

Electrically operated valves

Series MC-20 for sub-base mounting, 5/2- and 5/3-way
220 NI/min (0.224 Cv)



Order code

MC-20-510-HN-412

Series and function

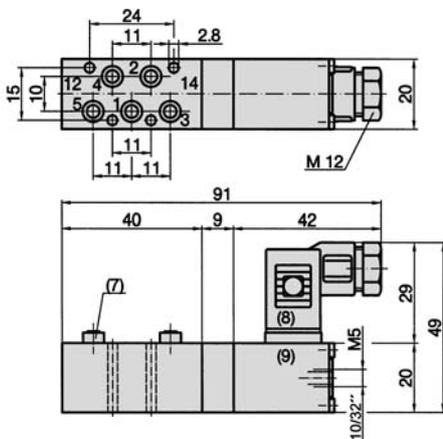
Coil options*

- 441 = 12 V DC, 2 W, without plug socket (plug pins on top)
- 442 = 24 V DC, 2 W, without plug socket (plug pins on top)
- 411 = 12 V DC, 2 W, without plug socket (plug pins bottom)
- 412 = 24 V DC, 2 W, without plug socket (plug pins bottom)

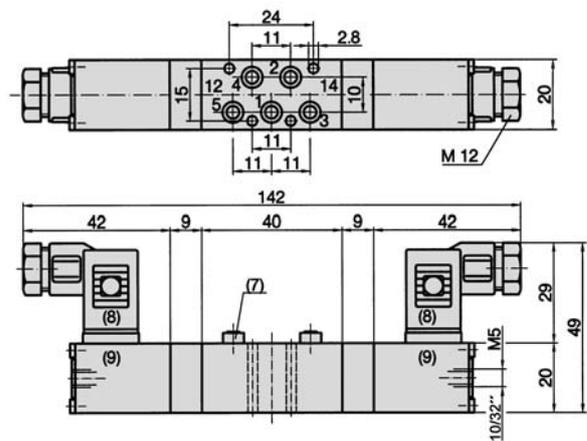
Design, function and technical data

Spool valve actuated by an electrical signal. Please specify required control voltage when ordering.
All mounting screws and sealing for sub-base mounting are included.

MC-20-510-HN, MD-20-510-HN



MC-20-520-HN, MC-20-530-HN, MC-20-533-HN, MD-20-520-HN



- 1 = pressure inlet
- 2, 4 = outlets
- 3, 5 = exhausts
- (7) = exhaust throttle, only at series MD-20
- (8) = plug socket can be repositioned by 180°
- (9) = manual override (detent) can be repositioned by 4 x 90°

Note:
Plug socket(s) not included in scope of delivery.

Order number Please complete according to order code.	MC-20-510-HN	MC-20-520-HN	MC-20-530-HN	MC-20-533-HN	MD-20-510-HN	MD-20-520-HN
Function	5/2-way single solenoid	5/2-way double solenoid	5/3-way center position closed	5/3-way center position exhausted	5/2-way single solenoid with exhaust throttles	5/2-way double solenoid with exhaust throttles
Connection	Sub-base mounting					
Nominal size	3 mm					
Flow rate	220 NI/min (0.224 Cv)					
Pressure range	2,5 ... 8 bar (36 ... 116 psi)		3 ... 8 bar (43 ... 116 psi)		2,5 ... 8 bar (36 ... 116 psi)	
Response time at 6 bar	on 12 ms off 12 ms	11 ms	on 15 ms off 22 ms		on 12 ms off 12 ms	11 ms
Temperature range	- 10 °C ... + 70 °C (+ 14 °F ... + 158 °F)					
Materials	Body: Al (anodized), plastic, Seals: NBR and POM, Inner parts: Al, stainless steel, brass					
Medium	Compressed air in accordance with ISO 8573-1: 2010, Class 7:2:4 – and free of aggressive additives.					
Degree of protection	IP 65 according to EN 60529					
Weight	0.100 kg (0.220 lb.)	0.156 kg (0.343 lb.)	0.162 kg (0.356 lb.)		0.100 kg (0.220 lb.)	0.156 kg (0.343 lb.)

