0 |

Dimensions in mm



Drive selection

DC planetary geared motors

Selection table Type SPL12-□PVCR-071N21

| Motor type | P _N W | n ₂ rpm | M ₂ Nm | c | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| 13.120.75.1.2.□ | 540 24 V | 811 | 5.03 | 9.94 | 3.7 | |
| | | 444 | 9.08 | 5.45 | 6.75 | |
| | | 218 | 17.51 | 8.57 | 13.73 | |
| | | 120 | 31.89 | 4.70 | 25.01 | |
| | | 66 | 58.09 | 2.58 | 45.56 | |
| | | 59 | 64.88 | 4.62 | 50.89 | |
| | | 32 | 110.31 | 2.72 | 92.7 | |
| | | 18 | 200.92 | 1.49 | 168.84 | |
| 13.120.75.1.2.□ | 600 160 V | 811 | 5.65 | 8.84 | 3.7 | |
| | | 444 | 10.31 | 4.85 | 6.75 | |
| | | 218 | 19.67 | 7.63 | 13.73 | |
| | | 120 | 35.83 | 4.09 | 25.01 | |
| | | 66 | 65.26 | 2.30 | 45.56 | |
| | | 59 | 72.90 | 4.02 | 50.89 | |
| | | 32 | 123.94 | 2.42 | 92.7 | |
| | | 18 | 225.74 | 1.33 | 168.84 | |

Additional order information

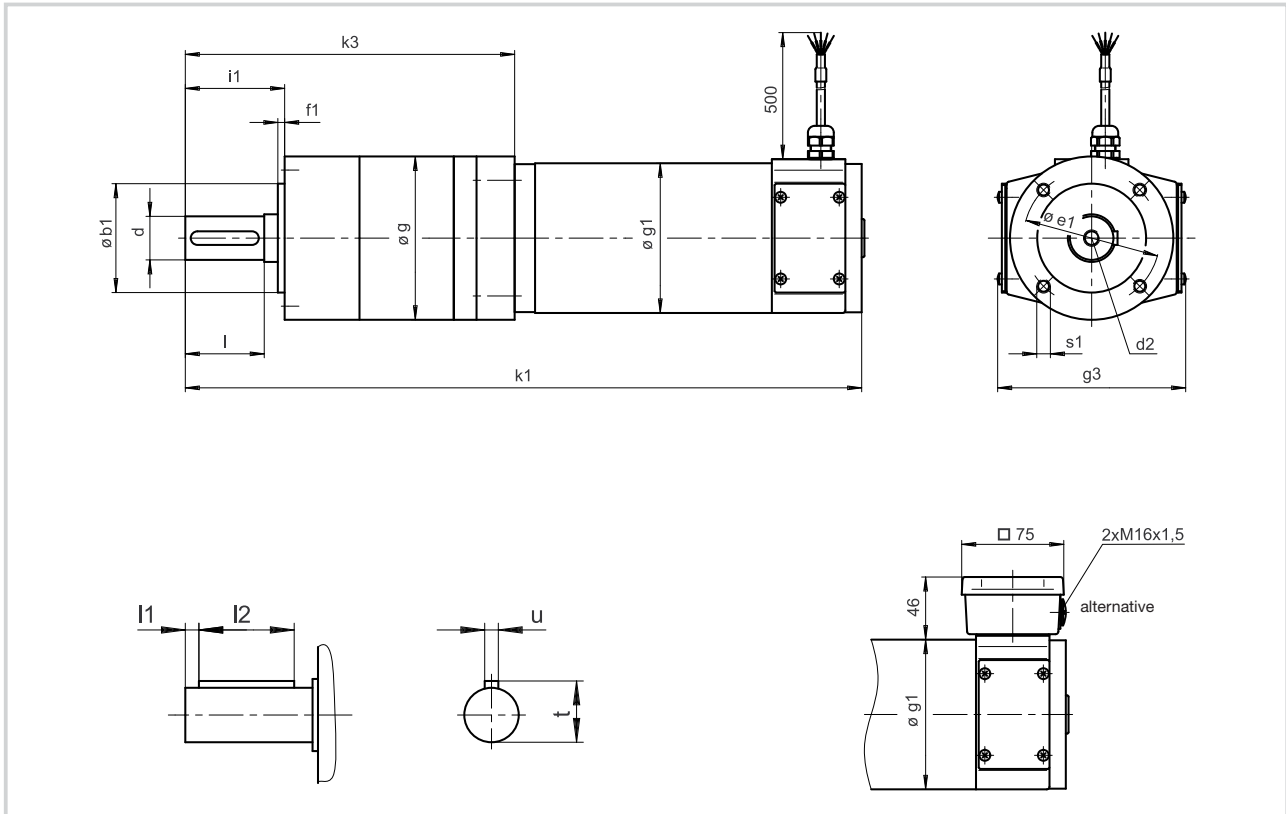
| | | |
|-----------------------------------|--|------|
| B-side design | 0 = no built-on accessories | |
| | 1 = with spring-applied brake | |
| | 4 = with DC tacho | |
| | 5 = with AC tacho | |
| | 6 = for tacho attachment | |
| | 7 = for brake attachment | |
| | Rated armature voltage | 24 V |
| 160 V | | |
| Brake supply voltage | 24 V DC | |
| | 205 V DC only with armature voltage of 160 V | |
| Electrical connection | Cable | |
| | Terminal box | |
| Position of electrical connection | | 2 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type SPL12-□PVCr-071N21



| Geared motor | Ratio i | b ₁ j7 | d k6 | d ₂ | e ₁ | f ₁ | g | g ₁ | g ₃ | i ₁ | k ₁ | k ₃ | l | l ₁ | l ₂ | s ₁ | t | u | Weight approx. kg |
|--------------------|------------|----------------------|---------|----------------|----------------|----------------|-----|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----|----|----------------------|
| SPL12-□PVCr-071N21 | 3.7; 6.7 | 80 | 32 | M12 | 100 | 5 | 120 | 110 | 138 | 73 | 463 | 208 | 58 | 4 | 50 | M10 x22 | 35 | 10 | 15.8 |
| | 14 ... 46 | | | | | | | | | | 497 | 242 | | | | | | | 18.2 |
| | 51 ... 169 | | | | | | | | | | 531 | 276 | | | | | | | 20.6 |

Dimensions in mm



Drive selection

DC helical geared motors

Selection table Type GST04-1PV□□-056C21

| Motor type | P _N W | n ₂ rpm | M ₂ Nm | c | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|-------|-------|---------------------------------|
| 13.126.55.4.6.□ | 200 | 1465 | 1.24 | 17.66 | 2.048 | |
| | | 1339 | 1.36 | 17.49 | 2.240 | |
| | | 1050 | 1.74 | 13.88 | 2.857 | |
| | | 857 | 2.03 | 11.33 | 3.500 | |
| | | 682 | 2.68 | 9.01 | 4.400 | |
| | | 529 | 3.45 | 7.00 | 5.667 | |
| | | 418 | 4.37 | 5.52 | 7.082 | |
| | | 333 | 5.47 | 4.00 | 9.000 | |

Additional order information

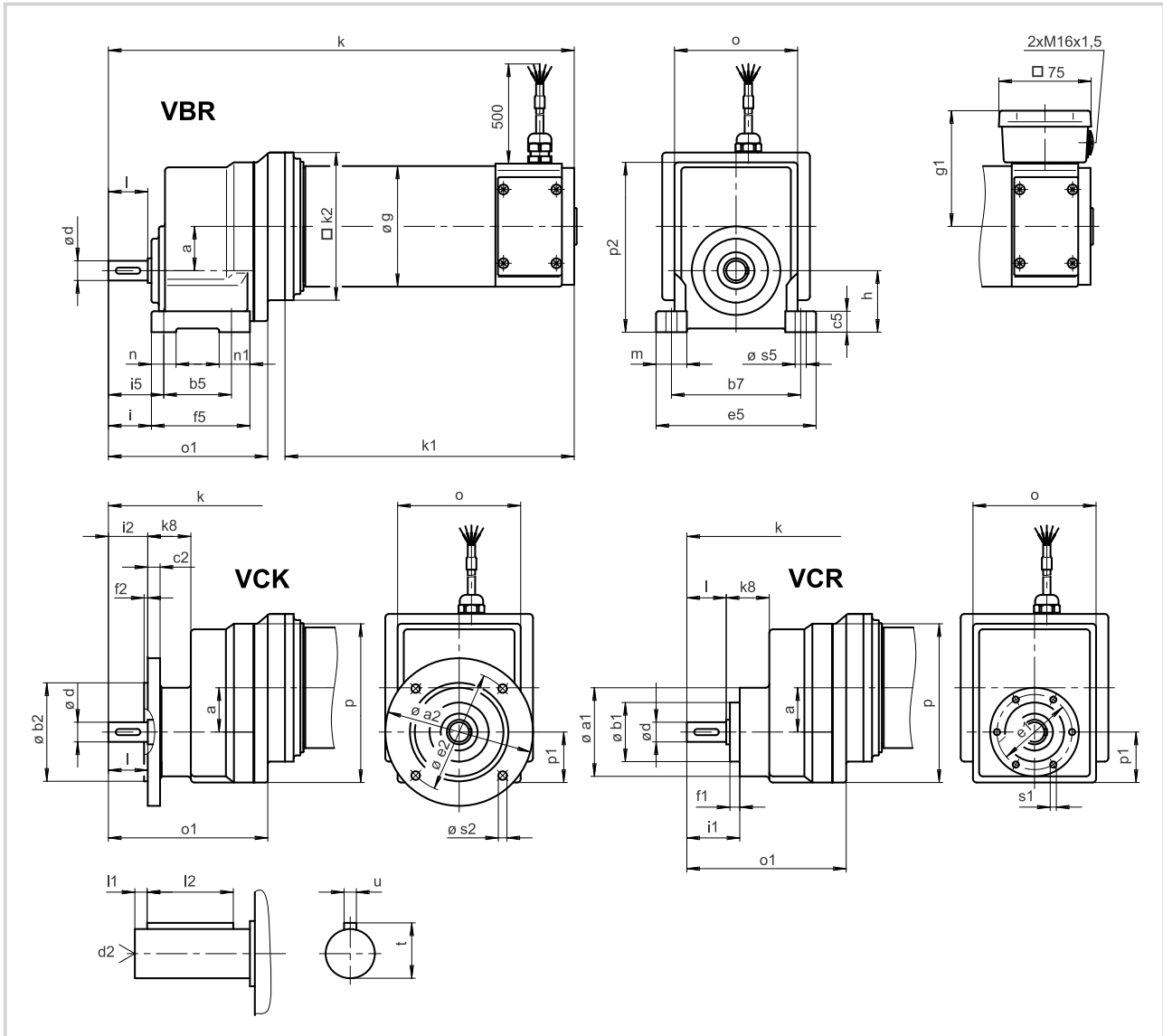
| | | |
|-----------------------------------|--|-------------|
| B-side design | 0 = no built-on accessories | |
| | 1 = with spring-applied brake | |
| | 4 = with DC tachometer | |
| | 5 = with AC tachometer | |
| | 6 = for tachometer attachment | |
| | 7 = for brake attachment | |
| | Rated armature voltage | 24 V |
| 180 V | | |
| Brake supply voltage | 24 V DC | |
| | 205 V DC only with armature voltage of 180 V | |
| Electrical connection | Cable | |
| | Terminal box | |
| Gearbox type | VBR | |
| | VCR | |
| | VCK | |
| Output-side flange diameter | D = 120 mm | |
| | D = 140 mm | |
| | D = 160 mm | |
| Mounting position | | A B C D E F |
| Position of electrical connection | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type GST04-1PV□□-056C21



| Geared motor | a | a ₁ | a ₂ | b ₁ j7 | b ₂ j7 | b ₅ | b ₇ | c ₂ | c ₅ | d | d ₂ | e ₁ | e ₂ | e ₅ | f ₁ | f ₂ | f ₅ | g | g ₁ | h | i | i ₁ | i ₂ |
|--------------------|----|----------------|----------------|----------------------|----------------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|----------------|----|----|----------------|----------------|
| GST04-1PV□□-056C21 | 36 | 72 | 120 | 80 | 55 | 105 | 10 | 17 | 16 | M5 | 61 | 61 | 100 | 125 | 8 | 3 | 80 | 80 | 85 | 50 | 35 | 43 | 32 |
| | | | 140 | 95 | | | | | | | | | 115 | | | | | | | | | | |
| | | | 160 | 110 | | | | | | | | | 130 | | | | | | | | | | |

| Geared motor | i ₅ | k | k ₁ | k ₂ | k ₈ | l | l ₁ | l ₂ | m | n | n ₁ | o* | o ₁ | p* | p ₁ | p ₂ * | s ₁ | s ₂ VCK | s ₅ | u | t | Weight approx. kg |
|--------------------|----------------|-----|----------------|----------------|----------------|----|----------------|----------------|----|----|----------------|-----|----------------|-----|----------------|------------------|----------------|-----------------------|----------------|---|----|----------------------|
| GST04-1PV□□-056C21 | 45 | 344 | 200 | 120 | 35 | 32 | 6 | 20 | 25 | 20 | 25 | 100 | 134 | 129 | 41 | 138 | M5 x10 | 7 | 9 | 5 | 18 | 8 |
| | | | | | | | | | | | | | | | | | | 9 | | | | |
| | | | | | | | | | | | | | | | | | | 9 | | | | |

