

# further positioning systems

PSE 21\_/23\_-8

PSE 34\_-14

PSE 31\_-VG-14

PSE 100/200

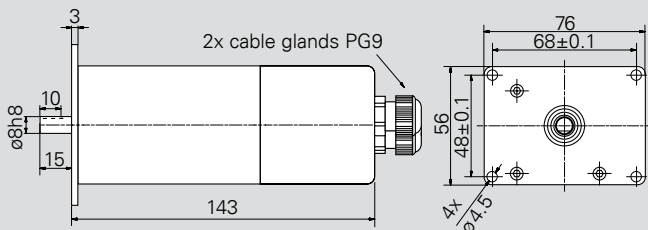
PSE 172/272

LPE 72

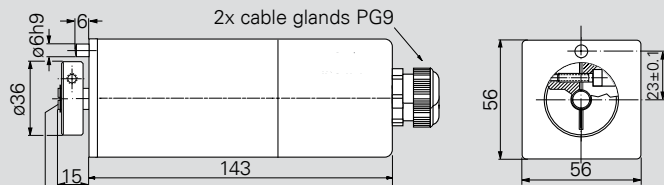
LPE 4310 C



### PSE 21\_/23\_-8 with solid shaft

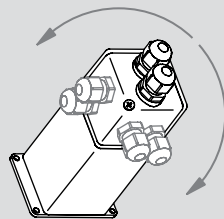


### PSE 21\_/23\_-8 with hollow shaft

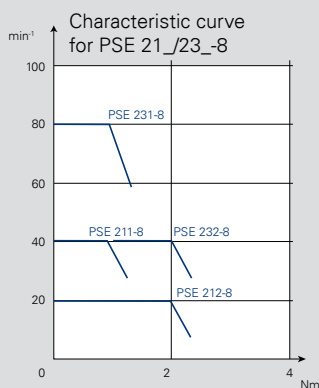


hollow shaft Ø8H9/20 depth

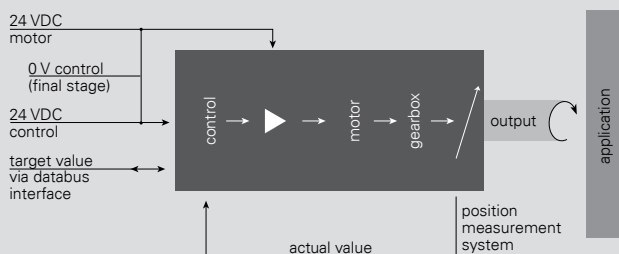
For details of the connections see also p. 10



The cable gland can be moved into different positions by turning the cover by 90°.



### Functional block diagram PSE 21\_/23\_-8



Start-up duration	50 % (basis time 300 s)
Supply voltage	24 VDC ± 10 %
Nominal current	0.7 A
Power consumption (motor control unit)	0.1 A
Positioning accuracy Measurement of position taken directly at the output shaft	0.9°
Positioning range	
quasi absolute measurement system:	unlimited
absolute measurement system:	64 rotations
Shock resistance in accordance with IEC/DIN EN 60068-2-27	50 g 11 ms
Vibration resistance in accordance with IEC/DIN EN 60068-2-6	10..55 Hz 1.5 mm / 55..1 000 Hz 10 g / 10..2 000 Hz 5 g
Output shaft	8 mm solid shaft or 8 mm hollow shaft with adjustable collar
Maximum axial force	20 N
Maximum radial force	40 N
Connections	Electrical connections via terminal bar (max. 1.5 mm <sup>2</sup> )
Ambient temperature	0..45 °C
Storage temperature	-10..70 °C
Protection class	IP54
Weight	500 g
Certificates	CE

Nominal torque	Nominal rated speed	Nominal power output	A
1 Nm	40 min <sup>-1</sup>	4 W	211-8
2 Nm	20 min <sup>-1</sup>	4 W	212-8
1 Nm	80 min <sup>-1</sup>	8 W	231-8
2 Nm	40 min <sup>-1</sup>	8 W	232-8

