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1. Allgemeine Angaben

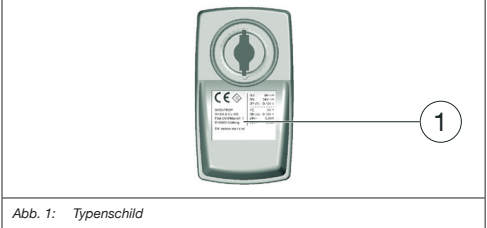
Die Originalbetriebsanleitung ist in deutscher Sprache verfasst. Die Betriebsanleitungen anderer Sprachen wurden aus dem Deutschen übersetzt.

1.1 Gültigkeit der Anleitung

Diese Anleitung gilt für den Elektromotorischen Stellantrieb, 24V Aktor M ST L, 0-10V / 3-Punkt-Antrieb.

1.2 Typenschild

Das Typenschild befindet sich auf der Unterseite des Produktes.



|     |             |
|-----|-------------|
| (1) | Typenschild |
|-----|-------------|

1.3 Lieferumfang

Prüfen Sie Ihre Lieferung auf Transportschäden und Vollständigkeit. Der Lieferumfang umfasst:

- „Aktor M ST L“
- Betriebsanleitung

1.4 Kontakt

Kontaktadresse

OVENTROP GmbH & Co. KG  
Paul-Oventrop-Straße 1  
59939 Olsberg  
DEUTSCHLAND

Technischer Kundendienst

Telefon: +49 (0) 29 62 82-234

1.5 Urheber- und Schutzrechte

Diese Anleitung ist urheberrechtlich geschützt. Sie ist ausschließlich für die mit dem Produkt beschäftigten Personen bestimmt.

1.6 EU-Konformitätserklärung

Hiermit erklärt die Oventrop GmbH & Co. KG, dass dieses Produkt in Übereinstimmung mit den grundlegenden Anforderungen und den einschlägigen Bestimmungen der betreffenden EU-Richtlinien hergestellt wurde. Die Konformitätserklärung kann beim Hersteller angefordert werden.

1.7 Verwendete Symbole

|    |                                                                     |
|----|---------------------------------------------------------------------|
|    | Kennzeichnet wichtige Informationen und weiterführende Ergänzungen. |
|    | Handlungsaufforderung                                               |
|    | Aufzählung                                                          |
| 1. | Feste Reihenfolge. Handlungsschritte 1 bis X.                       |
|    | Ergebnis der Handlung                                               |

2. Sicherheitsbezogene Informationen

2.1 Normative Vorgaben

Beachten Sie die am Installationsort geltenden rechtlichen Rahmenbedingungen. Es gelten die aktuell gültigen Normen, Regeln und Richtlinien.

2.2 Bestimmungsgemäße Verwendung

Die Betriebssicherheit ist nur bei bestimmungsgemäßer Verwendung des Produktes gewährleistet. Der Stellantrieb darf in Heizungs-, Lüftungs- und Klimaanlage im Innenbereich verwendet werden. Jede darüber hinausgehende und/oder andersartige Verwendung gilt als nicht bestimmungsgemäß. Ansprüche jeglicher Art gegen den Hersteller und/oder seine Bevollmächtigten wegen Schäden aus nicht bestimmungsgemäßer Verwendung können nicht anerkannt werden. Zur bestimmungsgemäßen Verwendung zählt auch die korrekte Einhaltung dieser Anleitung.

2.3 Änderungen am Produkt

Änderungen am Produkt sind untersagt. Bei Änderungen am Produkt erlischt die Produktgarantie. Für Schäden und Betriebsstörungen, die sich aus Änderungen am Produkt ergeben, haftet der Hersteller nicht.

2.4 Warnhinweise

Jeder Warnhinweis enthält folgende Elemente:

| Warnsymbol | SIGNALWORT                                                                                                                                                        |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            | <b>Art und Quelle der Gefahr!</b><br>Mögliche Folgen, wenn die Gefahr eintritt bzw. der Warnhinweis ignoriert wird.<br>► Möglichkeiten zur Vermeidung der Gefahr. |

Signalworte definieren die Schwere der Gefahr, die von einer Situation ausgeht.

|  | VORSICHT                                                                                                                                                    |
|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Kennzeichnet eine mögliche Gefahr mit geringerem Risiko. Wenn die Situation nicht vermieden wird, sind leichte und reversible Körperverletzungen die Folge. |

| ACHTUNG                                                                                                          |
|------------------------------------------------------------------------------------------------------------------|
| Kennzeichnet eine Situation, die möglicherweise Sachschäden zur Folge haben kann, wenn sie nicht vermieden wird. |

2.5 Sicherheitshinweise

Wir haben dieses Produkt gemäß aktueller Sicherheitsanforderungen entwickelt. Beachten Sie folgende Hinweise zum sicheren Gebrauch.

2.5.1 Gefahr durch unzureichende Personalqualifikation

Arbeiten an diesem Produkt dürfen nur dafür ausreichend qualifizierte Fachhandwerker ausführen. Qualifizierte Fachhandwerker sind aufgrund ihrer fachlichen Ausbildung und Erfahrungen sowie Kenntnisse der einschlägigen rechtlichen Vorschriften in der Lage, Arbeiten am beschriebenen Produkt fachgerecht auszuführen.

Betreiber

Der Betreiber muss von einem Fachhandwerker in die Bedienung eingewiesen sein.

2.5.2 Gefahr durch elektrischen Strom!

Arbeiten an der Stromversorgung darf nur ein Elektrofachhandwerker durchführen.

- Nehmen Sie das Produkt bei sichtbaren Beschädigungen nicht in Betrieb.
- Trennen Sie das Produkt allpolig von der Stromversorgung.
- Prüfen Sie die Spannungsfreiheit.
- Sichern Sie das Produkt gegen Wiedereinschalten.
- Montieren Sie das Produkt nur in trockenen Innenräumen.

2.5.3 Verbrennungsgefahr an heißen Armaturen und Oberflächen

- Lassen Sie das Produkt vor Arbeiten abkühlen.
- Tragen Sie geeignete Schutzkleidung, um ungeschützten Kontakt mit heißen Armaturen und Anlagenteilen zu vermeiden.

2.5.4 Verfügbarkeit der Betriebsanleitung

Jede Person, die mit diesem Produkt arbeitet, muss diese Anleitung und alle mitgeltenden Anleitungen gelesen haben und anwenden. Die Anleitung muss am Einsatzort des Produktes verfügbar sein.

- Geben Sie diese Anleitungen und alle mitgeltenden Anleitungen an den Betreiber weiter.

3. Technische Beschreibung

3.1 Aufbau

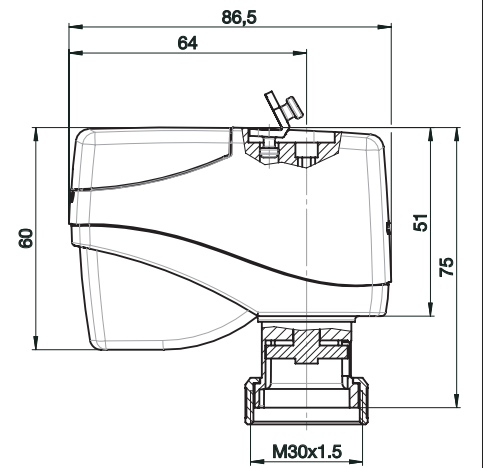


Abb. 2: Seitenansicht

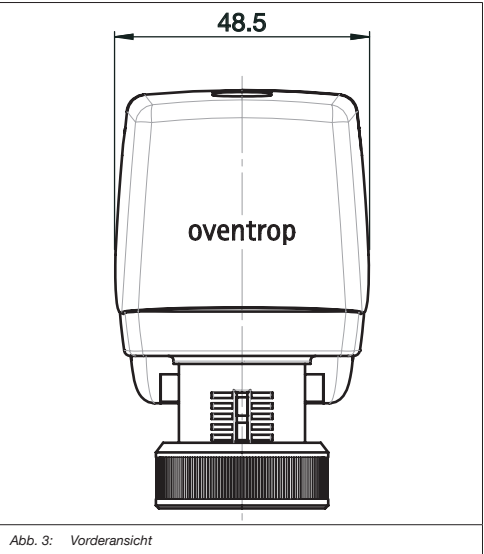


Abb. 3: Vorderansicht

3.2 Funktionsbeschreibung

Der Stellantrieb öffnet oder schließt ein Ventil in Abhängigkeit von der angelegten Steuerspannung. Durch DIP-Schalter kann der Stellantrieb an die spezifischen Parameter des eingesetzten Ventils und an spezifische Betriebsanforderungen angepasst werden.

3.3 Technische Daten

|                                             |                                                                                                                                                                                                                                                                                              |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Betriebsspannung</b>                     | 24 V AC ±10 %, 50/60 Hz<br>24 V DC ±10 %                                                                                                                                                                                                                                                     |
| <b>Leistungsaufnahme</b>                    | Dimensionierung:<br>- 3,7 VA (24 V AC)<br>- 1,7 W (24 V DC)<br>nominal:<br>- 2,5 VA (24 V AC)<br>- 1,3 W (24 V DC)                                                                                                                                                                           |
| <b>Einschaltstrom</b>                       | kurzzeitig max. 10 A                                                                                                                                                                                                                                                                         |
| <b>Ansteuerung</b>                          | - Stetige Ansteuerung 0 - 10 V DC<br>- 3-Punkt (Auf/Halt/Zu)<br>Die Einschaltzeit der Spannung darf für einen definierten Betrieb 2 Sekunden nicht überschreiten!<br>- 2-Punkt (Auf/Zu)<br>Die Einschaltzeit der Spannung darf für einen definierten Betrieb 2 Sekunden nicht überschreiten! |
| <b>Anschluss</b>                            | fest vormontiertes Kabel<br>1,5 m; 3 x 0,5 mm <sup>2</sup>                                                                                                                                                                                                                                   |
| <b>Motorabschaltung</b>                     | Antriebsspindel:<br>ausfahrend = lastabhängig,<br>einfahrend = wegabhängig                                                                                                                                                                                                                   |
| <b>Stellhub</b>                             | max. 4 mm                                                                                                                                                                                                                                                                                    |
| <b>Stellzeit</b>                            | 22 s/mm                                                                                                                                                                                                                                                                                      |
| <b>Stellkraft</b>                           | nominal 150 N                                                                                                                                                                                                                                                                                |
| <b>Stellungsanzeige</b>                     | Hubskala                                                                                                                                                                                                                                                                                     |
| <b>Handverstellung</b>                      | Nur im spannungslosen Zustand!<br>Verstellspindel für Innensechskantschlüssel unter der Abdeckung (Position 2 in Abb. 9), Schlüsselweite 4 mm                                                                                                                                                |
| <b>zulässige Medientemperatur im Ventil</b> | 0 - 120 °C                                                                                                                                                                                                                                                                                   |

|                               |                                                                                                   |
|-------------------------------|---------------------------------------------------------------------------------------------------|
| <b>Umgebungs-temperatur</b>   | 0 - 50 °C                                                                                         |
| <b>Umgebungs-feuchte</b>      | in Betrieb: 0 - 85 % r.F., nicht kondensierend<br>außer Betrieb: 0 - 85 r.F., nicht kondensierend |
| <b>Überspannungskategorie</b> | III                                                                                               |
| <b>Verschmutzungs-grad</b>    | 2                                                                                                 |
| <b>Schutzart</b>              | IP54 in allen Einbaulagen                                                                         |
| <b>Schutzklasse</b>           | III nach EN 60730                                                                                 |
| <b>Einbaulage</b>             | ohne Einschränkung                                                                                |
| <b>Wartung</b>                | wartungsfrei                                                                                      |
| <b>Gewicht</b>                | 230 g                                                                                             |

4. Transport und Lagerung

|                                  |                                                           |
|----------------------------------|-----------------------------------------------------------|
| <b>Temperaturbereich</b>         | -0 °C - +40 °C                                            |
| <b>Relative Luftfeuchtigkeit</b> | max. 95%                                                  |
| <b>Partikel</b>                  | Trocken und staubgeschützt lagern                         |
| <b>Mechanische Einflüsse</b>     | Geschützt vor mechanischer Erschütterung                  |
| <b>Witterungseinflüsse</b>       | Nicht im Freien lagern<br>Vor Sonneneinstrahlung schützen |
| <b>Chemische Einflüsse</b>       | Nicht zusammen mit aggressiven Medien lagern              |

5. Montage

5.1 Erstmontage

|  |                                                                                                    |
|--|----------------------------------------------------------------------------------------------------|
|  | Berücksichtigen Sie bei der Montage einen ausreichenden freien Raum zur Montage des Stellantriebs. |
|--|----------------------------------------------------------------------------------------------------|

|  |                                                                               |
|--|-------------------------------------------------------------------------------|
|  | Montieren Sie den Stellantrieb, bevor Sie die Spannungsversorgung herstellen! |
|--|-------------------------------------------------------------------------------|

|  | VORSICHT                                                                                                                                                                                         |
|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>Verbrennungsgefahr an heißen Bauteilen!</b><br>Das Berühren heißer Bauteile kann zu Verbrennungen führen.<br>► Lassen Sie das Ventil vor Arbeiten abkühlen.<br>► Tragen Sie Schutzhandschuhe. |

- Setzen Sie den Stellantrieb auf den Gewindeanschluss des Ventils.
- Schrauben Sie die Überwurfmutter handfest an.

|  |                                                          |
|--|----------------------------------------------------------|
|  | Achten Sie darauf, dass Sie das Gewinde nicht verkanten. |
|--|----------------------------------------------------------|

| ACHTUNG                                                                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Beschädigung des Aktors durch zu hohes Drehmoment beim Anschrauben der Überwurfmutter!</b><br>Der Aktor kann beschädigt und in seiner Funktion beeinträchtigt werden, wenn die Überwurfmutter zu stark angeschraubt wird.<br>► Schrauben Sie die Überwurfmutter mit der Hand an. |

6. Inbetriebnahme

6.1 DIP-Schalter konfigurieren

- Entfernen Sie den Deckel des Gehäuses.
- Konfigurieren Sie die DIP-Schalter passend zu dem von Ihnen verwendeten Ventil (siehe Abs. 12).