* Observe dimension k₂
Dimensions in mm



Drive selection

DC helical geared motors

Selection table Type GST04-2PV□□-056C21

| Motor type | P _N W | n ₂ rpm | M ₂ Nm | c | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|-------|--------|---------------------------------|
| 13.126.55.4.6.□ | 200 | 578 | 3.22 | 15.53 | 5.087 | |
| | | 513 | 3.63 | 14.66 | 5.850 | |
| | | 469 | 3.97 | 13.85 | 6.400 | |
| | | 333 | 5.59 | 11.20 | 9.010 | |
| | | 304 | 6.02 | 10.58 | 9.856 | |
| | | 268 | 6.95 | 8.63 | 11.200 | |
| | | 239 | 7.80 | 8.85 | 12.571 | |
| | | 210 | 8.87 | 6.85 | 14.286 | |
| | | 195 | 9.56 | 7.28 | 15.400 | |
| | | 171 | 10.86 | 5.68 | 17.500 | |
| | | 155 | 12.02 | 5.85 | 19.360 | |
| | | 136 | 13.66 | 4.56 | 22.000 | |
| | | 120 | 15.48 | 4.60 | 24.933 | |
| | | 106 | 17.59 | 3.60 | 28.333 | |
| | | 95 | 19.62 | 3.68 | 31.600 | |
| | | 84 | 22.29 | 2.87 | 35.909 | |
| 76 | 24.58 | 2.97 | 39.600 | | | |
| 67 | 27.94 | 2.34 | 45.000 | | | |

Additional order information

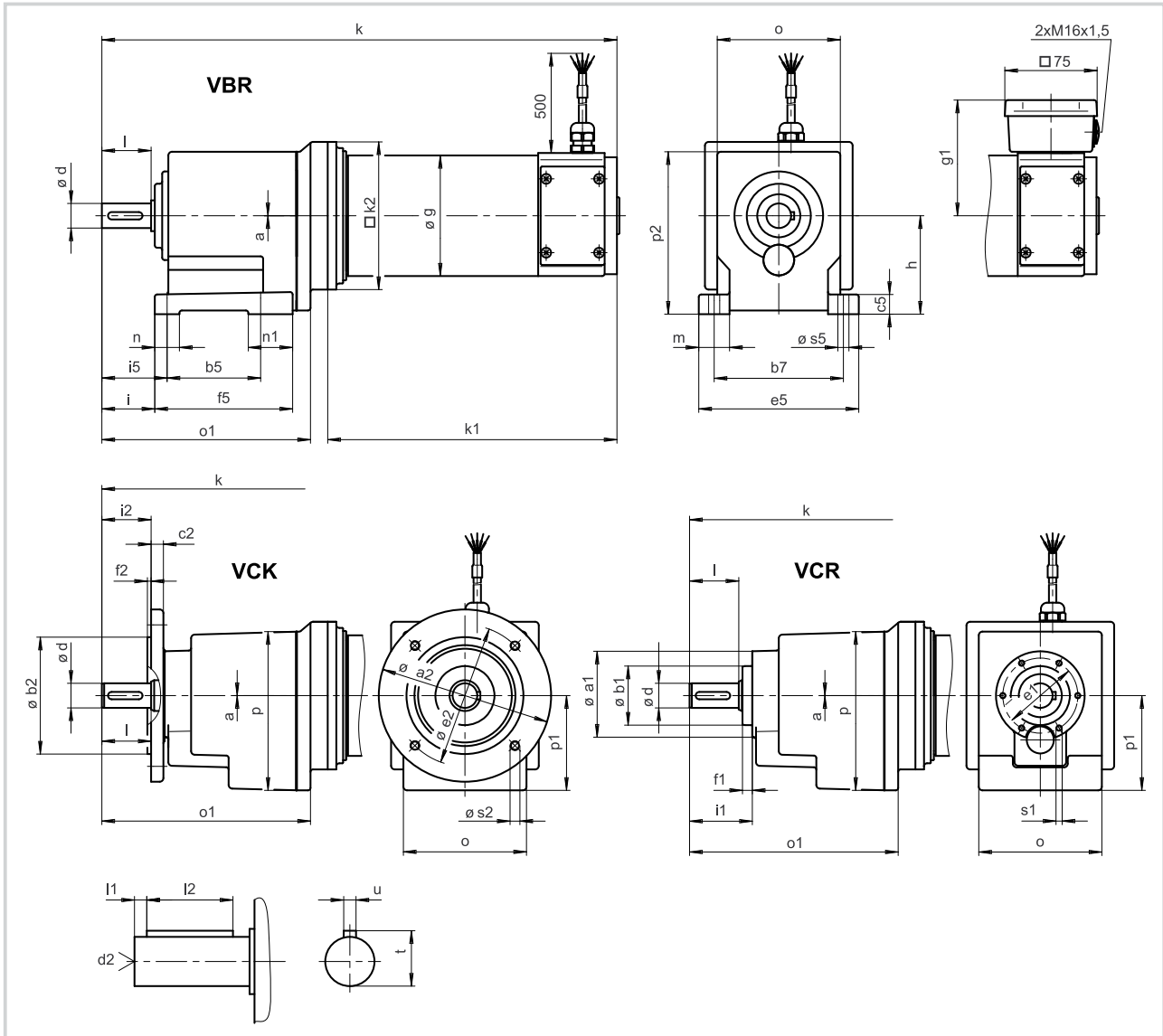
| | | |
|-----------------------------------|--|-------------|
| B-side design | 0 = no built-on accessories | |
| | 1 = with spring-applied brake | |
| | 4 = with DC tachometer | |
| | 5 = with AC tachometer | |
| | 6 = for tachometer attachment | |
| | 7 = for brake attachment | |
| | Rated armature voltage | 24 V |
| 180 V | | |
| Brake supply voltage | 24 V DC | |
| | 205 V DC only with armature voltage of 180 V | |
| Electrical connection | Cable | |
| | Terminal box | |
| Gearbox type | VBR | |
| | VCR | |
| | VCK | |
| Output-side flange diameter | D = 120 mm | |
| | D = 140 mm | |
| | D = 160 mm | |
| Mounting position | | A B C D E F |
| Position of electrical connection | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type GST04-2PV□□-056C21



| Geared motor | a | a ₁ | a ₂ | b ₁ j7 | b ₂ j7 | b ₅ | b ₇ | c ₂ | c ₅ | d | d ₂ | e ₁ | e ₂ | e ₅ | f ₁ | f ₂ | f ₅ | g | g ₁ | h | i | i ₁ | i ₂ |
|--------------------|---|----------------|----------------|----------------------|----------------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|----------------|----|----|----------------|----------------|
| GST04-2PV□□-056C21 | 0 | 72 | 120 | 80 | 76 | 105 | 10 | 18 | 20 | M6 | 61 | 61 | 100 | 130 | 8 | 3 | 112 | 80 | 85 | 80 | 43 | 51 | 40 |
| | | | 140 | 95 | | | | | | | | | 115 | | | | | | | | | | |
| | | | 160 | 110 | | | | | | | | | 130 | | | | | | | | | | |

| Geared motor | i ₅ | k | k ₁ | k ₂ | k ₈ | l | l ₁ | l ₂ | m | n | n ₁ | o* | o ₁ | p* | p ₁ | p ₂ * | s ₁ | s ₂ VCK | s ₅ | u | t | Weight approx. kg |
|--------------------|----------------|-----|----------------|----------------|----------------|----|----------------|----------------|----|----|----------------|-----|----------------|-----|----------------|------------------|----------------|-----------------------|----------------|---|------|----------------------|
| GST04-2PV□□-056C21 | 53 | 384 | 200 | 120 | | 40 | 5 | 28 | 25 | 20 | 36 | 100 | 174 | 129 | 77 | 132 | M5 x10 | 7 | 9 | 6 | 22.5 | 10 |
| | | | | | | | | | | | | | | | | | | 9 | | | | |
| | | | | | | | | | | | | | | | | | | 9 | | | | |

* Observe dimension k₂
Dimensions in mm



Drive selection

DC helical geared motors

Selection table Type GST04-1PV□□-063C21

| Motor type | P _N W | n ₂ rpm | M ₂ Nm | c | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|------|-------|---------------------------------|
| 13.126.65.4.6.□ | 370 | 1465 | 2.30 | 9.58 | 2.048 | |
| | | 1339 | 2.51 | 9.49 | 2.240 | |
| | | 1050 | 3.20 | 7.53 | 2.857 | |
| | | 857 | 3.92 | 6.05 | 3.500 | |
| | | 682 | 4.93 | 4.89 | 4.400 | |
| | | 529 | 6.35 | 3.80 | 5.667 | |
| | | 418 | 8.05 | 2.99 | 7.082 | |
| | | 333 | 10.09 | 2.22 | 9.000 | |

Additional order information

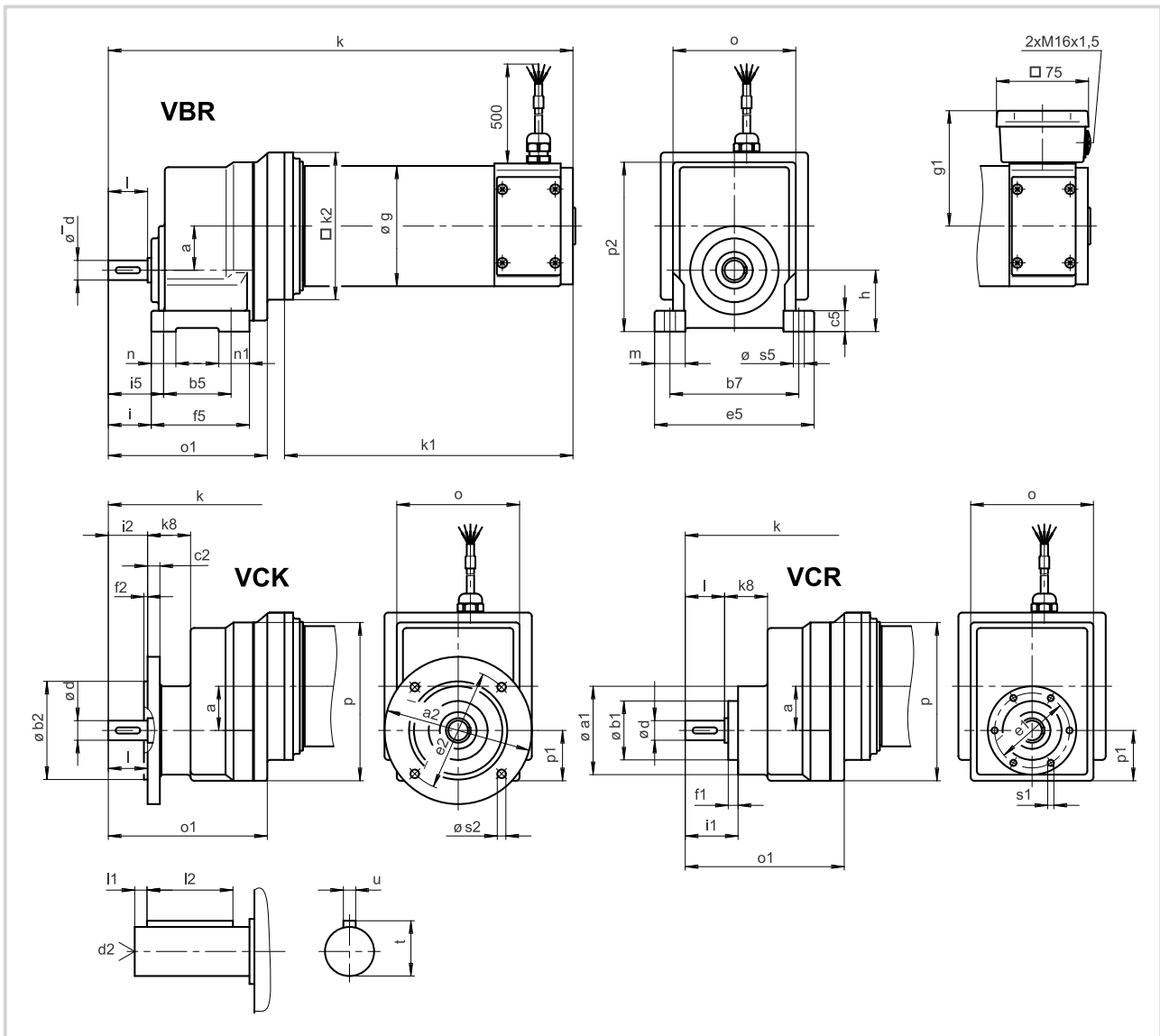
| | | |
|-----------------------------------|--|-------------|
| B-side design | 0 = no built-on accessories | |
| | 1 = with spring-applied brake | |
| | 4 = with DC tachometer | |
| | 5 = with AC tachometer | |
| | 6 = for tachometer attachment | |
| | 7 = for brake attachment | |
| | Rated armature voltage | 24 V |
| 180 V | | |
| Brake supply voltage | 24 V DC | |
| | 205 V DC only with armature voltage of 180 V | |
| Electrical connection | Cable | |
| | Terminal box | |
| Gearbox type | VBR | |
| | VCR | |
| | VCK | |
| Output-side flange diameter | D = 120 mm | |
| | D = 140 mm | |
| | D = 160 mm | |
| Mounting position | | A B C D E F |
| Position of electrical connection | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type GST04-1PV□□-063C21



| Geared motor | a | a ₁ | a ₂ | b ₁ j7 | b ₂ j7 | b ₅ | b ₇ | c ₂ | c ₅ | d k6 | d ₂ | e ₁ | e ₂ | e ₅ | f ₁ | f ₂ | f ₅ | g | g ₁ | h | i | i ₁ | i ₂ | |
|--------------------|----|----------------|----------------|----------------------|----------------------|----------------|----------------|----------------|----------------|---------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|----------------|----|----|----------------|----------------|-----|
| GST04-1PV□□-063C21 | 36 | 72 | 120 | 48 | 80 | 55 | 105 | 10 | 17 | 16 | M5 | 61 | 100 | 130 | 8 | 3 | 80 | 98 | 94 | 50 | 35 | 43 | 32 | |
| | | | 140 | | 95 | | | | | | | | 115 | | | | | | | | | | | 130 |
| | | | 160 | | 110 | | | | | | | | 130 | | | | | | | | | | | 3.5 |

| Geared motor | i ₅ | k | k ₁ | k ₂ | k ₈ | l | l ₁ | l ₂ | m | n | n ₁ | o* | o ₁ | p* | p ₁ | p ₂ * | s ₁ | s ₂ VCK | s ₅ | u | t | Weight approx. kg |
|--------------------|----------------|-----|----------------|----------------|----------------|----|----------------|----------------|----|----|----------------|-----|----------------|-----|----------------|------------------|----------------|-----------------------|----------------|---|----|----------------------|
| GST04-1PV□□-063C21 | 45 | 384 | 240 | 120 | 35 | 32 | 6 | 20 | 25 | 20 | 25 | 100 | 134 | 129 | 41 | 138 | M5 x10 | 7 | 9 | 5 | 18 | 12 |
| | | | | | | | | | | | | | | | | | | 9 | | | | |
| | | | | | | | | | | | | | | | | | | 9 | | | | |

