Tender specification:
Oventrop electromotive actuators for steady control. The actuator can be used for two point, three point or proportional control (0-10 V), with squeeze connection and position feedback signal 0-10 V.

Models:
- 24 V, steady control with 0-10 V or switching as two or three point control.
- Type of characteristic line (linear, equal percentage) adjustable.
- With enclosed adapter for Oventrop valves.
- Same actuator as item no. 1158010 but without enclosed adapter

Technical data:
- Operating current: 24 V
- Power consumption: 4.9 W during operation
- Drive: 0 - 10 V
- Max. piston stroke: 10 mm
- Operating power: 500 N
- Floating time: 7.5 / 15 s / mm
- Protection: IP 54 according to EN 60529
- Max. fluid temperature: 120 °C
- Ambient temperature: -10 °C up to +55 °C
- Storage temperature: -10 °C up to +55 °C
- Connecting cable: 5 x 0.5 mm²

Installation:
The connecting cable must not come into contact with the hot pipe 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, except for vertical downward position.

Depending on the wiring (see connection diagrams), the actuators item no. 1158010/11 can be used as two point, three point or 0-10 V actuator.

Application:
The actuators can be combined with the following Oventrop valves:
- Item no. 1158010: "Cocon QTR/QFC" DN 40 and DN 50
- Item no. 1158011: Two-way valves item no. 11308.. and 16708 DN 15-DN 50

Function:
- Synchronous motor with activation and switch off technology
- Electronic recognition of the limit of travel via timer
- Gear release for manual positioning of the valve. To do so, activate the lateral sliding switch and set the actuator to the required position with the help of the enclosed key.

Connection diagrams item no.1158010/11
Tender specification:
Oventrop electromotive actuators for steady control. The actuator can be used for two point, three point or proportional control, with squeeze connection and position feedback signal 0-10 V.
1158020: 0(2).-10 V= 
1158021/22: 0(2).-10 V= or 0(4).-20 mA
With enclosed adapter for Oventrop valves.

Models: | Item no.: |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>24 V, steady control with 0(2)-10 V or switching as three point control. Linear characteristic line.</td>
<td>1158020</td>
</tr>
<tr>
<td>24 V, steady control with 0(2)-10 V or 0(4)-20 mA or switching as two or three point control. Linear characteristic line. With spring return. Valves opening with current &quot;off&quot;.</td>
<td>1158021</td>
</tr>
<tr>
<td>24 V, steady control with 0(2)-10 V or 0(4)-20 mA or switching as two or three point control. Linear characteristic line. With spring return. Valves closing with current &quot;off&quot;.</td>
<td>1158022</td>
</tr>
</tbody>
</table>

Technical data:
**Item no. 1158020:**
- Operating current: 24 V ~; 50/60 Hz
- Power consumption: 4.8 W during operation and in final lift position
- Drive: 0 (2)– 10 V
- Max. piston stroke: 20 mm
- Operating power: 800 N
- Floating time: 9 s / mm
- Protection: IP 54 according to EN 60529
- Max. fluid temperature: 120 °C
- Ambient temperature: 0 up to 50 °C
- Storage temperature: 0 up to 50 °C
- Actuator: reversible synchronous motor

**Item no. 1158021/22:**
- Operating current: 24 V ~; 50/60 Hz
- Power consumption: 26 W during operation and in final lift position
- Drive: 0(2) – 10 V or 0(4) – 20 mA
- Max. piston stroke: 20 mm
- Operating power: 1000 N
- Floating time: 2 s / mm
- Emergency setting time: 1 s / mm
- Protection: IP 54 according to EN 60529
- Max. fluid temperature: 120 °C
- Ambient temperature: 0 up to 50 °C
- Storage temperature: 0 up to 50 °C
- Actuator: brushless direct current motor

Installation:
The connecting cable must not come into contact with the hot pipe 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, except for vertical downward position.
Depending on the wiring (see connection diagrams), the actuators item no. 1158020/21/22 can be used as two point, three point or 0(2)-10V or 0(4)- 20 mA actuator.
Application:
The actuators can be combined with the following Oventrop valves:
"Cocon QTR/QFC" DN 40 up to DN 100

Function:
– electronic switching operation depending on the motive force
– compensation of external interferences by dynamic hysteresis
– linear characteristic line
– valve blocking function, short stroke lift if the actuator has not moved within 24 h (optionally adjustable)
– automatic piston stroke adaptation by initialization
– manual setting of item numbers 1158021/22 by removing the cover and by setting the actuator to the required position with the help of a 4 mm Allen key
– maintenance-free

LED display:
Item no. 1158020:
Permanent light: Normal operation
Slow flashing: Initialization run or partial initialization after power failure
Irregular fast flashing: Valve is blocked or manual setting
Off: Power supply interrupted or actuator fuse defective

Item no. 1158021/22:
Permanent light: Normal operation
Short flashing: Malfunction / reverse polarity
Extended flashing: Initialization run

Connection diagrams item no. 1158020

Connection diagrams item no. 1158021/22
Tender specification:
Oventrop electromotive actuators for steady control. The actuator can be used for two point, three point or proportional control (0-10 V or 4-20 mA), with squeeze connection and position feedback signal 0-10 V.

