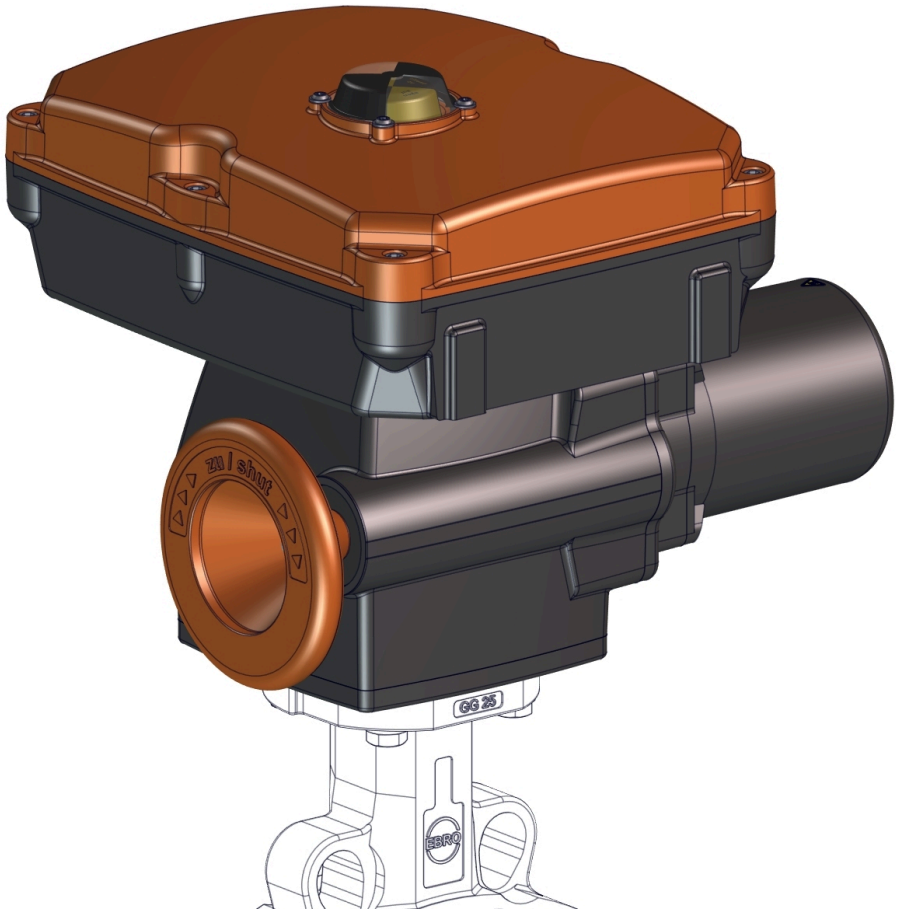
Technical data sheet

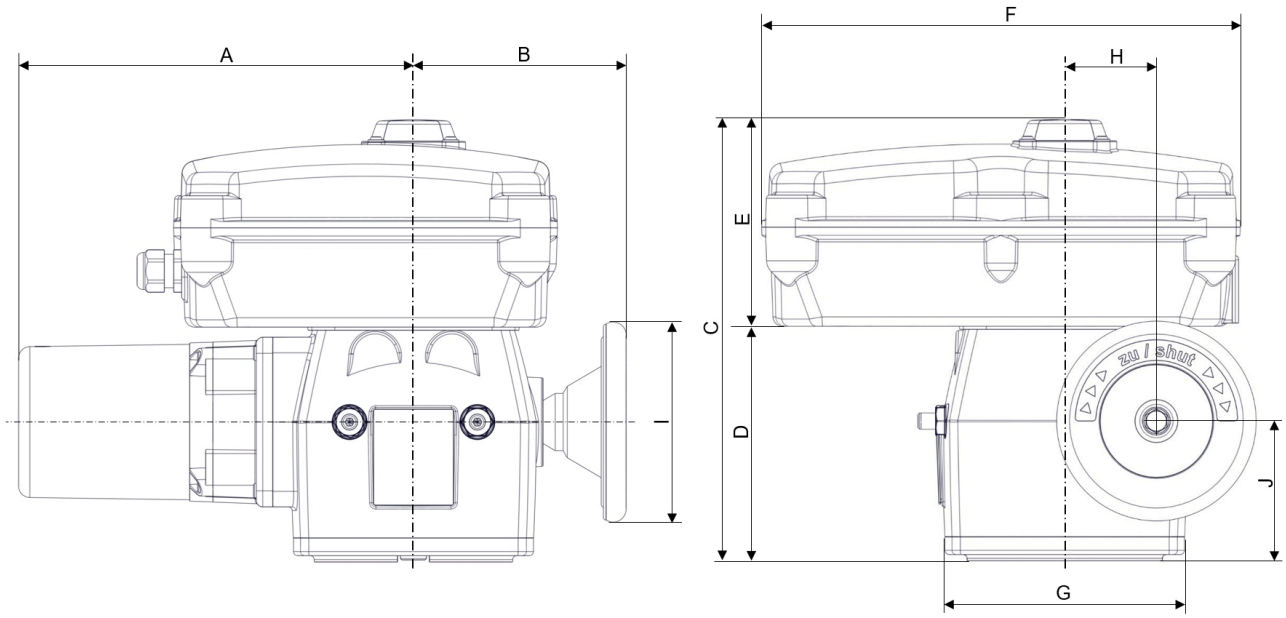
Electrical control drive MS3



EBRO ARMATUREN®

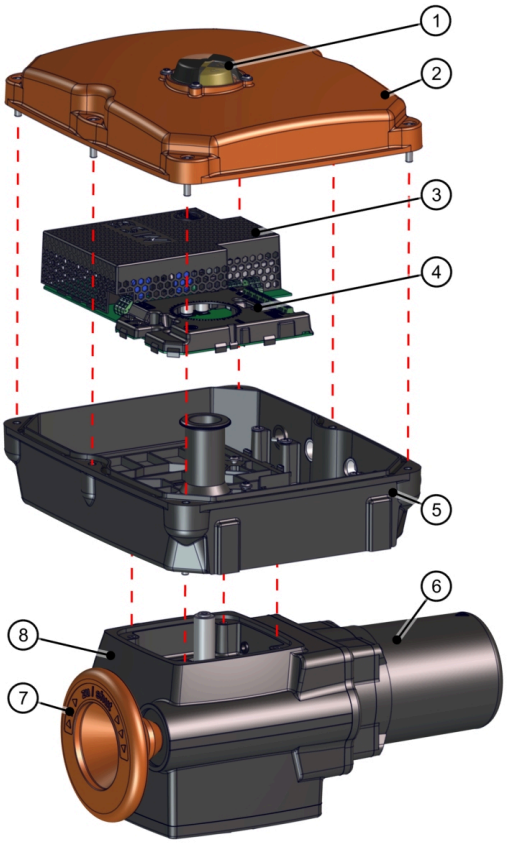
en
Version 1.3 from 20/08/2026

Dimension sheet



Type	Main dimensions [mm]										Weight [kg]
	A	B	C	D	E	F	G	H	I	J	
E65	172	119	253	123	130	300	125	42	80	78	10.3
E110	247	136	275	145	130	300	150	58	125	88	19.0
E160	280	157	300	170	130	300	175	89	200	112	29.0

Material specifications & bill of materials



Item	Naming
1	Position indicator
2	Switch box cover
3	Control PCB
4	Power PCB
5	Switch box base
6	Motor
7	Manual emergency override
8	Part-turn actuator with gearbox

Technical features

Designation	Description
Valve body	Powder-coated aluminum
Operating elements / HMI	Pushbutton / IO-Link / Bluetooth / RGB light element
Temperature range	-20 °C to +60 °C (-4 °F to +140 °F)
Connection type	Screw terminal connection 26-16 AWG / 0.129-1.31mm² (16 AWG), optional M12 panel connector
Recording range	100°
Dead zone	1-10% (factory setting 3%)
Safety position	Holding, closing or opening
Power supply	230 V AC (- 5% / +10%) 50 Hz / 60 Hz (110 V AC optional)
Sensor type position detection	Angle sensor, non-contact
Additional sensors	Acceleration sensor, temperature sensor
Analog input/setpoint specification	4-20 mA / 0-10 V