* Observe dimension k₂
Dimensions in mm



Drive selection

DC helical geared motors

Selection table Type GST04-2PV□□-063C21

| Motor type | P _N W | n ₂ rpm | M ₂ Nm | c | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| 13.126.65.4.6.□ | 370 | 578 | 5.94 | 8.42 | 5.087 | |
| | | 513 | 6.70 | 7.95 | 5.850 | |
| | | 469 | 7.33 | 7.51 | 6.400 | |
| | | 333 | 10.31 | 6.07 | 9.010 | |
| | | 304 | 11.28 | 5.74 | 9.856 | |
| | | 268 | 12.82 | 4.68 | 11.200 | |
| | | 239 | 14.39 | 4.80 | 12.571 | |
| | | 210 | 16.35 | 3.72 | 14.286 | |
| | | 195 | 17.63 | 3.95 | 15.400 | |
| | | 171 | 20.03 | 3.08 | 17.500 | |
| | | 155 | 22.06 | 3.07 | 19.360 | |
| | | 136 | 25.08 | 2.47 | 22.000 | |
| | | 120 | 28.54 | 2.49 | 24.933 | |
| | | 106 | 32.43 | 1.95 | 28.333 | |
| | | 95 | 36.07 | 2.00 | 31.600 | |
| | | 84 | 41.00 | 1.56 | 35.909 | |
| | | 76 | 45.33 | 1.61 | 39.600 | |
| 67 | 51.51 | 1.27 | 45.000 | | | |

Additional order information

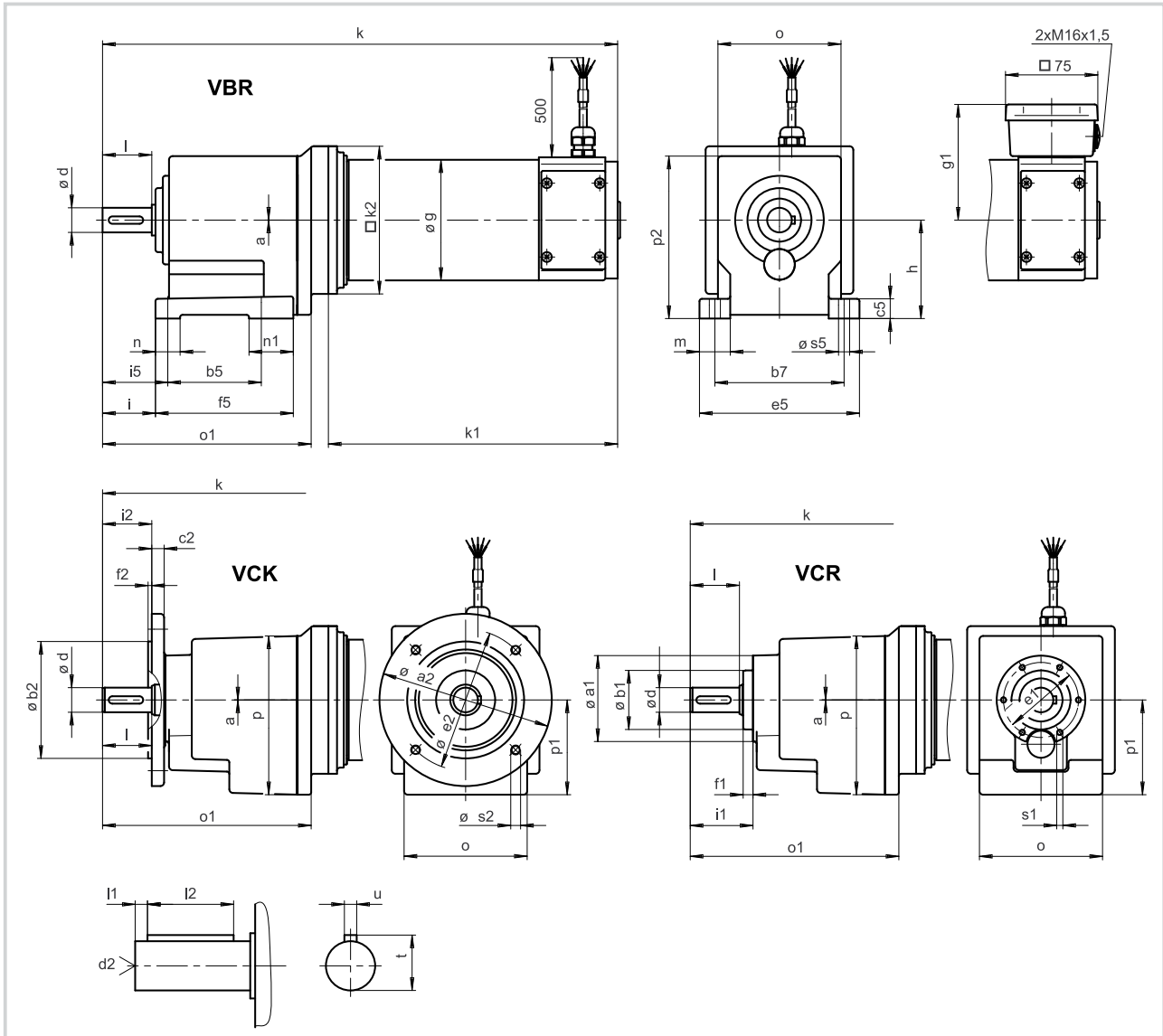
| | | |
|-----------------------------------|--|-------------|
| B-side design | 0 = no built-on accessories | |
| | 1 = with spring-applied brake | |
| | 4 = with DC tachometer | |
| | 5 = with AC tachometer | |
| | 6 = for tachometer attachment | |
| | 7 = for brake attachment | |
| | Rated armature voltage | 24 V |
| 180 V | | |
| Brake supply voltage | 24 V DC | |
| | 205 V DC only with armature voltage of 180 V | |
| Electrical connection | Cable | |
| | Terminal box | |
| Gearbox type | VBR | |
| | VCR | |
| | VCK | |
| Output-side flange diameter | D = 120 mm | |
| | D = 140 mm | |
| | D = 160 mm | |
| Mounting position | | A B C D E F |
| Position of electrical connection | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type GST04-2PV□□-063C21



| Geared motor | a | a ₁ | a ₂ | b ₁ j7 | b ₂ j7 | b ₅ | b ₇ | c ₂ | c ₅ | d | d ₂ | e ₁ | e ₂ | e ₅ | f ₁ | f ₂ | f ₅ | g | g ₁ | h | i | i ₁ | i ₂ |
|--------------------|---|----------------|----------------|----------------------|----------------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|----------------|----|----|----------------|----------------|
| GST04-2PV□□-063C21 | 0 | 72 | 120 | 80 | 76 | 105 | 10 | 18 | 20 | M6 | 61 | 61 | 100 | 130 | 8 | 3 | 112 | 98 | 94 | 80 | 43 | 51 | 40 |
| | | | 140 | 95 | | | | | | | | | 115 | | | | | | | | | | |
| | | | 160 | 110 | | | | | | | | | 130 | | | | | | | | | | |

| Geared motor | i ₅ | k | k ₁ | k ₂ | k ₈ | l | l ₁ | l ₂ | m | n | n ₁ | o* | o ₁ | p* | p ₁ | p ₂ * | s ₁ | s ₂ VCK | s ₅ | u | t | Weight approx. kg |
|--------------------|----------------|-----|----------------|----------------|----------------|----|----------------|----------------|----|----|----------------|-----|----------------|-----|----------------|------------------|----------------|-----------------------|----------------|---|------|----------------------|
| GST04-2PV□□-063C21 | 53 | 424 | 240 | 120 | | 40 | 5 | 28 | 25 | 20 | 36 | 100 | 174 | 129 | 77 | 132 | M5 x10 | 7 | 9 | 6 | 22.5 | 14 |
| | | | | | | | | | | | | | | | | | | 9 | | | | |
| | | | | | | | | | | | | | | | | | | 9 | | | | |

* Observe dimension k₂
Dimensions in mm



Drive selection

DC helical geared motors

Selection table Type GST05-1PV□□-071C21

| Motor type | P _N W | n ₂ rpm | M ₂ Nm | c | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|-------|-------|---------------------------------|
| 13.126.75.5.6.□ | 540 | 1465 | 3.31 | 12.36 | 2.048 | |
| | | 1339 | 3.62 | 12.43 | 2.240 | |
| | 24 V | 1050 | 4.61 | 11.08 | 2.857 | |
| | | 857 | 5.65 | 9.21 | 3.500 | |
| | | 682 | 7.36 | 7.08 | 4.556 | |
| | | 529 | 9.05 | 5.69 | 5.667 | |
| | | 418 | 11.84 | 3.80 | 7.330 | |
| | | 333 | 14.37 | 2.82 | 8.900 | |

Additional order information

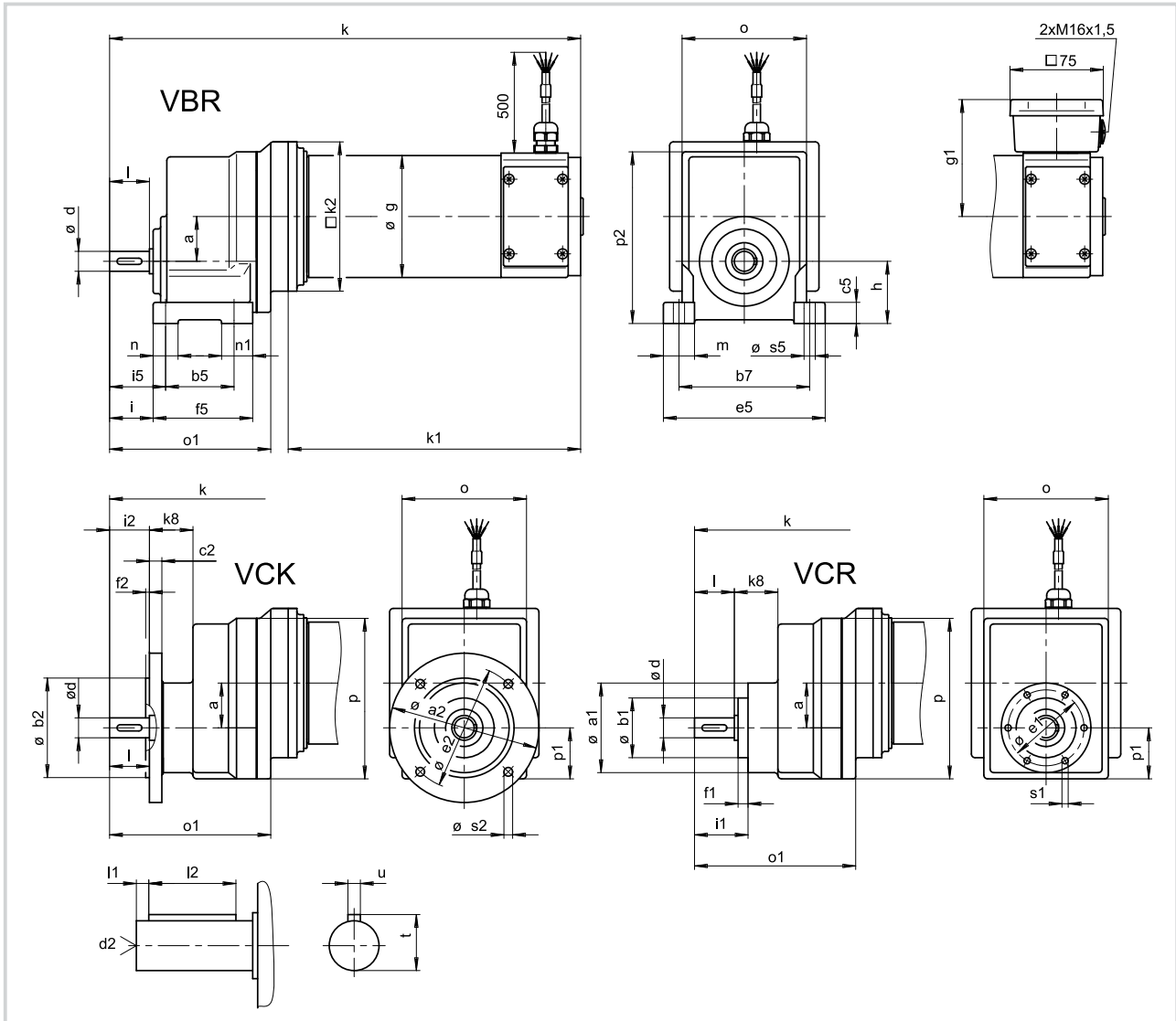
| | | |
|--|-------------------------------|-------------|
| B-side design | 0 = no built-on accessories | |
| | 1 = with spring-applied brake | |
| | 4 = with DC tachometer | |
| | 5 = with AC tachometer | |
| | 6 = for tachometer attachment | |
| | 7 = for brake attachment | |
| | Brake supply voltage | 24 V DC |
| Electrical connection | Cable | |
| | Terminal box | |
| Gearbox type | VBR | |
| | VCR | |
| | VCK | |
| Output-side flange diameter | D = 120 mm | |
| | D = 140 mm | |
| | D = 160 mm | |
| | D = 200 mm | |
| Mounting position | | A B C D E F |
| Position of electrical connection | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type GST05-1PV□□-071C21



| Geared motor | a | a ₁ | a ₂ | b ₁ j7 | b ₂ j7 | b ₅ | b ₇ | c ₂ | c ₅ | d k6 | d ₂ | e ₁ | e ₂ | e ₅ | f ₁ | f ₂ | f ₅ | g | g ₁ | h | i | i ₁ | i ₂ |
|--------------------|----|----------------|----------------|----------------------|----------------------|----------------|----------------|----------------|----------------|---------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----|----------------|----|----|----------------|----------------|
| GST05-1PV□□-071C21 | 45 | 88 | 120 | 80 | 70 | 125 | 10 | 22 | 20 | M6 | 74 | 74 | 100 | 154 | 9 | 3 | 99 | 110 | 101 | 63 | 43 | 52 | 40 |
| | | | 140 | 95 | | | | | | | | | 115 | | | | | | | | | | |
| | | | 160 | 110 | | | | | | | | | 130 | | | | | | | | | | |
| | | | 200 | 130 | | | | | | | | | 165 | | | | | | | | | | |

| Geared motor | i ₅ | k | k ₁ | k ₂ | k ₈ | l | l ₁ | l ₂ | m | n | n ₁ | o* | o ₁ | p* | p ₁ | p ₂ * | s ₁ | s ₂ VCK | s ₅ | u | t | Weight approx. kg |
|--------------------|----------------|-----|----------------|----------------|----------------|----|----------------|----------------|----|----|----------------|-----|----------------|-----|----------------|------------------|----------------|-----------------------|----------------|---|------|----------------------|
| GST05-1PV□□-071C21 | 56 | 429 | 259 | 145 | 43 | 40 | 6 | 28 | 32 | 26 | 29 | 115 | 165 | 156 | 51 | 168 | M6 x12 | 7 | 11 | 6 | 22.5 | 17 |
| | | | | | | | | | | | | | | | | | | 9 | | | | |
| | | | | | | | | | | | | | | | | | | 9 | | | | |
| | | | | | | | | | | | | | | | | | | 11 | | | | |

