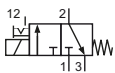


Technical details

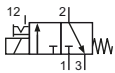
Connection	M5
Nominal size	1.2 mm
Temperature range	-10°C ... +70°C
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Alternatively the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Body: Al (anodized), seals: NBR, inner parts: Al, steel and plastic
Protection	IP 65 according to EN 60529



Electrically operated poppet valve. The manual override is detent and is operated by screw driver.

3/2-way-valves


MS-20-310-HN-xxx
3/2-way, single solenoid, mechanical spring return, NC



MS-20-310/n-HN-xxx
3/2-way, single solenoid, mechanical spring return, NC

Please complete: xxx = electrical option
n = number of stations (2 to 6)

Electrical options

Nominal voltage	Power consumption	Specifics	Plug connection* ¹	-xxx
12 V DC	2 W		Form C industrial norm	-411
24 V DC	2 W		Form C industrial norm	-412

*¹ Plug socket not included, suitable plug sockets see page 03.

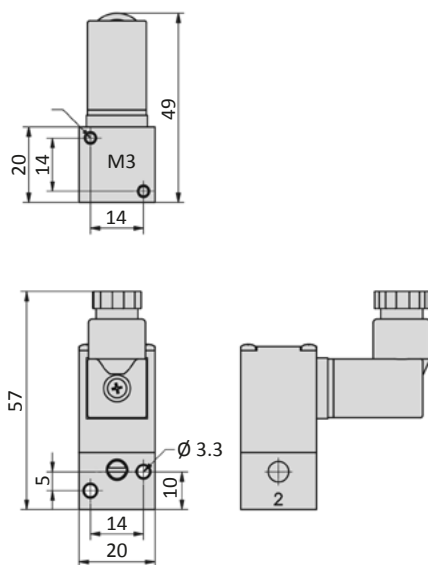
Series MS-20

Technical data

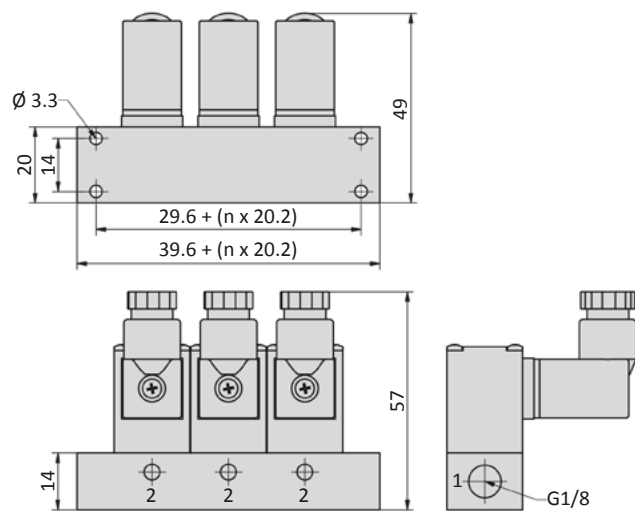
Model-no.:	MS-20-310	MS-20-310/n
Pressure range (bar)	-0.95 ... 8	-0.95 ... 8
Pilot pressure (bar)	-	-
Flow rate (NI/min)	38	38
Response time (ms) at 6 bar	on: 8 off: 8	on: 8 off: 8
Weight (kg)	0.064	0.01 + 0.066 x n

Dimensions

MS-20-310-HN



MS-20-310/n-HN



n = number of stations (2 to 6)

Form C Industriennorm

Baubreite	15 mm
Kontaktabstand	9,4 mm
Kontakte	2P + E
Schutzart	IP 65 nach EN 60529 in Verbindung mit Flachdichtung
Einsatz für Baureihe	M-20, MC-20, MD-20, MS-20

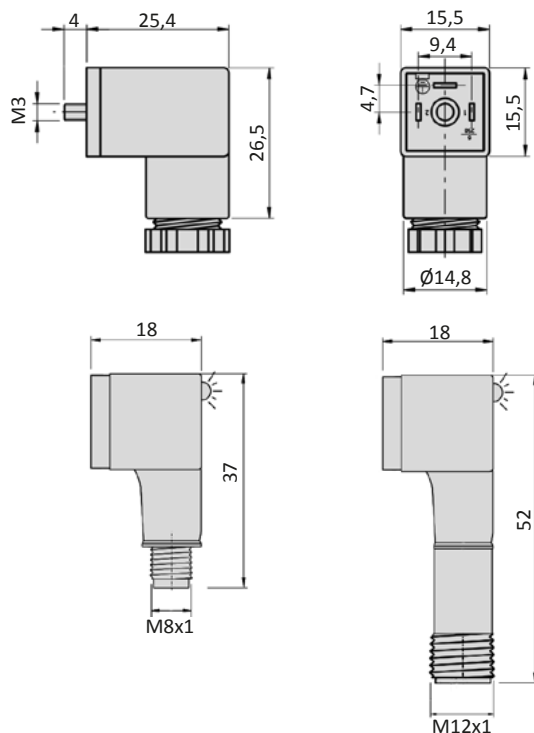


Bestell-Nr.:	28-ST-02-01	28-ST-09-112	28-ST-10-112	28-ST-10-K3-112
Spannung (AC/DC)	0 - 250 V	10 - 50 V	24 V	24 V
Statusanzeige	nein	ja	ja	ja
Schutzbeschaltung	nein	nein	ja (Varistor)	ja (Varistor)
Anschlusskabel	ohne	ohne	ohne	3 m
Kabelquerschnitt	max. 0,75 mm ²	max. 0,75 mm ²	max. 0,75 mm ²	3 x 0,5 mm ²
Kabeldurchmesser	4 - 6 mm	4 - 6 mm	4 - 6 mm	

