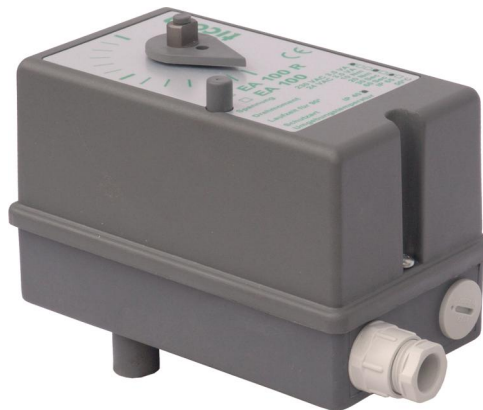


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## Electric Actuator EA100 and EA100R



### Application

The electric Actuator EA100(R) is equipped for every application, suitable for TICOVAL-Ball Valves DN 15 / ½ " up to max. DN 50 / 2 " and TICOFly-Butterfly Valves up to DN 65. Due to the wide range of selectable equipment, it can be adapted for any application perfectly and is characterized by its unsurpassed reliability. The available options include:

- power supply 230V AC or 24V AC
- switching time 60 or 30 sec. for 90°
- auxiliary switch 0, 1 or 2
- with or without built-in relay (see below „function“)
- protection class IP40 or IP65 (IP65 with built-in heating resistor to prevent of condensation)
- pre-set running and aux. switch angle of 90° . Other angle freely adjustable (e.g. for 180°-function)

### Quality features

- extremely solid, proven technology = high durability
- easy mounting to Valve with only two screws
- suitable for ambient temperature -10°C to +50°C (avoid condensation inside Actuator)
- can be mounted on Valve in every 90°-position (3-way DN40/50 only 180° positions)
- sufficient power reserves available to overcome a breakaway torque of the Valve after long standstills
- provides waterhammer free operation of Valve
- maintenance-free
- manual turning possible (e.g. in case of power failure), hand lever on request included
- running angle 90° (standard) and angular position of auxiliary switch preset at factory, other running angle (e.g. 180°) and auxiliary switch positions freely adjustable
- with optical position indicator (not for protection class IP65)
- switching time 60 sec. or 30 sec. for 90°
- different versions such as 230V AC, 24V AC, with or without built-in relay, 0, 1 or 2 auxiliary switches (potential-free, use as NC or NO), protection class IP40 or IP65 (with built-in heating resistor), etc.

### Function

Standard execution is **EA100R with integrated relay for 2-point control (on/off)**. It is controlled by a single-pole contact (e.g. thermostat, switch). Depending upon the position of the contact the Valve moves forth or back to the end position, the relay effects the switchover of direction. **Intermediate positions are not possible.** Rotating direction is selectable by internal switch.

The version **EA100 without relay for 3-point control** is controlled by separate wires for the direction clockwise and counterclockwise. Without power, the Actuator remains in the current position, **intermediate positions are possible.**

**Actuator EA103 for proportional signal control:** see separate data sheet EA103

### 4 steps to your matching Actuator

option selection with article no. code	<b>A</b>	<b>power supply</b>			
		with relay (on / off)		without relay (3-point)	
		230V / 50Hz	<b>1</b>	230V / 50Hz	<b>3</b>
		24V / 50 Hz	<b>2</b>	24V / 50 Hz	<b>4</b>
	<b>B</b>	<b>switching time</b>			
		rotation 90°		rotation 180°	
		60 sec.	<b>1</b>	120 sec.	<b>4</b>
		30 sec.	<b>3</b>		
	<b>C</b>	<b>protection class</b>			
		heating systems		refrigeration / airconditioning	
		IP40	<b>0</b>	IP65	<b>3</b>
	<b>D</b>	<b>auxiliary switches</b>			
		without auxiliary switch		<b>0</b>	
		1 auxiliary switch		<b>7</b>	
		2 auxiliary switches		<b>8</b>	

### = complete article no.

750.	A	000.	B	C	D
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Technical data	
Power supply	230V AC / 50Hz or 24V AC / 50Hz
Switching time 90°	60 sec. or 30 sec.
Torque 60 sec.	20 nm
Torque 30 sec.	17 nm
Auxiliary switches, adjustable (potential-free, NC or NO)	0, 1 or 2 16/4 A, 250 VAC <small>EN 61058-1</small>
Running angle	90° (standard) or 180° (for Valves 180°)
Power consumption	3,5 VA
Protection class	IP40 or IP65 (with 5W heating resistor)
Ambient temperature	-10°C to +50°C, avoid condensation
Weight	950 g
Handlever	on request, included
Maintenance	maintenance-free
CE-conformity	CEE 89/336-73/23-93/68

Materials	
Housing	plastic
Cover	plastic
Cable gland	Polyamid
Gears	steel
Joint to Valve	IP40: galvanized steel IP65: stainless steel
Handlever	plastic

### ⚠ Assembly / Safety notes

Mounting of Actuator to Valve is very easy with two M8 screws (included) and is possible in every 90° position (except 3-way Valves DN40 / DN50, only in 180° positions).