* Observe dimension k₂

Dimensions in mm



Drive selection

DC helical geared motors

Selection table Type GST05-2PV□□-071C21

| Motor type | P _N W | n ₂ rpm | M ₂ Nm | c | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|-------|--------|---------------------------------|
| 13.126.75.5.6.□ | 540 | 578 | 8.55 | 10.51 | 5.087 | |
| | | 513 | 9.65 | 10.50 | 5.850 | |
| | | 469 | 10.55 | 9.92 | 6.400 | |
| | 24 V | 414 | 11.94 | 9.07 | 7.238 | |
| | | 368 | 13.46 | 8.55 | 8.063 | |
| | | 333 | 14.86 | 7.99 | 9.010 | |
| | | 300 | 16.49 | 7.53 | 10.000 | |
| | | 268 | 18.47 | 6.90 | 11.200 | |
| | | 230 | 21.46 | 6.39 | 13.016 | |
| | | 209 | 23.67 | 5.90 | 14.356 | |
| | | 185 | 26.70 | 5.56 | 16.090 | |
| | | 171 | 28.86 | 4.92 | 17.500 | |
| | | 150 | 33.05 | 4.82 | 20.044 | |
| | | 132 | 37.56 | 3.83 | 22.778 | |
| | | 120 | 41.02 | 3.94 | 24.933 | |
| | | 106 | 46.72 | 3.05 | 28.333 | |
| | | 93 | 53.21 | 3.08 | 32.267 | |
| | | 82 | 60.46 | 2.45 | 36.667 | |
| | | 77 | 64.57 | 2.55 | 39.060 | |
| 67 | 73.38 | 2.03 | 44.500 | | | |

Additional order information

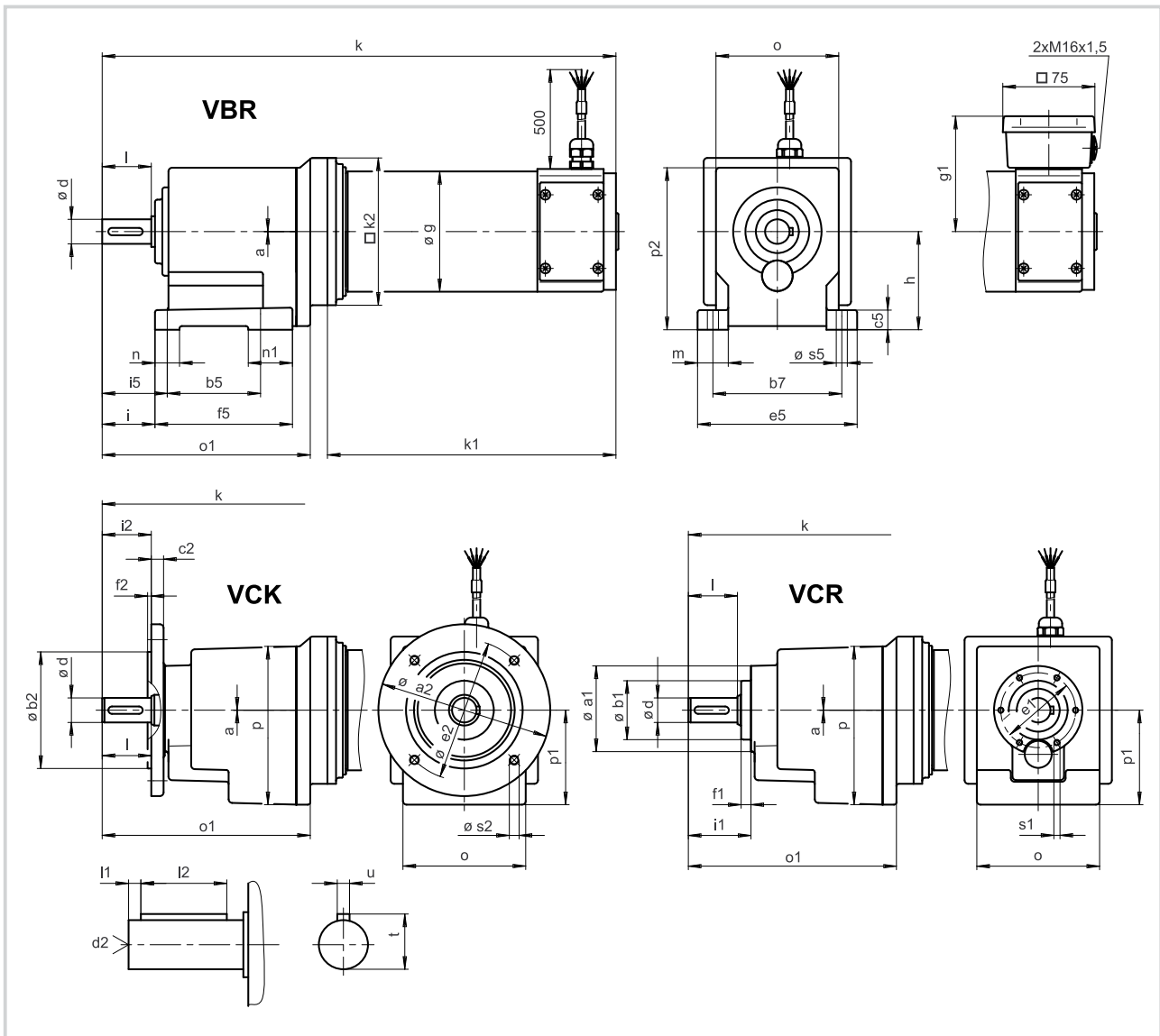
| | | |
|-----------------------------------|-------------------------------|-------------|
| B-side design | 0 = no built-on accessories | |
| | 1 = with spring-applied brake | |
| | 4 = with DC tachometer | |
| | 5 = with AC tachometer | |
| | 6 = for tachometer attachment | |
| | 7 = for brake attachment | |
| | Brake supply voltage | 24 V DC |
| Electrical connection | Cable | |
| | Terminal box | |
| Gearbox type | VBR | |
| | VCR | |
| | VCK | |
| Output-side flange diameter | D = 120 mm | |
| | D = 140 mm | |
| | D = 160 mm | |
| | D = 200 mm | |
| Mounting position | | A B C D E F |
| Position of electrical connection | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type GST05-2PV□□-071C21



| Geared motor | a | a ₁ | a ₂ | b ₁ j7 | b ₂ j7 | b ₅ | b ₇ | c ₂ | c ₅ | d | d ₂ | e ₁ | e ₂ | e ₅ | f ₁ | f ₂ | f ₅ | g | g ₁ | h | i | i ₁ | i ₂ |
|--------------------|---|----------------|----------------|----------------------|----------------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----|----------------|-----|----|----------------|----------------|
| GST05-2PV□□-071C21 | 1 | 88 | 120 | 80 | 58 | 90 | 125 | 10 | 23 | 25 | M10 | 74 | 100 | 155 | 9 | 3 | 139 | 110 | 101 | 100 | 53 | 62 | 50 |
| | | | 140 | 95 | | | | | | | | | 115 | | | | | | | | | | |
| | | | 160 | 110 | | | | | | | | | 130 | | | | | | | | | | |
| | | | 200 | 130 | | | | | | | | | 165 | | | | | | | | | | |

| Geared motor | i ₅ | k | k ₁ | k ₂ | k ₈ | l | l ₁ | l ₂ | m | n | n ₁ | o* | o ₁ | p* | p ₁ | p ₂ * | s ₁ | s ₂ VCK | s ₅ | u | t | Weight approx. kg |
|--------------------|----------------|-----|----------------|----------------|----------------|----|----------------|----------------|------|----|----------------|-----|----------------|-----|----------------|------------------|----------------|-----------------------|----------------|---|----|----------------------|
| GST05-2PV□□-071C21 | 64 | 478 | 259 | 145 | | 50 | 4 | 40 | 32.5 | 26 | 49 | 115 | 214 | 156 | 98 | 156 | M6 x12 | 7 | 11 | 8 | 28 | 19 |
| | | | | | | | | | | | | | | | | | | 9 | | | | |
| | | | | | | | | | | | | | | | | | | 9 | | | | |
| | | | | | | | | | | | | | | | | | | 11 | | | | |

* Observe dimension k₂
Dimensions in mm



Drive selection

DC helical geared motors

Selection table Type GST05-1PV□□-071C21

| Motor type | P _N W | n ₂ rpm | M ₂ Nm | c | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|-------|-------|---------------------------------|
| 13.126.75.5.6.□ | 600 | 1465 | 3.72 | 11.00 | 2.048 | |
| | | 1339 | 4.06 | 11.07 | 2.240 | |
| | 160 V | 1050 | 5.08 | 9.86 | 2.857 | |
| | | 857 | 6.35 | 8.20 | 3.500 | |
| | | 682 | 8.27 | 6.30 | 4.556 | |
| | | 529 | 10.28 | 5.07 | 5.667 | |
| | | 418 | 13.31 | 3.38 | 7.333 | |
| | | 333 | 16.05 | 2.51 | 8.900 | |

Additional order information

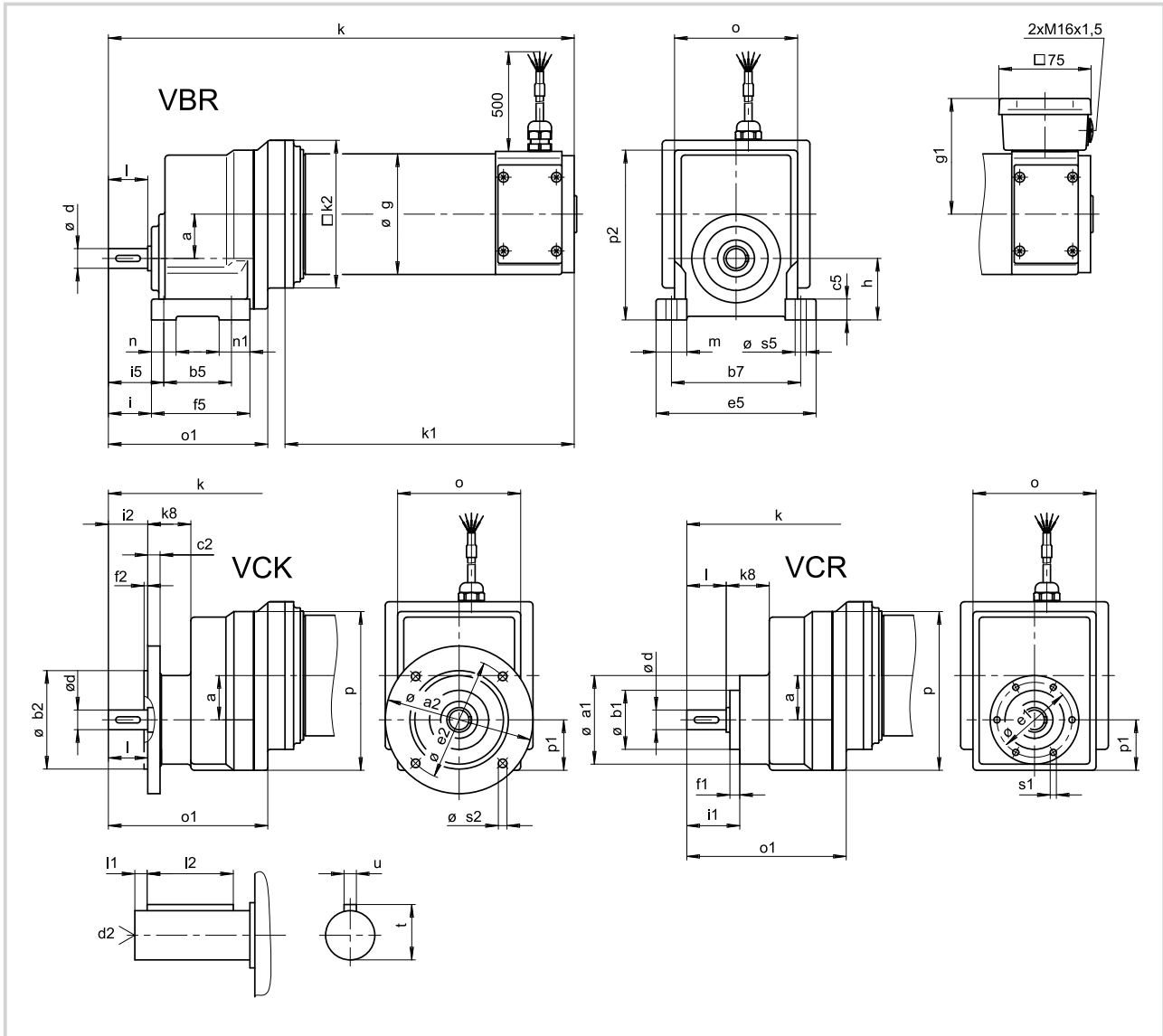
| | | |
|--|-------------------------------|-------------|
| B-side design | 0 = no built-on accessories | |
| | 1 = with spring-applied brake | |
| | 4 = with DC tachometer | |
| | 5 = with AC tachometer | |
| | 6 = for tachometer attachment | |
| | 7 = for brake attachment | |
| | Brake supply voltage | 205 V DC |
| Electrical connection | Cable | |
| | Terminal box | |
| Gearbox type | VBR | |
| | VCR | |
| | VCK | |
| Output-side flange diameter | D = 120 mm | |
| | D = 140 mm | |
| | D = 160 mm | |
| | D = 200 mm | |
| Mounting position | | A B C D E F |
| Position of electrical connection | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type GST05-1PV□□-071C21