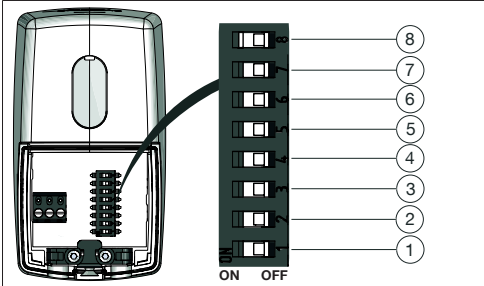


Abb. 4: DIP-Schalter

|     |                                                            |                                                                                                       |
|-----|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| (1) | S1 ON/OFF                                                  | <b>Einstellung des gewünschten Hubverhaltens entsprechend der Kennlinien des verwendeten Ventils.</b> |
| (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<br>siehe Abb. 5                            | OFF = 0 V - 10 V                                                                                      |
| (8) | Automatische Spülfunktion und Ventilblockierschutzfunktion |                                                                                                       |
|     | ON                                                         | aktiviert                                                                                             |
|     | OFF                                                        | deaktiviert                                                                                           |

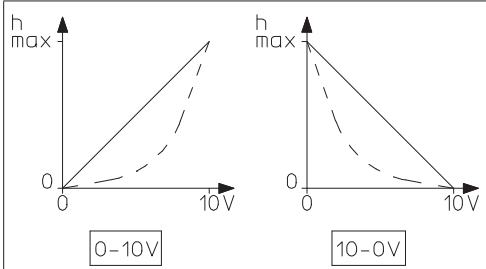


Abb. 5: Kennlinien Invertierung DIP-Schalter 7

6.2 Spannungsversorgung herstellen

- Stellen Sie die Spannungsversorgung entsprechend der gewünschten Belegung in Abb. 6 bis Abb. 8 her.

6.2.1 Stetige Ansteuerung

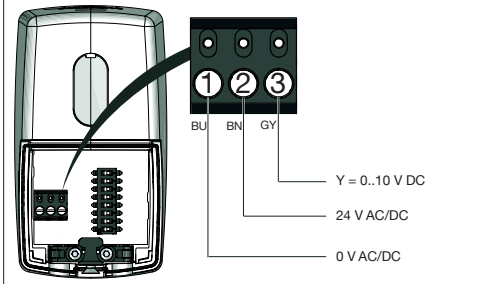


Abb. 6: Anschlussbelegung stetige Ansteuerung

|     |                         |            |
|-----|-------------------------|------------|
| (1) | 0 V AC/DC               | blau (BU)  |
| (2) | 24 V AC/DC              | braun (BN) |
| (3) | Ansteuerung 0 - 10 V DC | grau (GY)  |

6.2.2 Ansteuerung 3-Punkt

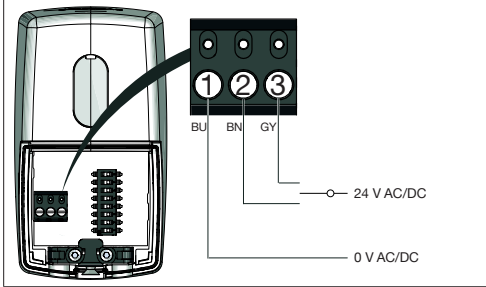


Abb. 7: Anschlussbelegung 3-Punkt Ansteuerung

|     |                     |            |
|-----|---------------------|------------|
| (1) | 0 V AC/DC           | blau (BU)  |
| (2) | 0 V oder 24 V AC/DC | braun (BN) |
| (3) | 0 V oder 24V AC/DC  | grau (GY)  |

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>Wenn der DIP-Schalter 7 auf OFF eingestellt ist gilt folgendes Hubverhalten. (Ist der DIP-Schalter 7 auf ON eingestellt, ist das Hubverhalten invertiert!)</b> <ul style="list-style-type: none"><li>- Der Stellantrieb fährt in die obere Hub-Position (siehe Position (1) in Abb. 10), wenn 24 V an Position/Kontakt (3) anliegen.</li><li>- Der Stellantrieb fährt in die untere Hub-position, wenn 24 V an Position/Kontakt (2) anliegen.</li></ul> |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

6.2.3 Ansteuerung 2-Punkt

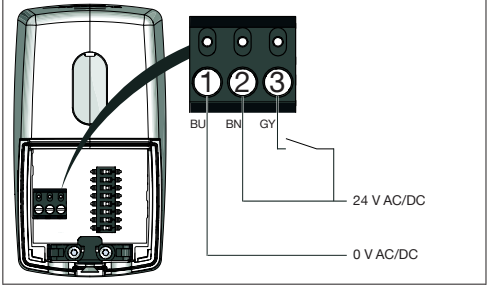


Abb. 8: Anschlussbelegung 2-Punkt Ansteuerung

|     |                    |            |
|-----|--------------------|------------|
| (1) | 0 V AC/DC          | blau (BU)  |
| (2) | 24 V AC/DC         | braun (BN) |
| (3) | 0 V oder 24V AC/DC | grau (GY)  |

- Nachdem die Spannungsversorgung erstmalig hergestellt wurde, führt der Stellantrieb einen Initialisierungslauf durch. Nach der Initialisierung ist das Produkt betriebsbereit.

7. Betrieb

Der Aktor wird über die jeweilige Regelungstechnik automatisch angesteuert.

8. Instandhaltung

Der Aktor ist wartungsfrei.

9. Demontage

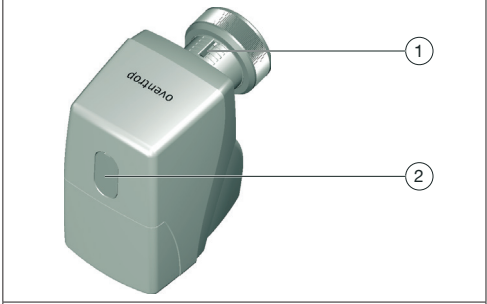


Abb. 9: Anzeige Hub-Position und Abdeckung Ventilspindel

|     |                                                     |
|-----|-----------------------------------------------------|
| (1) | Anzeige der Hub-Position des Stellantriebs          |
| (2) | Abdeckung für die Handverstellung (Verstellspindel) |

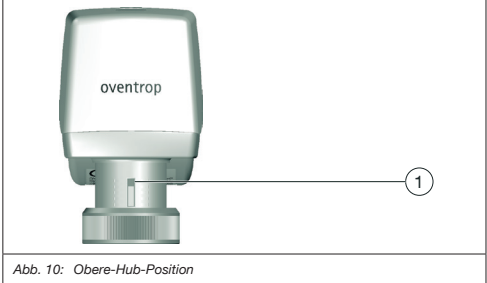


Abb. 10: Obere-Hub-Position

|     |                                 |
|-----|---------------------------------|
| (1) | Anzeige der oberen Hub-Position |
|-----|---------------------------------|

|  | VORSICHT                                                                                                                                                        |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>Verbrennungsgefahr an heißen Bauteilen!</b><br>Das Berühren heißer Bauteile kann zu Verbrennungen führen.<br>► Lassen Sie das Produkt vor Arbeiten abkühlen. |

| ACHTUNG                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Die Überwurfmutter lässt sich eventuell nicht von Hand lösen!</b><br>Der Aktor schließt das Ventil unter Umständen mit der maximalen Stellkraft von 200N. Dabei ist die Überwurfmutter nicht mehr von Hand zu lösen.<br>► Verwenden Sie keine Zange oder Ähnliches, um die Überwurfmutter zu lösen!<br>► Nutzen Sie die manuelle Verstellmöglichkeit |

- Trennen Sie den Stellantrieb allpolig von der Spannungsversorgung.
- Prüfen Sie die Hub-Position des Stellantriebs.

3. Wenn sich der Stellantrieb nicht in der oberen Hub-Position befindet (siehe Position (1) in Abb. 10): Öffnen Sie die Abdeckung für die Handverstellung (Verstellspindel) (siehe Position 2 in Abb. 9) und bringen Sie den Stellantrieb mit einem Innensechskantschlüssel (Schlüsselweite 4 mm) in die obere Hubstellung.

ACHTUNG

Funktionsstörung durch manuelles Überdrehen

Wird die Handverstellung bis zum Ansprechen der Rutschkupplung vorgenommen ist eine störungsfreie Funktion des Aktors nicht gewährleistet.

►

Drehen Sie den Innensechskantschlüssel nach Erreichen der manuell eingestellten Hubposition eine halbe Umdrehung in die entgegengesetzte Richtung!

4. Lösen Sie die Überwurfmutter.  
► Der Aktor kann abgenommen werden.

10. Erneute Montage

i

Für die korrekte Montage muss sich der Stellantrieb in der oberen Hub-Position befinden.

1. Bringen Sie den Stellantrieb vor der erneuten Montage in die obere Hub-Position wie in Abs. 9 beschrieben.
2. Setzen Sie den Stellantrieb auf den Gewindeanschluss des Ventils.
3. Schrauben Sie die Überwurfmutter handfest an.
4. Nehmen Sie den Stellantrieb in Betrieb, wie in Abs. 6 beschrieben.

i

Nach der erneuten Montage wird ein Initialisierungslauf nur ausgelöst, wenn einer der DIP-Schalter 1 bis 6 (siehe Abb. 4) verstellt wird, nachdem die Spannungsversorgung hergestellt wurde.  
Der Initialisierungslauf wird jedoch auch nach einer Neukonfiguration nicht ausgelöst, wenn sich der Stellantrieb bereits in der unteren Hub-Position befindet.

11. Entsorgung

ACHTUNG

Verschmutzungsgefahr für die Umwelt!

Nicht fachgerechte Entsorgung (z. B. im Hausmüll) kann zu Umweltschäden führen.

►

Entsorgen Sie Verpackungsmaterial umweltgerecht.

►

Entsorgen Sie Bauteile fachgerecht.

Sofern keine Rücknahme- oder Entsorgungsvereinbarung getroffen wurde, entsorgen Sie das Produkt.

- Führen Sie Bestandteile möglichst der Wiederverwertung zu.
- Entsorgen Sie nicht wiederverwertbare Bestandteile den lokalen Vorschriften entsprechend. Das Entsorgen im Hausmüll ist nicht zulässig.