Data interfaces	B
CANopen	CA
DeviceNet	DN
Modbus RTU	MB

Address switches / baud rate switches	C
without address switches/baud rate switches	O
with address switches/baud rate switches adjustable baud rate, 500 kBaud, 250 kBaud, 125 kBaud	A

Output shaft	D
8 mm solid shaft	W
8 mm hollow shaft with adjustable collar	H

Measurement system	E
Quasi absolute measurement system	0
Absolute measurement system, 64 rotations	1

Order code	A	B	C	D	E
PSE	-	-	-	-	-

Start-up duration	20 % (basis time 300 s)
Mode of operation	S3
Supply voltage	24 VDC $\pm$ 10 % Galvanically separated between control and motor and bus
Nominal current	7.8 A
Power consumption (control unit)	0.1 A
Positioning accuracy	0.9°
Absolute measurement of position taken directly at the output shaft	
Positioning range	250 rotations not subject to mechanical limits
Shock resistance	50 g 11 ms
in accordance with IEC/DIN EN 60068-2-27	
Vibration resistance	10..55 Hz 1.5 mm / 55..1 000 Hz 10 g / 10..2 000 Hz 5 g
Output shaft	14 mm hollow shaft with clamp and feather key
Maximum axial force	20 N
Maximum radial force	40 N
Ambient temperature	0..45°C
Storage temperature	-10..70°C
Protection class	IP54
Weight	1 900 g
Certificates	CE

Nominal torque	Self-holding torque	Nominal rated speed	Nominal power output	A
10 Nm	5 Nm	80 min <sup>-1</sup>	100 W	3410-14
18 Nm	9 Nm	60 min <sup>-1</sup>	100 W	3418-14

Data interfaces	B
CANopen	CA
PROFIBUS DP	DP
Sercos	SE
EtherCAT	EC
PROFINET	PN
EtherNet/IP	EI
POWERLINK	PL

Jog keys	C
without jog keys	0
with jog keys <sup>1)</sup>	T

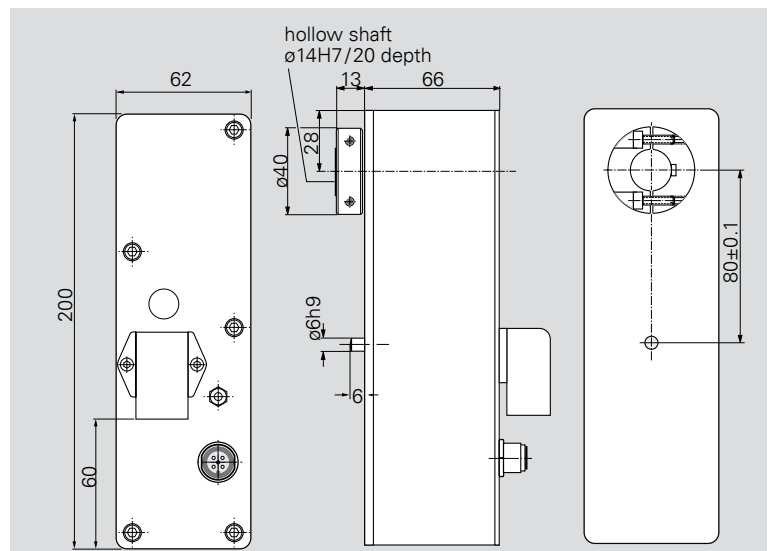
<sup>1)</sup> only for PROFIBUS DP

Brake	D
No brake	0
With brake (holding torque is the same as the nominal torque)	M

