

# Valve positioners

## CMSX-P-S-C-U-F1-D-50-C

Part number: 3929315

**FESTO**



## Data sheet

| Feature                                     | Value                                                    |
|---------------------------------------------|----------------------------------------------------------|
| Structural design                           | digital, electropneumatic positioner                     |
| Mode of operation                           | Double-acting                                            |
| Design features                             | Safety position - pneumatic outlets closed               |
| Mounting position                           | Any                                                      |
| Type of mounting                            | With accessories                                         |
| Measuring principle of linear potentiometer | Potentiometer                                            |
| Sensing range                               | 0 deg...100 deg                                          |
| Display                                     | 7-segment<br>LCD display<br>With backlighting            |
| Setting options                             | Via display and pushbuttons                              |
| Size of dead space                          | 0.5 %...10 %                                             |
| Operating pressure                          | 0.3 MPa...0.8 MPa<br>3 bar...8 bar<br>43.5 psi...116 psi |
| Operating medium                            | Compressed air as per ISO 8573-1:2010 [7:4:4]            |
| Information on operating and pilot media    | Operation with oil lubrication not possible              |
| Standard nominal flow rate                  | 50 l/min                                                 |
| Pneumatic connection                        | G1/8                                                     |
| Nominal operating voltage DC                | 24 V                                                     |
| DC operating voltage range                  | 21.6 V...26.4 V                                          |
| Max. current consumption                    | 600 mA                                                   |
| Reverse polarity protection                 | for operating voltage connections                        |
| Analog inputs, signal range                 | 0 - 10 V<br>0 - 20 mA<br>4 - 20 mA                       |
| Analog inputs, max. dynamic range           | 0 - 24 mA<br>0 - 11 V                                    |
| Analog inputs, linearity error at 25°C      | 0.5 %                                                    |
| Analog inputs, temperature coefficient      | 0.02 %FS/K                                               |
| Analog inputs, resolution                   | 16 bit                                                   |
| Analog inputs, overload protection          | yes                                                      |
| Analog inputs, galvanic isolation           | no                                                       |

| Feature                                          | Value                                                                                                          |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Analog outputs, signal range                     | 4 - 20 mA                                                                                                      |
| Analog outputs, max. load resistance             | 600 Ohm                                                                                                        |
| Analog outputs, linearity error at 25°C          | 0.5%                                                                                                           |
| Analog outputs, temperature coefficient          | 0.02 %FS/K                                                                                                     |
| Analog outputs, resolution                       | 12 bit                                                                                                         |
| Analog outputs, reverse polarity protection      | yes                                                                                                            |
| Analog outputs, short-circuit protection         | yes                                                                                                            |
| Analog outputs, overload protection              | yes                                                                                                            |
| Analog outputs, galvanic isolation               | no                                                                                                             |
| Input characteristics                            | As per IEC 61131-2, type 3                                                                                     |
| Switching input                                  | PNP<br>NPN                                                                                                     |
| Digital inputs, reverse polarity protection      | yes                                                                                                            |
| Digital inputs, electrical isolation             | Yes, optocoupler                                                                                               |
| Digital outputs, reverse polarity protection     | yes                                                                                                            |
| Switching output                                 | 3 x PNP or 3 x NPN switchable                                                                                  |
| Digital outputs, output current                  | 100 mA                                                                                                         |
| Digital outputs, short circuit current rating    | yes                                                                                                            |
| Digital outputs, overload protection             | yes                                                                                                            |
| Digital outputs, potential separation            | Yes, optocoupler                                                                                               |
| Electrical connection 1, function                | 3x digital output<br>Analog output<br>Analog input<br>Digital input<br>Power supply<br>Load power supply       |
| Electrical connection 1, connection type         | Terminal strip                                                                                                 |
| Electrical connection 1, connection technology   | Screw terminal                                                                                                 |
| Electrical connection 1, number of pins/wires    | 13                                                                                                             |
| Electrical connection 1, tightening torque       | 0.6 Nm                                                                                                         |
| Electrical connection 1, conductor cross section | 1.5 mm²                                                                                                        |
| Cable fitting                                    | M20 x 1.5 for electrical connection 1                                                                          |
| Approved cable diameter                          | 7-13 mm for electrical connection 1                                                                            |
| Max. cable length                                | 30 m for electrical connection 1                                                                               |
| Ambient temperature                              | -5 °C...60 °C                                                                                                  |
| Storage temperature                              | -20 °C...60 °C                                                                                                 |
| Relative air humidity                            | 5 - 95 %<br>Non-condensing                                                                                     |
| Degree of protection                             | IP65                                                                                                           |
| Corrosion resistance class (CRC)                 | 2 - Moderate corrosion stress                                                                                  |
| Shock resistance                                 | Shock test with severity level 1 as per FN 942017-5 and EN 60068-2-27<br>as per EN 60068-2-29                  |
| Vibration resistance                             | Transport application test with severity level 2 as per FN 942017-4 and<br>EN 60068-2-6<br>as per EN 60068-2-6 |
| Contamination level                              | 3                                                                                                              |
| Certification                                    | RCM compliance mark                                                                                            |
| CE marking (see declaration of conformity)       | As per EU EMC directive<br>As per EU RoHS directive                                                            |
| UKCA marking (see declaration of conformity)     | To UK instructions for EMC<br>To UK RoHS instructions                                                          |
| Housing material                                 | PC-reinforced                                                                                                  |
| Inspection window material                       | PC                                                                                                             |
| Base plate material                              | Wrought aluminum alloy, anodized                                                                               |
| Shaft material                                   | High-alloy stainless steel                                                                                     |
| Quick-coupling material                          | High-alloy stainless steel                                                                                     |

| Feature                      | Value                      |
|------------------------------|----------------------------|
| Material of screws           | High-alloy stainless steel |
| Seals material               | NBR                        |
| Material for cable connector | PA                         |
| Blanking plug material       | PA                         |
| LABS (PWIS) conformity       | VDMA24364-B2-L             |
| Note on materials            | RoHS-compliant             |
| Product weight               | 970 g                      |
| Dimensions W x L x H         | 190 mm x 105 mm x 130 mm   |