12. Anhang

Einstellungen DIP-Schalter

| Ventil + Stellantrieb =            |                            |                 |              |     |     |     |     |     |              |     |     |     |     |     |
|------------------------------------|----------------------------|-----------------|--------------|-----|-----|-----|-----|-----|--------------|-----|-----|-----|-----|-----|
| Ventiltyp                          | Ausführung                 | Einstellbereich | DIP-Schalter |     |     |     |     |     | DIP-Schalter |     |     |     |     |     |
|                                    |                            |                 | S1           | S2  | S3  | S4  | S5  | S6  | S1           | S2  | S3  | S4  | S5  | S6  |
| <br>Cocon QTZ<br>PN 25             | DN 10/15<br>30 - 210 l/h   | 30 - 90 l/h     | on           | off | off | off | off | off |              |     |     |     |     |     |
|                                    |                            | 91 - 150 l/h    | on           | on  | off | off | off | off | on           | on  | off | off | off | on  |
|                                    |                            | 151 - 210 l/h   | on           | off | on  | off | off | off | on           | off | on  | off | off | on  |
|                                    | DN 10/15<br>150 - 700 l/h  | 150 - 250 l/h   | on           | on  | on  | off | off | off |              |     |     |     |     |     |
|                                    |                            | 251 - 500 l/h   | on           | off | off | on  | off | off | on           | on  | on  | off | off | on  |
|                                    |                            | 501 - 700 l/h   | on           | on  | off | on  | off | off | on           | off | off | on  | off | on  |
|                                    | DN 15<br>200 - 1300 l/h    | 200 - 300 l/h   | on           | off | on  | on  | off | off |              |     |     |     |     |     |
|                                    |                            | 301 - 500 l/h   | on           | off | on  | off | off | off | on           | off | on  | off | off | on  |
|                                    |                            | 501 - 900 l/h   | on           | on  | on  | on  | off | off | on           | on  | off | on  | off | on  |
|                                    | DN 20<br>250 - 1800 l/h    | 901 - 1300 l/h  | on           | off | off | off | on  | off | on           | off | on  | on  | off | on  |
|                                    |                            | 250 - 400 l/h   | on           | off | on  | on  | off | off |              |     |     |     |     |     |
|                                    |                            | 401 - 800 l/h   | on           | on  | off | off | off | off | on           | on  | off | off | off | on  |
|                                    | DN 25<br>400 - 2500 l/h    | 801 - 1100 l/h  | on           | on  | on  | on  | on  | off | on           | on  | off | off | on  | on  |
|                                    |                            | 1101 - 1500 l/h | on           | on  | off | off | on  | off | on           | on  | on  | on  | off | on  |
|                                    |                            | 1501 - 1800 l/h | on           | off | on  | off | on  | off | on           | off | on  | on  | off | on  |
|                                    | DN 32<br>600 - 4800 l/h    | 400 - 700 l/h   | on           | on  | on  | off | on  | off |              |     |     |     |     |     |
|                                    |                            | 701 - 1100 l/h  | on           | on  | off | off | off | off | on           | on  | off | off | off | on  |
|                                    |                            | 1101 - 2100 l/h | on           | off | off | on  | on  | off | on           | off | off | off | on  | on  |
| <br>Cocon QTR<br>PN 16             | DN 10/15<br>30 - 210 l/h   | 30 - 90 l/h     | off          | off | off | off | on  | off |              |     |     |     |     |     |
|                                    |                            | 91 - 150 l/h    | off          | on  | off | off | on  | off | off          | on  | on  | off | on  | on  |
|                                    |                            | 151 - 210 l/h   | off          | off | on  | off | on  | off | off          | on  | off | on  | on  | on  |
|                                    | DN 10/15<br>90 - 450 l/h   | 90 - 150 l/h    | off          | on  | on  | off | on  | off |              |     |     |     |     |     |
|                                    |                            | 151 - 250 l/h   | off          | off | off | on  | on  | off | off          | off | off | on  | on  | on  |
|                                    |                            | 251 - 450 l/h   | off          | on  | off | on  | on  | off | off          | on  | off | on  | on  | on  |
|                                    | DN 15/20<br>150 - 1050 l/h | 150 - 200 l/h   | off          | off | on  | on  | on  | off |              |     |     |     |     |     |
|                                    |                            | 201 - 300 l/h   | off          | off | off | on  | off | on  | off          | off | on  | off | on  | on  |
|                                    |                            | 301 - 600 l/h   | off          | on  | on  | on  | on  | off | off          | off | on  | on  | on  | on  |
|                                    | DN 20<br>180 - 1300 l/h    | 601 - 1050 l/h  | off          | off | off | off | off | on  | off          | on  | off | on  | on  | on  |
|                                    |                            | 180 - 400 l/h   | off          | on  | off | off | off | on  | off          | off | on  | off | on  | on  |
|                                    |                            | 401 - 500 l/h   | off          | on  | off | off | on  | off | off          | on  | on  | off | on  | on  |
|                                    | DN 25<br>300 - 2000 l/h    | 501 - 600 l/h   | off          | off | on  | off | on  | off | off          | on  | off | on  | on  | on  |
|                                    |                            | 601 - 700 l/h   | off          | off | on  | off | off | on  | off          | off | on  | on  | on  | on  |
|                                    |                            | 701 - 1300 l/h  | off          | on  | on  | off | off | on  | off          | off | on  | on  | on  | on  |
|                                    | DN 32<br>600 - 3600 l/h    | 300 - 400 l/h   | off          | off | off | on  | off | on  |              |     |     |     |     |     |
|                                    |                            | 401 - 600 l/h   | off          | off | off | on  | on  | off | off          | off | on  | on  | on  | on  |
|                                    |                            | 601 - 900 l/h   | off          | off | off | off | off | on  | off          | on  | off | on  | on  | on  |
| <br>Cocon 2TZ<br><br><br>Cocon 4TR | kvs = 0.45                 | 0.25 U.         | off          | off | off | on  | off | off |              |     |     |     |     |     |
|                                    |                            | 0.26 - 0.5 U    | off          | off | on  | off | on  | off |              |     |     |     |     |     |
|                                    |                            | 0.6 - 4 U.      | off          | off | on  | off | off | off | off          | off | on  | off | on  | off |
|                                    | kvs = 1.0                  | 0.5 - 1 U.      | off          | on  | off | off | on  | off |              |     |     |     |     |     |
|                                    |                            | 1.1 - 4.5 U     | off          | off | off | off | off | on  | off          | on  | on  | on  | on  | on  |
|                                    |                            | 0.5 - 7 U.      | off          | on  | off | off | on  | off |              |     |     |     |     |     |
|                                    | kvs = 1.8                  | 0.75 - 1 U.     | off          | off | on  | off | on  | off |              |     |     |     |     |     |
|                                    |                            | 1.1 - 7 U.      | off          | off | on  | on  | off | on  |              |     |     |     |     |     |
|                                    |                            |                 |              |     |     |     |     |     |              |     |     |     |     |     |
|                                    | kvs = 4.5                  |                 |              |     |     |     |     |     |              |     |     |     |     |     |
|                                    |                            |                 |              |     |     |     |     |     |              |     |     |     |     |     |
|                                    |                            |                 |              |     |     |     |     |     |              |     |     |     |     |     |
|                                    | kvs = 4.5                  |                 |              |     |     |     |     |     |              |     |     |     |     |     |
|                                    |                            |                 |              |     |     |     |     |     |              |     |     |     |     |     |
|                                    |                            |                 |              |     |     |     |     |     |              |     |     |     |     |     |
|                                    |                            |                 |              |     |     |     |     |     |              |     |     |     |     |     |
| <br><br><br><br><br><br>           | AV9                        | VE 3, 4, 5, 6   | off          | off | on  | on  | off | off |              |     |     |     |     |     |
|                                    |                            | VE 7, 8         | off          | on  | off | on  | off | off |              |     |     |     |     |     |
|                                    |                            | VE 9            | off          | off | off | on  | off | off |              |     |     |     |     |     |
|                                    | AV6                        | VE 2, 3         | off          | off | on  | on  | off | off |              |     |     |     |     |     |
|                                    |                            | VE 4, 5         | off          | on  | off | on  | off | off |              |     |     |     |     |     |
|                                    |                            | VE 6            | off          | off | off | on  | off | off |              |     |     |     |     |     |
|                                    | AF                         | VE 1, 2, 3, 4   | off          | on  | on  | on  | off | off |              |     |     |     |     |     |
|                                    |                            | VE 5, 6         | off          | off | on  | on  | off | off |              |     |     |     |     |     |
|                                    |                            |                 |              |     |     |     |     |     |              |     |     |     |     |     |
|                                    | AZ/A                       |                 | off          | on  | off | off | off | on  | off          | on  | on  | off | on  | off |
|                                    |                            |                 |              |     |     |     |     |     |              |     |     |     |     |     |
|                                    |                            |                 |              |     |     |     |     |     |              |     |     |     |     |     |
|                                    | PTB kvs=0.45               |                 | off          | off | on  | off | off | off | off          | off | on  | off | on  | off |
|                                    |                            |                 |              |     |     |     |     |     |              |     |     |     |     |     |
|                                    | PTB kvs=0.80               |                 | off          | off | off | off | off | on  | off          | on  | on  | on  | on  | on  |
|                                    |                            |                 |              |     |     |     |     |     |              |     |     |     |     |     |

|                   |                    |               |     |     |     |     |     |     |  |  |  |  |  |  |
|-------------------|--------------------|---------------|-----|-----|-----|-----|-----|-----|--|--|--|--|--|--|
| <br>Hycococon HTZ | DN 15<br>kvs = 1.7 | 0.5 - 0.75 U. | off | off | on  | on  | off | off |  |  |  |  |  |  |
|                   |                    | 0.76 - 1 U.   | off | on  | off | on  | off | off |  |  |  |  |  |  |
|                   |                    | 1.1 - 3 U.    | off | off | off | on  | off | off |  |  |  |  |  |  |
|                   | DN 20<br>kvs = 2.7 | 0.5 - 0.75 U. | off | off | on  | on  | off | off |  |  |  |  |  |  |
|                   |                    | 0.76 - 1.5 U. | off | off | on  | off | on  | off |  |  |  |  |  |  |
|                   |                    | 1.6 - 3 U.    | off | off | on  | on  | off | on  |  |  |  |  |  |  |
|                   | DN 25<br>kvs = 3.6 | 0.5 - 0.75 U. | off | on  | on  | on  | off | off |  |  |  |  |  |  |
|                   |                    | 0.76 - 1.0 U. | off | off | on  | on  | off | off |  |  |  |  |  |  |
|                   |                    | 1.1 - 1.5 U.  | off | on  | off | off | on  | off |  |  |  |  |  |  |
|                   | DN 32<br>kvs = 6.8 | 1.6 - 3.0 U.  | off | off | off | off | off | on  |  |  |  |  |  |  |
|                   |                    | 3.1 - 3.5 U.  | off | off | on  | off | off | on  |  |  |  |  |  |  |
|                   |                    | 0.5 U.        | off | on  | on  | on  | off | off |  |  |  |  |  |  |
|                   | DN 40<br>kvs = 10  | 0.6 - 1.0 U.  | off | off | on  | on  | off | off |  |  |  |  |  |  |
|                   |                    | 1.1 - 1.5 U.  | off | on  | off | on  | off | off |  |  |  |  |  |  |
|                   |                    | 1.6 - 2.0 U.  | off | off | off | on  | off | off |  |  |  |  |  |  |
|                   |                    | 2.1 - 2.5 U.  | off | on  | on  | off | off | off |  |  |  |  |  |  |
|                   |                    | 2.6 - 3.0 U.  | off | on  | off | off | off | off |  |  |  |  |  |  |
|                   |                    | 3.1 - 4.0 U.  | off | off | off | off | off | off |  |  |  |  |  |  |

|                                       |             |            |     |     |     |     |     |     |  |     |     |     |     |    |    |
|---------------------------------------|-------------|------------|-----|-----|-----|-----|-----|-----|--|-----|-----|-----|-----|----|----|
| Fremdfabrikate<br>(M30x1.5, s=11.8mm) | Ventilhub h | h = 0,5 mm | off | on  | on  | on  | off | off |  | off | on  | off | off | on | on |
|                                       |             | h = 1,0 mm | off | off | on  | on  | off | off |  |     |     |     |     |    |    |
|                                       |             | h = 1,5 mm | off | on  | off | on  | off | off |  | off | off | on  | off | on | on |
|                                       |             | h = 2,0 mm | off | off | off | on  | off | off |  | off | on  | on  | off | on | on |
|                                       |             | h = 2,5 mm | off | on  | on  | off | off | off |  | off | off | off | on  | on | on |
|                                       |             | h = 3,0 mm | off | off | on  | off | off | off |  | off | on  | off | on  | on | on |
|                                       |             | h = 3,5 mm | off | on  | off | off | off | off |  | off | off | on  | on  | on | on |
|                                       |             | h = 4,0 mm | off | off | off | off | off | off |  | off | on  | on  | on  | on | on |
|                                       |             |            |     |     |     |     |     |     |  |     |     |     |     |    |    |
|                                       |             |            |     |     |     |     |     |     |  |     |     |     |     |    |    |
|                                       |             |            |     |     |     |     |     |     |  |     |     |     |     |    |    |
|                                       |             |            |     |     |     |     |     |     |  |     |     |     |     |    |    |



1. General information
2. Safety-related information
3. Technical description
4. Transport and storage
5. Installation
6. Commissioning
7. Operation
8. Maintenance
9. Removal
10. Reinstallation
11. Disposal
12. Appendix

1. General information

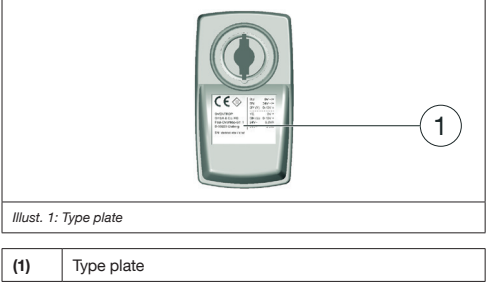
The original operating instructions were drafted in German.  
The operating instructions in other languages have been translated from German.

1.1 Validity of the operating instructions

These operating instructions are valid for the electromotive actuator "Aktor M ST L", 0 – 10V / 3 point control, 24 V

1.2 Type plate

The type plate is located on the bottom of the product.



1.3 Extent of supply

Please check your delivery for any damage caused during transit and for completeness.  
Items included in the extent of supply:

- "Aktor M ST L"
- Operating instructions

1.4 Contact

Contact address

OVENTROP GmbH & Co. KG  
Paul-Oventrop-Straße 1  
59939 Olsberg  
GERMANY

Technical services

Telephone: +49 (0) 29 62 82-234

1.5 Copyright and protective rights

These operating instructions are copyrighted. They are intended exclusively for persons involved with the product.

1.6 EU declaration of conformity

Oventrop GmbH & Co. KG hereby declares that this product complies with the fundamental requirements and other relevant provisions of the applicable EC Directives.  
The declaration of conformity can be obtained from the manufacturer.

1.7 Symbols used

|          |                                                            |
|----------|------------------------------------------------------------|
|          | Highlights important information and further explanations. |
|          | Action required                                            |
|          | List                                                       |
| 1.<br>2. | Fixed order. Steps 1 to X.                                 |
|          | Result of action                                           |

2. Safety-related information

2.1 Normative directives

Observe the legal requirements applicable at the installation location.  
The current standards, regulations and guidelines apply.

2.2 Correct use

Operating safety is only guaranteed if the product is used correctly.  
The actuator may be used in indoor heating, ventilation and air conditioning systems.  
Any other use of the product will be considered incorrect use.  
Claims of any kind against the manufacturer and/or its authorised representatives due to damage caused by incorrect use will not be accepted.  
Observance of these operating instructions is part of compliance with correct use.

2.3 Modifications to the product

Modifications to the product are not permitted. In the case of modifications to the product, the warranty will become void. The manufacturer will not accept liability for damage and breakdowns caused by modifications to the product.

2.4 Warnings

Each warning contains the following elements:

| Warning symbol | SIGNAL WORD                                                                                                                             |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------|
|                | <b>Type and source of danger!</b><br>Possible consequences if the danger occurs or the warning is ignored.<br>Ways to avoid the danger. |

The signal words identify the severity of the danger arising from a situation.

| CAUTION                                                                                                              |
|----------------------------------------------------------------------------------------------------------------------|
| Indicates a possible danger with a lower risk. The situation may lead to minor and reversible injury if not avoided. |

| NOTICE                                                                    |
|---------------------------------------------------------------------------|
| Indicates a situation that may lead to damage to property if not avoided. |

2.5 Safety notes

We have developed this product in accordance with current safety requirements.  
Please note the following information concerning safe use.

2.5.1 Danger caused by inadequately qualified personnel

Work on this product may only be carried out by adequately qualified installers.  
Qualified installers are able to correctly carry out work on the product described as a result of their professional training and experience, as well as awareness of the relevant regulations.