With enclosed adapter for Oventrop valves.

Models:

<table>
<thead>
<tr>
<th>Item no.:</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1158030</td>
<td>24 V, steady control with 0-10 V or 4-20 mA</td>
</tr>
<tr>
<td></td>
<td>or switching as to or three point control.</td>
</tr>
<tr>
<td></td>
<td>Type of characteristic line (linear, square-law,</td>
</tr>
<tr>
<td></td>
<td>equal percentage) adjustable.</td>
</tr>
<tr>
<td>1158031</td>
<td>24 V, steady control with 0-10 V or 4-20 mA</td>
</tr>
<tr>
<td></td>
<td>or switching as to or three point control.</td>
</tr>
<tr>
<td></td>
<td>Type of characteristic line (linear, square-law,</td>
</tr>
<tr>
<td></td>
<td>equal percentage) adjustable.</td>
</tr>
<tr>
<td></td>
<td>With spring return.</td>
</tr>
<tr>
<td></td>
<td>Valves opening with current “off”</td>
</tr>
<tr>
<td>1158032</td>
<td>24 V, steady control with 0-10 V or 4-20 mA</td>
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<tr>
<td></td>
<td>or switching as to or three point control.</td>
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<tr>
<td></td>
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<tr>
<td></td>
<td>equal percentage) adjustable.</td>
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<tr>
<td></td>
<td>With spring return.</td>
</tr>
<tr>
<td></td>
<td>Valves closing with current “off”</td>
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</table>

Technical data:

<table>
<thead>
<tr>
<th>Item no. 1158030:</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating current:</td>
<td>24 V /=</td>
</tr>
<tr>
<td>Power consumption:</td>
<td>10 W during operation</td>
</tr>
<tr>
<td></td>
<td>18 W in final lift position</td>
</tr>
<tr>
<td>Drive:</td>
<td>0-10 V or 4-20 mA</td>
</tr>
<tr>
<td>Max. piston stroke:</td>
<td>40 mm</td>
</tr>
<tr>
<td>Operating power:</td>
<td>2.500 N</td>
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<tr>
<td>Floating time:</td>
<td>2 / 4 / 6 s / mm</td>
</tr>
<tr>
<td>Protection:</td>
<td>IP 66 according to EN 60529</td>
</tr>
<tr>
<td>Max. fluid temperature:</td>
<td>120 °C</td>
</tr>
<tr>
<td>Ambient temperature:</td>
<td>-10 °C up to +55 °C</td>
</tr>
<tr>
<td>Storage temperature:</td>
<td>-10 °C up to +55 °C</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item no. 1158031/32:</th>
<th>Specification</th>
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</thead>
<tbody>
<tr>
<td>Operating current:</td>
<td>24 V /=</td>
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<tr>
<td>Power consumption:</td>
<td>10 W during operation</td>
</tr>
<tr>
<td></td>
<td>20 W in final lift position</td>
</tr>
<tr>
<td>Drive:</td>
<td>0-10 V or 4-20 mA</td>
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<tr>
<td>Max. piston stroke:</td>
<td>40 mm</td>
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<td>Operating power:</td>
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</tr>
<tr>
<td>Storage temperature:</td>
<td>-10 °C up to +55 °C</td>
</tr>
<tr>
<td>Number of spring returns:</td>
<td>&gt; 4000</td>
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</tbody>
</table>

Installation:

The connecting cable must not come into contact with the hot pipe 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, except for vertical downward position. Depending on the wiring (see connection diagrams), the actuators item no. 1158030/31/32 can be used as two point, three point or 0-10 V or 4-20 mA actuator.
Application:
The actuators can be combined with the following Oventrop valves:
“Cocon QFC” DN 125 up to DN 200
Two-way valves item no. 11308.. and 16708.. DN 65 up to DN 150

Function:
– electronic switching operation depending on the motive force
– automatic recognition of the input control signal
– setting of the characteristic line at the actuator (linear, square-law, equal percentage)
– automatic adaptation
– free choice of mode of operation
– choice of characteristic line
– setting of floating time via coding switch
– the actuator can be set manually with the crank handle
– reinitialization is triggered with the crank handle

LED display:
Both LEDs flash red: Initialization
One LED flashes green: A piston stroke is carried out by the actuator, direction according to LED
One LED glows green: Idle position, last direction of travel according to LED
One LED glows red: Final position, valve position according to LED
Off: No power supply or no activation in three point mode

Accessories:
Connection module 230 V 1158033
For the connection of the 24 V actuators “Aktor M”, item no. 1158030/31/32 to the 230 V supply voltage.
Module for plug-in connection to the actuator.