Bestell-Nr.:	28-ST-02-2-05	28-ST-02-2-07
Spannung (AC/DC)	24 V	24 V
Statusanzeige	ja	ja
Schutzbeschaltung	ja (Varistor)	ja (Varistor)
Anschluss	M8 Stecker	M12 Stecker



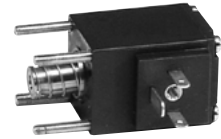
4

Abmessungen
Form C Industriennorm


Solenoid coils

Form C industrial norm

Overall width	20 mm
Contact distance	9,4 mm
Contacts	2P + E
Protection	IP 65 according to EN 60529 with connected plug socket
Duty cycle	100 %
Temperature range*	-20°C...+50°C
Voltage tolerance	± 10 %
For use with series	M-20, MS-20, MC-20, MD-20

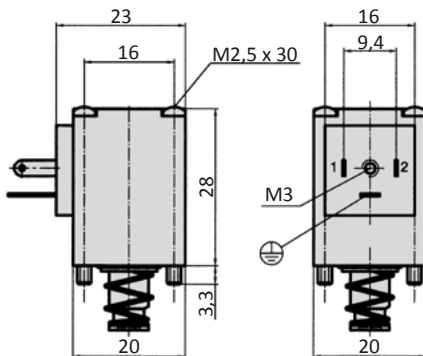


* The max. applicable operating temperature, depends on the temperature specification of the used valve.

Model-no.:	23-M-20-411	23-M-20-412
Voltage	12 V DC	24 V DC
Power consumption DC	2 W	2 W
Power consumption AC	-	-

Dimensions

Form C industrial norm



- HN * - * * *					
Manual override	Coil and plug options		Coil type	Manual override position on side of	Voltage
HN detent	0	ATEX 2GD, encapsulated with casting compound width 30 mm	23-SP-037	0 without indication ports 1/3/(5)	0 without indication
HNR detent	1	with coil and plug	according to valve	1 DC ports 1/3/(5)	1 12 V
HNT non-detent	2			2 AC ports 1/3/(5)	2 24 V
	3			3 DC, low power consumption ports 1/3/(5)	3 42 V
	4	with coil, without plug	according to valve	4 DC ports 2/(4)	4 48 V
	5	without coil	no	5 AC ports 2/(4)	5 110 V
	6	without pilot valve	no	6 DC, low power consumption ports 2/(4)	6 115 V
	7	with coil, with enhanced humidity resistance, without plug	according to valve	7 without indication ports 2/(4)	7 230 V
	8	with coil, with enhanced humidity resistance, with plug	according to valve		8 240 V
	9	ATEX 2GD, intrinsically safe, with plug width 30 mm	23-SP-038		9
	A	ATEX 3GD, without plug, width 30 mm	23-SP-040		A 4 V
	B	ATEX 3GD, with plug, width 30 mm	23-SP-040		B 6 V
	C	ATEX 3GD, without plug, width 22 mm	23-SP-041		C 8 V
	D				D 61 V
	E	ATEX 2GD, encapsulated with casting compound width 22 mm	23-SP-036		E 36 V
	F	with coil, with enhanced humidity resistance, without plug, low temperature version	23-SP-060-1		F 9 V
	G				
	H	with coil shape B according to DIN EN 175301-803, with plug	23-SP-011-G		
	I	with coil shape B according to DIN EN 175301-803, without plug	23-SP-011-G		
	J	with coil shape A according to DIN EN 175301-803, without plug (if not standard)	23-SP-016		
	K	with coil shape A according to DIN EN 175301-803, with plug (if not standard)	23-SP-016		
	L	with coil, with plug with LED and protective circuit	according to valve		
	M	with coil, with plug with LED, without protective circuit	according to valve		
	N	with coil with M12 connection	according to valve		
	O	with coil with M12 connection with LED and protective circuit	according to valve		
	P	without connector bridge, without plug			
	Q	with coil with with cable	according to valve		
	R	with cable up to 1 m length	according to valve		
	S	with connector bridge, without plug			
	T				
	U	ATEX 2GD, without coil (for coil 23-SP-036)	no		
	V	ATEX 2GD, Flame proof enclosures and encapsulated with casting compound	23-SP-045		
	W	ATEX 2GD / 3GD, without coil (for coil 23-SP-041 and 23-SP-045)	no		
	X	ATEX 3GD, without coil (for coil 23-SP-040 in 230V AC and 115V AC)	no		
	Y	ATEX 2GD, without coil (for coil 23-SP-038)	no		
	Z	ATEX 2GD / 3GD, without coil (for coil 23-SP-040 in 24V DC and 23-SP-037)	no		

Not all options are suitable for all valve series