worksheet **WS 373-E45**

Electric linear actuators baelz 373-E45

Electric linear actuators for modulating and open-close duty of control and process technology to operate control valves. The self-locking stem/stem nut is driven by an electric motor via a gearing. Load and limit switches define the stops for the end positions.

- Valve protection against excessive force due to load-dependent seating.
- Comfortable manual operation when disengaging the actuator motor.
- Mounting to valve made via yoke or mounting flange DIN 3358. The design enables easy connection to all types of valves.
- Generating a defined closing force in the end position leads to constantly tight shut-off of the valve.
- The actuators are in enclosure protection IP 65 and are designed for rugged industrial use.
- Stallproof synchronous motors (or brake motors for higher positioning forces) ensure highest positioning accuracy.
- Exact, backlash-free measurement of actual valve stroke by direct coupling to the valve stem.
- Universally usable actuators due to control via 3-point-step controllers, analogue input signals 0…10 V, 0 (4)…20 mA, or fieldbus systems.
- Easy supplement to actuator with optional devices due to modular design.
- Limit switches, easily adjustable, for stroke limitation or as signal for intermediate positions.
- Integrated, adjustable stroke setting to nominal stroke over the complete stroke range
- Mechanical stroke indication via anti-rotation bar.

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Technical data

Type		**baelz 373-E45**	
Positioning force	kN	4,0	
Positioning speed [1]	mm/min	15	40
Power consumption (230 V)	VA	11	64
Nominal current (230 V)	A	0,045	0,280
Type of motor [3]		syn	syn
Motor protection [4]		B	B
Max. stroke	mm	40	
Supply voltages [2] [5]		24 V / 115 V / 230 V 50/60 Hz, 24 V DC	
Type of duty acc. to IEC 34-1		S1 – 100% S3 – 30% cfd 1200 c/h	
Cable gland		3 x M20x1,5	
Electrical connection		Inside terminal board, terminal configuration according to electrical connection diagram	
Switch off in end position		2 load-dependent switches, max. 250 V AC, rating for resistive load, max. 5 A, for inductive load, max. 3 A	
Mounting position		as desired, however downward position not possible	
Ambient temperature		–20 ℃ to +60 ℃	
Lubricant for gearing		Klüber Microlube GL 261 grease	
Position indicator		by anti-rotation bar	
Manual adjustment		by means of lateral hand wheel	
Enclosure protection according to EN 60529		IP 65	
Trapezoidal thread		Tr 14 x 3	
Connection type		EN ISO 5210 F05 (also refer to options)	
Weight	kg	8.0	

1) at 60 Hz, the positioning speeds and input power increase by 20%
2) other supply voltages on request
3) syn synchronous motor
4) B stallproof motor
5) see price list for possible combinations

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Accessories and options

Options for actuators	
EZ	Additional limit switches for signalling end positions or intermediate positions, freely adjustable, max. 250 V AC, rating for resistive load max. 5 A, for inductive load max. 3 A, max. 2 switches for signalling end positions, and max. 2 switches for intermediate positions
EZG	Additional limit switches for signalling end positions or intermediate positions, freely adjustable, with **gold-plated contacts** for low voltage, max. 30 V AC, rating for resistive load max. 0.1 A, max. 2 switches for signalling end positions, and max. 2 switches for intermediate positions
FG	Potentiometer 100/130/200/500/1000/5000 Ohms or 10 kOhms Linearity error ≤ 0.5 %, max. 1.5 W, contact current 30 mA max. 2 pieces
ESR	Electronic position feedback 2-/3-/4-wire system Inductive travel measuring, output 0 (4)…20 mA Connection 24 V DC
PDB100	Profibus module DP for actuator control in separate housing IP 66 mounted at actuator with plug M12 5-poles, 2 x M20 cable entries (potentiometer and 2 EZ required)
PEL	Positioning electronics for actuator control Input 0…10 V, 0 (4)…20 mA, output 0…10 V, 0 (4)…20 mA Supply voltage 24, 115, 230 V 50/60 Hz
HZG	Heating resistor with thermoswitch against moisture with automatic temperature regulation, max. 15 Watts Supply voltage 24, 115, 230 V 50/60 Hz

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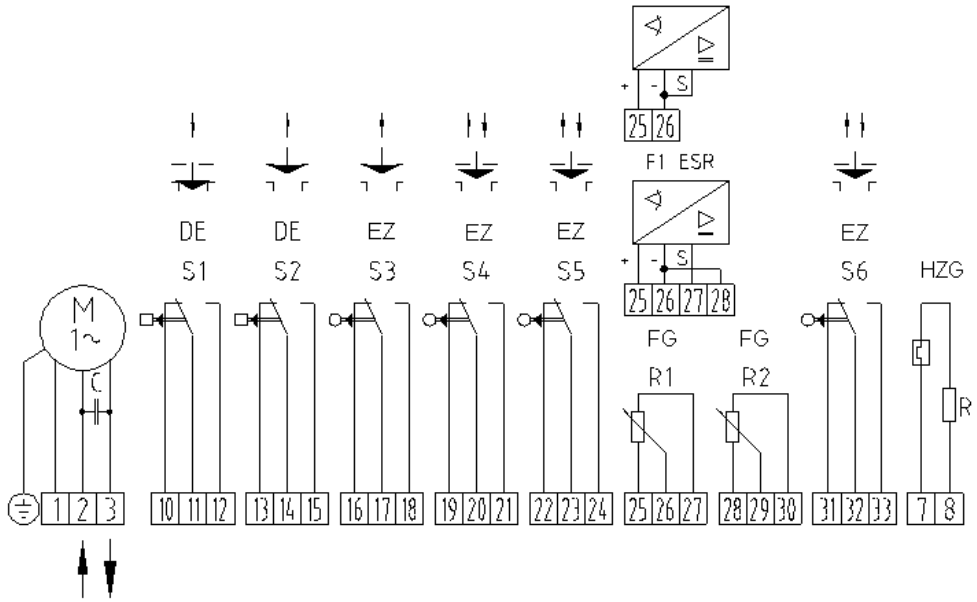
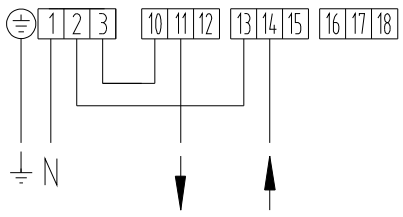
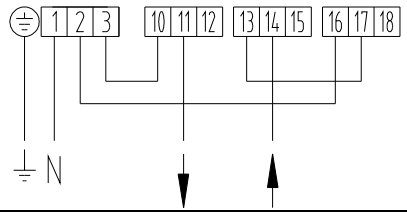
Electrical connection

synchronous motor	Basic wiring diagram including options





Switch off in end postion via two load-dependant switches to control e.g. three-way mixing valves.



Switch off in end position via a load-dependent switch and a limit switch to control e.g. full-way valves without upper stop. Monitoring blocking in OPEN direction.

DE	Load-dependent switch
EZ	Limit switch
HZG	Heater with thermoswitch
FG	Potentiometer
ESR	Electronic position feedback
PEL	Positioning electronics

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