Additional analog inputs	4-20 mA / 0-10 V
Analog output	4-20 mA / 0-10 V
Digital input signals	3 (on/off, intermediate position, external process sensor)
Digital output signals	3 (feedback: on, off, fault/intermediate position)
Reverse polarity protection	Yes (power supply)
Actuator sizes	E65-E160
Actuating times	12 s / 24 s
Insulation class	F
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	4 Nm for E65 20 Nm for E110 35 Nm for E160

E65WS

Nominal voltage	V	115	115	230	230
Actuating time from 0° - 90°	s	10	20*	12	24*
Nominal torque	Nm	80	60	80	60
Nominal current	A	1.1	0.55	0.55	0.3
Start-up current	A	1.5	0.85	0.8	0.4
Absorption capacity	kW	0.125	0.066	0.125	0.066
Frequency	Hz	60	60	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	115	115	230	230
Actuating time from 0° - 90°	s	10	20*	12	24*
Nominal torque	Nm	400	320	400	320
Nominal current	A	2	1.3	1.3	0.65
Start-up current	A	3	2.5	2	1.5
Absorption capacity	kW	0.26	0.138	0.26	0.138
Frequency	Hz	60	60	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	115	115	230	230
Actuating time from 0° - 90°	s	20	40*	24	48*
Nominal torque	Nm	1200	800	1200	800
Nominal current	A	2	1.3	1.3	0.65
Start-up current	A	3	2.5	2	1.5
Absorption capacity	kW	0.26	0.138	0.26	0.138
Frequency	Hz	60	60	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					

