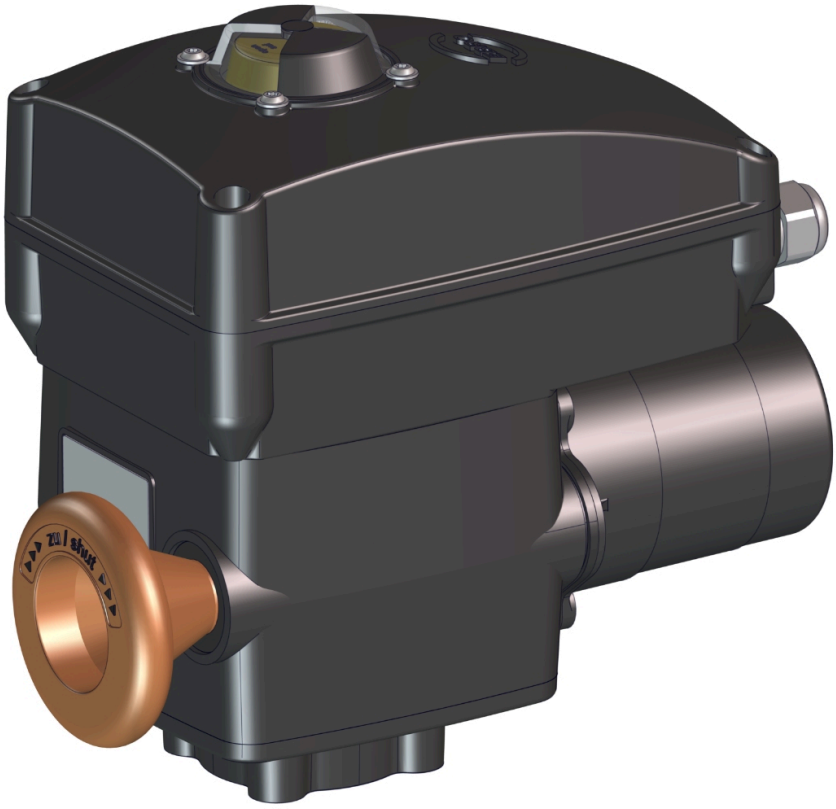
Technical data sheet

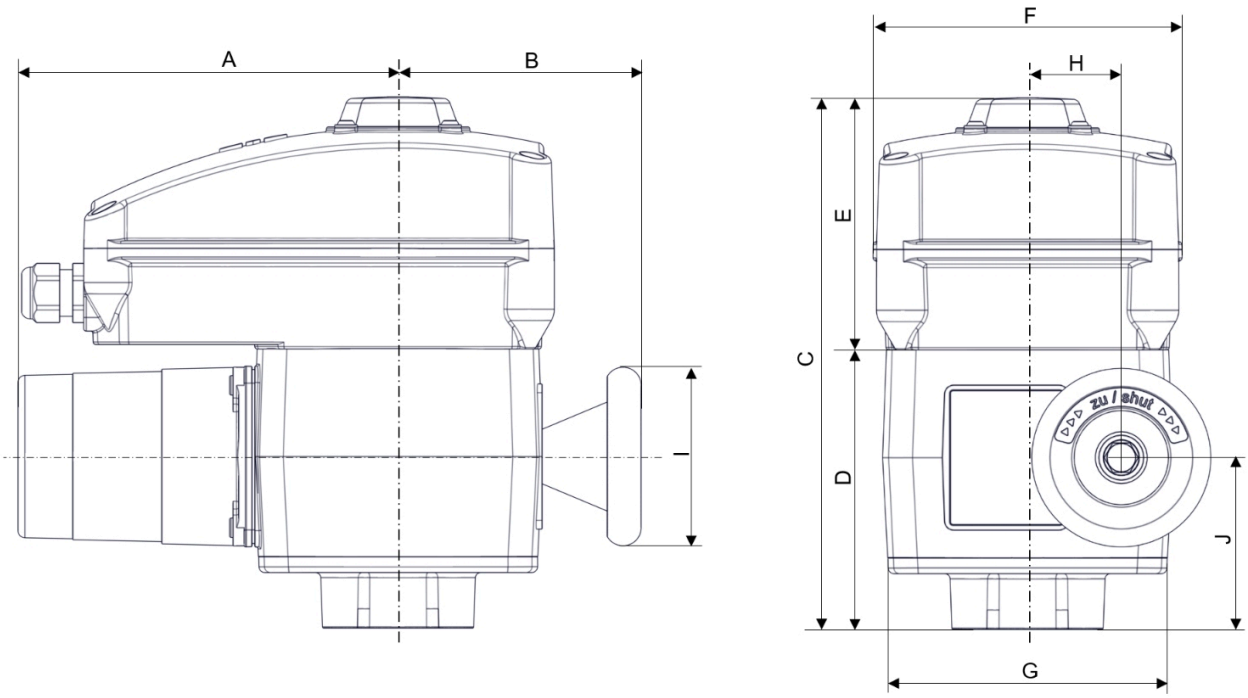
Electrical part-turn actuator E50-E210



EBRO ARMATUREN®

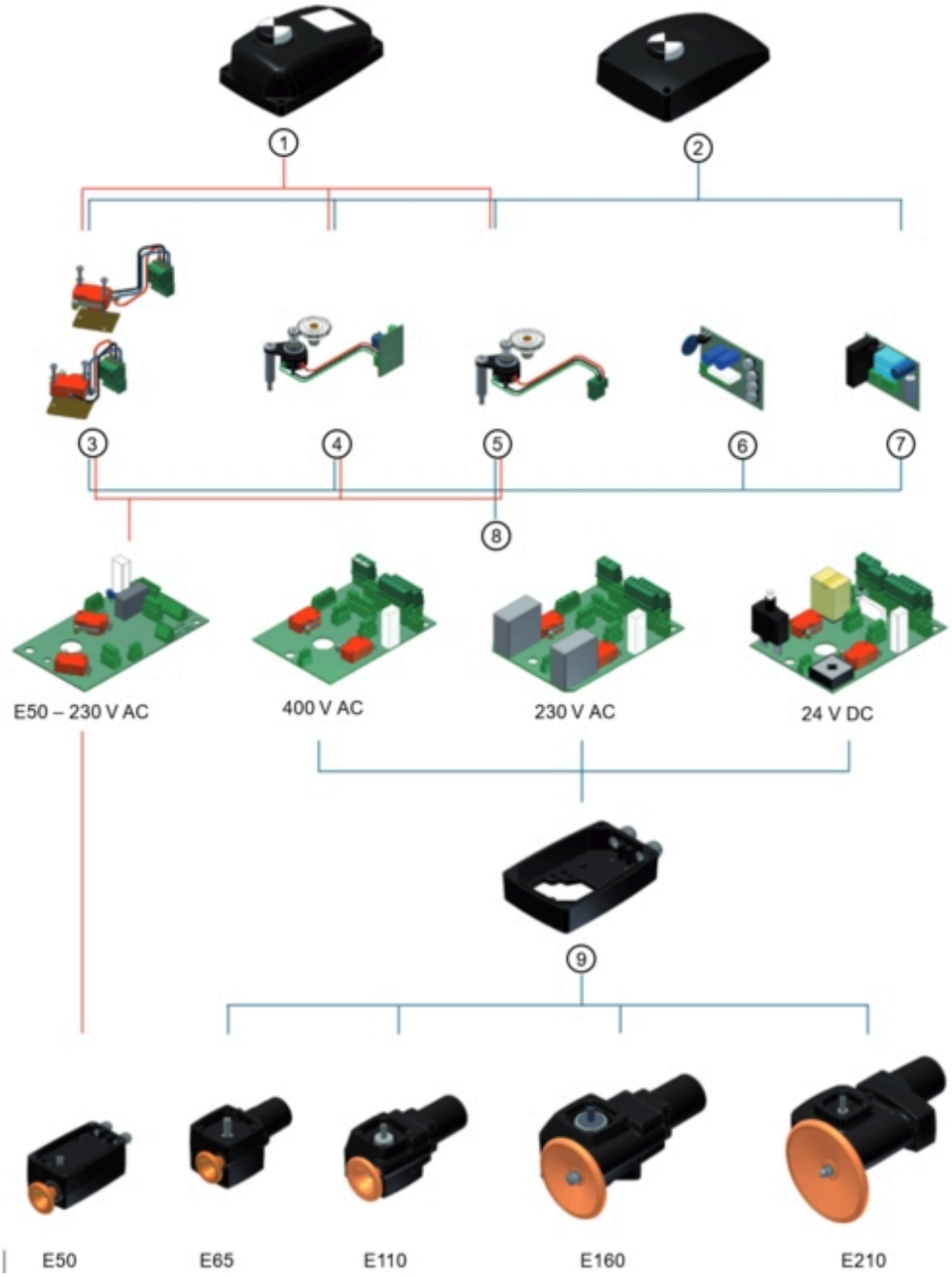
en
Version 1.0 from 01/06/2026

Dimension sheet



Type	Main dimensions [mm]										Weight [kg]
	A	B	C	D	E	F	G	H	I	J	
E50	149	110	210	123	87	124	126	42	80	73	5
E65	172	119	235	123	112	139	125	42	80	78	7
E110	247	136	257	145	112	139	150	58	125	88	14
E160	280	157	282	170	112	139	175	89	200	112	25
E210	352	212	274	162	112	139	240	125	315	84	40

Material specifications & bill of materials



Item	Naming	Item	Naming
1	Cover with position indicator (E50)	6	Torque cut-off
2	Cover with position indicator (E65 - E210)	7	Positioning time extension
3	Additional limit switches	8	Main PCBs
4	Current feedback 4-20 mA	9	Switch box with cable entries
5	Potentiometer 1000 Ω	10	

Technical features

Designation	Description
Actuator sizes	E50-E210
Duty cycle	Class C according to DIN EN ISO 22153:2021-07
Interface	DIN EN ISO 5211:2024-10
Actuating times	6 s - 180 s
Corrosion protection class	C4 to DIN EN ISO 22153:2021-07 tested in accordance with DIN EN IEC 60068-2-52:2018-08
Protection class	IP67 to DIN EN 60529:2014-09
Insulation class	F
Path limit switch	max. 250 V AC, 3 A for DS part-turn actuators max. 250 V AC, 3 A for WS part-turn actuators max. 24 V DC, 10 A for GS part-turn actuators
Operating temperature	-20 °C to +70 °C
Cable gland	2 x M20 x 1.5; Ø min = 6 mm, Ø max = 13 mm
Manual emergency override	15 turns for 90°
Actuating force manual emergency override	8 Nm for E50 4 Nm for E65 20 Nm for E110 35 Nm for E160 50 Nm for E210