User

The user must be trained in the operation of the product by a qualified installer.

2.5.2 Danger from electric current!

Work on the power supply may only be carried out by a qualified electrician.

- Do not put the product into operation if there are visible signs of damage.
- Completely disconnect the product from the power supply.
- Check that the product is disconnected from the power supply.
- Secure the product against switching back on.
- The product may only be installed in dry indoor areas.

2.5.3 Risk of burns due to hot components and surfaces

- Allow the product to cool down before working on it.
- Wear suitable protective clothing to avoid unprotected contact with hot system components and fittings.

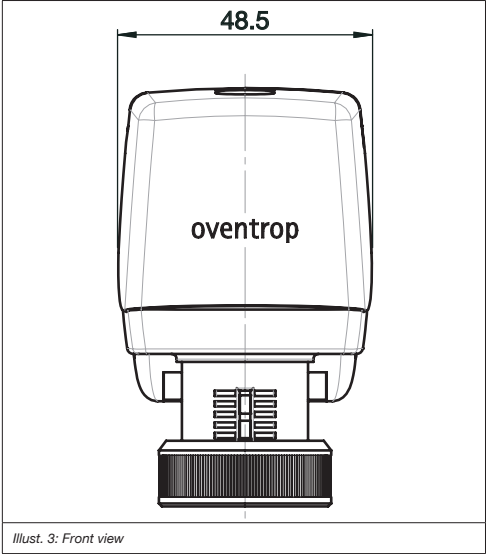
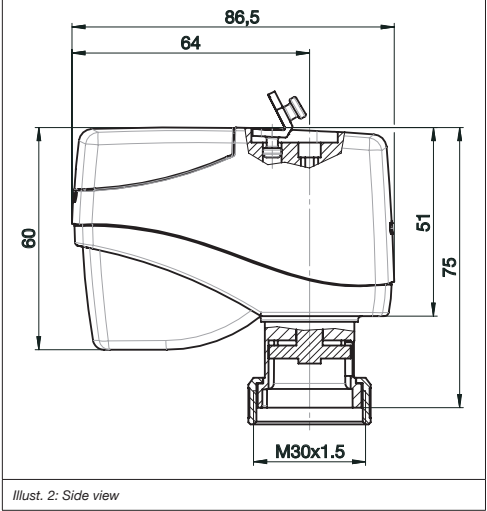
2.5.4 Availability of the operating instructions

These operating instructions and all other relevant documents (e.g. accessory manuals) must be read and applied by any person working with the product.  
The operating instructions must be available at the installation location of the product.

- Hand these operating instructions and all other relevant documents over to the user.

3. Technical description

3.1 Construction



3.2 Functional description

The actuator opens or closes the valve depending on the applied control voltage.  
The actuator can be adapted to the specific parameters of the valve and to specific operation requirements with the help of DIP switches.

3.3 Technical data

|                                        |                                                                                                                                                                                                                                                                                           |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating voltage                      | 24 V AC ±10 %, 50/60 Hz<br>24 V DC ±10 %                                                                                                                                                                                                                                                  |
| Power consumption                      | Dimensioning:<br>- 3.7 VA (24 V AC)<br>- 1.7 W (24 V DC)<br>Nominal:<br>- 2.5 VA (24 V AC)<br>- 1.3 W (24 V DC)                                                                                                                                                                           |
| Start up load                          | Max. 10 A for short periods                                                                                                                                                                                                                                                               |
| Control                                | - Steady control 0 – 10 V DC<br>- 3 point control (Open/Stop/Closed)<br>The voltage switch-on time may not fall below 2 seconds for any given operation mode!<br>- 2 point control (Open/Closed)<br>The voltage switch-on time may not fall below 2 seconds for any given operation mode! |
| Connection                             | Fixed pre-assembled cable<br>1.5 m; 3 x 0.5 mm2                                                                                                                                                                                                                                           |
| Motor deactivation                     | Spindle drive:<br>extending = load-dependent,<br>retracting = travel-dependent                                                                                                                                                                                                            |
| Travel                                 | Max. 4 mm                                                                                                                                                                                                                                                                                 |
| Floating time                          | 22 s/mm                                                                                                                                                                                                                                                                                   |
| Actuating power                        | Nominal 150 N                                                                                                                                                                                                                                                                             |
| Setting indicator                      | Stroke scale                                                                                                                                                                                                                                                                              |
| Manual setting                         | Only when not under current!<br>Adjustment spindle for Allen key under the cover (Position 2 in Illust. 9), 4 mm across flats                                                                                                                                                             |
| Permissible fluid temperature in valve | 0 – 120 °C                                                                                                                                                                                                                                                                                |

|                         |                                                                                                |
|-------------------------|------------------------------------------------------------------------------------------------|
| Ambient temperature     | 0 – 50 °C                                                                                      |
| Ambient humidity        | In operation: 0 – 85 % r.h., not condensing<br>Not in operation: 0 – 85 % r.h., not condensing |
| Overvoltage category    | III                                                                                            |
| Degree of contamination | 2                                                                                              |
| Protection              | IP54 in all installation positions                                                             |
| Protection class        | III in accordance with EN 60730                                                                |
| Installation position   | No restriction                                                                                 |
| Maintenance             | Maintenance-free                                                                               |
| Weight                  | 230 g                                                                                          |

4. Transport and storage

|                       |                                                       |
|-----------------------|-------------------------------------------------------|
| Temperature range     | -0 °C – +40 °C                                        |
| Relative air humidity | Max. 95 %                                             |
| Particles             | Store dry and free from dust                          |
| Mechanical influences | Protect from mechanical agitation                     |
| Weather influences    | Do not store outdoors<br>Protect from direct sunlight |
| Chemical influences   | Do not store together with aggressive fluids          |

5. Installation

5.1 Initial installation

|  |                                                                    |
|--|--------------------------------------------------------------------|
|  | Ensure that you have sufficient room when installing the actuator. |
|  | Only connect the actuator to the power supply after installation!  |

| CAUTION                                                                                                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Risk of burns due to hot components!</b><br>Contact with hot components may cause burns.<br>Before starting work, let the valve cool down.<br>Wear safety gloves. |

- Fit the actuator to the connection thread of the valve.
- Tighten the collar nut finger-tight.

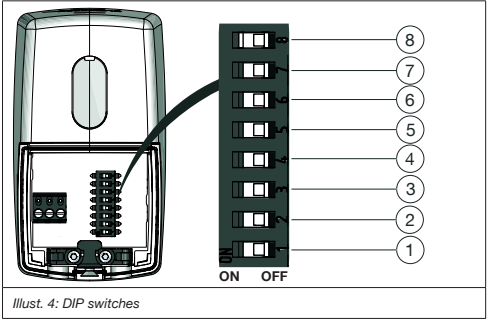
|  |                                        |
|--|----------------------------------------|
|  | Ensure that you avoid cross-threading. |
|--|----------------------------------------|

| NOTICE                                                                                                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Damage to the actuator due to over-tightening of the collar nut!</b><br>The actuator can be damaged and its function impaired if the collar nut is tightened too much.<br>Hand-tighten the collar nut. |

6. Commissioning

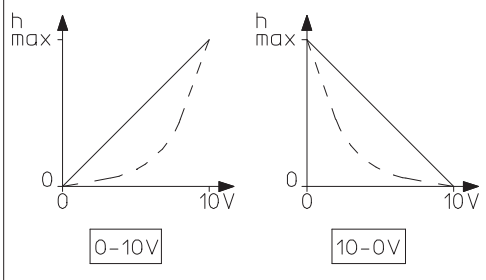
6.1 Configuring the DIP switches

- Remove the casing cover.
- Configure the DIP switches according to the valve used (see section 12)



|     |           |                                                                                                             |
|-----|-----------|-------------------------------------------------------------------------------------------------------------|
| (1) | S1 ON/OFF | <b>Setting the required stroke behaviour in accordance with the characteristic lines of the valve used.</b> |
| (2) | S2 ON/OFF |                                                                                                             |
| (3) | S3 ON/OFF |                                                                                                             |
| (4) | S4 ON/OFF |                                                                                                             |
| (5) | S5 ON/OFF |                                                                                                             |
| (6) | S6 ON/OFF |                                                                                                             |

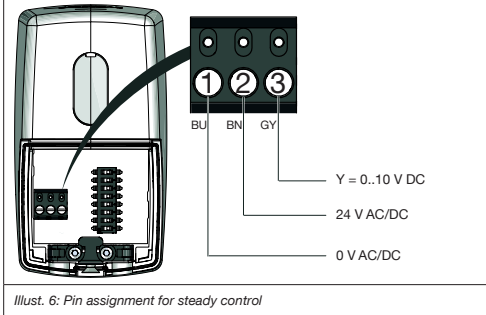
|     |                                                           |                  |
|-----|-----------------------------------------------------------|------------------|
| (7) | ON = 10 V – 0 V                                           | OFF = 0 V – 10 V |
|     | see Illust. 5                                             |                  |
| (8) | Automatic flushing function and valve blocking protection |                  |
|     | ON                                                        | activated        |
|     | OFF                                                       | deactivated      |



6.2 Connecting the power supply

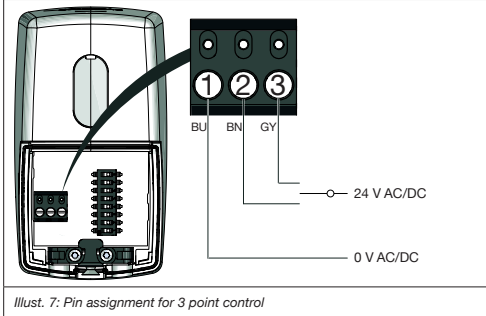
- Connect the power supply for the desired configuration as shown in Illust. 6 to Illust. 8.

6.2.1 Steady control



|     |                     |            |
|-----|---------------------|------------|
| (1) | 0 V AC/DC           | blue (BU)  |
| (2) | 24 V AC/DC          | brown (BN) |
| (3) | Control 0 – 10 V DC | grey (GY)  |

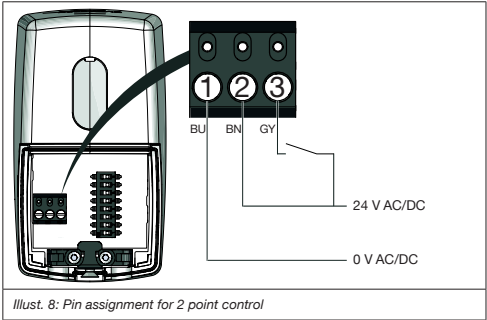
6.2.2 3 point control



|     |                   |            |
|-----|-------------------|------------|
| (1) | 0 V AC/DC         | blue (BU)  |
| (2) | 0 V or 24 V AC/DC | brown (BN) |
| (3) | 0 V or 24 V AC/DC | grey (GY)  |

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>If the DIP switch 7 is set to OFF, the stroke behaviour will be as follows. (If the DIP switch is set to ON, the stroke behaviour will be reversed!)</b> <ul style="list-style-type: none"><li>The actuator will move to the upper lift position (see position (1) in Illust. 10) when position/pin contact (3) registers a 24-V connection.</li><li>The actuator will move to the lower lift position when position/pin contact (2) registers a 24-V connection.</li></ul> |
|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

6.2.3 2 point control



|     |                   |            |
|-----|-------------------|------------|
| (1) | 0 V AC/DC         | blue (BU)  |
| (2) | 24 V AC/DC        | brown (BN) |
| (3) | 0 V or 24 V AC/DC | grey (GY)  |

- After the power supply has been connected for the first time, the actuator will carry out an initialisation run. The product will be ready for operation after this initialisation.

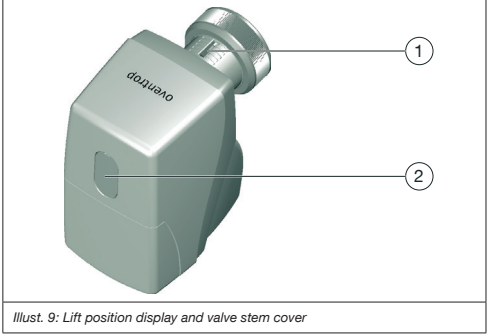
7. Operation

The actuator is automatically controlled using the relevant control technology.

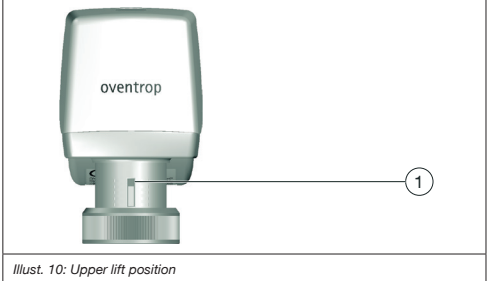
8. Maintenance

The actuator is maintenance-free.

9. Removal



|     |                                               |
|-----|-----------------------------------------------|
| (1) | Display of the actuator lift position         |
| (2) | Cover for manual setting (adjustment spindle) |



|     |                                    |
|-----|------------------------------------|
| (1) | Display of the upper lift position |
|-----|------------------------------------|

| CAUTION                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Risk of burns due to hot components!</b><br>Contact with hot components may cause burns.<br>Allow the product to cool down before working on it. |

| NOTICE                                                                                                                                                                                                                                                                                                                             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>It may not be possible to unscrew the collar nut manually!</b><br>In some circumstances, the actuator closes the valve with the maximum actuating power of 200 N. In this case, the collar nut can no longer be unscrewed manually.<br>Do not use pliers or similar to loosen the collar nut!<br>Use the manual setting option. |

- Completely disconnect the actuator (all poles) from the power supply.
- Check the actuator lift position.

