

#### Tender specification:

Oventrop electromotive actuators for steady control, as proportional actuator (0-10 V) with manual setting and connection thread M 30 x 1.5. Multiple characteristic lines and the mode of operation are adjustable via the DIP switches (with characteristic lines for “Cocon QTZ” PN 25). Furthermore, the actuator features an automatic valve anti-blocking function, an automatic flushing function and an automatic recognition of neutral point.

#### Models:

“Aktor M ST L”, 24 V, proportional actuator (0-10V), characteristic lines adjustable

#### Item no.:

1012725

“Aktor M ST L”, 24 V, proportional actuator (0-10 V) with position feedback, characteristic lines adjustable

1012726

#### Technical data:

Operating voltage:	24 V AC/DC $\pm 10\%$ ; 50/60 Hz
Power consumption:	2.5 VA for AC 1.3 W for DC
Control:	0–10 V DC (1012725 also 2 point and 3 point)
Position feedback:	Item no.: 1012726 0–10 V DC, 5 mA for piston stroke 0 %– 100 %
Max. stroke:	4 mm
Positioning force:	nominal 150 N
Travel time:	about 22 s / mm
Protection:	IP 54 according to EN 60529
Protection class:	III according to EN 60730
Fluid temperature:	0 °C to 120 °C
Ambient temperature:	0 °C to 50 °C, (0 % to 85 % r.h. not condensing)
Storage temperature:	0 °C to 50 °C, (0 % to 85 % r.h. not condensing)
Connecting cable:	Item no.: 1012725 3 x 0.5 mm <sup>2</sup> , length 1.5 m Item no.: 1012726 5 x 0.5 mm <sup>2</sup> , length 1.5 m

#### Installation and fitting:

The connecting cable must not come into contact with hot pipes or similar as excessive heat will accelerate the ageing of the cable insulation.

Electrical connection must be carried out in accordance with the requirements of the local Electricity Board.

The Oventrop electromotive actuators can be installed in any position.

#### Application:

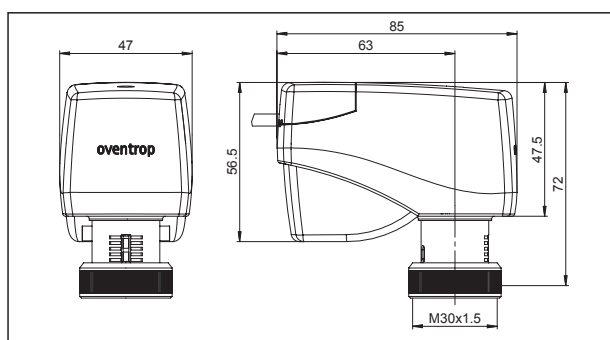
The Oventrop electromotive actuators “Aktor M ST L” are used for heating, ventilation and air conditioning. In combination with conventional radiators, radiators with integrated distributor, distributors/collectors for surface heating, radiant ceiling panels, chilled ceiling systems and induction air systems, the electromotive actuators allow for room temperature control.

The actuators can be combined with the following Oventrop valves with connection thread M 30 x 1.5:

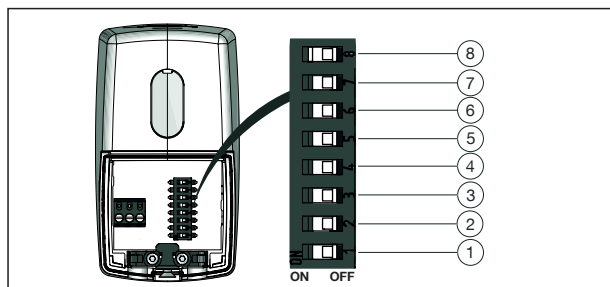
- Valves “Cocon 2TZ/QTZ” (PN 16 and PN 25)
- All thermostatic valves (except for valves “ADV 9” and “KTB”)
- Three-way diverting and mixing valves
- Regulating valves “Hycoco ETZ/HTZ”
- Distributors/collectors for surface heating (please observe ambient temperature within the cabinet)



“Aktor M ST L”

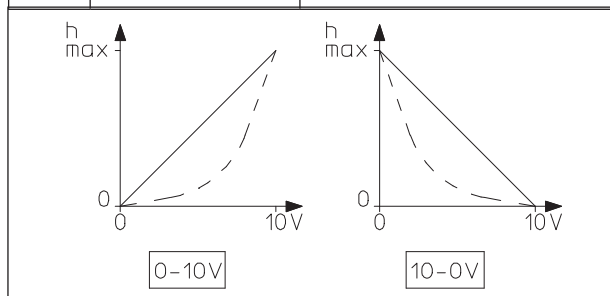


Dimensions



DIP switches

(1)	S1 ON/OFF	Setting of the required stroke behaviour in accordance with the characteristic lines of the valve used.
(2)	S2 ON/OFF	
(3)	S3 ON/OFF	
(4)	S4 ON/OFF	
(5)	S5 ON/OFF	
(6)	S6 ON/OFF	
(7)	ON = 10 V - 0 V	OFF = 0 V - 10 V
(8)	Automatic flushing function and automatic valve anti-blocking function	
	ON	activated
	OFF	deactivated