E50WS

Nominal voltage	V	230	115*	24*
Actuating time from 0° - 90°	s	25	25	25
Nominal torque	Nm	40	40	40
Nominal current	A	0.15	0.31	1.45
Start-up current	A	0.18	0.36	1.8
Absorption capacity	kW	0.035	0.035	0.035
Frequency	Hz	50	50	50
Flange sizes	F04 and F05 after DIN EN ISO 5211:2024-10			
shaft intakes	For square 11 mm, 14 mm			
* Option				

E65WS

Nominal voltage	V	230	230	230
Actuating time from 0° - 90°	s	6	12*	24*
Nominal torque	Nm	100	80	60
Nominal current	A	0.7	0.55	0.3
Start-up current	A	1.0	0.8	0.4
Absorption capacity	kW	0.16	0.125	0.066
Frequency	Hz	50	50	50

Flange sizes	F04 or combined flange F05 and F07 after DIN EN ISO 5211:2024-10
shaft intakes	For square 10 mm, 11 mm, 12 mm, 14 mm, 16 mm, 17 mm, and 16 mm with fitting key
* Option	

E110WS

Nominal voltage	V	230	230	230
Actuating time from 0° - 90°	s	6*	12	24*
Nominal torque	Nm	400	400	320
Nominal current	A	1.8	1.3	0.65
Start-up current	A	2.6	2	1.5
Absorption capacity	kW	0.4	0.26	0.138
Frequency	Hz	50	50	50
Flange sizes	Combined flange F07 and F10 after DIN EN ISO 5211:2024-10			
shaft intakes	For square 12 mm, 14 mm, 16 mm, 17 mm, 22 mm, 24 mm, and 28 mm with fitting key			
* Option				

E160WS

Nominal voltage	V	230	230	230
Actuating time from 0° - 90°	s	12*	24	48*
Nominal torque	Nm	1200	1200	800
Nominal current	A	1.8	1.3	0.65
Start-up current	A	2.6	2	2.5
Absorption capacity	kW	0.4	0.26	0.138
Frequency	Hz	50	50	50
Flange sizes	F10, F12, F14, and F16 after DIN EN ISO 5211:2024-10			
shaft intakes	For square 22 mm, 24 mm, 27 mm, 32 mm, and 40/50 mm with fitting key			
* Option				

E65GS

Nominal voltage	V	24	-	-
Actuating time from 0° - 90°	s	6*	-	-
Nominal torque	Nm	100	-	-
Nominal current	A	5.5	-	-
Start-up current	A	8	-	-
Absorption capacity	kW	0.077	-	-
Frequency	Hz	-	-	-
Flange sizes	F04 or combined flange F05 and F07 after DIN EN ISO 5211:2024-10			
shaft intakes	For square 10 mm, 11 mm, 12 mm, 14 mm, 16 mm, 17 mm, and 16 mm with fitting key			
* Option				

E110GS

Nominal voltage	V	24	-	-
Actuating time from 0° - 90°	s	6*	-	-
Nominal torque	Nm	360	-	-
Nominal current	A	8.8	-	-
Start-up current	A	12.5	-	-
Absorption capacity	kW	0.4	-	-
Frequency	Hz	-	-	-
Flange sizes	Combined flange F07 and F10 after DIN EN ISO 5211:2024-10			
shaft intakes	For square 12 mm, 14 mm, 16 mm, 17 mm, 22 mm, 24 mm, and 28 mm with fitting key			
* Option				

E160GS

Nominal voltage	V	24	-	-
Actuating time from 0° - 90°	s	12*	-	-
Nominal torque	Nm	800	-	-
Nominal current	A	8.8	-	-
Start-up current	A	12.5	-	-
Absorption capacity	kW	0.4	-	-
Frequency	Hz	-	-	-
Flange sizes	F10, F12, F14, and F16 after DIN EN ISO 5211:2024-10			
shaft intakes	For square 22 mm, 24 mm, 27 mm, 32 mm, and 40/50 mm with fitting key			
* Option				

E65DS

Nominal voltage	V	400	400	-
Actuating time from 0° - 90°	s	6	12*	-
Nominal torque	Nm	100	80	-
Nominal current	A	0.3	0.25	-
Start-up current	A	0.5	0.3	-
Absorption capacity	kW	0.085	0.065	-
Frequency	Hz	50	50	-
Flange sizes	F04 or combined flange F05 and F07 after DIN EN ISO 5211:2024-10			
shaft intakes	For square 10 mm, 11 mm, 12 mm, 14 mm, 16 mm, 17 mm, and 16 mm with fitting key			
* Option				

E110DS

Nominal voltage	V	400	400	400
Actuating time from 0° - 90°	s	6*	12	24*
Nominal torque	Nm	400	400	320

Nominal current	A	1.4	1	0.95
Start-up current	A	2.1	1.8	1.6
Absorption capacity	kW	0.27	0.22	0.2
Frequency	Hz	50	50	50
Flange sizes	Combined flange F07 and F10 after DIN EN ISO 5211:2024-10			
shaft intakes	For square 12 mm, 14 mm, 16 mm, 17 mm, 22 mm, 24 mm, and 28 mm with fitting key			
* Option				

E160DS

Nominal voltage	V	400	400	400
Actuating time from 0° - 90°	s	12*	24	48*
Nominal torque	Nm	1000	1000	750
Nominal current	A	1.4	1	0.95
Start-up current	A	2.1	1.8	1.6
Absorption capacity	kW	0.27	0.22	0.2
Frequency	Hz	50	50	50
Flange sizes	F10, F12, F14, and F16 after DIN EN ISO 5211:2024-10			
shaft intakes	For square 22 mm, 24 mm, 27 mm, 32 mm, and 40/50 mm with fitting key			
* Option				