| Geared motor | a | a ₁ | a ₂ | b ₁ j7 | b ₂ j7 | b ₅ | b ₇ | c ₂ | c ₅ | d k6 | d ₂ | e ₁ | e ₂ | e ₅ | f ₁ | f ₂ | f ₅ | g | g ₁ | h | i | i ₁ | i ₂ |
|--------------------|----|----------------|----------------|----------------------|----------------------|----------------|----------------|----------------|----------------|---------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----|----------------|----|----|----------------|----------------|
| GST05-1PV□□-071C21 | 45 | 88 | 120 | 80 | 58 | 70 | 125 | 10 | 22 | 20 | M6 | 74 | 100 | 154 | 9 | 3 | 99 | 110 | 101 | 63 | 43 | 52 | 40 |
| | | | 140 | 95 | | | | | | | | | 115 | | | | | | | | | | |
| | | | 160 | 110 | | | | | | | | | 130 | | | | | | | | | | |
| | | | 200 | 130 | | | | | | | | | 165 | | | | | | | | | | |

| Geared motor | i ₅ | k | k ₁ | k ₂ | k ₈ | l | l ₁ | l ₂ | m | n | n ₁ | o* | o ₁ | p* | p ₁ | p ₂ * | s ₁ | s ₂ VCK | s ₅ | u | t | Weight approx. kg |
|--------------------|----------------|-----|----------------|----------------|----------------|----|----------------|----------------|----|----|----------------|-----|----------------|-----|----------------|------------------|----------------|-----------------------|----------------|---|------|----------------------|
| GST05-1PV□□-071C21 | 56 | 429 | 259 | 145 | 43 | 40 | 6 | 28 | 32 | 26 | 29 | 115 | 165 | 156 | 51 | 168 | M6 x12 | 7 | 11 | 6 | 22.5 | 17 |
| | | | | | | | | | | | | | | | | | | 9 | | | | |
| | | | | | | | | | | | | | | | | | | 9 | | | | |
| | | | | | | | | | | | | | | | | | | 11 | | | | |

* Observe dimension k₂
Dimensions in mm



Drive selection

DC helical geared motors

Selection table Type GST05-2PV□□-071C21

| Motor type | P _N W | n ₂ rpm | M ₂ Nm | c | i | Selection (tick as required) |
|-----------------|---------------------|-----------------------|----------------------|------|--------|---------------------------------|
| 13.126.75.2.6.□ | 600 | 578 | 9.61 | 9.35 | 5.087 | |
| | | 513 | 10.84 | 9.35 | 5.850 | |
| | 160 V | 469 | 11.86 | 8.83 | 6.400 | |
| | | 414 | 13.41 | 8.07 | 7.238 | |
| | | 368 | 15.02 | 7.61 | 8.063 | |
| | | 333 | 16.69 | 7.02 | 9.010 | |
| | | 300 | 18.53 | 6.71 | 10.000 | |
| | | 268 | 20.75 | 6.05 | 11.200 | |
| | | 230 | 24.01 | 5.69 | 13.016 | |
| | | 209 | 26.60 | 5.25 | 14.356 | |
| | | 185 | 30.00 | 4.95 | 16.090 | |
| | | 171 | 32.42 | 4.38 | 17.500 | |
| | | 150 | 37.04 | 4.29 | 20.044 | |
| | | 132 | 42.20 | 3.41 | 22.778 | |
| | | 120 | 46.09 | 3.51 | 24.933 | |
| | | 106 | 52.49 | 2.80 | 28.333 | |
| | | 93 | 59.78 | 2.74 | 32.267 | |
| | | 82 | 67.93 | 2.08 | 36.667 | |
| | | 77 | 72.55 | 2.27 | 39.060 | |
| 67 | 82.45 | 1.81 | 44.500 | | | |

Additional order information

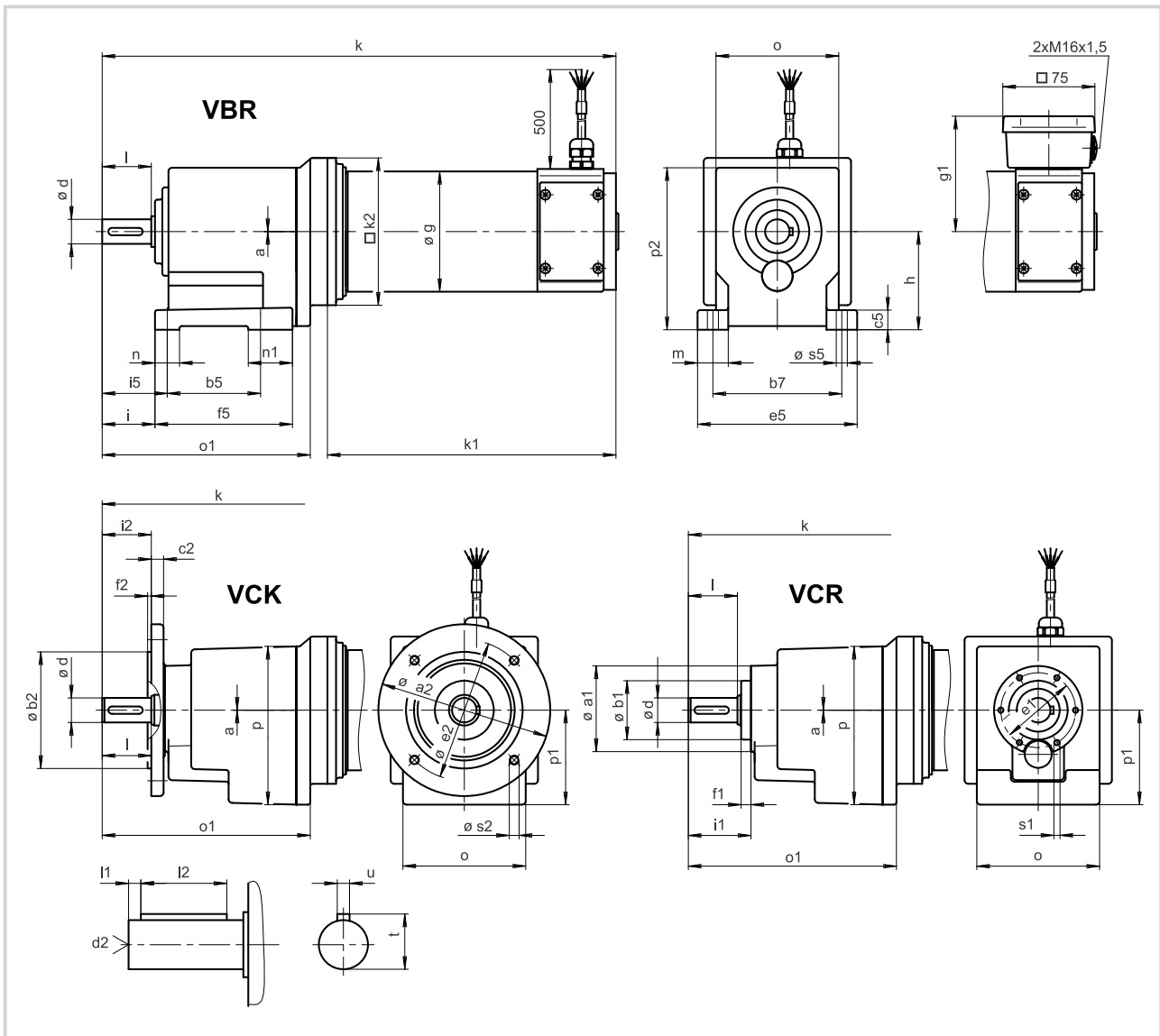
| | | |
|-----------------------------------|-------------------------------|-------------|
| B-side design | 0 = no built-on accessories | |
| | 1 = with spring-applied brake | |
| | 4 = with DC tachometer | |
| | 5 = with AC tachometer | |
| | 6 = for tachometer attachment | |
| | 7 = for brake attachment | |
| | Brake supply voltage | 205 V DC |
| Electrical connection | Cable | |
| | Terminal box | |
| Gearbox type | VBR | |
| | VCR | |
| | VCK | |
| Output-side flange diameter | D = 120 mm | |
| | D = 140 mm | |
| | D = 160 mm | |
| | D = 200 mm | |
| Mounting position | | A B C D E F |
| Position of electrical connection | | 2 3 4 5 |

Type code see pages 1-3 to 1-6.

Mounting position see cover fold-out.



Dimensions Type GST05-2PV□□-071C21



| Geared motor | a | a ₁ | a ₂ | b ₁ j7 | b ₂ j7 | b ₅ | b ₇ | c ₂ | c ₅ | d | d ₂ | e ₁ | e ₂ | e ₅ | f ₁ | f ₂ | f ₅ | g | g ₁ | h | i | i ₁ | i ₂ |
|--------------------|---|----------------|----------------|----------------------|----------------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----|----------------|-----|----|----------------|----------------|
| GST05-2PV□□-071C21 | 1 | 88 | 120 | 80 | 58 | 90 | 125 | 10 | 23 | 25 | M10 | 74 | 100 | 155 | 9 | 3 | 139 | 110 | 101 | 100 | 53 | 62 | 50 |
| | | | 140 | 95 | | | | | | | | | 115 | | | | | | | | | | |
| | | | 160 | 110 | | | | | | | | | 130 | | | | | | | | | | |
| | | | 200 | 130 | | | | | | | | | 165 | | | | | | | | | | |

| Geared motor | i ₅ | k | k ₁ | k ₂ | k ₈ | l | l ₁ | l ₂ | m | n | n ₁ | o* | o ₁ | p* | p ₁ | p ₂ * | s ₁ | s ₂ VCK | s ₅ | u | t | Weight approx. kg |
|--------------------|----------------|-----|----------------|----------------|----------------|----|----------------|----------------|------|----|----------------|-----|----------------|-----|----------------|------------------|----------------|-----------------------|----------------|---|----|----------------------|
| GST05-2PV□□-071C21 | 66 | 478 | 259 | 145 | | 50 | 4 | 40 | 32.5 | 26 | 49 | 115 | 214 | 156 | 98 | 156 | M6 x12 | 7 | 11 | 8 | 28 | 19 |
| | | | | | | | | | | | | | | | | | | 9 | | | | |
| | | | | | | | | | | | | | | | | | | 9 | | | | |
| | | | | | | | | | | | | | | | | | | 11 | | | | |

* Observe dimension k₂
Dimensions in mm



Drive selection

Worm gearbox

Selection table Type SSN25

| Ratio i | Perm. axial load F_a [N] | Perm. radial load F_r [N] | $M_{max.}$ [Nm] | Efficiency | Gearbox | Weight [approx. kg] |
|---------|----------------------------|-----------------------------|-----------------|------------|---------|---------------------|
| 5 | 50 | 63(DCR,VCR) 80(VCL) | 7 | 0.81 | SSN25 | 0.4 |
| 8 | | | 7.5 | 0.76 | | |
| 10 | | | 8 | 0.72 | | |
| 15 | | | 7.5 | 0.64 | | |
| 20 | | | 8 | 0.58 | | |
| 30 | | | 7.5 | 0.48 | | |
| 40 | | | 7 | 0.43 | | |
| 50 | | | 6 | 0.36 | | |
| 60 | | | 5.6 | 0.33 | | |

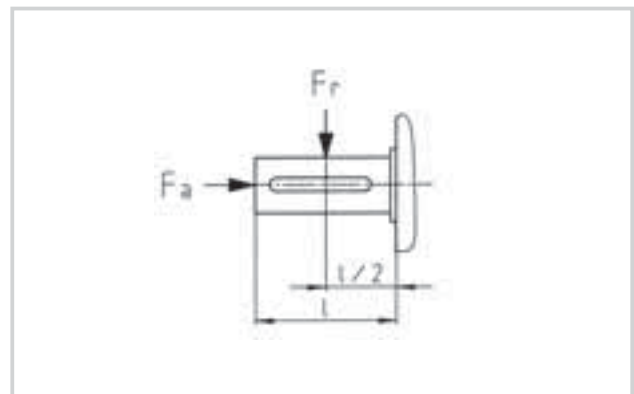
Selection table Type SSN31

| Ratio i | Perm. axial load F_a [N] | Perm. radial load F_r [N] | $M_{max.}$ [Nm] | Efficiency | Gearbox | Weight [approx. kg] |
|---------|------------------------------|-----------------------------|-----------------|------------|---------|--|
| 5 | 300(VAL,VAR,DAR) 400(HAR) | 200(VAL,VAR) 2x100(DAR) | 14 | 0.85 | SSN31 | 0.67(VAR) 0.80(VAL) 0.68(DAR) 0.70(HAR) |
| 7 | | | 14 | 0.83 | | |
| 10 | | | 14 | 0.77 | | |
| 15 | | | 16 | 0.74 | | |
| 20 | | | 15 | 0.69 | | |
| 25 | | | 14 | 0.61 | | |
| 30 | | | 15 | 0.59 | | |
| 38 | | | 16 | 0.57 | | |
| 50 | | | 13 | 0.46 | | |
| 55 | | | 15 | 0.52 | | |
| 75 | | | 11 | 0.36 | | |
| 100 | | | 11 | 0.38 | | |