Standards

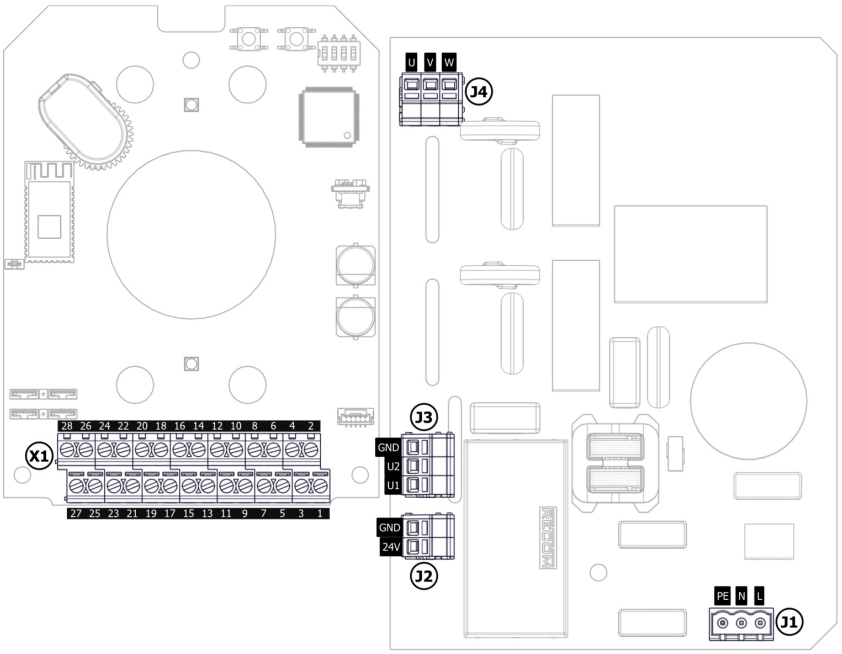
Designation	Description
Valve interface	DIN EN ISO 5211:2024-10
Electric actuator for industrial valves	DIN EN ISO 22153:2021-07

Designation	Description
Duty cycle	Class C according toDIN EN ISO 22153:2021-07
Interface	DIN EN ISO 5211:2024-10
Corrosion protection class	C4 toDIN EN ISO 22153:2021-07 tested in accordance withDIN EN IEC 60068-2-52:2018-08
Protection class	IP67DIN EN 60529:2014-09

Certificates and approvals

Designation	Description
IO-Link communication type	COM3 (230.4 kBaud / 230.4 kbps)
IO-Link revision	1.1.4
IO-Link process cycle time	min. 10 ms
IO-Link class	Class A
Conformity	CE, IO-Link
Notice: Further certificates and approvals available upon request.	