*Valves with other control voltages on request

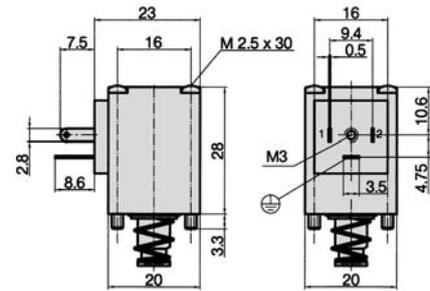
Solenoid coil	23-M-20-...	Standard coil	page 4.282
Plug sockets	28-ST-02-01	Standard plug socket	page 4.284
	28-ST-09-...	Plug socket with LED	page 4.284
	28-ST-10-...	Plug socket with LED and circuit protection	page 4.284
	28-ST-10-K3-...	Plug socket with LED, circuit protection and cable	page 4.284
	28-ST-02-2-07	Plug socket with M12 plug connection, LED and circuit protection	page 4.284
	28-ST-02-2-05	Plug socket with M8 plug connection, LED and circuit protection	page 4.284

Accessories for electrically operated valves

Solenoid coils and plug sockets



Solenoid coils with connection pattern pursuant to DIN EN 175301-803 Shape C



Order number	23-M-20-411	23-M-20-412
Standard voltage	12 V DC	24 V DC
Power consumption	2 W	2 W
Degree of protection	IP 65 according to EN 60529 with connected plug socket	
Duty cycle	100 %	
Temperature range	- 20 °C ... + 50 °C	
Voltage tolerance	± 10 %	
Standard for series	MS-20, MF-04	

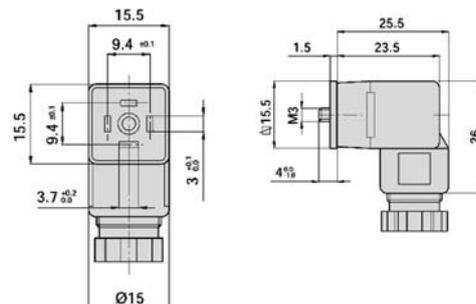
Accessories for electrically operated valves

Plug sockets for coil



Plug sockets pursuant to DIN EN 175301-803 Shape C

(2pol. + PE, 15,5 x 15,5 mm, Contact distance 9,4 mm)

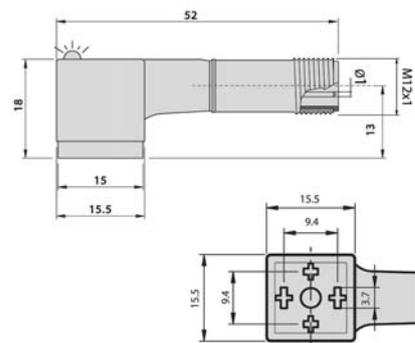
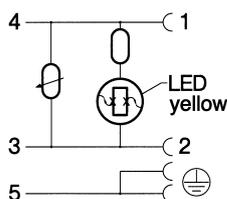


Order number	28-ST-02-01	28-ST-09-112	28-ST-09-127	28-ST-10-112	28-ST-10-127	28-ST-10-K3-112	28-ST-10-K3-127
Standard voltage	all	24 V DC	230 V AC	24 V DC	230 V AC	24 V DC	230 V AC
Protective circuit	no	no	no	yes	yes	yes	yes
Status indicator	without	yes	yes	yes	yes	yes	yes
Degree of protection	IP 65 pursuant to EN 60529 requires a flat gasket						
Connecting cable	without					3 m	3m
max. Ø Connecting cable	6,5 mm					-	-
Max. wire cross section	0,75 mm ²					-	-
for coil	23-M-20						

Plug sockets with integrated adaptor for M8/M12

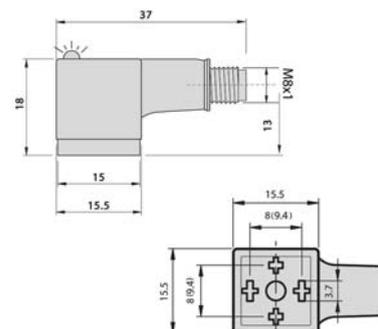
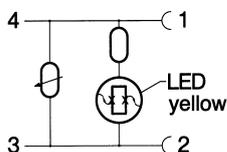
(2pol. + PE, 15,2 x 15,8 mm, Contact distance 8 bzw. 9,4 mm)

Plug socket 28-ST-02-2-07



2 = not connected 4 = +24 Volt (+)
3 = 0 Volt (-) 5 = ⊕

Plug socket 28-ST-02-1-05 and 28-ST-02-2-05



2 = +24 Volt (+)
3 = 0 Volt (-)
4 = not connected

Order number	28-ST-02-1-05	28-ST-02-2-05	28-ST-02-2-07
Standard voltage	24 V DC		
Protective circuit	yes		
Status indicator	yes		
Degree of protection	IP 65 pursuant to EN 60529 requires a flat gasket		
Contact distance	8 mm	9,4 mm	9,4 mm
for plug sockets	M8	M8	M12
for coil	23-M-09-19	23-M-20	