Selection table Type SSN40

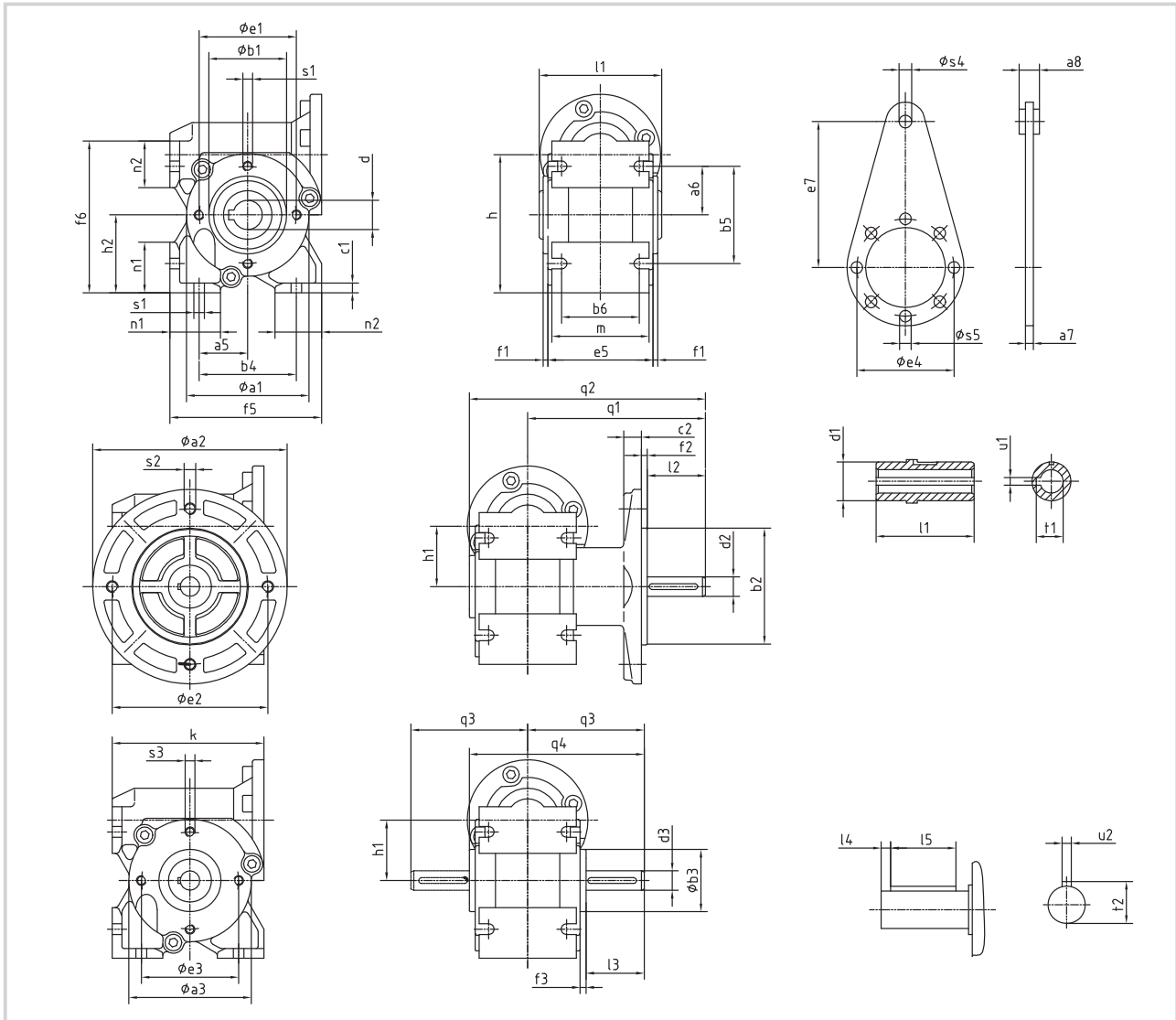
| Ratio i | Perm. axial load F_a [N] | Perm. radial load F_r [N] | $M_{max.}$ [Nm] | Efficiency | Gearbox | Weight [approx. kg] |
|---------|----------------------------|-----------------------------|-----------------|------------|---------|---------------------------------------|
| 6.75 | 400 | 600(VAL,VAR) 2x300(DAR) | 35 | 0.84 | SSN40 | 1.5(HAR, VAR) 1.6(DAR) 1.8(VAL) |
| 10 | | | 35 | 0.81 | | |
| 15 | | | 33 | 0.74 | | |
| 20 | | | 34 | 0.71 | | |
| 25 | | | 29 | 0.64 | | |
| 30 | | | 36 | 0.62 | | |
| 40 | | | 34 | 0.56 | | |
| 50 | | | 32 | 0.54 | | |
| 60 | | | 23 | 0.38 | | |
| 80 | | | 24 | 0.39 | | |

| Gearbox | Gearbox type | Position of system elements | |
|---------|--------------|-----------------------------|--------|
| | | Shaft | Flange |
| SSN25 | VCL | 3 5 | 3 5 |
| | VCR | 3 5 | — |
| | DCR | 8 | — |
| SSN31 | VAL | 3 5 | 3 5 |
| | VAR | 3 5 | — |
| | DAR | 8 | — |
| | HAR | — | — |
| SSN40 | VAL | 3 5 | 3 5 |
| | VAR | 3 5 | — |
| | DAR | 8 | — |
| | HAR | — | — |





Dimensions Type SSN



| Type | a ₁ | a ₂ | a ₃ | a ₅ | a ₆ | a ₇ | a ₈ | b ₁ h8 | b ₂ j7 | b ₃ h8 | b ₄ | b ₅ | b ₆ | c ₁ | c ₂ | d H7 | d ₁ | d ₂ h6 | d ₃ h6 | e ₁ | e ₂ | Weight approx. kg |
|--------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------|----------------------|----------------------|----------------|----------------|----------------|----------------|----------------|---------|----------------|----------------------|----------------------|----------------|----------------|----------------------|
| SSN 31 | 63 | 100 | 63 | 25 | 25 | 4 | 4 | 40 | 60 | 32 | 50 | 50 | 40 | 5 | 9 | 15 | 25 | 10 | 10 | 50 | 80 | 0.7-0.8 |
| SSN 31 | 63 | 120 | 63 | 25 | 25 | 4 | 4 | 40 | 80 | 32 | 50 | 50 | 40 | 5 | 9 | 15 | 25 | 12 | 12 | 50 | 100 | 0.7-0.8 |
| SSN 40 | 77 | 140 | 77 | 30 | 30 | 4 | 14 | 50 | 95 | 44 | 60 | 60 | 50 | 6 | 10 | 20 | 30 | 15 | 15 | 65 | 115 | 1.5-1.8 |

| Type | e ₃ | e ₄ | e ₅ | e ₇ | f ₁ | f ₂ | f ₃ | f ₅ | f ₆ | h | h ₁ | h ₂ | k | l ₁ | l ₂ | l ₃ | l ₄ | l ₅ | n ₁ | n ₂ | m | Weight approx. kg |
|--------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|----------------------|
| SSN 31 | 50 | 50 | 54 | 75 | 2.5 | 3 | 3 | 78 | 78 | 71 | 31 | 40 | 78 | 63 | 30 | 30 | 4 | 25 | 26 | 24 | 50 | 0.7-0.8 |
| SSN 31 | 50 | 50 | 54 | 75 | 2.5 | 3 | 3 | 78 | 78 | 71 | 31 | 40 | 78 | 63 | 40 | 40 | 4 | 28 | 26 | 24 | 50 | 0.7-0.8 |
| SSN 40 | 65 | 65 | 76 | 85 | 2 | 3 | 3 | 90 | 90 | 88 | 40 | 48 | 96 | 83 | 50 | 43 | 4 | 36 | 30 | 24 | 59 | 1.5-1.8 |

| Type | q ₁ | q ₂ | q ₃ | q ₄ | s ₁ | s ₂ | s ₃ | s ₄ | s ₅ | t ₁ | t ₂ | u ₁ | u ₂ | | | | | | | | | Weight approx. kg |
|--------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--|--|--|--|--|--|--|--|----------------------|
| SSN 31 | 91.5 | 121.5 | 60 | 90 | 5.5 | M6 | M5 | 6.5 | 6 | 17.3 | 11.2 | 5 | 3 | | | | | | | | | 0.7-0.8 |
| SSN 31 | 101.5 | 131.5 | 70 | 100 | 5.5 | M6 | M5 | 6.5 | 6 | 17.3 | 13.5 | 5 | 4 | | | | | | | | | 0.7-0.8 |
| SSN 40 | 128 | 168 | 83 | 123 | 5.5 | M8 | M6 | 8 | 7 | 22.8 | 17 | 6 | 5 | | | | | | | | | 1.5-1.8 |

Dimensions in mm



Drive selection Planetary gearbox

Drive selection planetary gearbox SPL□□-□NVCR

| Gearbox type | Ratio | M max. | Axial load max. | Radial load max. | Selection (tick as required) |
|--------------|--------|--------|-----------------|------------------|------------------------------|
| | i | Nm | N | N | |
| SPL42-1NVCR | 3.7 | 3 | 50 | 160 | |
| | 6.75 | 3 | 50 | 160 | |
| SPL42-2NVCR | 13.73 | 7.5 | 80 | 230 | |
| | 25.01 | 7.5 | 80 | 230 | |
| | 45.56 | 7.5 | 80 | 230 | |
| SPL42-3NVCR | 50.89 | 15 | 110 | 300 | |
| | 92.7 | 15 | 110 | 300 | |
| | 168.84 | 15 | 110 | 300 | |

| Gearbox type | Ratio | M max. | Axial load max. | Radial load max. | Selection (tick as required) |
|--------------|--------|--------|-----------------|------------------|------------------------------|
| | i | Nm | N | N | |
| SPL52-1NVCR | 3.7 | 4 | 60 | 200 | |
| | 6.75 | 4 | 60 | 200 | |
| SPL52-2NVCR | 13.73 | 12 | 100 | 320 | |
| | 25.01 | 12 | 100 | 320 | |
| | 45.56 | 12 | 100 | 320 | |
| SPL52-3NVCR | 50.89 | 25 | 150 | 450 | |
| | 92.7 | 25 | 150 | 450 | |
| | 168.84 | 25 | 150 | 450 | |

| Gearbox type | Ratio | M max. | Axial load max. | Radial load max. | Selection (tick as required) |
|--------------|--------|--------|-----------------|------------------|------------------------------|
| | i | Nm | N | N | |
| SPL62-1NVCR | 3.7 | 8 | 50 | 240 | |
| | 6.75 | 8 | 50 | 240 | |
| SPL62-2NVCR | 13.73 | 25 | 70 | 360 | |
| | 25.01 | 25 | 70 | 360 | |
| | 34.97 | 25 | 70 | 360 | |
| | 45.56 | 25 | 70 | 360 | |
| SPL62-3NVCR | 50.89 | 50 | 120 | 520 | |
| | 71.06 | 50 | 120 | 520 | |
| | 99.5 | 50 | 120 | 520 | |
| | 123.97 | 50 | 120 | 520 | |

| Gearbox type | Ratio | M max. | Axial load max. | Radial load max. | Selection (tick as required) |
|--------------|--------|--------|-----------------|------------------|------------------------------|
| | i | Nm | N | N | |
| SPL81-1NVCR | 3.7 | 20 | 80 | 400 | |
| | 6.75 | 20 | 80 | 400 | |
| SPL81-2NVCR | 13.73 | 60 | 120 | 600 | |
| | 25.01 | 60 | 120 | 600 | |
| | 34.97 | 60 | 120 | 600 | |
| | 45.56 | 60 | 120 | 600 | |
| SPL81-3NVCR | 50.89 | 120 | 200 | 1000 | |
| | 71.06 | 120 | 200 | 1000 | |
| | 99.5 | 120 | 200 | 1000 | |
| | 123.97 | 120 | 200 | 1000 | |

| Gearbox type | Ratio | M max. | Axial load max. | Radial load max. | Selection (tick as required) |
|--------------|--------|--------|-----------------|------------------|------------------------------|
| | i | Nm | N | N | |
| SPL12-1NVCR | 3.7 | 50 | 120 | 600 | |
| | 6.75 | 50 | 120 | 600 | |
| SPL12-2NVCR | 13.73 | 150 | 180 | 900 | |
| | 25.01 | 150 | 180 | 900 | |
| | 45.56 | 150 | 180 | 900 | |
| SPL12-3NVCR | 50.89 | 300 | 300 | 1500 | |
| | 92.7 | 300 | 300 | 1500 | |
| | 168.84 | 300 | 300 | 1500 | |

| At the drive end motor attachment | | |
|-----------------------------------|--------------|-----------|
| Gearbox type | Design | Selection |
| SPL42 | B14-SPL42 | |
| SPL52 | IEC56B14C80 | |
| SPL62 | IEC56B14C80 | |
| SPL62 | IEC63B14C90 | |
| SPL81 | IEC63B14C90 | |
| SPL81 | IEC71B14C105 | |
| SPL12 | IEC71B14C105 | |

| Efficiency | |
|------------|------|
| 1-stage | 0.8 |
| 2-stage | 0.75 |
| 3-stage | 0.7 |