3. If the actuator is not in the upper lift position: (see position (1) in Illust. 10):  
Open the cover for manual setting (adjustment spindle) (see position 2 in Illust. 9) and move the actuator into the upper lift position using an Allen key (4 mm across flats).

NOTICE

**Malfunction due to manual over-tightening**  
Fault-free operation of the actuator is not guaranteed if contact is made with the slip clutch during manual setting.  

► After reaching the manually-set piston stroke position, rotate the Allen key half a turn in the opposite direction!

4. Undo the collar nut.  
► The actuator can be removed.

10. Reinstallation

The actuator must be in the upper lift position for correct installation.

1. Before reinstalling, position the actuator in the upper lift position as described in section 9.
2. Fit the actuator to the connection thread of the valve.
3. Tighten the collar nut finger-tight.
4. Commission the actuator as described in section 6.

After reinstallation, an initialisation run will only be triggered if one of the DIP switches 1 to 6 (see Illust. 4) is reset after connection to the power supply.  
The initialisation run will neither be triggered after a reconfiguration if the actuator is already in the lower lift position.

11. Disposal

NOTICE

**Risk of environmental pollution!**  
Incorrect disposal (for instance with standard waste) may lead to environmental damage.  

► Dispose of packaging material in an environmentally friendly manner.  
► Dispose of the components appropriately.

- If no return or disposal agreement has been made, you must dispose of the product yourself.
- Return components to the recycling system if possible.
- Dispose of components which cannot be recycled according to local regulations. Disposal with standard waste is not permitted.

12. Appendix

DIP switch settings

| Valve + actuator =                                        |                            |                       |              |     |     |     |     |     |              |     |     |     |     |     |
|-----------------------------------------------------------|----------------------------|-----------------------|--------------|-----|-----|-----|-----|-----|--------------|-----|-----|-----|-----|-----|
| Valve type                                                | Model                      | Control range         | DIP switches |     |     |     |     |     | DIP switches |     |     |     |     |     |
|                                                           |                            |                       | S1           | S2  | S3  | S4  | S5  | S6  | S1           | S2  | S3  | S4  | S5  | S6  |
| <br>Cocon QTZ<br>PN 25                                    | DN 10/15<br>30 – 210 l/h   | 30 – 90 l/h           | on           | off | off | off | off | off |              |     |     |     |     |     |
|                                                           |                            | 91 - 150 l/h          | on           | on  | off | off | off | off | on           | on  | off | off | off | on  |
|                                                           |                            | 151 - 210 l/h         | on           | off | on  | off | off | off | on           | off | on  | off | off | on  |
|                                                           |                            | 150 - 250 l/h         | on           | on  | on  | off | off | off |              |     |     |     |     |     |
|                                                           |                            | 251 - 500 l/h         | on           | off | off | on  | off | off | on           | on  | on  | off | off | on  |
|                                                           |                            | 501 - 700 l/h         | on           | on  | off | on  | off | off | on           | off | off | on  | off | on  |
|                                                           | DN 15<br>200 – 1300 l/h    | 200 - 300 l/h         | on           | off | on  | on  | off | off |              |     |     |     |     |     |
|                                                           |                            | 301 - 500 l/h         | on           | off | on  | off | off | off | on           | off | on  | off | off | on  |
|                                                           |                            | 501 - 900 l/h         | on           | on  | on  | on  | off | off | on           | on  | off | on  | off | on  |
|                                                           |                            | 901 - 1300 l/h        | on           | off | off | off | on  | off | on           | off | on  | on  | off | on  |
|                                                           |                            | 250 - 400 l/h         | on           | off | on  | on  | off | off |              |     |     |     |     |     |
|                                                           |                            | 401 - 800 l/h         | on           | on  | off | off | off | off | on           | on  | off | off | off | on  |
|                                                           | DN 20<br>250 – 1800 l/h    | 801 - 1100 l/h        | on           | on  | on  | on  | on  | off | on           | on  | off | off | on  | on  |
|                                                           |                            | 1101 - 1500 l/h       | on           | on  | off | off | on  | off | on           | on  | on  | on  | off | on  |
|                                                           |                            | 1501 - 1800 l/h       | on           | off | on  | off | on  | off | on           | off | on  | on  | off | on  |
|                                                           |                            | 400 - 700 l/h         | on           | on  | on  | on  | off | on  |              |     |     |     |     |     |
|                                                           |                            | 701 - 1100 l/h        | on           | on  | off | off | off | off | on           | on  | off | off | off | on  |
|                                                           |                            | 1101 - 2100 l/h       | on           | off | on  | on  | on  | off | on           | off | off | off | on  | on  |
|                                                           | DN 25<br>400 – 2500 l/h    | 2101 - 2500 l/h       | on           | on  | off | on  | on  | off | on           | off | on  | on  | off | on  |
|                                                           |                            | 600 - 800 l/h         | on           | off | on  | on  | on  | off |              |     |     |     |     |     |
|                                                           |                            | 801 - 2800 l/h        | on           | on  | on  | on  | on  | off | on           | on  | off | off | on  | on  |
|                                                           |                            | 2801 - 4800 l/h       | on           | off | off | off | off | on  | on           | off | on  | off | on  | on  |
|                                                           |                            | 30 - 90 l/h           | off          | off | off | off | on  | off |              |     |     |     |     |     |
|                                                           |                            | 91 - 150 l/h          | off          | on  | off | off | on  | off | off          | on  | on  | off | on  | on  |
| <br>Cocon QTZ<br>PN 16                                    | DN 10/15<br>30 – 210 l/h   | 151 – 210 l/h         | off          | off | on  | off | on  | off | off          | on  | on  | off | on  | on  |
|                                                           |                            | 90 – 150 l/h          | off          | on  | on  | off | on  | off |              |     |     |     |     |     |
|                                                           |                            | 151 – 250 l/h         | off          | off | off | on  | on  | off | off          | off | off | on  | on  | on  |
|                                                           |                            | 251 – 450 l/h         | off          | on  | off | on  | on  | off | off          | on  | off | on  | on  | on  |
|                                                           |                            | 150 – 200 l/h         | off          | off | on  | on  | on  | off |              |     |     |     |     |     |
|                                                           |                            | 201 – 300 l/h         | off          | off | off | on  | off | on  | off          | off | on  | off | on  | on  |
|                                                           | DN 15/20<br>150 – 1050 l/h | 301 – 600 l/h         | off          | on  | on  | on  | on  | off | off          | off | off | on  | on  | on  |
|                                                           |                            | 601 – 1050 l/h        | off          | off | off | off | off | on  | off          | on  | off | on  | on  | on  |
|                                                           |                            | 180 – 400 l/h         | off          | on  | off | off | off | on  | off          | off | on  | off | on  | on  |
|                                                           |                            | 401 – 500 l/h         | off          | on  | off | off | on  | off | off          | on  | on  | off | on  | on  |
|                                                           |                            | 501 – 600 l/h         | off          | off | on  | off | on  | off | off          | on  | off | on  | on  | on  |
|                                                           |                            | 601 – 700 l/h         | off          | off | on  | off | off | on  | off          | off | on  | on  | on  | on  |
|                                                           | DN 20<br>180 – 1300 l/h    | 701 – 1300 l/h        | off          | on  | on  | off | off | on  | off          | off | on  | on  | on  | on  |
|                                                           |                            | 300 – 400 l/h         | off          | off | off | on  | off | on  |              |     |     |     |     |     |
|                                                           |                            | 401 – 600 l/h         | off          | off | off | on  | on  | off | off          | off | on  | on  | on  | on  |
|                                                           |                            | 601 – 900 l/h         | off          | off | off | off | off | on  | off          | on  | off | on  | on  | on  |
|                                                           |                            | 901 – 1400 l/h        | off          | on  | off | on  | off | on  | off          | off | on  | on  | on  | on  |
|                                                           |                            | 1401 – 2000 l/h       | off          | off | on  | on  | off | on  | off          | on  | on  | on  | on  | on  |
|                                                           | DN 25<br>300 – 2000 l/h    | 600 l/h               | off          | on  | on  | on  | off | on  |              |     |     |     |     |     |
|                                                           |                            | 601 – 800 l/h         | off          | off | off | off | on  | on  | off          | on  | off | on  | on  | on  |
|                                                           |                            | 801 – 1600 l/h        | off          | off | off | off | on  | on  | off          | off | on  | on  | on  | on  |
|                                                           |                            | 1601 – 3600 l/h       | off          | off | off | off | off | off | off          | on  | on  | on  | on  | on  |
|                                                           |                            | 0.25 U.               | off          | off | off | on  | off | off |              |     |     |     |     |     |
|                                                           |                            | 0.26 – 0.5 U          | off          | off | on  | off | on  | off |              |     |     |     |     |     |
| <br>Cocon 2TZ<br>+<br><br>Cocon 4TR                       | kvs = 0.45                 | 0.6 – 4 U.            | off          | off | on  | off | off | off | off          | off | on  | off | on  | off |
|                                                           |                            | 0.5 – 1 U.            | off          | on  | off | off | on  | off |              |     |     |     |     |     |
|                                                           |                            | 1.1 – 4.5 U           | off          | off | off | off | off | on  | off          | on  | on  | on  | on  | on  |
|                                                           |                            | 0.5 – 7 U.            | off          | on  | off | off | on  | off |              |     |     |     |     |     |
|                                                           |                            | 0.75 – 1 U.           | off          | off | on  | off | on  | off |              |     |     |     |     |     |
|                                                           |                            | 1.1 – 7 U.            | off          | off | on  | on  | off | on  |              |     |     |     |     |     |
|                                                           | kvs = 1.0                  |                       |              |     |     |     |     |     |              |     |     |     |     |     |
|                                                           |                            |                       |              |     |     |     |     |     |              |     |     |     |     |     |
|                                                           |                            |                       |              |     |     |     |     |     |              |     |     |     |     |     |
|                                                           |                            |                       |              |     |     |     |     |     |              |     |     |     |     |     |
|                                                           |                            |                       |              |     |     |     |     |     |              |     |     |     |     |     |
|                                                           |                            |                       |              |     |     |     |     |     |              |     |     |     |     |     |
| <br>Cocon 4TR<br>+<br><br>Cocon 2TZ<br>+<br><br>Cocon 4TR | AV9                        | Presetting 3, 4, 5, 6 | off          | off | on  | on  | off | off |              |     |     |     |     |     |
|                                                           |                            | Presetting 7, 8       | off          | on  | off | on  | off | off |              |     |     |     |     |     |
|                                                           |                            | Presetting 9          | off          | off | off | on  | off | off |              |     |     |     |     |     |
|                                                           | AV6                        | Presetting 2, 3       | off          | off | on  | on  | off | off |              |     |     |     |     |     |
|                                                           |                            | Presetting 4, 5       | off          | on  | off | on  | off | off |              |     |     |     |     |     |
|                                                           |                            | Presetting 6          | off          | off | off | on  | off | off |              |     |     |     |     |     |
|                                                           | AF                         | Presetting 1, 2, 3, 4 | off          | on  | on  | on  | off | off |              |     |     |     |     |     |
|                                                           |                            | Presetting 5, 6       | off          | off | on  | on  | off | off |              |     |     |     |     |     |
|                                                           |                            |                       |              |     |     |     |     |     |              |     |     |     |     |     |
|                                                           | AZ/A                       |                       | off          | on  | off | off | off | on  | off          | on  | on  | off | on  | off |
|                                                           |                            |                       |              |     |     |     |     |     |              |     |     |     |     |     |
|                                                           |                            |                       |              |     |     |     |     |     |              |     |     |     |     |     |
| <br>Cocon 4TR<br>+<br><br>Cocon 2TZ                       | PTB kvs = 0.45             |                       | off          | off | on  | off | off | off | off          | off | on  | off | on  | off |
|                                                           | PTB kvs = 0.80             |                       | off          | off | off | off | off | on  | off          | on  | on  | on  | on  | on  |

