

# Positioner CMSh-

Part number: 8148076

FESTO



 General operating condition

## Data sheet

Overall data sheet – Individual values depend upon your configuration.

Feature	Value
Design	Digital, electropneumatic positioner
Mode of operation	Double-acting Single-acting
Design characteristics	Safety position - pneumatic outlets closed Safety pneumatic output 2 exhausted Safety pneumatic output 4 pressurised
Mounting position	Any
Type of mounting	With accessories in accordance with VDI/VDE 3845 To VDI/VDE 3847-2
Functional principle of measuring system	Potentiometer External
Sensing range	0 deg ... 115 deg
Display	LCD display, via software 90° rotatable
Setting options	Via display and buttons
Cycle time	20 ms
Nominal altitude of use	≤ 2000 m NHN
ATEX category gas	II (1) 2G II 2G
Explosion ignition protection type 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 dust	II (1) 2D II 2D
Explosion ignition protection type for dust	Zone 21, AEx ia [ia Da] IIIC T135°C Db
Explosion ambient temperature	T4: -40°C ≤ Ta ≤ +80°C T6: -40°C ≤ Ta ≤ +50°C
Certificate issuing authority	BVS 23 ATEX E004 DNV 24.0177 IECEX BVS 23.0001 UL E322346 UL E544513
Max. intrinsically safe circuit input parameter	See IECEx certificate See ATEX certificate
Max. input power Pi	See ATEX certificate See IECEx certificate
Max. input voltage Ui	See ATEX certificate See IECEx certificate

Feature	Value
Max. input current Ii	See ATEX certificate See IECEx certificate
Effective internal capacitance Ci	See ATEX certificate See IECEx certificate
Effective internal inductivity 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 to ISO 8573-1:2010 [7:4:4]
Note on operating and pilot medium	Maximum particle size 40 µm
Air flow rate at Δp = 6 bar	270 l/min ... 380 l/min
Note on air flow rate	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
digital input, signal range	4 - 20 mA with HART
Analogue inputs, input impedance	480 ohm at 20 mA
Analog inputs, overload protection	<65 mA
Analogue inputs, electrical isolation	Yes
digital output, signal range	4 - 20 mA
Analogue outputs, functional principle	Regulated power source with external supply
Analogue outputs, supply voltage	24 V
Analogue outputs, reverse polarity protection	Yes
Analog outputs, short circuit current rating	Yes
Analog outputs, overload protection	Yes
Analogue outputs, galvanic isolation	Yes
Characteristic for inputs	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 to IEC 60947-5-6 or 2x to DIN EN 61131-2 type 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, electrical isolation	Yes
Electrical connection 1, function	Analogue input Digital input External path/angle sensor
Electrical connection 1, connection type	Terminal strip
Electrical connection 1, connector system	Spring-loaded terminal
Electrical connection 1, number of connections/cores	7
Electrical connection 2, function	2x digital output Analogue output Digital input
Electrical connection 2, connection type	Terminal strip
Electrical connection 2, connector system	Spring-loaded terminal
Electrical connection 2, number of connections/cores	8
Cable fitting	2x 1/2 NPT 2x M20x1.5

Feature	Value
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 to EN 60721 for storage 4K3 to EN 60721 for operation
Degree of protection	IP66 IP67
Shock resistance	Shock test with severity level 1 to FN 942017-5 and EN 60068-2-27
Vibration resistance	Transport application test with severity level 2 to FN 942017-4 and EN 60068-2-6
Pollution degree	3
Approval	RCM c UL us - Listed (Oil)
CE mark (see declaration of conformity)	To EU EMC Directive To EU Explosion Protection Directive (ATEX) In accordance with 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 (IECEx)
Material housing	Aluminium, powder-coated
Material screen	Makrolon®
Material shaft	High-alloy stainless steel
Material coupling	High-alloy stainless steel
Material screws	Galvanised steel
Material seals	EPDM NBR VMQ
LABS (PWIS) conformity	VDMA24364 zone III
Note on materials	RoHS compliant
Product weight	2045 g ... 2820 g