Helical gearbox, permissible radial and axial output forces

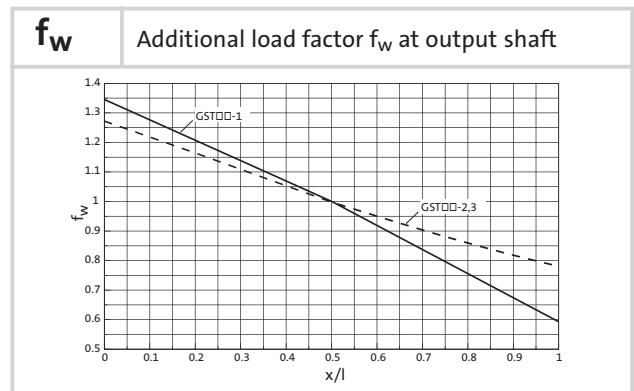
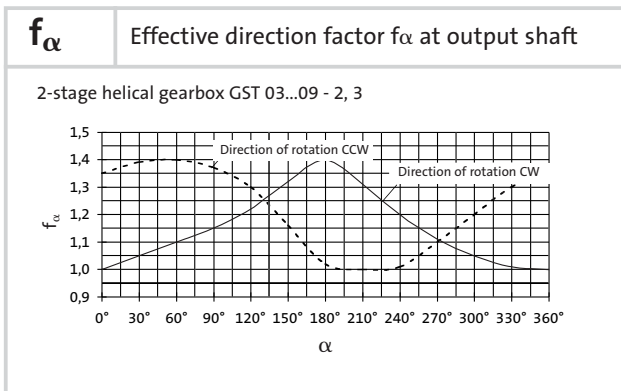
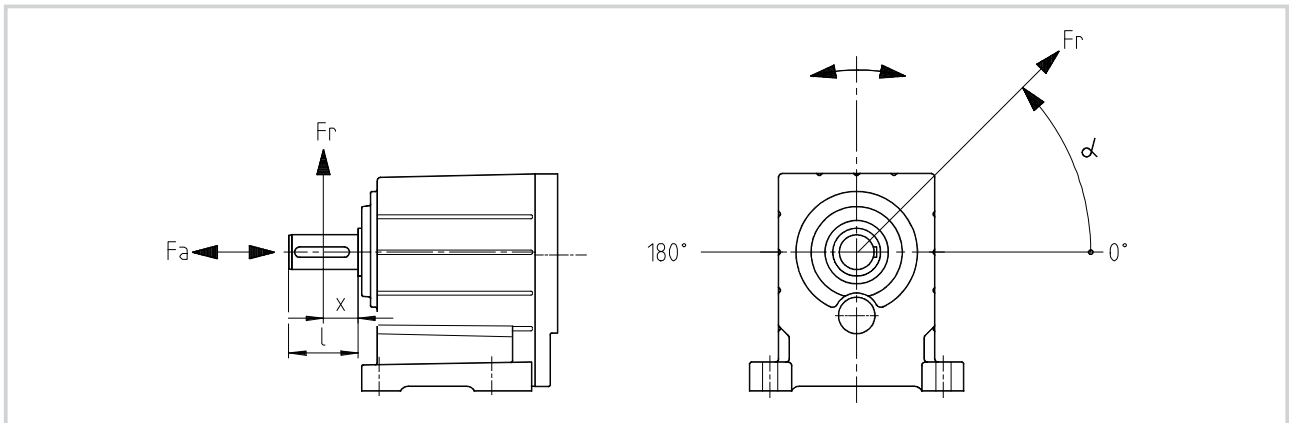
► Permissible radial force

$$F_{rperm} = f_w \cdot f_\alpha \cdot F_{rTab} \leq f_w \cdot F_{rmax}$$

► Permissible axial force

$$F_{aperm} = F_{aTab} \quad \text{when } F_r = 0$$

Contact Lenze if F_r and $F_a \neq 0$





Drive selection

Technical data - Bevel gearboxes

Bevel gearbox GKR□□, permissible radial and axial output forces

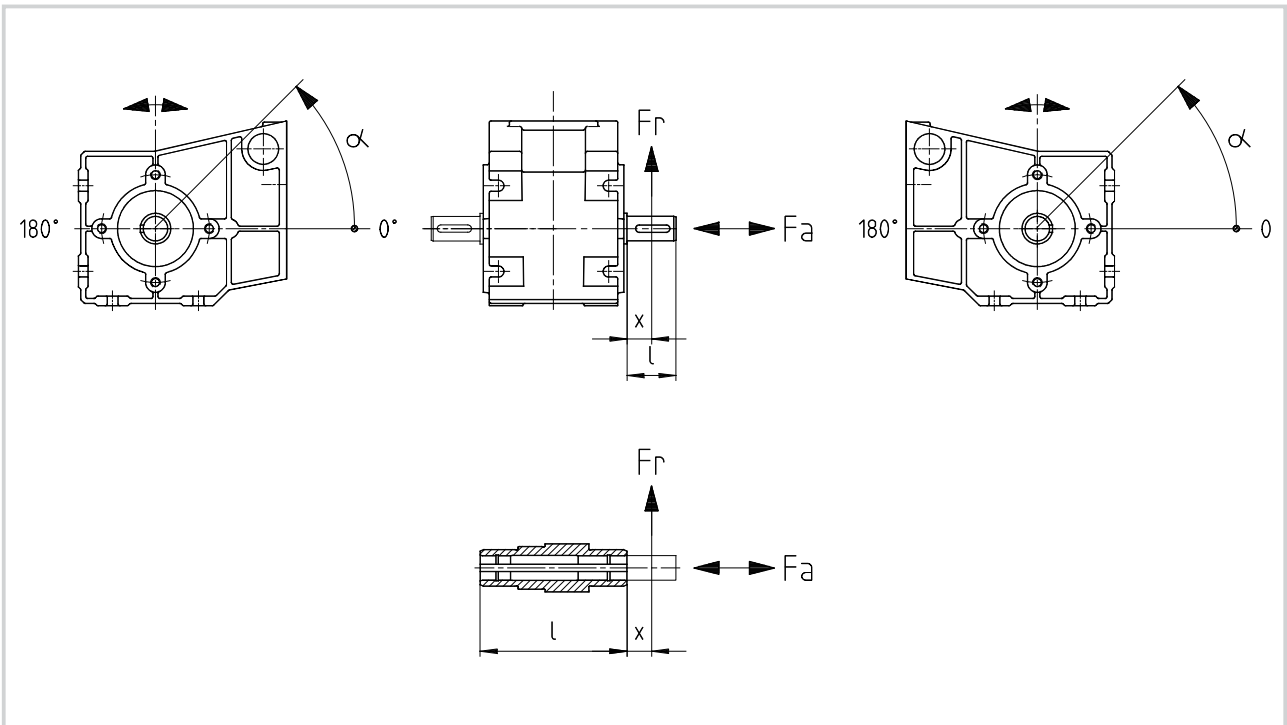
► Permissible radial force

$$F_{rperm} = f_w \cdot f_\alpha \cdot F_{rTab} \leq f_w \cdot F_{rmax}$$

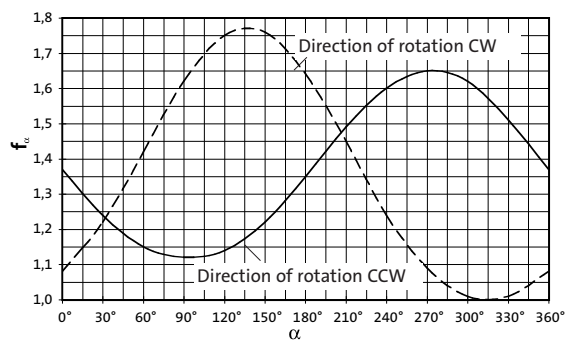
► Permissible axial force

$$F_{aperm} = F_{aTab} \quad \text{when } F_r = 0$$

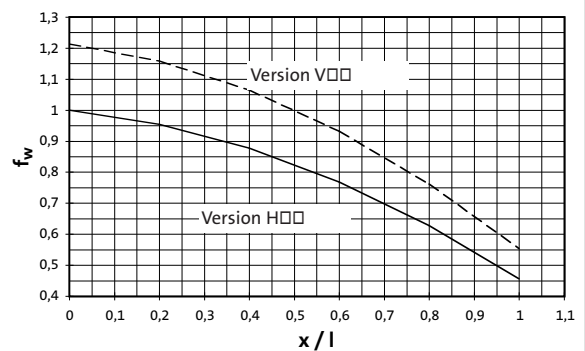
Contact Lenze if F_r and $F_a \neq 0$



f_α Effective direction factor at output shaft



f_w Additional load factor at output shaft





Bevel gearbox, permissible radial and axial output forces

| V00 | Solid shaft without flange Application of force F_{rTab} : on middle of shaft journal ($x = l/2$) F_{aTab} only when $F_r = 0$ | |
|----------------|--|-------------------|
| | GKR 03 | |
| n_2 [rpm] | F_{rTab} [N] | F_{aTab} [N] |
| 400 | 1800 | 1000 |
| 250 | 2100 | 1100 |
| 160 | 2400 | 1250 |
| 100 | 2800 | 1400 |
| 63 | 3000 | 1400 |
| 40 | 3000 | 1400 |
| 25 | 3000 | 1400 |
| ≤ 16 | 3000 | 1400 |
| F_{max} | 3000 | – |

| H00 | Application of force F_{rTab} : at hollow shaft end face ($x = 0$) F_{aTab} only when $F_r = 0$ | |
|----------------|--|-------------------|
| | GKR 03 | |
| n_2 [rpm] | F_{rTab} [N] | F_{aTab} [N] |
| 400 | 2200 | 1000 |
| 250 | 2500 | 1100 |
| 160 | 2800 | 1250 |
| 100 | 3000 | 1400 |
| 63 | 3000 | 1400 |
| 40 | 3000 | 1400 |
| 25 | 3000 | 1400 |
| ≤ 16 | 3000 | 1400 |
| F_{max} | 3000 | – |

2





Drive selection

Technical data B-side built-on accessories

Brakes

Description

Spring-applied brakes work on the closed-circuit principle, i.e., the braking torque is generated by the spring force when the supply is off. The brake is released electromagnetically by applying a DC voltage.

Spring-applied brakes should be fitted if

- ▶ a holding torque is required during motor standstill,
- ▶ the coasting time after motor disconnection must be very short,
- ▶ short operating cycles (on/off cycles) are required.

Three-phase asynchronous motors are equipped with a rectifier in the terminal box.

Technical data

| Brake Type | Braking torque [Nm] | Brake voltage [DV] | Coil power [W] | Rotor bore [mm] | Weight [kg] |
|------------|---------------------|--------------------|----------------|-----------------|-------------|
| BFK 457-03 | 0.5 | 24 or 205 | 9 | 10 | 0.25 |
| BFK 457-04 | 1 | 24 or 205 | 12.5 | 7 or 10 | 0.3 |
| BFK 457-05 | 2 | 24 or 205 | 16 | 10 | 0.4 |
| BFK 458-06 | 4 | 24 or 205 | 20 | 10 | 0.8 |

Tacho generators

DC tachogenerator

An armature with winding and commutator rotates in a permanent magnetic field. The induced voltage is tapped at the commutator by carbon brushes.

Features

- ▶ Detection of the direction of rotation when the polarity of the tacho voltage changes
- ▶ Very low residual ripple of the tacho signal thanks to suitable dimensioning of the windings
- ▶ Very good linearity of the tacho signal even at very low speeds

AC tachogenerator

A rotating permanent magnet induces a single- or multi-phase AC voltage in the stator winding. An integrated rectifier rectifies the AC voltage so that the output signal is a DC voltage.

Features

- ▶ Simple structure (price)
- ▶ Simple assembly
- ▶ No wearing parts, therefore maintenance-free
- ▶ Direction of rotation not detected from polarity of the tacho voltage, therefore not suitable for 4-Q drives
- ▶ Tacho voltage and speed are only proportional from a minimum speed $n_{\min} > 0$ because of the threshold voltage of the integrated rectifier.

Technical data

| Design Type | Detection of direction of rotation for 4-Q drives | Voltage per 1000 rpm [V] | Ripple | Reversing error | Linearity error | Minimum limit of control range [rpm] | Max speed [rpm] | Thermal limit current [mA] | Enclosure | Weight [approx. kg] |
|---------------------------------------|---|--------------------------|--------|-----------------|-----------------|--------------------------------------|-----------------|----------------------------|-----------|---------------------|
| DC current tacho Type GT7.08 | yes | 20 (-10%) | < 0.3% | +/- 0.0% | < 0.05% | 0 | 9000 | 24 | IP54 | 0.5 |
| Three-phase AC current tacho Type TD3 | no | 30 (+/- 3%) | 4% | – | < 1% | 60 | 10000 | 20 | IP54 | 0.5 |



Resolver (built-in encoder)

Stator-fed resolver with 2 stator windings offset by 90° and one rotor winding with transformer winding.

| Design | Brushless hollow-shaft resolver in pancake construction |
|----------------------------------|---|
| Max. speed (continuous) | 8000 rpm |
| Max. speed (short-time) | 10000 rpm |
| Input voltage | 10 V amplitude |
| Input frequency | 4 kHz |
| Stator/rotor ratio | 0.3 ± 5% |
| Rotor impedance Z _{ro} | 51 Ω + j90 Ω |
| Stator impedance Z _{s0} | 102 Ω + j150 Ω |
| Impedance Z _{rs} | 44 Ω + j76 Ω |
| Insulation resistance | > 10 MΩ at 500 V DC |
| Number of pole pairs | 1 |
| Maximum phase-angle error | ± 10 angular minutes |

Incremental encoder (built-in encoder)

Encoder with 2 TTL rectangular signals offset by 90° with 2048 pulses/revolution and additional zero track.

| Design | Brushless hollow shaft incremental encoder |
|---------------------|---|
| Maximum speed | 8000 rpm |
| Number of pulses | 2048 pulses/revolution |
| Output signals | 2 rectangular signals offset by 90°, zero pulse, complementary TTL signals, U _{low} ≤ 0.5 V, U _{high} ≥ 2.5 V |
| Supply | 5 V ± 5 %, protected against polarity reversal |
| Current consumption | ≤ 150 mA |
| Limit frequency | 300 kHz |