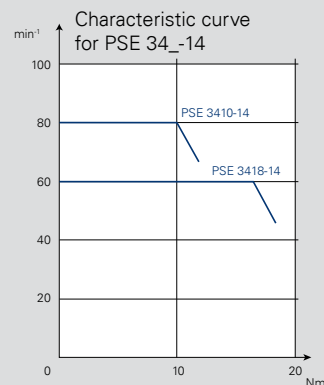
Order code	A	B	C	D
PSE	-	-	-	-

**Accessories:**

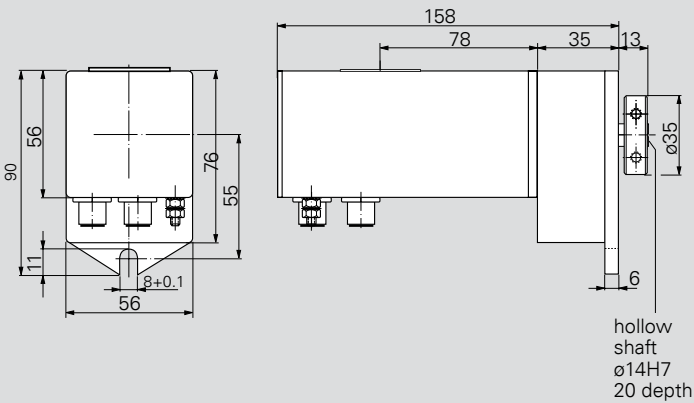
Set of connectors Order no. 9601.0093  
(Harting and round plugs for power supply and bus + second databus connector)



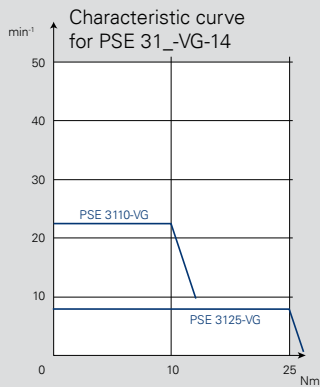
For details of the connections see also p. 10



Functional block diagram PSE 34\_-14 see p. 14



For details of the connections see also p. 10



Functional block diagram PSE 31\_-VG-14 see p. 14

Start-up duration	30 % (basis time 300 s)
Mode of operation	S3
Supply voltage	24 VDC ± 10 % Galvanically separated between control and motor and bus
Nominal current	2.2 A
Power consumption (control unit)	0.1 A
Positioning accuracy Absolute measurement of position taken directly at the output shaft	0.9°
Positioning range	250 rotations not subject to mechanical limits
Shock resistance in accordance with IEC/DIN EN 60068-2-27	50 g 11 ms
Vibration resistance in accordance with IEC/DIN EN 60068-2-6	10 .. 55 Hz 1.5 mm / 55 .. 1 000 Hz 10 g / 10 .. 2 000 Hz 5 g
Output shaft	14 mm hollow shaft with clamp and feather key
Maximum axial force	20 N
Maximum radial force	40 N
Ambient temperature	0 .. 45 °C
Storage temperature	-10 .. 70 °C
Protection class	IP 54
Weight	1 200 g
Certificates	CE

Nominal torque	Self-holding torque	Nominal rated speed	Nominal power output	A
10 Nm	5 Nm	22 min <sup>-1</sup>	25 W	PSE 3110-VG
25 Nm	12.5 Nm	9 min <sup>-1</sup>	25 W	PSE 3125-VG

Data interfaces	B
CANopen	CA
PROFIBUS DP	DP
DeviceNet	DN
Modbus RTU	MB
Sercos	SE
EtherCAT	EC
PROFINET	PN
EtherNet/IP	EI
POWERLINK	PL
IO-Link	IO

Jog keys	C
without jog keys <sup>1)</sup>	0
with jog keys <sup>2)</sup>	T

<sup>1)</sup> with IO-Link there is only one connection and no second databus connection (power supply and bus via one cable)

<sup>2)</sup> not for Modbus RTU, Sercos, EtherCAT, PROFINET, EtherNet/IP or IO-Link