E210DS

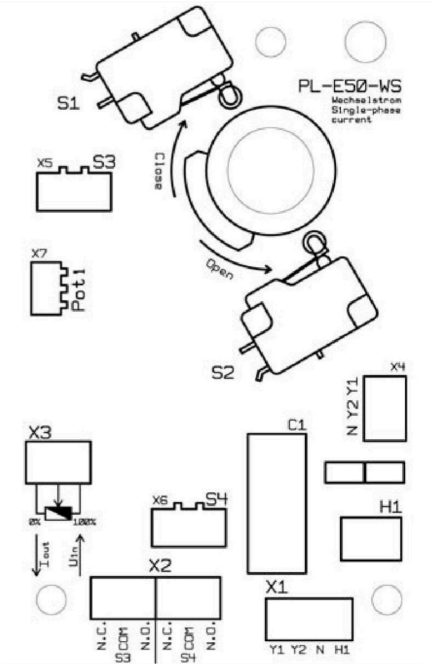
Nominal voltage	V	400	400	400
Actuating time from 0° - 90°	s	12*	24	48*
Nominal torque	Nm	4000	4000	3200
Nominal current	A	3.8	3.2	2.8
Start-up current	A	5.6	5.2	3.6
Absorption capacity	kW	1	0.84	0.6
Frequency	Hz	50	50	50
Flange sizes	F12, F14, and F16 after DIN EN ISO 5211:2024-10			
shaft intakes	For square 27 mm, 32 mm, and 30 mm, 40/50 mm with fitting key			
* Option				

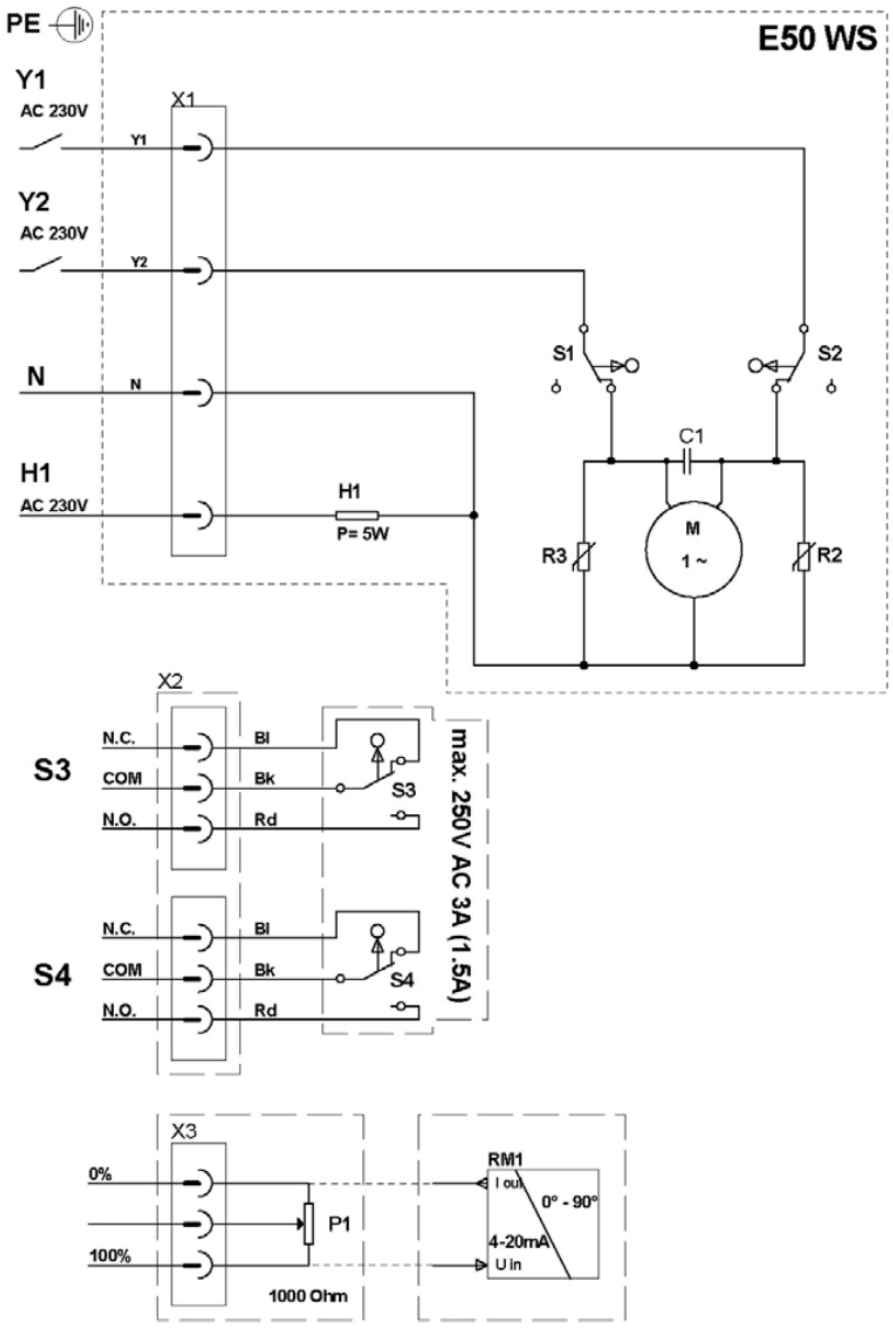
Standards

Designation	Description
Valve interface	DIN EN ISO 5211:2024-10
Electric actuator for industrial valves	DIN EN ISO 22153:2021-07