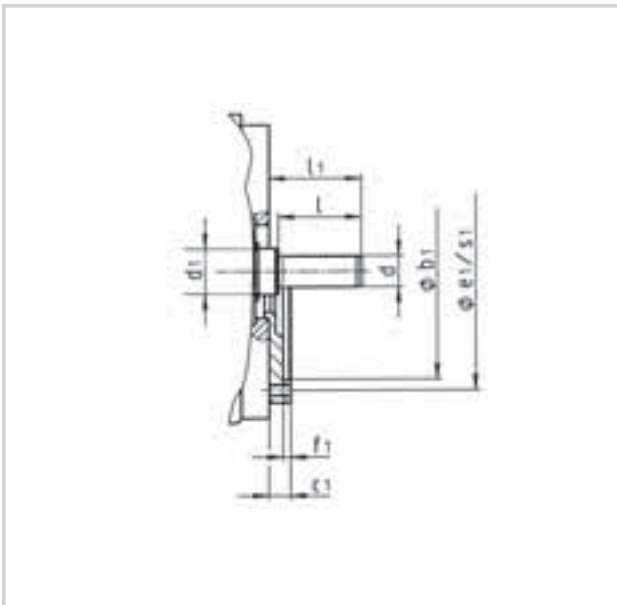


Drive selection

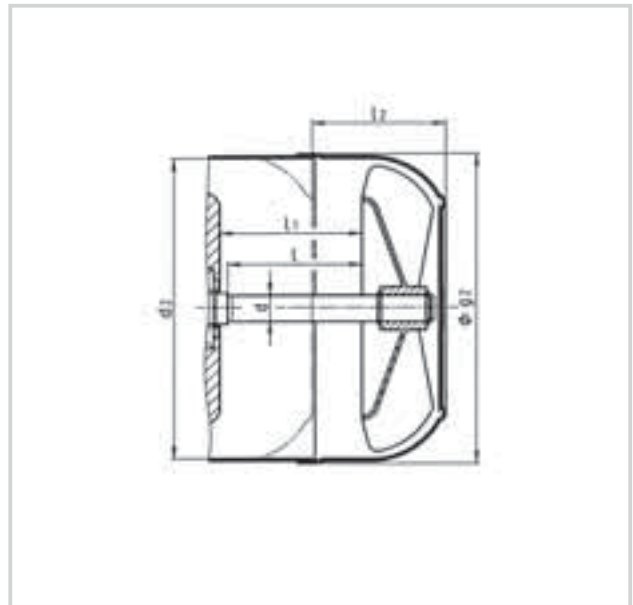
B-side built-on accessories

Motors prepared for an attachment

Motor type: 13.120/13.710



Motor type: 13.750





Available designs

| Motor design Motor type | Motor prepared for an attachment | Spring-applied brake | | Feedback | |
|---|----------------------------------|----------------------|----------------|----------------|-------------|
| | | Type BFK457-04 | Type BFK458-06 | DC Type GT7.08 | AC Type TD3 |
| DC permanent magnet motor 13.120.35 13.120.45 13.120.55 13.120.65 13.120.75 | ● ● ● ● | ● | ● ● | ● ● ● | ● ● ● |
| AC asynchronous motor (smooth housing) 13.710.35 13.710.47 13.710.55 | ● ● | ● ● | | | |
| AC asynchronous motor (ribbed housing) 13.750.45 13.750.55 13.750.65 | ● ● ● | ● ● | ● | | |

| Motor type Motor type | Motor prepared for an attachment | Spring-applied brake | | | Feedback | |
|---|----------------------------------|----------------------|----------------|----------------|-------------|---------------------|
| | | Type BFK457-03 | Type BFK457-04 | Type BFK457-05 | Resolver | Incremental encoder |
| AC asynchronous motor (inverter-optimised) SDSGA 047-22 SDSGA 056-22 SDSGA 063-22 SDSGA 063-32 | ● ● ● ● | ● | ● | ● ● | ● ● ● | ● ● ● |

Dimensions

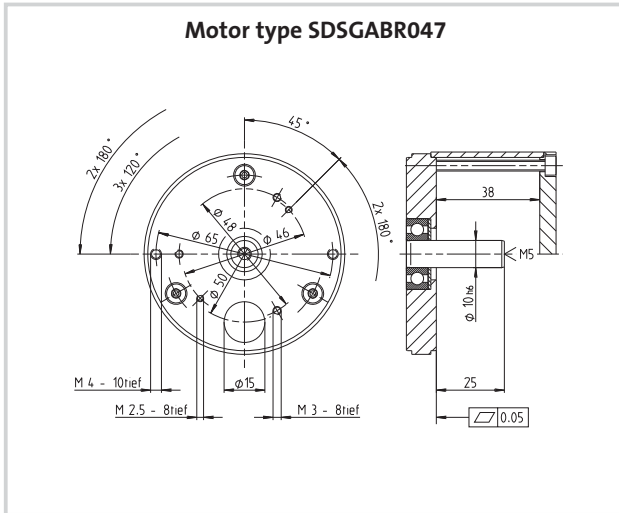
| Motor type Motor type | b ₁ | c ₁ | d | d ₁ | d ₂ | e ₁ | g ₂ | f ₁ | l | l ₁ | l ₂ | s ₁ |
|---|----------------|----------------|----------------------|----------------|----------------------|----------------------|----------------------|----------------|--------------------------|------------------------|----------------------|------------------------------|
| DC permanent magnet motor 13.120.35 13.120.45 13.120.55 13.120.65 13.120.75 | | | 10 | | | 77 | | 2.5 | 30 | 30 | | 4xM4 |
| | 70 | 7 | 10 | | | 77 | | 2.5 | 30 | 30 | | 4xM4 |
| | 70 | 7 | 10 | 15 | | 77 | | 2.5 | 27 | 30 | | 4xM4 |
| | 70 | 7 | 10 | 15 | | 77 | | 2.5 | 27 | 30 | | 4xM4 |
| AC asynchronous motor (smooth housing) 13.710.35 13.710.47 13.710.55 | | | 7 10 | 7.9 10 | | | | | 18.5 | 21 30 | | |
| AC asynchronous motor (ribbed housing) 13.750.45 13.750.55 13.750.65 | | | 7 10 10 | 7 10 10 | 90 108.5 121 | 77 77 | 93 110.5 123 | 3 3 | 38.5 42 45 | 39.5 48 51 | 35 51.5 49 | 4xM4 4xM4 |
| AC asynchronous motor (inverter-optimised) SDSGA 047-22 SDSGA 056-22 SDSGA 063-22 SDSGA 063-32 | | | 10 10 10 10 | 12 15 15 | 71 81 91 91 | 48 58 66 66 | 75 85 95 95 | | 25 25 23.5 23.5 | 25 25.5 25 25 | 44 44 46 46 | 3xM3 3xM3 3xM4 3xM4 |



Drive selection

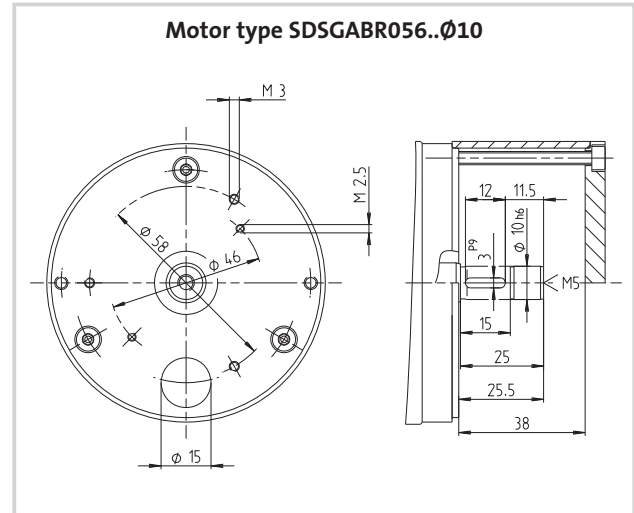
B-side built-on accessories

B-side shaft end



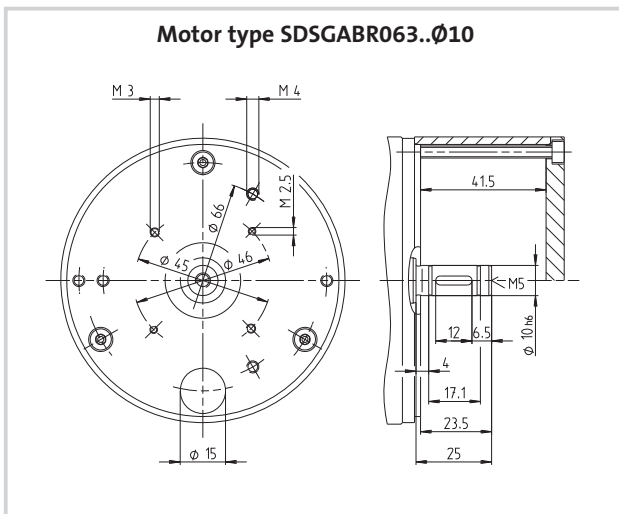
Dimensions in mm
Subject to amendment

B-side shaft end



Keyway to DIN 6885/1
Circlip slot to DIN 471
Dimensions in mm
Subject to amendment

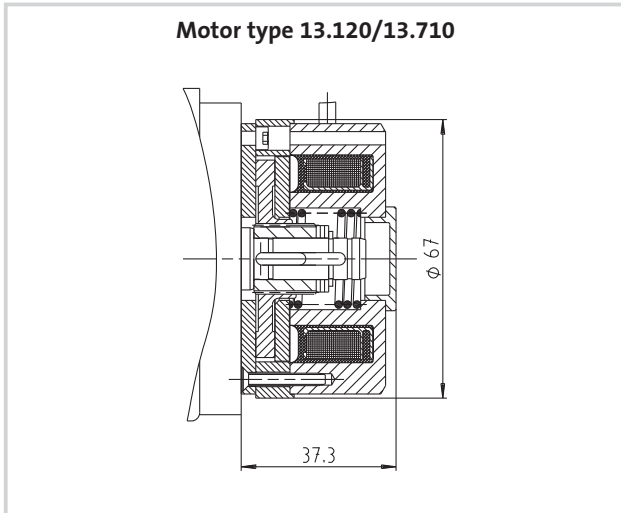
B-side shaft end



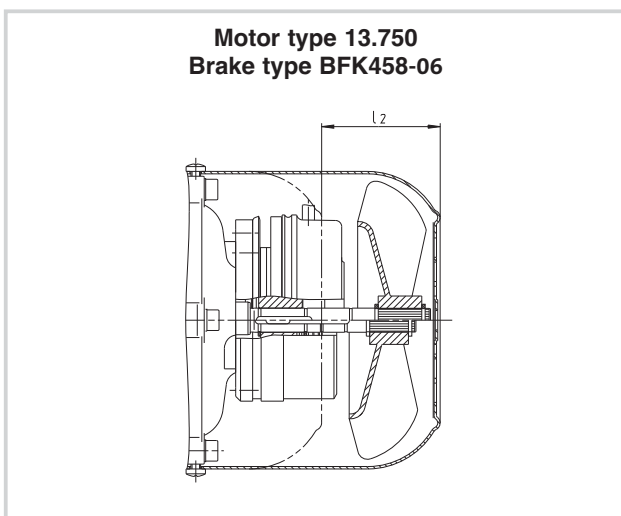
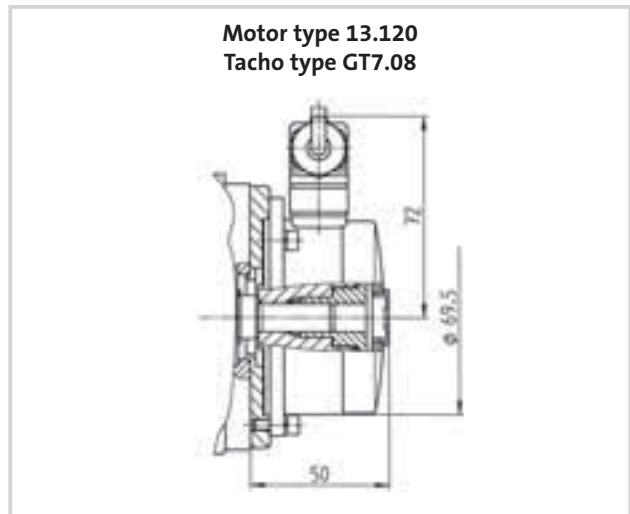
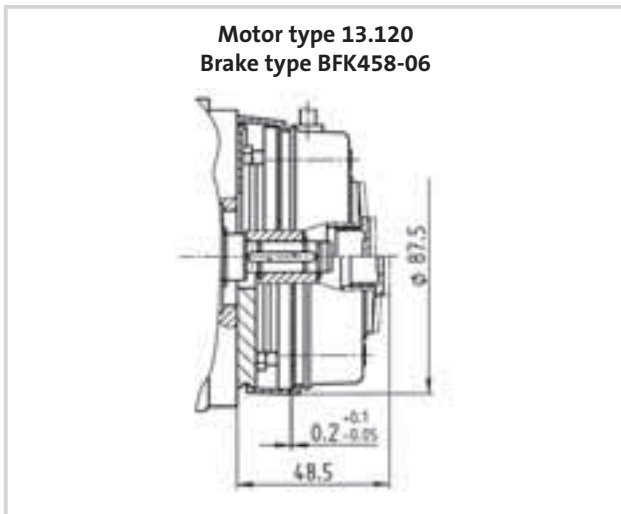
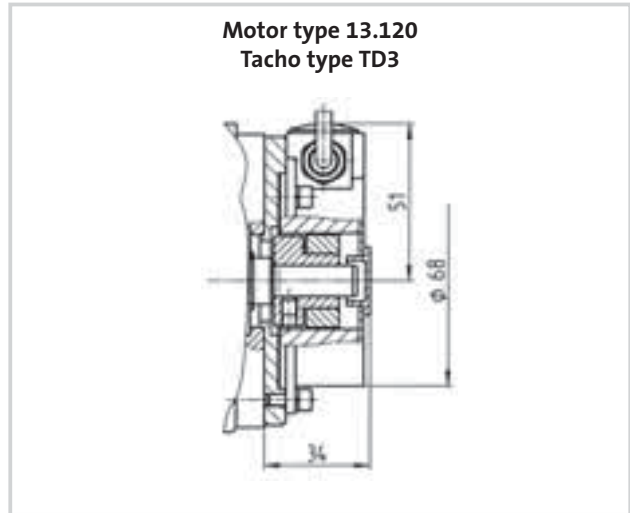
Keyway to DIN 6885/1
Circlip slot to DIN 471
Dimensions in mm
Subject to amendment



Spring-applied brake BFK457-04



Tachogenerator





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