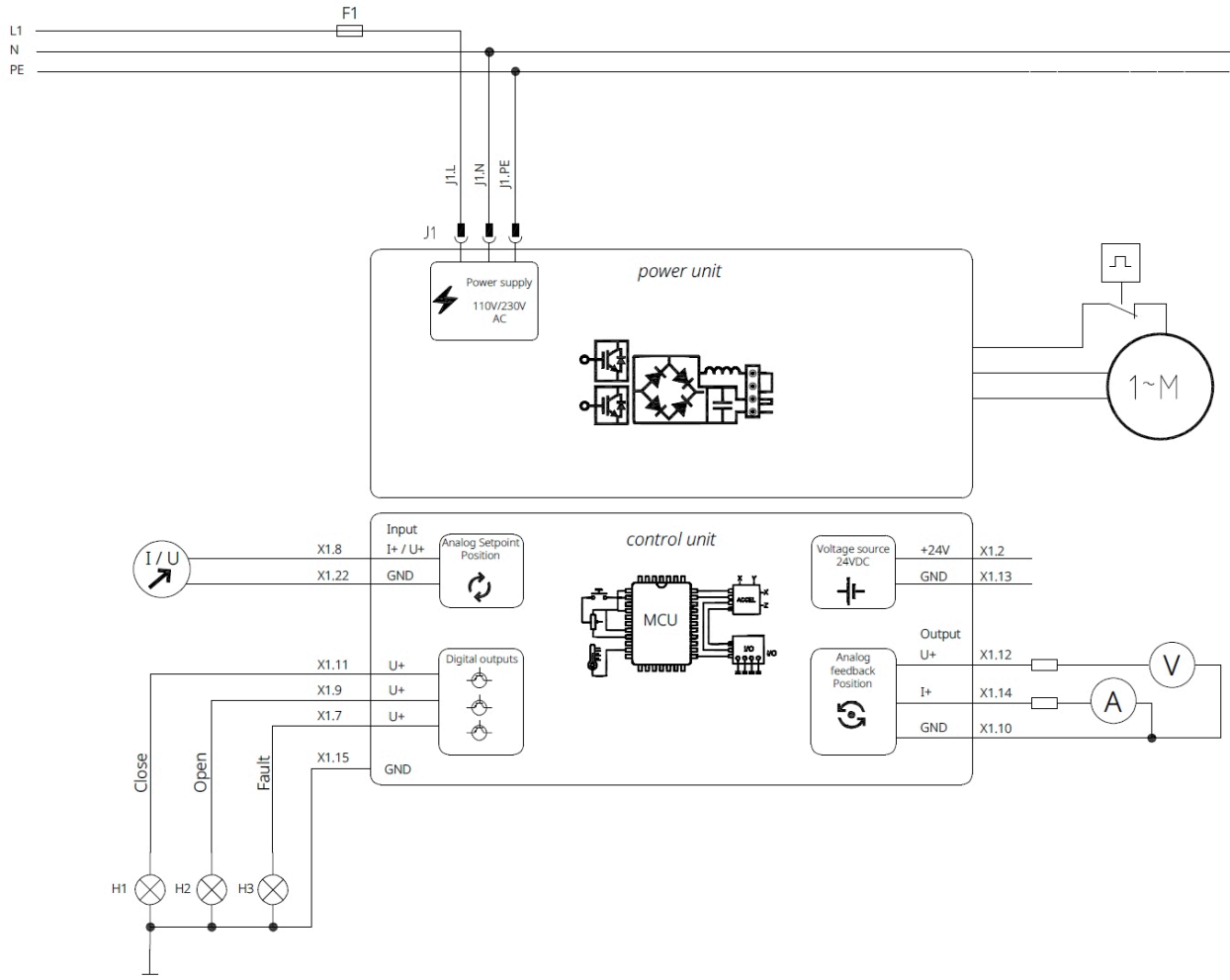
Wiring diagram



Function	Terminal	Assignment
Power supply - control PCB -	X1.1	Protective earth (PE)
	X1.3	Power supply GND (0 V)
	X1.5	Power supply +24 V DC
Voltage source - control PCB -	X1.2	Voltage source +24 V DC, max 50 mA
	X1.4	Voltage source +24 V DC, max 50 mA
	X1.13	Voltage source GND
Analog input - control PCB -	X1.6	Analog input 2 (+)
	X1.8	Analog input 1 (+), setpoint 0-100%
	X1.17	Analog input 2 (GND)
	X1.22	Analog input 1 (GND)
Analog output - control PCB -	X1.12	Analog output 0-10 V
	X1.14	Analog output 4-20mA
	X1.10	Analog output (GND)
Digital input - control PCB -	X1.16	Analog input 3
	X1.18	Analog input 2
	X1.20	Analog input 1
Digital output - control PCB -	X1.7	Digital output 1 - collective fault
	X1.9	Digital output 2 - position OPEN
	X1.11	Digital output 1 - position CLOSED / IO-Link (C/Q)

Function	Terminal	Assignment
Reserved - control PCB -	X1.15	GND
	X1.27	Reserved N.C.
	X1.28	Reserved N.C.
Signal - control PCB -	X1.23	Signal 1 to the power PCB
	X1.24	Signal 2 to the power PCB
	X1.25	Signal GND
Power supply - control PCB -	J1.L	Phase (L), power supply 230 V AC 50Hz (optional: 110 V AC)
	J1.N	Neutral conductor
	J1.PE	Protective earth (PE)
Voltage source - control PCB -	J2.GND	Voltage GND(0 V)
	J2.+24V	Voltage +24 V DC
Signal - control PCB -	J3.GND	Signal GND
	J3.U1	Signal 1 from control PCB
	J3.U2	Signal 2 from control PCB
Motor - control PCB -	J4.U	Actuator connection
	J4.V	Actuator connection
	J4.W	Actuator connection

Switching suggestion



A	Feedback signal 4-20 mA	I/U	Input signal 4-20 mA / 0-10 V for target value
F1	Fuse	J1	Power supply for electrical control drive
H1	Signal lamp position CLOSED	V	Feedback signal 0-10 V
H2	Signal lamp position OPEN	X1.x	Interface control PCB
H3	Signal lamp error		