Characteristic line version DIP switch 7

**Function:**

In combination with Oventrop valves with steady control and an electronic room thermostat with proportional output or a central controller in the centralised building control system, the Oventrop electromotive actuators with steady control allow for precise individual room temperature control. When installing the pipework correspondingly, several terminal units (zones) may be controlled with one valve only.

Perfect regulation with high accuracy is guaranteed by different stored characteristic lines (adjustable via DIP switches S1 - S 6), which are adapted to the Oventrop valves regarding effective valve lift and valve characteristics. The adjustable linear or equal percentage characteristic lines allow for an adaptation to the regulation characteristics of the terminal units. (Exact DIP switch assignment: see operating instructions.)

The automatic valve anti-blocking function avoids sticking of the valve stem. Should no piston stroke have been carried during 24 hours, the actuator opens the valve for a few seconds to avoid sticking of the valve stem.

If characteristic lines with small maximum piston strokes of less than or equal to 1 mm have been set with the help of the DIP switches, the actuator opens every 74 hours to rinse out dirt particles which may have gathered in front of the valve seat.

As for the model with position feedback (item no. 1012726), the current lift position is transmitted via the 0-10 V output signal (terminals 4 and 5).

The actuators are silent in operation with low power consumption. The stroke lift of the actuator is clearly visible via the lift position indicator.

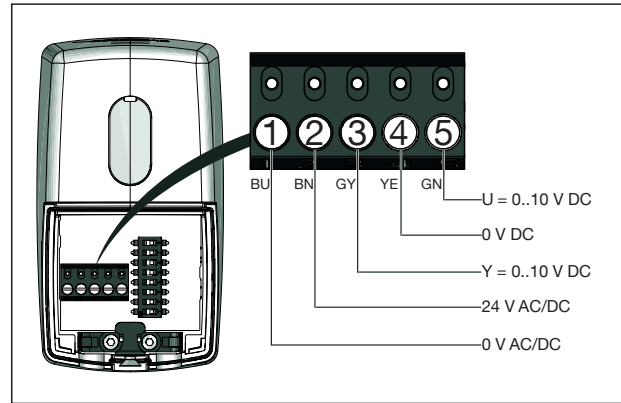
In de-energized state, the manual setting allows for manual operation of the actuator with the help of a 4 mm Allen key. The integrated slip clutch protects the gear against excessive operating forces.

In addition to the cable connected at works, the integrated terminals allow for the direct connection to the installation cable laid on site without additional clamping device.

**LED display:**

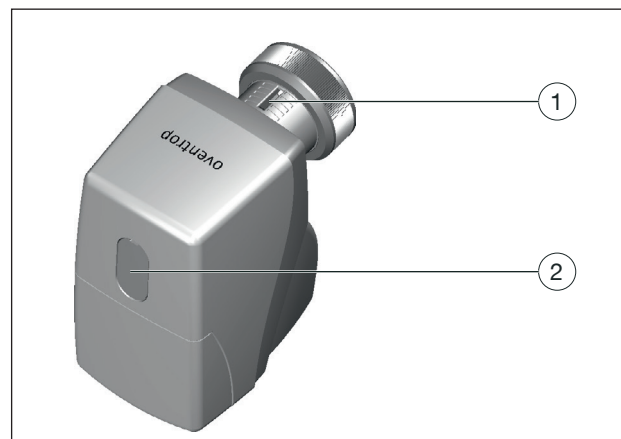
The LED display located under the cover shows the operating status of the actuator.

- ☀ On      Operating current available
- ⚡ Flashes   Recognition of neutral point
- Off      No operating current



Pin assignment

(1)	0 V AC/DC	blue (BU)
(2)	24 V AC/DC	brown (BN)
(3)	0 - 10 V DC control	grey (GY)
(4)	Position feedback 0 V DC	yellow (YE) only 1012726
(5)	Position feedback 0 - 10 V DC	green (GN) only 1012726



(1)	Lift position indicator of the actuator
(2)	Cover for manual setting (adjustment spindle)

Subject to technical modifications without notice.

Product range 1.1  
ti 316-EN/10/MW  
Edition 2019