Wiring diagram

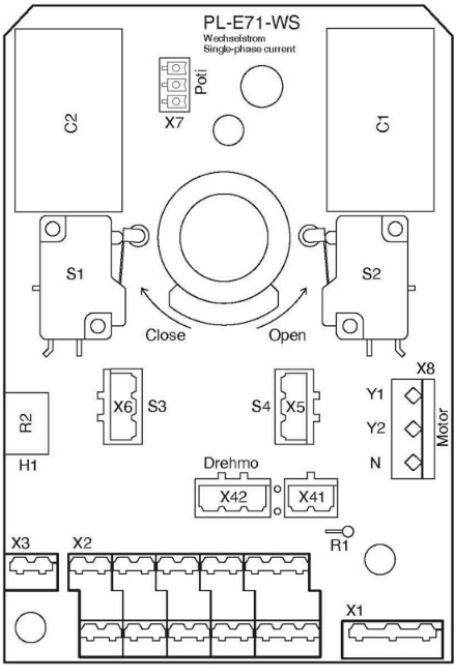
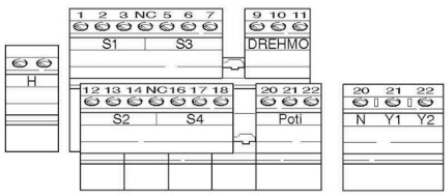
E50WS

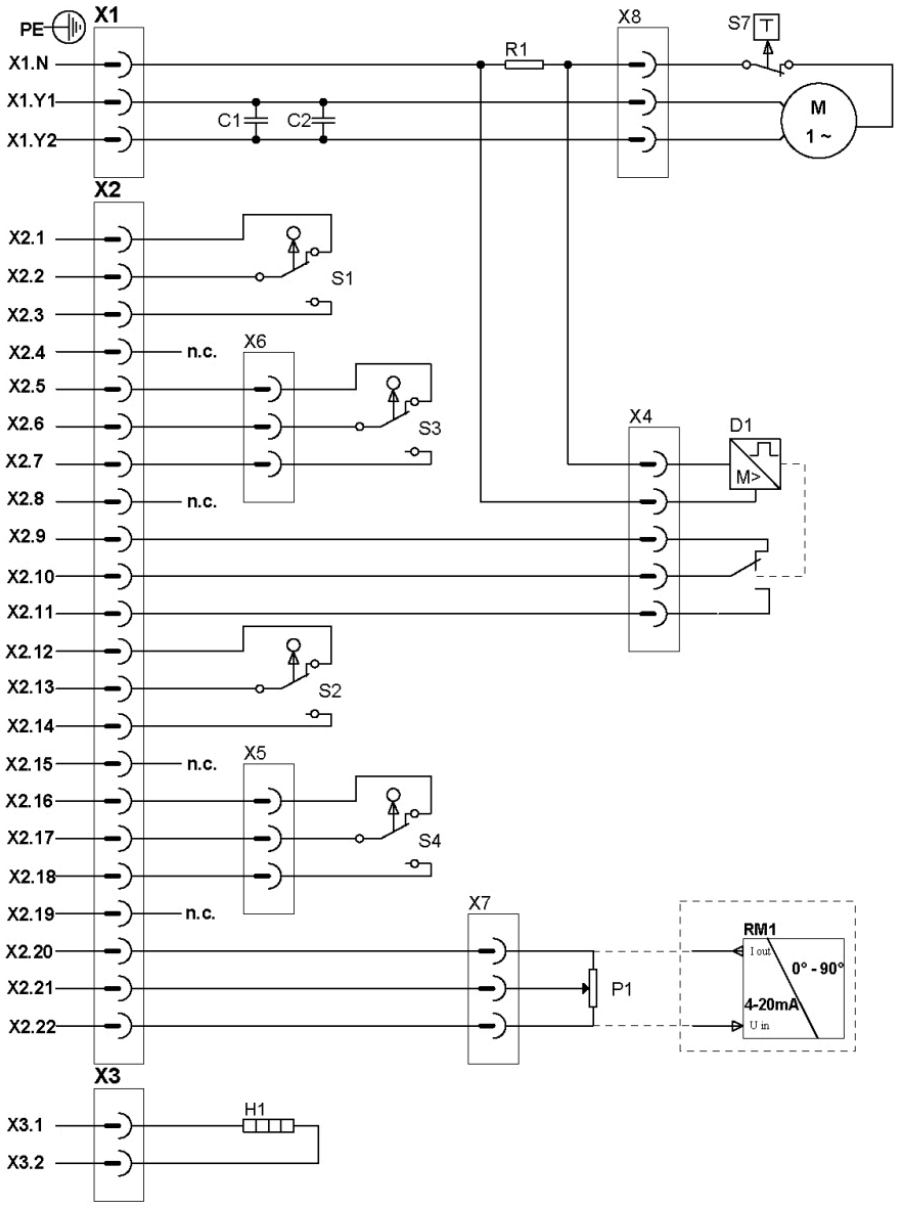
Figure	Terminal connection	Function
	X1.Y1	Motor connection, switched phase for direction OPEN
	X1.Y2	Motor connection, switched phase for direction CLOSED
	X1.N	Motor connection; neutral conductor
	X1.H1	Supply voltage for heating; permanent
	X2.S3.nc	Switch S3; additional limit switch CLOSED; normally closed contact; n.c.
	X2.S3.com	Switch S3; additional limit switch CLOSED; foot contact; com
	X2.S3.no	Switch S3; additional limit switch CLOSED; normally open contact; n.o.
	X2.S4.nc	Switch S4; additional limit switch CLOSED; normally closed contact; n.c.
	X2.S4.com	Switch S4; additional limit switch CLOSED; foot contact; com
	X2.S4.no	Switch S4; additional limit switch CLOSED; normally open contact; n.o.
	X3.1	Potentiometer - end contact or current feedback current output
	X3.2	Potentiometer - tap
	X3.3	Potentiometer - end contact or current feedback voltage input