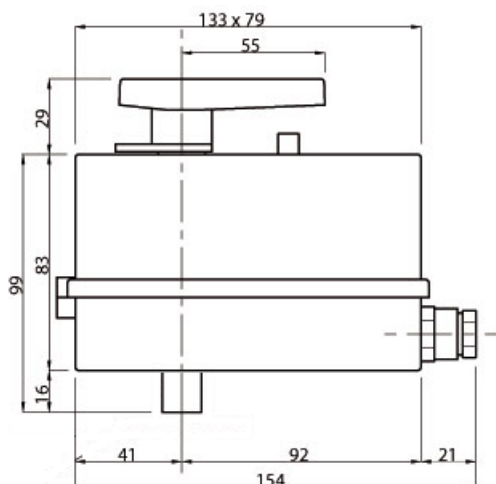
**Installation positions: upright standing to horizontal** (based on stem of Valve).

For ensuring the proper functioning, make sure that both Actuator and Valve are correctly set when assembling (direction of rotation / position of ball / direction of flow) according to the installation instructions.

In case of power loss, gears can be disengaged by push button on Actuator for manual operation (use fork wrench or handlever).

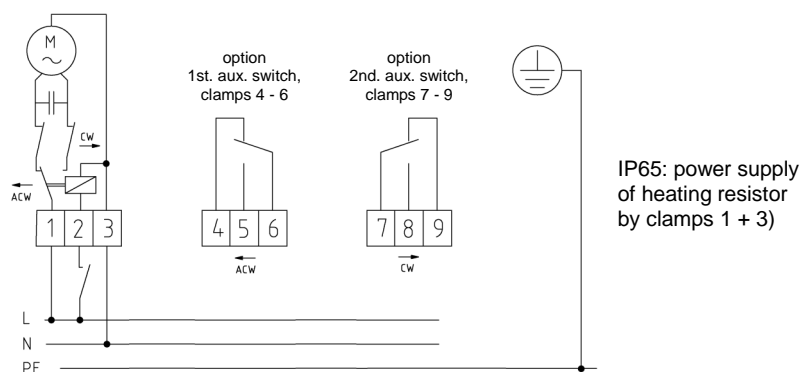
The installation must be carried out by authorized personnel, according to current laws and regulations.

### Dimensions

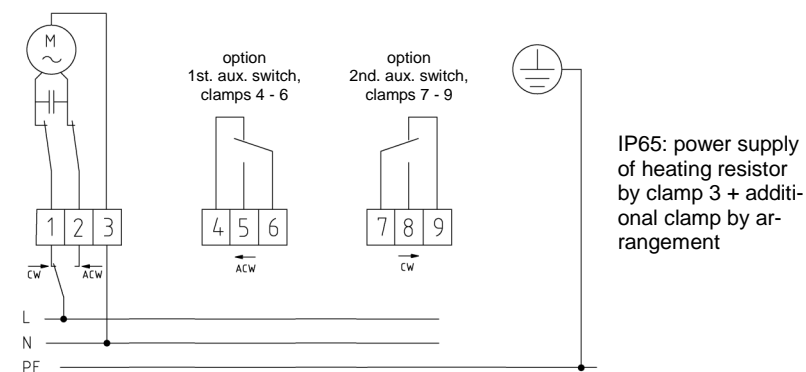


### Wiring diagram

with relay



without relay



CW = rotation clockwise  
ACW = rotation anticlockwise

### Combinations Actuators / Valves

use for TICOVAL-Ball Valves with dimensions:

Actuator	DN15 - 1/2"	DN20 - 3/4"	DN25 - 1"	DN32 - 1 1/4"	DN40 - 1 1/2"	DN50 - 2"	DN65 - 2 1/2"	DN80 - 3"	DN100 - 4"
EA100(R) - 60 sec.	✓	✓	✓	✓	✓	✓			
EA100(R) - 30 sec.	✓	✓	✓	✓	✓	✓			

For larger dimensions of TICOVAL-Ball Valves use Actuator EA500(R) (see separate data sheet Actuator EA500(R)). Actuator EA100(R) is also used for TICOFly-Butterfly Valves (see brochure TICOFly-Butterfly Valves).