|                                                                |                    |               |     |     |     |     |     |     |     |     |     |     |     |    |
|----------------------------------------------------------------|--------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| <br>Hycococon HTZ                                              | DN 15<br>kvs = 1.7 | 0.5 – 0.75 U. | off | off | on  | on  | off | off |     |     |     |     |     |    |
|                                                                |                    | 0.76 – 1 U.   | off | on  | off | on  | off | off |     |     |     |     |     |    |
|                                                                |                    | 1.1 – 3 U.    | off | off | off | on  | off | off |     |     |     |     |     |    |
|                                                                | DN 20<br>kvs = 2.7 | 0.5 – 0.75 U. | off | off | on  | on  | off | off |     |     |     |     |     |    |
|                                                                |                    | 0.76 – 1.5 U. | off | off | on  | off | on  | off |     |     |     |     |     |    |
|                                                                |                    | 1.6 – 3 U.    | off | off | on  | on  | off | on  |     |     |     |     |     |    |
|                                                                | DN 25<br>kvs = 3.6 | 0.5 – 0.75 U. | off | on  | on  | on  | off | off |     |     |     |     |     |    |
|                                                                |                    | 0.76 – 1.0 U. | off | off | on  | on  | off | off |     |     |     |     |     |    |
|                                                                |                    | 1.1 – 1.5 U.  | off | on  | off | off | on  | off |     |     |     |     |     |    |
|                                                                |                    | 1.6 – 3.0 U.  | off | off | off | off | off | on  |     |     |     |     |     |    |
|                                                                |                    | 3.1 – 3.5 U.  | off | off | on  | off | off | on  |     |     |     |     |     |    |
|                                                                | DN 32<br>kvs = 6.8 | 0.5 U.        | off | on  | on  | on  | off | off |     |     |     |     |     |    |
|                                                                |                    | 0.6 – 1.0 U.  | off | off | on  | on  | off | off |     |     |     |     |     |    |
|                                                                |                    | 1.1 – 1.5 U.  | off | on  | off | on  | off | off |     |     |     |     |     |    |
|                                                                |                    | 1.6 – 2.0 U.  | off | off | off | on  | off | off |     |     |     |     |     |    |
|                                                                |                    | 2.1 – 2.5 U.  | off | on  | on  | off | off | off |     |     |     |     |     |    |
|                                                                |                    | 2.6 – 3.0 U.  | off | on  | off | off | off | off |     |     |     |     |     |    |
|                                                                |                    | 3.1 – 4.0 U.  | off | off | off | off | off | off |     |     |     |     |     |    |
|                                                                | DN 40<br>kvs = 10  | 0.5 – 0.75 U. | off | off | on  | on  | off | off |     |     |     |     |     |    |
|                                                                |                    | 0.76 – 1.0 U. | off | on  | off | on  | off | off |     |     |     |     |     |    |
|                                                                |                    | 1.1 – 1.5 U.  | off | off | off | on  | off | off |     |     |     |     |     |    |
|                                                                |                    | 1.6 – 2.0 U.  | off | on  | on  | off | off | off |     |     |     |     |     |    |
|                                                                |                    | 2.1 – 2.5 U.  | off | off | on  | off | off | off |     |     |     |     |     |    |
|                                                                |                    | 2.6 – 3.0 U.  | off | on  | off | off | off | off |     |     |     |     |     |    |
|                                                                |                    | 3.1 – 4.0 U.  | off | off | off | off | off | off |     |     |     |     |     |    |
| Products by other manufacturers<br>(M30 x 1.5,<br>s = 11.8 mm) | Valve lift h       | h = 0.5 mm    | off | on  | on  | on  | off | off | off | on  | off | on  | on  | on |
|                                                                |                    | h = 1.0 mm    | off | off | on  | on  | off | off |     |     |     |     |     |    |
|                                                                |                    | h = 1.5 mm    | off | on  | off | on  | off | off | off | off | on  | off | on  | on |
|                                                                |                    | h = 2.0 mm    | off | off | off | on  | off | off | off | off | on  | on  | off | on |
|                                                                |                    | h = 2.5 mm    | off | on  | on  | off | off | off | off | off | off | on  | on  | on |
|                                                                |                    | h = 3.0 mm    | off | off | on  | off | off | off | off | on  | off | on  | on  | on |
|                                                                |                    | h = 3.5 mm    | off | on  | off | off | off | off | off | off | off | on  | on  | on |
|                                                                |                    | h = 4.0 mm    | off | off | off | off | off | off | off | off | off | on  | on  | on |



1. Généralités
2. Informations relatives à la sécurité
3. Description technique
4. Transport et stockage
5. Montage
6. Mise en service
7. Utilisation
8. Maintenance
9. Démontage
10. Remontage
11. Élimination
12. Annexe

## 1. Généralités

La notice d'utilisation originale est rédigée en allemand. Les notices d'utilisation rédigées dans les autres langues ont été traduites de l'allemand.

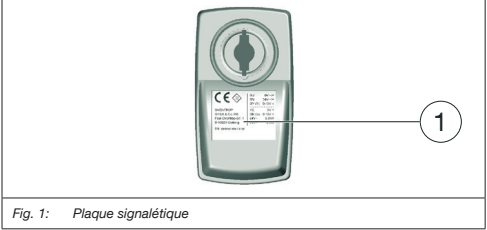
### 1.1 Validité de la notice d'utilisation

Cette notice d'utilisation s'applique au servo-moteur, 24 V Aktor M ST L, 0 – 10 V / 3 points

.

### 1.2 Plaque signalétique

La plaque signalétique se trouve sur la face inférieure du produit.



|     |                     |
|-----|---------------------|
| (1) | Plaque signalétique |
|-----|---------------------|

## 1.3 Composants fournis

Contrôler la livraison. Veiller à ce qu'elle soit complète et sans dommages liés au transport.

Les composants fournis sont les suivants :

- « Aktor M ST L »
- Notice d'utilisation

## 1.4 Contact

### Adresse

OVENTROP GmbH & Co. KG  
Paul-Oventrop-Straße 1  
59939 Olsberg  
ALLEMAGNE

### Service technique

Téléphone : +49 (0) 29 62 82-234

### 1.5 Propriété intellectuelle et loi protectrice

Cette notice est protégée par le droit de la propriété intellectuelle. Son usage est exclusivement destiné aux personnes travaillant avec ce produit.

## 1.6 Déclaration de conformité UE

Par la présente, la société Oventrop GmbH & Co. KG déclare que ce produit est en conformité avec les exigences fondamentales et les dispositions applicables des directives UE concernées. La déclaration de conformité peut être demandée auprès du fabricant.

### 1.7 Symboles utilisés

|          |                                      |
|----------|--------------------------------------|
|          | Informations et explications utiles. |
|          | Appel à l'action                     |
|          | Énumération                          |
| 1.<br>2. | Ordre fixe. Étapes 1 à X.            |
|          | Résultat de l'action                 |

## 2. Informations relatives à la sécurité

### 2.1 Prescriptions normatives

Respecter les conditions cadres en vigueur sur le lieu d'installation. Les normes, règles et directives en vigueur sont à appliquer.

### 2.2 Utilisation conforme

La sécurité d'exploitation n'est garantie que si le produit est affecté à l'utilisation prévue.

Le moteur doit être utilisé en intérieur dans des installations de chauffage, de ventilation et de rafraîchissement. Toute autre utilisation est interdite et réputée non conforme. Les revendications de toutes natures à l'égard du fabricant et/ou de ses mandataires, pour des dommages résultant d'une utilisation non conforme ne seront pas acceptées. L'utilisation conforme inclut notamment l'application des recommandations de la notice d'utilisation.

### 2.3 Modifications sur le produit

Les modifications sur le produit sont interdites. Toute modification sur le produit entraîne l'annulation de la garantie. Le fabricant décline toute responsabilité en cas de dommages et dysfonctionnements résultant de modifications sur le produit.

### 2.4 Avertissements

Chaque avertissement comprend les éléments suivants :

| Symbole d'avertissement MOT DE SIGNALISATION |                                                                                                                                                                 |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                              | <b>Nature et source du danger !</b><br>Conséquences possibles lorsqu'un danger survient ou qu'un avertissement est ignoré.<br>► Moyens de prévention du danger. |

Les mots de signalisation indiquent la gravité du danger résultant d'une situation.

| ATTENTION |                                                                                                                                     |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------|
|           | Signale un danger potentiel de faible niveau. La situation entraîne des blessures mineures et réversibles si elle n'est pas évitée. |

| AVIS |                                                                                              |
|------|----------------------------------------------------------------------------------------------|
|      | Signale une situation susceptible d'entraîner des dégâts matériels si elle n'est pas évitée. |

## 2.5 Consignes de sécurité

Nous avons développé ce produit conformément aux exigences de sécurité actuelles. Respecter les consignes suivantes pour une utilisation en toute sécurité.

### 2.5.1 Danger lié à une qualification insuffisante

Les interventions sur le produit doivent être effectuées exclusivement par un professionnel qualifié.

De par sa formation professionnelle, son expérience ainsi que sa connaissance des normes et réglementations en vigueur, le professionnel qualifié est en mesure d'effectuer les travaux sur le produit décrit dans la présente notice.

### Utilisateur

L'utilisateur de l'installation doit demander au professionnel qualifié de lui expliquer l'utilisation du produit.

### 2.5.2 Danger lié au courant électrique !

Ne faire effectuer les travaux sur l'alimentation secteur que par un électricien qualifié.

- En cas de dégâts visibles, ne pas mettre le produit en service.
- Débrancher entièrement le produit de l'alimentation en courant.
- Vérifier que le produit est hors tension.
- Sécuriser le produit contre tout rebranchement.
- Ne monter le produit que dans des locaux au sec.

### 2.5.3 Risque de brûlure lié aux robinetteries et surfaces chaudes

- Laisser le produit refroidir avant de débiter toute intervention.
- Porter des vêtements de protection appropriés pour éviter tout contact sans protection avec des robinetteries et des tronçons de l'installation chauds.

### 2.5.4 Disponibilité de la notice d'utilisation

Chaque personne travaillant avec ce produit doit lire et appliquer cette notice, ainsi que tous les autres documents de référence. La notice doit rester disponible sur le lieu d'utilisation du produit.

- Cette notice ainsi que tous les autres documents de référence doivent être remis à l'utilisateur de l'installation.

## 3. Description technique

### 3.1 Configuration

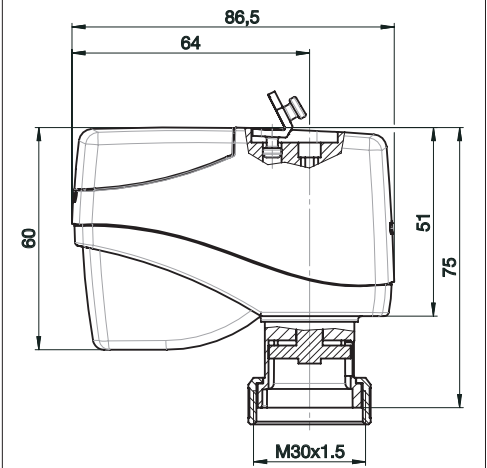


Fig. 2: Vue de côté

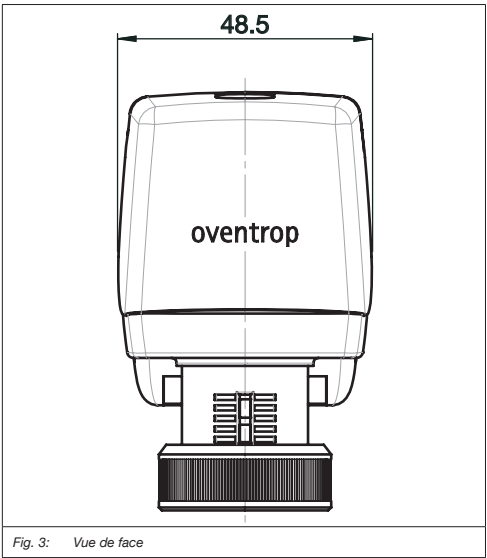


Fig. 3: Vue de face

### 3.2 Description du fonctionnement

Le moteur ouvre ou ferme un robinet en fonction de la tension de commande appliquée.

Le moteur peut être adapté aux paramètres spécifiques du robinet utilisé à l'aide d'interrupteurs DIP.

### 3.3 Données techniques

|                                     |                                                                                                                                                                                                                                                                                                                                             |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tension de service</b>           | 24 V CA ±10 %, 50/60 Hz<br>24 V CC ±10 %                                                                                                                                                                                                                                                                                                    |
| <b>Puissance absorbée</b>           | Dimensionnement :<br>- 3,7 VA (24 V CA)<br>- 1,7 W (24 V CC)<br><br>Nominale :<br>- 2,5 VA (24 V CA)<br>- 1,3 W (24 V CC)                                                                                                                                                                                                                   |
| <b>Courant de démarrage</b>         | Max. 10 A sur une courte durée                                                                                                                                                                                                                                                                                                              |
| <b>Réglage</b>                      | - Réglage progressif 0 – 10 V CC<br>- 3 points (marche/veille/arrêt)<br>Le temps d'établissement de la tension ne doit pas être inférieur à 2 secondes pour un mode de service défini !<br><br>- 2 points (marche/arrêt)<br>Le temps d'établissement de la tension ne doit pas être inférieur à 2 secondes pour un mode de service défini ! |
| <b>Raccordement</b>                 | Câble fixe prémonté<br>1,5 m ; 3 x 0,5 mm <sup>2</sup>                                                                                                                                                                                                                                                                                      |
| <b>Mise hors service du moteur</b>  | Tige du moteur :<br>s'avancant = en fonction de la charge,<br>se retirant = en fonction de la course                                                                                                                                                                                                                                        |
| <b>Levée de réglage</b>             | Max. 4 mm                                                                                                                                                                                                                                                                                                                                   |
| <b>Temps de réglage</b>             | 22 s/mm                                                                                                                                                                                                                                                                                                                                     |
| <b>Force de réglage</b>             | Nominale 150 N                                                                                                                                                                                                                                                                                                                              |
| <b>Indicateur de réglage</b>        | Échelle de graduation                                                                                                                                                                                                                                                                                                                       |
| <b>Dispositif de réglage manuel</b> | Uniquement à l'état hors tension !<br>Tige de réglage pour clé Allen sous le cache (position 2, Fig. 9), surplat 4 mm                                                                                                                                                                                                                       |

|                                                         |                                                                                        |
|---------------------------------------------------------|----------------------------------------------------------------------------------------|
| <b>Température du fluide admissible dans le robinet</b> | 0 – 120 °C                                                                             |
| <b>Température ambiante</b>                             | 0 – 50 °C                                                                              |
| <b>Humidité ambiante</b>                                | En service : 0 – 85 % HR, non condensant<br>Hors service : 0 – 85 % HR, non condensant |
| <b>Catégorie de surtension</b>                          | III                                                                                    |
| <b>Degré d'encrassement</b>                             | 2                                                                                      |
| <b>Type de protection</b>                               | IP54 dans toutes les positions de montage                                              |
| <b>Classe de protection</b>                             | III selon la norme EN 60730                                                            |
| <b>Position de montage</b>                              | Aucune limitation                                                                      |
| <b>Entretien</b>                                        | Aucun                                                                                  |
| <b>Poids</b>                                            | 230 g                                                                                  |

## 4. Transport et stockage

|                                   |                                                                |
|-----------------------------------|----------------------------------------------------------------|
| <b>Plage de température</b>       | -0 °C – +40 °C                                                 |
| <b>Humidité relative de l'air</b> | 95 % max.                                                      |
| <b>Particules</b>                 | Au sec et protégé des poussières                               |
| <b>Influences mécaniques</b>      | Protégé des vibrations mécaniques                              |
| <b>Influences climatiques</b>     | Ne pas stocker en plein air<br>À l'abri du rayonnement solaire |
| <b>Influences chimiques</b>       | Ne pas stocker avec des agents agressifs                       |

## 5. Montage

### 5.1 Premier montage

|  |                                                                           |
|--|---------------------------------------------------------------------------|
|  | Lors du montage, veiller à prévoir de la place pour le montage du moteur. |
|--|---------------------------------------------------------------------------|

|  |                                                              |
|--|--------------------------------------------------------------|
|  | Monter le moteur avant d'établir l'alimentation électrique ! |
|--|--------------------------------------------------------------|

| ATTENTION |                                                                                                                                                                                                                              |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           | <b>Risque de brûlure par composants chauds !</b><br>Il y a risque de brûlure lors du contact avec des composants chauds.<br>► Avant le début des travaux, laisser le robinet refroidir.<br>► Porter des gants de protection. |

- Monter le moteur sur le raccordement fileté du robinet.
- Serrer l'écrou de serrage à la main.

|  |                             |
|--|-----------------------------|
|  | Ne pas bloquer le filetage. |
|--|-----------------------------|

| AVIS |                                                                                                                                                                                                                                                      |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | <b>Endommagement du moteur dû à un couple excessif lors du serrage de l'écrou !</b><br>Le moteur peut être endommagé et son fonctionnement être empêché par un couple excessif lors du serrage de l'écrou.<br>► Serrer l'écrou de serrage à la main. |

## 6. Mise en service

### 6.1 Configuration des interrupteurs DIP

- Retirer le couvercle du boîtier.
- Configurer les interrupteurs DIP en fonction du robinet utilisé (voir fig. 12).