S1	Limit switch CLOSED	C1	Operating capacitor
S2	Limit switch OPEN	R2, R3	VDR
S3	Add. limit switch CLOSED (option)	P1	Potentiometer (option)
S4	Add. Limit switch OPEN (option)	RM1	Feedback 4-20 mA (option)
H1	Heating 230 V AC / P=5 W	M	Motor

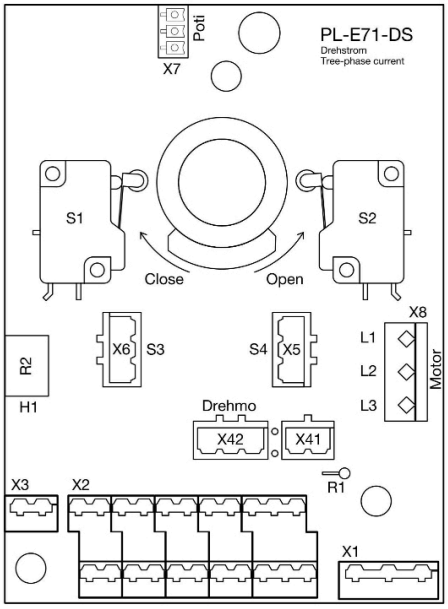
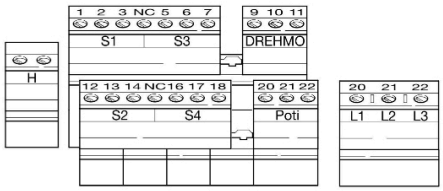
E65-E210WS

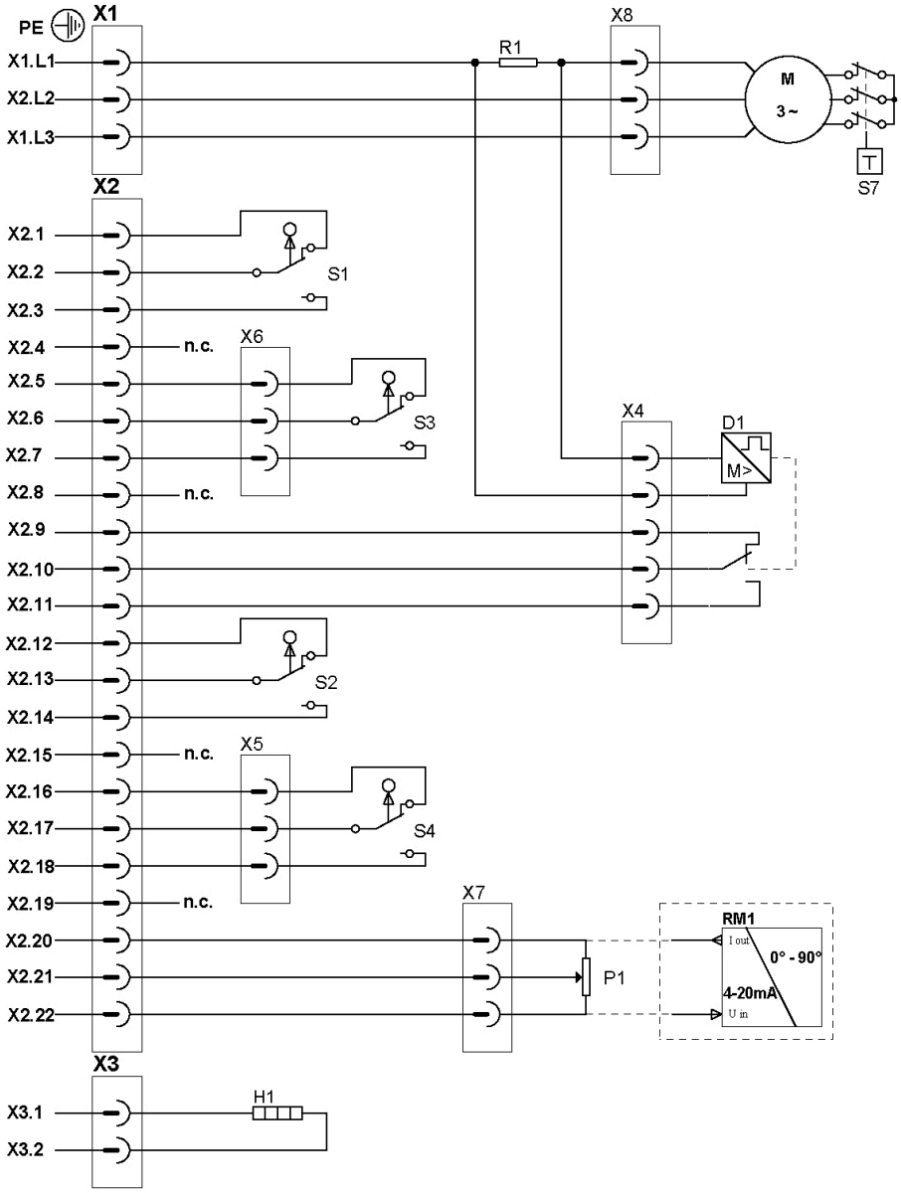
Figure	Terminal connection	Function
	X1.N	Neutral conductor
	X1.Y1	Motor connection, switched phase for the running direction OPEN
	X1.Y2	Motor connection, switched phase for the running direction CLOSED
	X2.1	Switch S1; limit switch CLOSED; normally closed contact; n.c.
	X2.2	Switch S1; limit switch CLOSED; foot contact; com
	X2.3	Switch S1; limit switch CLOSED; normally open contact; n.o.
	X2.4	not used
	X2.5	Switch S3; additional limit switch CLOSED; normally closed contact; n.c.
	X2.6	Switch S3; additional limit switch CLOSED; foot contact; com
	X2.7	Switch S3; additional limit switch CLOSED; normally open contact; n.o.
	X2.8	not used
	X2.9	Torque cut-off normally closed contact; n.c.
	X2.10	Torque cut-off foot contact; com
	X2.11	Torque cut-off normally open contact; n.o.
	X2.12	Switch S2; limit switch OPEN; normally closed contact; n.c.
	X2.13	Switch S2; limit switch OPEN; foot contact; com
	X2.14	Switch S2; limit switch OPEN; normally open contact; n.o.
	X2.15	not used
	X2.16	Switch S4; additional limit switch OPEN; normally closed contact; n.c.
	X2.17	Switch S4; additional limit switch OPEN; foot contact; com
	X2.18	Switch S4; additional limit switch OPEN; normally open contact; n.o.
	X2.19	not used
	X2.20	Potentiometer; end contact or current feedback current output
	X2.21	Potentiometer; tap
	X2.22	Potentiometer; end contact or current feedback voltage input
	X3.1	Control room heating; connection voltage 230V permanent
	X3.2	Control room heating; connection voltage 230V permanent



