

Positioner CMSh-

Part number: 8148076

FESTO



 General operating condition

Data sheet

Overall data sheet – Individual values depend upon your configuration.

Feature	Value
Structural design	digital, electropneumatic positioner
Mode of operation	Double-acting Single-acting
Design features	Safety position - pneumatic outlets closed Safety pneumatic output 2 exhausted Safety pneumatic output 4 pressurized
Mounting position	Any
Type of mounting	With accessories as per VDI/VDE 3845 to VDI/VDE 3847-2
Measuring principle of linear potentiometer	Potentiometer external
Sensing range	0 deg ... 115 deg
Display	LCD display, via software 90° rotatable
Setting options	Via display and pushbuttons
Cycle time	20 ms
Nominal altitude of use above sea level	≤ 2000 m NHN
ATEX category gas	II (1) 2G II 2G
Type of ignition protection for gas	Class I, Division 1, Group A, B, C and D, T4...T6 Ex ia Class I, Zone 1, AEx ia [ia Ga] IIC T4...T6 Gb Ex ia [ia Ga] IIC T4/T6 Gb Ex ia [ia Ga] IIC T4...T6 Gb Ex ib IIC T4/T6 Gb
ATEX category for dust	II (1) 2D II 2D
Type of (ignition) protection for dust	Class II, Division 1, Group E, F and G, T135°C Class III, Division 1 Ex ia [ia Ga] IIIC T135°C Db Ex ib IIIC T135°C Db Zone 21, AEx ia [ia Da] IIIC T135°C Db
Explosive ambient temperature	T4: -40°C ≤ Ta ≤ +80°C T6: -40°C ≤ Ta ≤ +50°C
Certificate issuing authority	DNV 24.0177 IECEX BVS 23.0001 UL E322346 UL E544513
Max. input parameter of intrinsically safe circuit	See IECEx certificate See ATEX certificate
Max. input power Pi	see ATEX certificate see IECEx certificate

Feature	Value
Max. input voltage Vi	see ATEX certificate see IECEx certificate
Max. input current Ii	see ATEX certificate see IECEx certificate
Effective internal capacitance Ci	see ATEX certificate see IECEx certificate
Effective internal inductance Li	see ATEX certificate see IECEx certificate
Overvoltage category	II
Operating pressure	0.14 MPa ... 0.8 MPa
Operating pressure	1.4 bar ... 8 bar
Operating pressure	20.3 psi ... 116 psi
Operating medium	Compressed air as per ISO 8573-1:2010 [7:4:4]
Information on operating and pilot media	Maximum particle size 40 µm
Air performance at Δp = 6 bar	270 l/min ... 380 l/min
Note on air performance	Depending on additional specific accessories
Pneumatic connection	G1/4 1/4 NPT
Pressure gauge connection	G1/8 1/8 NPT
Reverse polarity protection	yes
Connection resistance	3 kOhm ... 80 kOhm
Analog inputs, signal range	4 – 20 mA with HART
Analog inputs, input impedance	480 ohms at 20 mA
Analog inputs, overload protection	<65 mA
Analog inputs, galvanic isolation	yes
Analog outputs, signal range	4 - 20 mA
Analog outputs, functional principle	Regulated power source with external supply
Analog outputs, supply voltage	24 V
Analog outputs, reverse polarity protection	yes
Analog outputs, short-circuit protection	yes
Analog outputs, overload protection	yes
Analog outputs, galvanic isolation	yes
Input characteristics	1x to IEC 61131-2, type 3 2x to IEC 61131-2, type 3
Digital inputs, reverse polarity protection	yes
Digital inputs, electrical isolation	yes
Digital inputs, overload protection	33 V
Switching output	2x as per IEC 60947-5-6 or 2x Type 2 as per DIN EN 61131-2, switchable
Digital outputs, supply voltage	8.2 V 24 V
Digital outputs, short circuit current rating	yes
Digital outputs, overload protection	yes, <30 V
Digital outputs, potential separation	yes
Electrical connection 1, function	Analog input Digital input external path/angle sensor
Electrical connection 1, connection type	Terminal strip
Electrical connection 1, connection technology	Spring-loaded terminal
Electrical connection 1, number of pins/wires	7
Electrical connection 2, function	2x digital output Analog output Digital input
Electrical connection 2, connection type	Terminal strip
Electrical connection 2, connection technology	Spring-loaded terminal
Electrical connection 2, number of pins/wires	8

Feature	Value
Cable fitting	2x 1/2 NPT 2x M20x1.5
Max. cable length	30 m for external position sensor Shielded
Ambient temperature	-40 °C ... 80 °C
Note on ambient temperature	Display: -30 - 80°C
Storage temperature	-40 °C ... 80 °C
Climatic category	1K5 as per EN 60721 for storage 4K3 as per EN 60721 for operation
Degree of protection	IP66 IP67
Shock resistance	Shock test with severity level 1 as per FN 942017-5 and EN 60068-2-27
Vibration resistance	Transport application test with severity level 2 as per FN 942017-4 and EN 60068-2-6
Contamination level	3
Certification	RCM compliance mark c UL us - Listed (OL)
CE marking (see declaration of conformity)	As per EU EMC directive as per EU explosion protection directive (ATEX) As per EU RoHS directive
UKCA marking (see declaration of conformity)	To UK RoHS instructions
Explosion protection certification outside the EU	EPL Da (CA) EPL Da (US) EPL Db (BR) EPL Db (CN) EPL Db (GB) EPL Db (IEC-EX) EPL Ga (CA) EPL Ga (US) EPL Gb (BR) EPL Gb (CN) EPL Gb (GB) EPL Gb (IEC-EX)
Housing material	Aluminum, powder-coated
Inspection window material	PC
Shaft material	High-alloy stainless steel
Quick-coupling material	High-alloy stainless steel
Material of screws	Steel, galvanized
Seals material	EPDM NBR VMQ
LABS (PWIS) conformity	VDMA24364 zone III
Note on materials	RoHS-compliant
Product weight	2045 g ... 2820 g