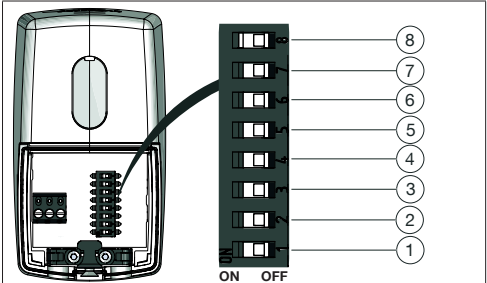


Fig. 4: Interrupteurs DIP

|     |                                                            |                                                                                                             |
|-----|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| (1) | S1 ON/OFF                                                  | <b>Réglage du comportement de la levée souhaité selon les courbes de fonctionnement du robinet utilisé.</b> |
| (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<br>voir Fig. 5                             | OFF = 0 V – 10 V                                                                                            |
| (8) | Fonction automatique de rinçage et anti-blocage du robinet |                                                                                                             |
|     | ON                                                         | activée                                                                                                     |
|     | OFF                                                        | désactivée                                                                                                  |

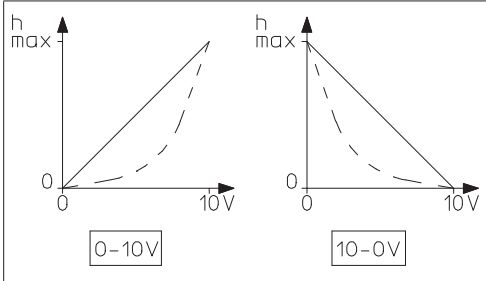


Fig. 5: Inversion courbes de fonctionnement des interrupteurs DIP 7

### 6.2 Établissement de l'alimentation électrique

- Établir l'alimentation électrique selon la disposition souhaitée, Fig. 6 à Fig. 8.

#### 6.2.1 Réglage progressif

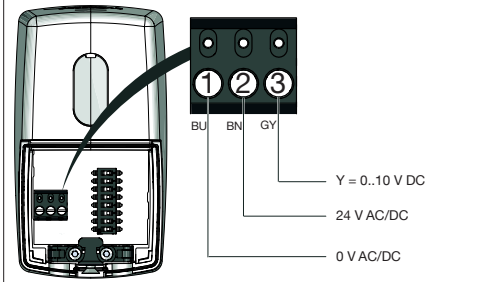


Fig. 6: Disposition des raccordements du réglage progressif

|     |                     |           |
|-----|---------------------|-----------|
| (1) | 0 V CA/CC           | bleu (BU) |
| (2) | 24 V CA/CC          | brun (BN) |
| (3) | Réglage 0 – 10 V CC | gris (GY) |

#### 6.2.2 Réglage 3 points

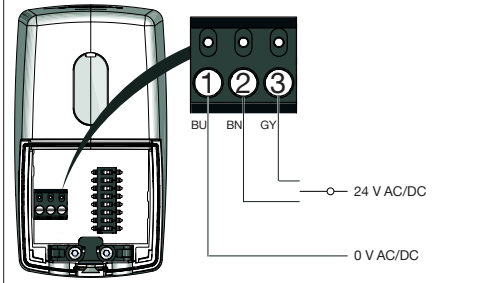


Fig. 7: Disposition des raccordements du réglage 3 points

|     |                   |           |
|-----|-------------------|-----------|
| (1) | 0 V CA/CC         | bleu (BU) |
| (2) | 0 V ou 24 V CA/CC | brun (BN) |
| (3) | 0 V ou 24 V CA/CC | gris (GY) |

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>Si l'interrupteur DIP 7 est réglé sur „OFF“, le comportement de la levée sera comme suit. (Si l'interrupteur DIP 7 est réglé sur „ON“, le comportement de la levée sera inversé !)</b><br><br>- Le moteur se place en position supérieure de la levée (voir position (1), Fig. 10) lorsqu'une tension de 24 V est présente au niveau de cette position/du contact (3).<br><br>- Le moteur se place en position inférieure de la levée lorsqu'une tension de 24 V est présente au niveau de cette position/du contact (2). |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### 6.2.3 Commande 2 points

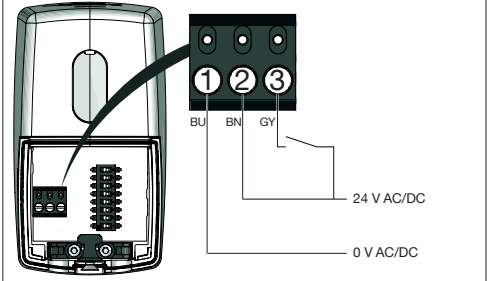


Fig. 8: Disposition des raccordements du réglage tout ou rien

|     |                   |           |
|-----|-------------------|-----------|
| (1) | 0 V CA/CC         | bleu (BU) |
| (2) | 24 V CA/CC        | brun (BN) |
| (3) | 0 V ou 24 V CA/CC | gris (GY) |

- Dès que l'alimentation électrique a été établie pour la première fois, le moteur effectue une course d'initialisation. Suite à l'initialisation, le produit est prêt à l'emploi.

## 7. Service

Le moteur est actionné automatiquement par la technique de régulation correspondante.

## 8. Maintenance

Le moteur ne nécessite aucun entretien.

## 9. Démontage

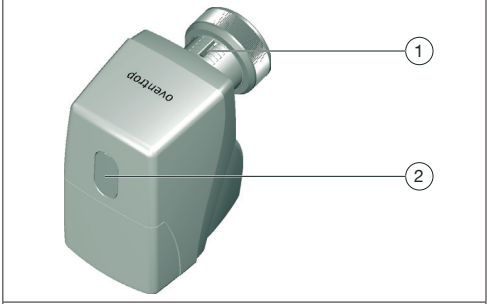


Fig. 9: Affichage de la position de la levée et cache de la tige du robinet

|     |                                                |
|-----|------------------------------------------------|
| (1) | Affichage de la position de la levée du moteur |
| (2) | Cache pour le réglage manuel (tige de réglage) |

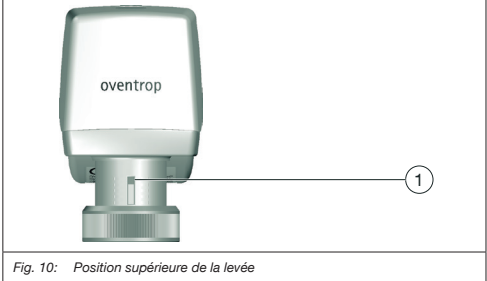


Fig. 10: Position supérieure de la levée

|     |                                                 |
|-----|-------------------------------------------------|
| (1) | Affichage de la position supérieure de la levée |
|-----|-------------------------------------------------|

| ATTENTION |                                                                                                                                                                                                 |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           | <b>Risque de brûlure par composants chauds !</b><br>Il y a risque de brûlure lors du contact avec des composants chauds.<br>► Laisser le produit refroidir avant de débiter toute intervention. |

| AVIS |                                                                                                                                                                                                                                                                                                                                                                                      |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | <b>Il est possible que l'écrou de serrage ne puisse pas être desserré à la main !</b><br>Il se peut que le moteur ferme le robinet avec la force de réglage maximale de 200 N. Dans ce cas, l'écrou de serrage ne peut plus être libéré à la main.<br>► Ne pas utiliser de pince ou d'outil similaire pour desserrer l'écrou de serrage !<br>► Utiliser la méthode de réglage manuel |

- Déconnecter entièrement le moteur de l'alimentation électrique.
- Contrôler la position de la levée du moteur.

3. Si le moteur ne se trouve pas en position supérieure de la levée (voir position (1), Fig. 10) :  
Ouvrir le cache pour le réglage manuel (tige de réglage) (voir position 2, Fig. 9) et, à l'aide d'une clé Allen (surplat 4 mm), amener le moteur en position supérieure de la levée.

AVIS

**Dysfonctionnement dû à un vissage manuel forcé**

Si le dispositif de réglage manuel atteint le point d'activation du limiteur de couple à friction, le fonctionnement sans dérangements du moteur n'est plus garanti.

► Lorsque la position de la levée réglée manuellement est atteinte, tourner la clé Allen d'un demi-tour dans le sens inverse !

4. Desserrer l'écrou de serrage.
- Le moteur peut être retiré.

10. Remontage

Pour effectuer le montage correctement, le moteur doit se trouver en position supérieure de la levée.

- Avant le remontage, amener le moteur dans la position supérieure de la levée comme indiqué au par. 9.
- Monter le moteur sur le raccordement fileté du robinet.
- Serrer l'écrou de serrage à la main.
- Mettre le moteur en service, comme indiqué au par. 6.

Après le remontage, une course d'initialisation sera uniquement effectuée si un des interrupteurs DIP 1 à 6 est déréglé (voir fig. 4) après avoir établi l'alimentation électrique.

La course d'initialisation ne sera non plus effectuée après une reconfiguration si le moteur se trouve déjà en position inférieure de la levée.

11. Élimination

AVIS

**Risque de pollution !**

Une élimination non conforme (par ex. avec les déchets ménagers) peut entraîner des dommages environnementaux.

► L'emballage est à éliminer dans le respect de l'environnement.

► Éliminer les composants dans le respect de la réglementation.

Si aucun accord de reprise ou d'élimination n'a été conclu, mettre le produit au rebut.

- Si possible, amener les composants au recyclage.
- Éliminer les composants non recyclables selon les réglementations locales. L'élimination avec les déchets ménagers est interdite.