S1	Limit switch CLOSED	C1, C2	Operating capacitors
S2	Limit switch OPEN	R1	Shunt
S3	Add. limit switch CLOSED (option)	H1	Heating
S4	Add. Limit switch OPEN (option)	P1	Potentiometer (option)
S7	Integrated thermoswitch	RM1	Current feedback 4-20 mA (option)
D1	Torque cut-off (option for E65)		

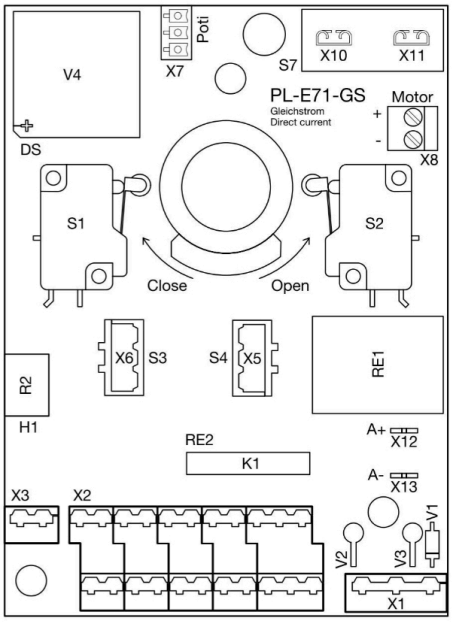
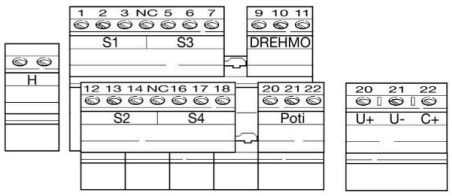
E65-E210DS