Order code	A	B	C
PSE	-	-	-

For accessories, see p. 19

Nominal current	PSE 100: 0.2 A PSE 200: 1 A
No-load current	0.2 A
Positioning resolution	0.5 % of positioning range
Positioning accuracy	2 % of positioning range
Positioning range	PSE 100: max. 20 rotations PSE 200: max. 50 rotations
Voltage output "actual value"	0..10 V, 0..20 mA, 4..20 mA
Shock resistance in accordance with IEC/DIN EN 60068-2-27	50g 11 ms
Vibration resistance in accordance with IEC/DIN EN 60068-2-6	10..55 Hz 1.5 mm / 55..1 000 Hz 10 g / 10..2 000 Hz 5 g
Output shaft	12 mm solid shaft
Maximum axial force	20 N
Maximum radial force	30 N
Ambient temperature	0..50 °C
Storage temperature	-10..70 °C
Protection class	IP 55
Weight	900 g
Certificates	CE

Product	Nominal torque	Nominal rated speed	A
PSE 100	2.5 Nm	2 min <sup>-1</sup>	100/1
	5 Nm	1 min <sup>-1</sup>	100/2
	10 Nm	0.5 min <sup>-1</sup>	100/3
	10 Nm	0.25 min <sup>-1</sup>	100/4
PSE 200	1 Nm	30 min <sup>-1</sup>	200/1
	5 Nm	5 min <sup>-1</sup>	200/2
	10 Nm	2 min <sup>-1</sup>	200/3
	10 Nm	1 min <sup>-1</sup>	200/4
	10 Nm	0.5 min <sup>-1</sup>	200/5
	10 Nm	0.25 min <sup>-1</sup>	200/6

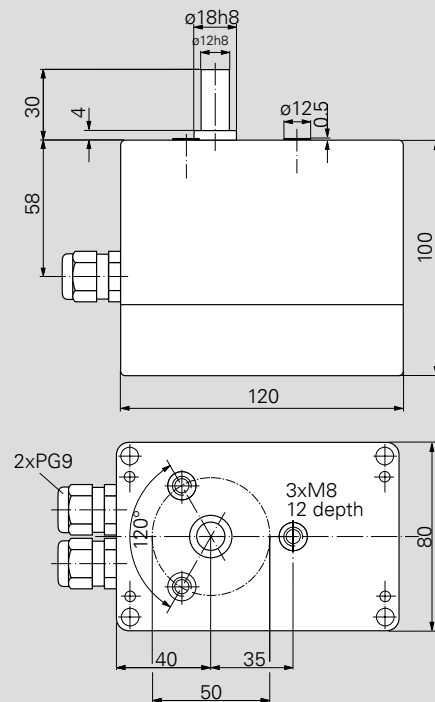
Default analog target value	B
0..10 VDC (R <sub>L</sub> > 2 kΩ)	A
0..20 mA (R <sub>L</sub> < 500 Ω)	B
4..20 mA (R <sub>L</sub> < 500 Ω)	C

Supply voltage	C
PSE 200	24 VDC (+20/-15 %)
PSE 100	24 VAC (+6/-15 % 50 Hz)
	115 VAC (+6/-15 % 50 Hz)
	230 VAC (+6/-15 % 50 Hz)

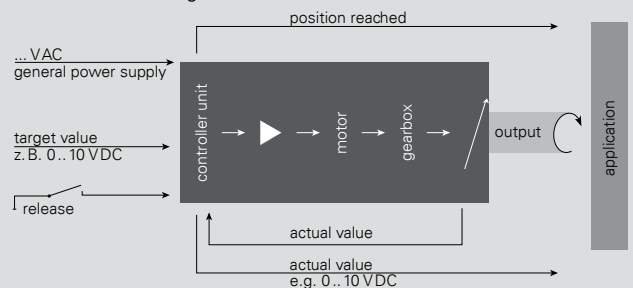
Positioning range <sup>1)</sup>	D
max. 50 rotations (PSE 200) max. 20 rotations (PSE 100)	

<sup>1)</sup> Value in rotations, max. 50 (20) possible. For < 1 rotation, conversion of the angle. Example: 270° = 0.75 rotations.

