Ticom GmbH
Bachstrasse 41
CH 8912 Obfelden
Tel. ++41 44 763 40 10
Fax ++41 44 763 40 19
www.ticom.ch / info@ticom.ch

Actuator for analog systems controlling EA502

Application

The electric Actuator EA502 for analog controlled systems is a powerfull drive for the **TICOVAL** - range and is used for **TICOVAL-Ball Valves from 2 ½“ / DN 65 to 4“ / DN 100** and **TICOFLY-Butterfly Valves from DN 80 to DN 125.** The Actuator has the same solid features as the proven standard Actuator EA500(R).

- **power supply 24V AC +/- 10%, 50Hz**
- **pilot signal (Y) VDC or mA**
- **running time 60 sec. for 90°**
- **2 auxiliary switches as standard**
- **protection class IP65** with built-in heating resistor to prevent condensation

Quality features

- extremely solid, housing bottom part made of die-cast aluminium
- easy mounting to Valve with four M6 socket head screws (included)
- suitable for ambient temperature -10°C to +50°C (avoid condensation inside Actuator)
- can be mounted on Valve in every 90°-position
- sufficient power reserves available to overcome a breakaway torque of the Valve after long standstills
- provides waterhammer free operation of Valve
- maintenance-free
- two cable glands of Polycarbonat, self extinguishing
- running angle 90° (standard). Other running angle (e.g. 180°) on request. Auxiliary switch positions freely adjustable
- protection class IP65 with integrated 5W heating resistor as standard
- rotating direction is selectable by internal switch (Valve = under power open or closed)
- F05 mounting flange according to ISO 5211 - DIN 3337 allows the use on Valves of other brands

Function

Power supply is 24V AC. The selectable pilot signal (Y) moves the Actuator linearly in any position, for example 50% of the pilot signal level corresponding to 50% of the opening angle.

Selectable pilot signal (Y) according to type:

EA502**V**
Signal lowmark (selectable) 0...7 VDC
ΔV control range (selectable) 2...12 VDC

EA502**A**
0...20 mA or 4...20 mA

At both end positions of rotation a signal can be output by integrated potential free auxiliary switches.
Rotating direction is selectable with switch SW1 on control board.

Product range electric Actuator EA502

type	torque	power supply	pilot signal (Y)	time for 90°	order code
EA500**V**	60 nm	24V AC +/- 10%, 50Hz	**VDC**	60 sec.	**750.500V.538**
EA500**A**	60 nm	24V AC +/- 10%, 50Hz	**mA**	60 sec.	**750.500A.538**

(other switching times on request)

Accessories for Actuator EA502

Description	order code
Isolating disk for F05 flange for mounting between Valve and Actuator (recommended in cooling systems for isolation of temperature bridge to Actuator)	**750.9999.KID**
Handlever for manual disengagement and manual actuation of the valve	**750.9999.600**

Technical data

Power supply	24V AC +/- 10%, 50Hz
Pilot signal (Y) EA502**V** Signal lowmark ΔV control range	 0...7 VDC (selectable) 0...12 VDC (selectable)
Pilot signal (Y) EA502**A** control range (selectable)	 0...20 mA *or* 4...20 mA
Resitance pilot signal	95 kΩ
Switching time for 90°	60 sec. (other on request)
Torque	60 nm
Auxiliary switches, adjustable (potential-free, NC or NO)	2 as standard
Max. load	16/4 A, 250 VAC EN 61058-1
Max. switching capacity	400 VA
Running angle	90° (180° on request)
Power consumption	13 VA
Protection class	IP65 (with 5W heating resistor)
Ambient temperature	-10°C to +50°C, avoid condensation
Weight	2350 g
Mounting flange	ISO 5211 - DIN 3337
Maintenance	maintenance-free
CE-conformity	CEE 89/336-73/23-93/68

Materials

Housing bottom	die-cast aluminium, varnished
Housing cover	Polycarbonat, self-extinguishing acc. UL 94 VO
Cable gland	Polyamid, selfextinguishing.
Gears	steel, thermally treated
Joint to Valve	galvanized steel

Assembly / Safety notes

Mounting of Actuator to Valve with 4 M6 socket head screws (included), possible in every 90° position.