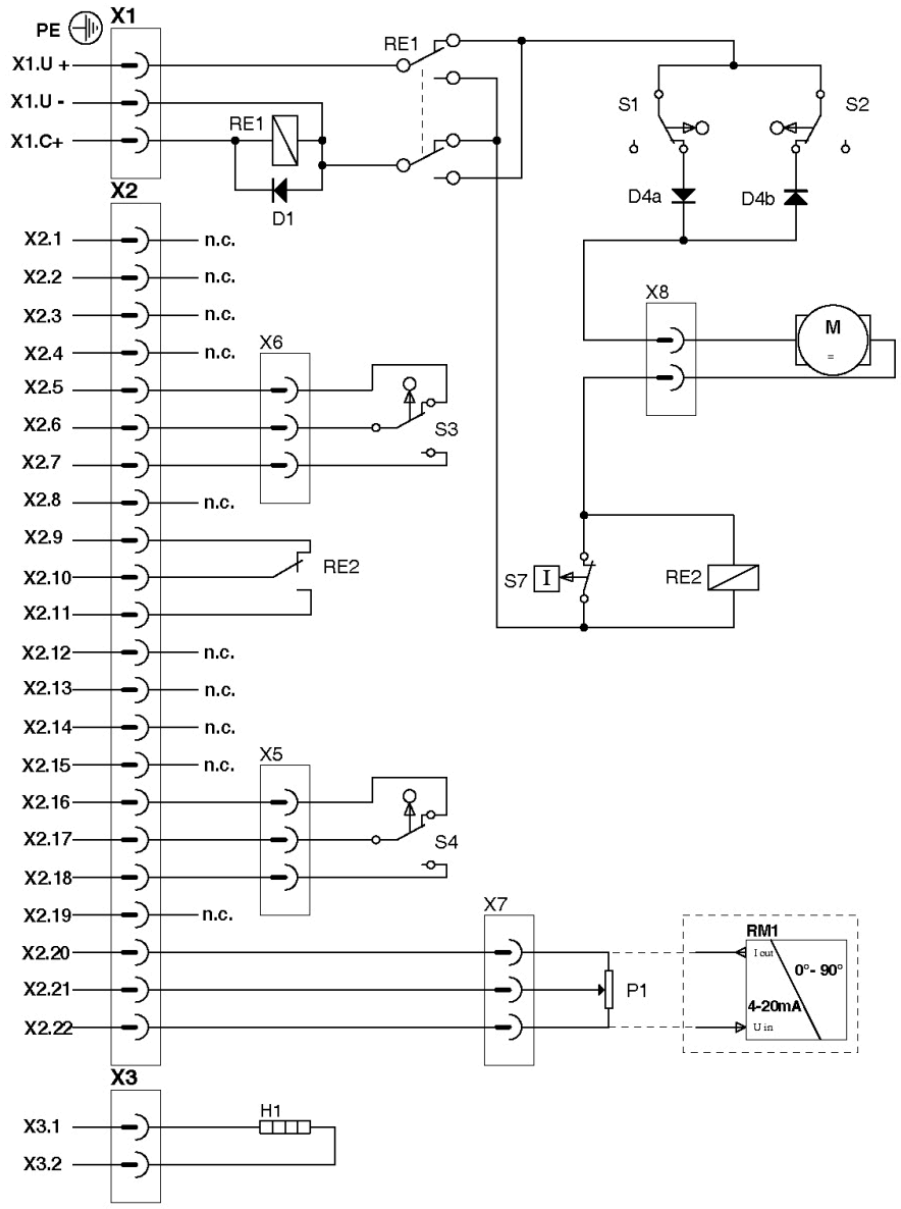
Figure	Terminal connection	Function
	X1.L1	Motor connection phase
	X1.L2	Motor connection phase
	X1.L3	Motor connection phase
	X2.1	Switch S1; limit switch CLOSED; normally closed contact; n.c.
	X2.2	Switch S1; limit switch CLOSED; foot contact; com
	X2.3	Switch S1; limit switch CLOSED; normally open contact; n.o.
	X2.4	not used
	X2.5	Switch S3; additional limit switch CLOSED; normally closed contact; n.c.
	X2.6	Switch S3; additional limit switch CLOSED; foot contact; com
	X2.7	Switch S3; additional limit switch CLOSED; normally open contact; n.o.
	X2.8	not used
	X2.9	Torque cut-off normally closed contact; n.c.
	X2.10	Torque cut-off foot contact; com
	X2.11	Torque cut-off normally open contact; n.o.
	X2.12	Switch S2; limit switch OPEN; normally closed contact; n.c.
	X2.13	Switch S2; limit switch OPEN; foot contact; com
	X2.14	Switch S2; limit switch OPEN; normally open contact; n.o.
	X2.15	not used
	X2.16	Switch S4; additional limit switch OPEN; normally closed contact; n.c.
	X2.17	Switch S4; additional limit switch OPEN; foot contact; com
	X2.18	Switch S4; additional limit switch OPEN; normally open contact; n.o.
	X2.19	not used
	X2.20	Potentiometer; end contact or current feedback current output
	X2.21	Potentiometer; tap
	X2.22	Potentiometer; end contact or current feedback voltage input
	X3.1	Control room heating; connection voltage 230V permanent
	X3.2	Control room heating; connection voltage 230V permanent



S1	Limit switch CLOSED	D1	Torque cut-off (option for E65)
S2	Limit switch OPEN	R1	Shunt
S3	Add. limit switch CLOSED (option)	H1	Heating
S4	Add. Limit switch OPEN (option)	P1	Potentiometer (option)
S7	Integrated thermoswitch	RM1	Current feedback 4-20 mA (option)

E65-E210GS

Figure	Terminal connection	Function
	X1.U+	Supply voltage 24V DC plus, permanent
	X1.U-	Supply voltage 24V DC minus, permanent
	X1.C+	Control input for reversing relay +24V DC
	X2.1	not used
	X2.2	not used
	X2.3	not used
	X2.4	not used
	X2.5	Switch S3; additional limit switch CLOSED; normally closed contact; n.c.
	X2.6	Switch S3; additional limit switch CLOSED; foot contact; com
	X2.7	Switch S3; additional limit switch CLOSED; normally open contact; n.o.
	X2.8	not used
	X2.9	Signal relay overcurrent solution normally closed contact; n.c.
	X2.10	Signal relay overcurrent solution foot contact; com
	X2.11	Signal relay overcurrent solution normally open contact; n.o.
	X2.12	not used
	X2.13	not used
	X2.14	not used
	X2.15	not used
	X2.16	Switch S4; additional limit switch OPEN; normally closed contact; n.c.
	X2.17	Switch S4; additional limit switch OPEN; foot contact; com
	X2.18	Switch S4; additional limit switch OPEN; normally open contact; n.o.
	X2.19	not used
	X2.20	Potentiometer; end contact or current feedback current output
	X2.21	Potentiometer; tap
	X2.22	Potentiometer; end contact or current feedback voltage input
	X3.1	Control room heating; connection voltage 24V permanent
	X3.2	Control room heating; connection voltage 24V permanent



S1	Limit switch CLOSED	D4a,b	Diode
S2	Limit switch OPEN	RE1	Reversing relay
S3	Add. Limit switch CLOSED	RE2	Signal relay
S4	Add. Limit switch OPEN	H1	Heating
S7	Thermal overcurrent protection	P1	Potentiometer (option)
D1	Diode	RM1	Current feedback 4-20 mA (option)