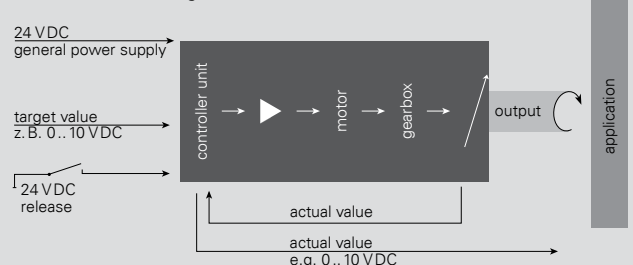
Order code	A	B	C	D
PSE				

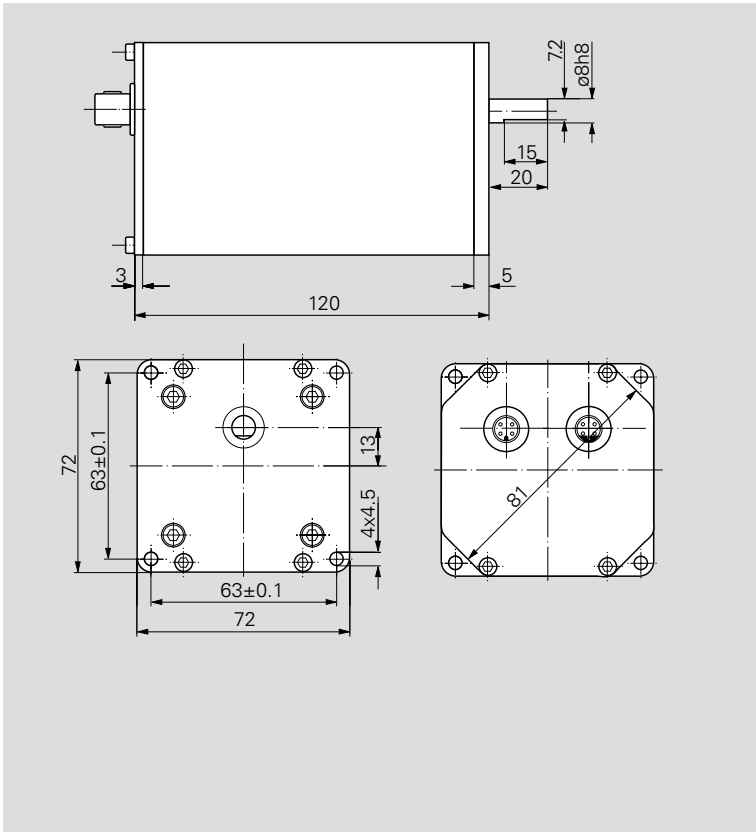


Functional block diagram PSE 100

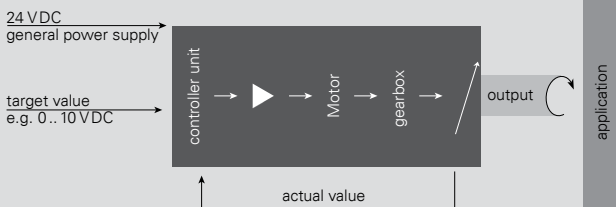


Functional block diagram PSE 200





Functional block diagram PSE 172/272



Start-up duration	100 %
Nominal current	PSE 172: 0.3 A PSE 272: 0.5 A
No-load current	PSE 172: 0.03A PSE 272: 0.2A
Positioning resolution	0.5 % of positioning range
Positioning accuracy	2 % of positioning range
Positioning range	max. 15 rotations
Shock resistance in accordance with IEC/DIN EN 60068-2-27	50g 11 ms
Vibration resistance in accordance with IEC/DIN EN 60068-2-6	10..55 Hz 1.5 mm / 55..1 000 Hz 10g / 10..2 000 Hz 5g
Output shaft	8 mm solid shaft
Maximum axial force	20 N
Maximum radial force	30 N
Ambient temperature	0..50 °C
Storage temperature	-10..70 °C
Protection class	IP65
Weight	800 g
Certificates	CE