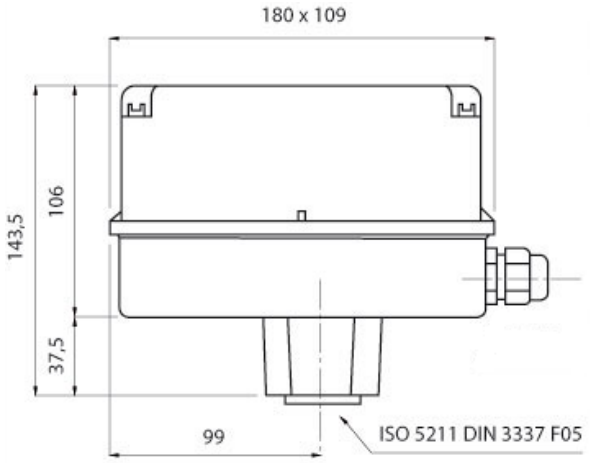
Installation positions: upright standing to horizontal (based on stem of Valve).

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 botton on Actuator (remove cover) for manual operation (use fork wrench).

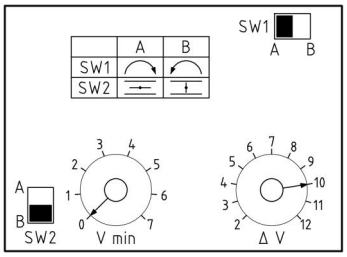
The installation must be carried out by authorized personnel, according to current laws and regulations.

Dimensions



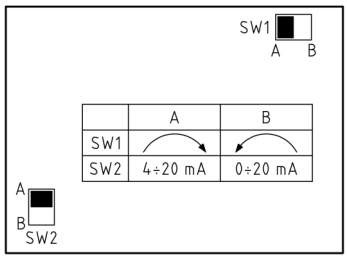
Control setting

Control board EA502**V** (VDC)



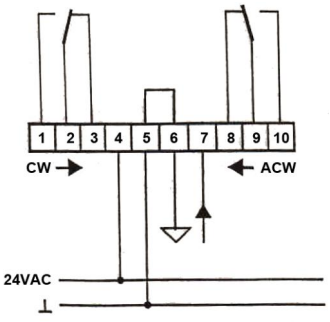
SW1: selecting direction of rotation
SW2: defines the starting position with omission of pilot signal (Y)
V min: setting of pilot signal (Y) - lowmark of 0...7 VDC
Δ V: setting of pilot signal (Y) - control range of 2...12 VDC, starting from V min

Control board EA502**A** (mA)



SW1: selecting direction of rotation
SW2: selecting pilot signals (Y)
A = 4...20 mA
B = 0...20 mA

Wiring diagram



1-2-3	auxiliary switch at end position clockwise CW (adjustable, potential-free, NC or NO)
8-9-10	auxiliary switch at end position counterclockwise CCW (adjustable, potential-free, NC or NO)
4-5	power supply 24V AC +/- 10%, 50Hz
6-7	Input pilot signal (Y) VDC or mA
Terminal **5 and 6 are** internally connected!	

Combinations Actuators / Valves

	use for TICOVAL-Ball Valves with dimensions:								
Actuator	**DN15 - ½"**	**DN20 - ¾"**	**DN25 - 1"**	**DN32 - 1 ¼"**	**DN40 - 1 ½"**	**DN50 - 2"**	**DN65 - 2 ½"**	**DN80 - 3"**	**DN100 - 4"**
EA502V / EA502A							✔	✔	✔

For smaller dimensions of TICOVAL-Ball Valves use Actuators EA80(R) resp. EA100(R) / EA103 (see separate sheets).
Actuator EA502 is also used for TICOFLY-Butterfly Valves (see brochure TICOFLY-Butterfly Valves).