12. Annexe

Paramétrages des interrupteurs DIP

| Robinet + moteur =                                                                                                            |                            |                       |                   |     |     |     |     |     |                   |     |     |     |     |     |
|-------------------------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------|-------------------|-----|-----|-----|-----|-----|-------------------|-----|-----|-----|-----|-----|
| Type de robinet                                                                                                               | Modèle                     | Plage de réglage      | Interrupteurs DIP |     |     |     |     |     | Interrupteurs DIP |     |     |     |     |     |
|                                                                                                                               |                            |                       | S1                | S2  | S3  | S4  | S5  | S6  | S1                | S2  | S3  | S4  | S5  | S6  |
| <br>Cocon QTZ<br><b>PN 25</b>                                                                                                 | DN 10/15<br>30 – 210 l/h   | 30 – 90 l/h           | on                | off | off | off | off | off |                   |     |     |     |     |     |
|                                                                                                                               |                            | 91 – 150 l/h          | on                | on  | off | off | off | off | on                | on  | off | off | off | on  |
|                                                                                                                               |                            | 151 – 210 l/h         | on                | off | on  | off | off | off | on                | off | on  | off | off | on  |
|                                                                                                                               |                            | 150 – 250 l/h         | on                | on  | on  | off | off | off |                   |     |     |     |     |     |
|                                                                                                                               |                            | 251 – 500 l/h         | on                | off | off | on  | off | off | on                | on  | on  | off | off | on  |
|                                                                                                                               |                            | 501 – 700 l/h         | on                | on  | off | on  | off | off | on                | off | off | on  | off | on  |
|                                                                                                                               | DN 15<br>200 – 1300 l/h    | 200 – 300 l/h         | on                | off | on  | on  | off | off |                   |     |     |     |     |     |
|                                                                                                                               |                            | 301 – 500 l/h         | on                | off | on  | off | off | off | on                | off | on  | off | off | on  |
|                                                                                                                               |                            | 501 – 900 l/h         | on                | on  | on  | on  | off | off | on                | on  | off | on  | off | on  |
|                                                                                                                               |                            | 901 – 1300 l/h        | on                | off | off | off | on  | off | on                | off | on  | on  | off | on  |
|                                                                                                                               |                            | 250 – 400 l/h         | on                | off | on  | on  | off | off |                   |     |     |     |     |     |
|                                                                                                                               |                            | 401 – 800 l/h         | on                | on  | off | off | off | off | on                | on  | off | off | off | on  |
|                                                                                                                               | DN 20<br>250 – 1800 l/h    | 801 – 1100 l/h        | on                | on  | on  | on  | on  | off | on                | on  | off | off | on  | on  |
|                                                                                                                               |                            | 1101 – 1500 l/h       | on                | on  | off | off | on  | off | on                | on  | on  | off | on  | on  |
|                                                                                                                               |                            | 1501 – 1800 l/h       | on                | off | on  | off | on  | off | on                | off | on  | on  | off | on  |
|                                                                                                                               |                            | 400 – 700 l/h         | on                | on  | on  | on  | on  | off |                   |     |     |     |     |     |
|                                                                                                                               |                            | 701 – 1100 l/h        | on                | on  | off | off | off | off | on                | on  | off | off | off | on  |
|                                                                                                                               |                            | 1101 – 2100 l/h       | on                | off | off | on  | on  | off | on                | off | off | off | on  | on  |
|                                                                                                                               | DN 32<br>600 – 7800 l/h    | 2101 – 2500 l/h       | on                | on  | off | on  | on  | off | on                | off | on  | on  | off | on  |
|                                                                                                                               |                            | 600 – 800 l/h         | on                | off | on  | on  | on  | off |                   |     |     |     |     |     |
|                                                                                                                               |                            | 801 – 2800 l/h        | on                | on  | on  | on  | on  | off | on                | on  | off | off | on  | on  |
|                                                                                                                               |                            | 2801 – 4800 l/h       | on                | off | off | off | off | on  | on                | off | on  | off | on  | on  |
|                                                                                                                               |                            | 30 – 90 l/h           | off               | off | off | off | on  | off |                   |     |     |     |     |     |
|                                                                                                                               |                            | 91 – 150 l/h          | off               | on  | off | off | on  | off | off               | on  | on  | off | on  | on  |
| <br>Cocon QTZ<br><b>PN 16</b>                                                                                                 | DN 10/15<br>30 – 210 l/h   | 151 – 210 l/h         | off               | off | on  | off | on  | off | off               | on  | off | on  | on  | on  |
|                                                                                                                               |                            | 90 – 150 l/h          | off               | on  | on  | off | on  | off |                   |     |     |     |     |     |
|                                                                                                                               |                            | 151 – 250 l/h         | off               | off | off | on  | on  | off | off               | off | on  | on  | on  | on  |
|                                                                                                                               |                            | 251 – 450 l/h         | off               | on  | off | on  | on  | off | off               | on  | off | on  | on  | on  |
|                                                                                                                               |                            | 150 – 200 l/h         | off               | off | on  | on  | on  | off |                   |     |     |     |     |     |
|                                                                                                                               |                            | 201 – 300 l/h         | off               | off | off | on  | off | on  | off               | off | on  | off | on  | on  |
|                                                                                                                               | DN 15/20<br>150 – 1050 l/h | 301 – 600 l/h         | off               | on  | on  | on  | on  | off | off               | off | on  | on  | on  | on  |
|                                                                                                                               |                            | 601 – 1050 l/h        | off               | off | off | off | off | on  | off               | on  | off | on  | on  | on  |
|                                                                                                                               |                            | 180 – 400 l/h         | off               | on  | off | off | off | on  | off               | off | on  | off | on  | on  |
|                                                                                                                               |                            | 401 – 500 l/h         | off               | on  | off | off | on  | off | off               | on  | on  | off | on  | on  |
|                                                                                                                               |                            | 501 – 600 l/h         | off               | off | on  | off | on  | off | off               | on  | off | on  | on  | on  |
|                                                                                                                               |                            | 601 – 700 l/h         | off               | off | on  | off | off | on  | off               | off | on  | on  | on  | on  |
|                                                                                                                               | DN 20<br>180 – 1300 l/h    | 701 – 1300 l/h        | off               | on  | on  | off | off | on  | off               | off | on  | on  | on  | on  |
|                                                                                                                               |                            | 300 – 400 l/h         | off               | off | off | on  | off | on  |                   |     |     |     |     |     |
|                                                                                                                               |                            | 401 – 600 l/h         | off               | off | off | on  | on  | off | off               | off | on  | on  | on  | on  |
|                                                                                                                               |                            | 601 – 900 l/h         | off               | off | off | off | off | on  | off               | on  | off | on  | on  | on  |
|                                                                                                                               |                            | 901 – 1400 l/h        | off               | on  | off | on  | off | on  | off               | off | on  | on  | on  | on  |
|                                                                                                                               |                            | 1401 – 2000 l/h       | off               | off | on  | on  | off | on  | off               | on  | on  | on  | on  | on  |
|                                                                                                                               | DN 25<br>300 – 2000 l/h    | 600 l/h               | off               | on  | on  | on  | off | on  |                   |     |     |     |     |     |
|                                                                                                                               |                            | 601 – 800 l/h         | off               | off | off | off | on  | on  | off               | on  | off | on  | on  | on  |
|                                                                                                                               |                            | 801 – 1600 l/h        | off               | off | off | off | on  | on  | off               | off | on  | on  | on  | on  |
|                                                                                                                               |                            | 1601 – 3600 l/h       | off               | off | off | off | off | off | off               | on  | on  | on  | on  | on  |
|                                                                                                                               |                            | 0,25 U.               | off               | off | off | on  | off | off |                   |     |     |     |     |     |
|                                                                                                                               |                            | 0,26 – 0,5 U.         | off               | off | on  | off | on  | off |                   |     |     |     |     |     |
| <br>Cocon 2TZ<br><br>+<br><br>Cocon 4TR                                                                                       | kvs = 0,45                 | 0,6 – 4 U.            | off               | off | on  | off | off | off | off               | off | on  | off | on  | off |
|                                                                                                                               |                            | 0,5 – 1 U.            | off               | on  | off | off | on  | off |                   |     |     |     |     |     |
|                                                                                                                               |                            | 1,1 – 4,5 U.          | off               | off | off | off | off | on  | off               | on  | on  | on  | on  | on  |
|                                                                                                                               | kvs = 1,0                  | 0,5 – 7 U.            | off               | on  | off | off | on  | off |                   |     |     |     |     |     |
|                                                                                                                               |                            | 0,75 – 1 U.           | off               | off | on  | off | on  | off |                   |     |     |     |     |     |
|                                                                                                                               |                            | 1,1 – 7 U.            | off               | off | on  | on  | off | on  |                   |     |     |     |     |     |
|                                                                                                                               | kvs = 1,8                  |                       |                   |     |     |     |     |     |                   |     |     |     |     |     |
|                                                                                                                               |                            |                       |                   |     |     |     |     |     |                   |     |     |     |     |     |
|                                                                                                                               |                            |                       |                   |     |     |     |     |     |                   |     |     |     |     |     |
|                                                                                                                               | kvs = 4,5                  |                       |                   |     |     |     |     |     |                   |     |     |     |     |     |
|                                                                                                                               |                            |                       |                   |     |     |     |     |     |                   |     |     |     |     |     |
|                                                                                                                               |                            |                       |                   |     |     |     |     |     |                   |     |     |     |     |     |
| <br>AV9<br><br>+<br><br>AV6<br><br>+<br><br>AF<br><br>+<br><br>AZ/A<br><br>+<br><br>PTB kvs=0,45<br><br>+<br><br>PTB kvs=0,80 |                            | Préréglage 3, 4, 5, 6 | off               | off | on  | on  | off | off |                   |     |     |     |     |     |
|                                                                                                                               |                            | Préréglage 7, 8       | off               | on  | off | on  | off | off |                   |     |     |     |     |     |
|                                                                                                                               |                            | VE 9                  | off               | off | off | on  | off | off |                   |     |     |     |     |     |
|                                                                                                                               |                            | Préréglage 2, 3       | off               | off | on  | on  | off | off |                   |     |     |     |     |     |
|                                                                                                                               |                            | Préréglage 4, 5       | off               | on  | off | on  | off | off |                   |     |     |     |     |     |
|                                                                                                                               |                            | VE 6                  | off               | off | off | on  | off | off |                   |     |     |     |     |     |
|                                                                                                                               |                            | Préréglage 1, 2, 3, 4 | off               | on  | on  | on  | off | off |                   |     |     |     |     |     |
|                                                                                                                               |                            | Préréglage 5, 6       | off               | off | on  | on  | off | off |                   |     |     |     |     |     |
|                                                                                                                               |                            |                       |                   |     |     |     |     |     |                   |     |     |     |     |     |
|                                                                                                                               |                            |                       | off               | on  | off | off | off | on  | off               | on  | on  | off | on  | off |
|                                                                                                                               |                            |                       |                   |     |     |     |     |     |                   |     |     |     |     |     |
|                                                                                                                               |                            |                       |                   |     |     |     |     |     |                   |     |     |     |     |     |
|                                                                                                                               |                            |                       | off               | off | on  | off | off | off | off               | off | on  | off | on  | off |
|                                                                                                                               |                            |                       |                   |     |     |     |     |     |                   |     |     |     |     |     |
|                                                                                                                               |                            |                       |                   |     |     |     |     |     |                   |     |     |     |     |     |
|                                                                                                                               |                            |                       | off               | off | on  | off | off | on  | off               | off | on  | on  | on  | on  |
|                                                                                                                               |                            |                       |                   |     |     |     |     |     |                   |     |     |     |     |     |
|                                                                                                                               |                            |                       |                   |     |     |     |     |     |                   |     |     |     |     |     |

|                                                                                                   |                    |               |     |     |     |     |     |     |     |     |     |     |    |    |
|---------------------------------------------------------------------------------------------------|--------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|
| <br>Hycocn HTZ | DN 15<br>kvs = 1,7 | 0,5 – 0,75 U. | off | off | on  | on  | off | off |     |     |     |     |    |    |
|                                                                                                   |                    | 0,76 – 1 U.   | off | on  | off | on  | off | off |     |     |     |     |    |    |
|                                                                                                   |                    | 1,1 – 3 U.    | off | off | off | on  | off | off |     |     |     |     |    |    |
|                                                                                                   | DN 20<br>kvs = 2,7 | 0,5 – 0,75 U. | off | off | on  | on  | off | off |     |     |     |     |    |    |
|                                                                                                   |                    | 0,76 – 1,5 U. | off | off | on  | off | on  | off |     |     |     |     |    |    |
|                                                                                                   |                    | 1,6 – 3 U.    | off | off | on  | on  | off | on  |     |     |     |     |    |    |
|                                                                                                   | DN 25<br>kvs = 3,6 | 0,5 – 0,75 U. | off | on  | on  | on  | off | off |     |     |     |     |    |    |
|                                                                                                   |                    | 0,76 – 1,0 U. | off | off | on  | on  | off | off |     |     |     |     |    |    |
|                                                                                                   |                    | 1,1 – 1,5 U.  | off | on  | off | off | on  | off |     |     |     |     |    |    |
|                                                                                                   |                    | 1,6 – 3,0 U.  | off | off | off | off | off | on  |     |     |     |     |    |    |
|                                                                                                   |                    | 3,1 – 3,5 U.  | off | off | on  | off | off | on  |     |     |     |     |    |    |
|                                                                                                   |                    | 0,5 U.        | off | on  | on  | on  | off | off |     |     |     |     |    |    |
|                                                                                                   | DN 32<br>kvs = 6,8 | 0,6 – 1,0 U.  | off | off | on  | on  | off | off |     |     |     |     |    |    |
|                                                                                                   |                    | 1,1 – 1,5 U.  | off | on  | off | on  | off | off |     |     |     |     |    |    |
|                                                                                                   |                    | 1,6 – 2,0 U.  | off | off | off | on  | off | off |     |     |     |     |    |    |
|                                                                                                   |                    | 2,1 – 2,5 U.  | off | on  | on  | off | off | off |     |     |     |     |    |    |
|                                                                                                   |                    | 2,6 – 3,0 U.  | off | on  | off | off | off | off |     |     |     |     |    |    |
|                                                                                                   |                    | 3,1 – 4,0 U.  | off | off | off | off | off | off |     |     |     |     |    |    |
|                                                                                                   | DN 40<br>kvs = 10  | 0,5 – 0,75 U. | off | off | on  | on  | off | off |     |     |     |     |    |    |
|                                                                                                   |                    | 0,76 – 1,0 U. | off | on  | off | on  | off | off |     |     |     |     |    |    |
|                                                                                                   |                    | 1,1 – 1,5 U.  | off | off | off | on  | off | off |     |     |     |     |    |    |
|                                                                                                   |                    | 1,6 – 2,0 U.  | off | on  | on  | off | off | off |     |     |     |     |    |    |
|                                                                                                   |                    | 2,1 – 2,5 U.  | off | off | on  | off | off | off |     |     |     |     |    |    |
|                                                                                                   |                    | 2,6 – 3,0 U.  | off | on  | off | off | off | off |     |     |     |     |    |    |
| Produits de fabricants<br>tiers<br>(M30x1,5 ; s=11,8 mm)                                          | Levée du robinet h | h = 0,5 mm    | off | on  | on  | on  | off | off | off | on  | off | on  | on | on |
|                                                                                                   |                    | h = 1,0 mm    | off | off | on  | on  | off | off |     |     |     |     |    |    |
|                                                                                                   |                    | h = 1,5 mm    | off | on  | off | on  | off | off | off | off | on  | off | on | on |
|                                                                                                   |                    | h = 2,0 mm    | off | off | off | on  | off | off | off | off | on  | off | on | on |
|                                                                                                   |                    | h = 2,5 mm    | off | on  | on  | off | off | off | off | off | off | on  | on | on |
|                                                                                                   |                    | h = 3,0 mm    | off | off | on  | off | off | off | off | off | on  | off | on | on |
|                                                                                                   |                    | h = 3,5 mm    | off | on  | off | off | off | off | off | off | off | on  | on | on |
|                                                                                                   |                    | h = 4,0 mm    | off | off | off | off | off | off | off | off | on  | on  | on | on |
|                                                                                                   |                    |               |     |     |     |     |     |     |     |     |     |     |    |    |
|                                                                                                   |                    |               |     |     |     |     |     |     |     |     |     |     |    |    |