Product	Nominal torque	Nominal rated speed	A
PSE 172	0.75 Nm	10 min <sup>-1</sup>	172/1
	1.5 Nm	5 min <sup>-1</sup>	172/2
	3.5 Nm	2 min <sup>-1</sup>	172/3
PSE 272	1 Nm	60 min <sup>-1</sup>	272/1
	2 Nm	30 min <sup>-1</sup>	272/2
	4 Nm	15 min <sup>-1</sup>	272/3
	5 Nm	7.5 min <sup>-1</sup>	272/4

Default analog target value	B
0..10 VDC ( $R_L > 2 \text{ k}\Omega$ )	A
0..20 mA ( $R_L < 500 \Omega$ )	B
4..20 mA ( $R_L < 500 \Omega$ )	C

Positioning range <sup>1)</sup>	C
max. 15 rotations	

<sup>1)</sup> Value in rotations, max. 15 possible. For < 1 rotation, conversion of the angle. Example: 270° = 0.75 rotations.

Supply voltage	D
PSE 272	24 VDC (+20/-15 %)
PSE 172	24 VAC (+6/-15 % 50 Hz)
	115 VAC (+6/-15 % 50 Hz)
	230 VAC (+6/-15 % 50 Hz)

Order code	A	B	C	D
PSE				

**Accessories:**  
 Mating connector Order no. 9601.0048  
 (A encoded socket and one B encoded socket, 4-pole)

Lifting force	100 N (50 % duty cycle)
Self-holding power	100 N
Supply voltage	24 VDC +30/-25 %
Nominal current	2.5 A
No-load current	0.5 A
Upstroke	120 mm (others on request)
Positioning resolution	0.2 % of the nominal upstroke
Positioning accuracy	0.6 % of the nominal upstroke
Shock resistance in accordance with IEC/DIN EN 60068-2-27	-
Vibration resistance in accordance with IEC/DIN EN 60068-2-6	30 Hz 4 g 90 min
Output shaft	10 mm solid shaft with M6
Maximum axial force	300 N
Maximum radial force	50 N
Ambient temperature	0 .. 50 °C
Storage temperature	-10 .. 70 °C
Protection class	IP 64
Weight	1 800 g
Certificates	CE

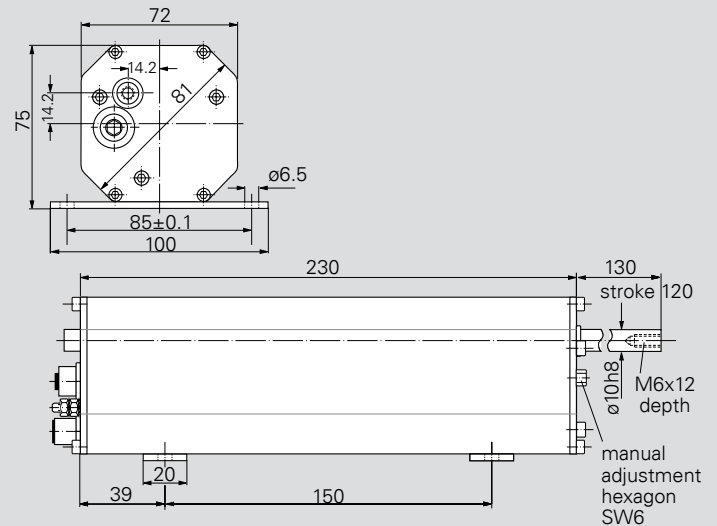
Upstroke speed	A
max. 4000 mm/min	72/1
max. 1000 mm/min	72/2
max. 500 mm/min	72/3
max. 250 mm/min	72/4

Default analog target value	B
2 .. 10 VDC ( $R_L > 2 \text{ k}\Omega$ )	A
4 .. 20 mA ( $R_L < 500 \Omega$ )	B

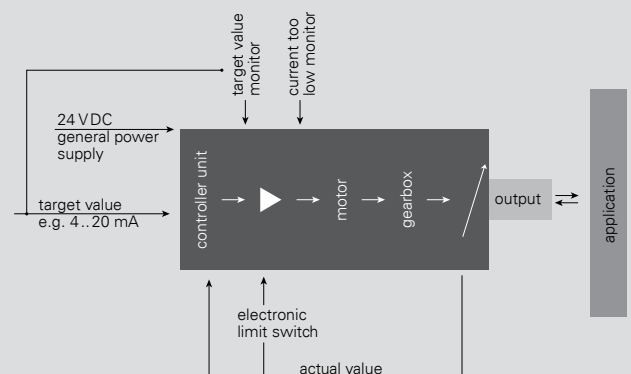
Order code	A	B
LPE	-	-

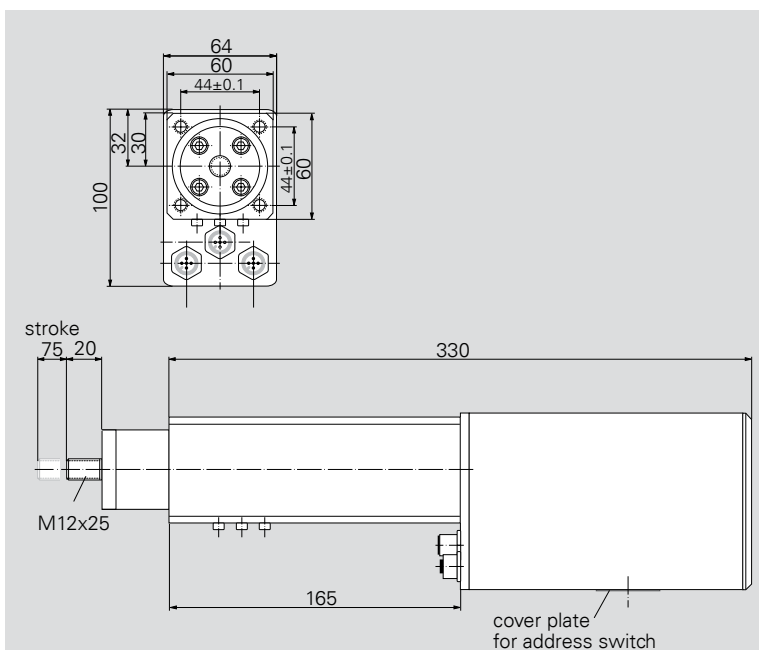
**Accessories:**

Mating connector Order no. 9601.0024  
(one A encoded male connector and one A encoded female connector, 5-pole)



Functional block diagram LPE 72





Lifting force	1 000 N
Self-holding power	1 000 N
Upstroke speed	20 mm/s
Nominal power output	20 W (30% duty cycle, basis time 600 s)
Supply voltage	24 VDC ± 25 %
Nominal current, motor	3 A
Nominal current, control unit electronics	0.1 A
Upstroke	75 mm (others on request)
Positioning accuracy	± 0.05 mm
Interface	CANopen
Shock resistance in accordance with IEC/DIN EN 60068-2-27	50 g 11 ms
Vibration resistance in accordance with IEC/DIN EN 60068-2-6	10 .. 55 Hz 1.5 mm / 55 .. 1 000 Hz 10 g / 10 .. 2 000 Hz 5 g
Piston	Adapter M 12 x 1.25
Maximum axial force	1 000 N
Maximum radial force	100 N
Ambient temperature	0 .. 45 °C
Storage temperature	-10 .. 70 °C
Protection class	IP 54
Weight	4 500 g
Certificates	CE

**Order code**  
**LPE4310C**

**Accessories:**  
Mating connector Order no. 9601.0064  
(two A encoded male connector and one A encoded female connector)

Functional block diagram LPE 3410 C

