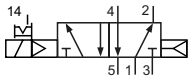


**Technical details**

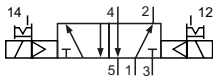
<b>Connection</b>	Sub-base mounting (1, 3 and 5) and G1/8 (2 and 4)
<b>Nominal size</b>	3 mm
<b>Temperature range</b>	-10°C ... +70°C
<b>Medium</b>	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Alternatively the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
<b>Materials</b>	Body: Al (anodized), seals: NBR and POM, inner parts: Al, stainless steel and brass
<b>Protection</b>	IP 65 according to EN 60529



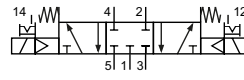
Electrically operated spool valve. The manual override is detent and is operated by screwdriver. Gaskets and screws are part of delivery.

**5/2-way valves**


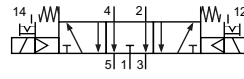
MF-04-510-HN-xxx  
5/2-way, single solenoid, air spring return



MF-04-520-HN-xxx  
5/2-way, double solenoid

**5/3-way valves**


MF-04-530-HN-xxx  
5/3-way, center position closed



MF-04-533-HN-xxx  
5/3-way, center position exhausted

Please complete: xxx = electrical option

**Elektrische Ausführungen**

Nominal voltage	Power consumption	Specifics	Plug connection*1	-xxx electrical pins on same side of ports	
				2 and 4	1, 3 and 5
12 V DC	1 W		Form C industrial norm	-441	-411
24 V DC	1 W		Form C industrial norm	-442	-412

\*1 Plug socket not included, suitable plug sockets see page 4.



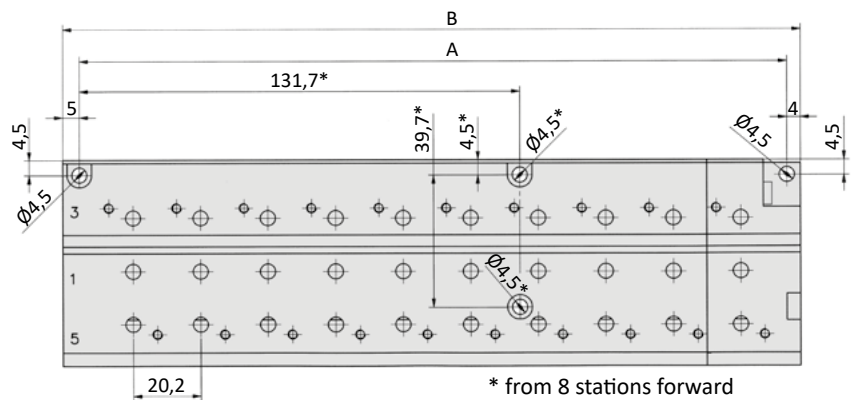
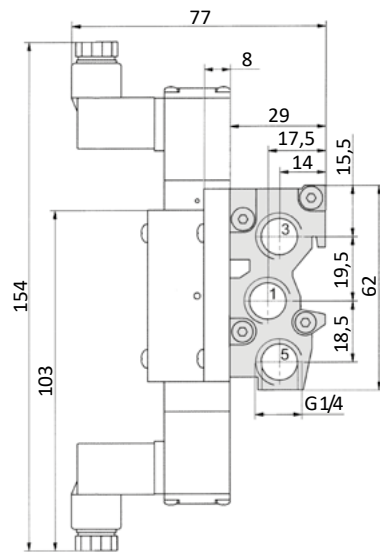
**General information**

The RF-24/n manifolds are suitable for the MF-04 valve series. This is a modular system and extendable up to 12 stations.

Blind plates RF-04-V are available for blank stations.

All mounting screws and the gasket are part of delivery of the valves.

Material: Al (anodized)


**Dimensions RF-24/n**


n = number of stations  
 1 = pressure inlet  
 3,5 = exhausts

Model-no.:	A	B	Weight (kg)
RF-24/2-P	50	59	0,202
RF-24/3-P	70,2	79,2	0,263
RF-24/4-P	90,4	99,4	0,324
RF-24/5-P	110,6	119,6	0,385
RF-24/6-P	130,8	139,8	0,447
RF-24/7-P	151	160	0,508
RF-24/8-P	171,2	180,2	0,567
RF-24/9-P	191,4	200,4	0,628
RF-24/10-P	211,6	220,6	0,708
RF-24/11-P	231,8	240,8	0,769
RF-24/12-P	252	261	0,831

## Plug sockets

### Form C industrial norm

<b>Overall width</b>	15 mm
<b>Contact distance</b>	9,4 mm
<b>Contacts</b>	2P + E
<b>Protection</b>	IP 65 according to EN 60529 requires a flat gasket



Model-no.:	28-ST-02-01	28-ST-09-112	28-ST-10-112	28-ST-10-K3-112 *
<b>Voltage (AC/DC)</b>	0 - 250 V	10 - 50 V	24 V	24 V
<b>Status indicator</b>	no	yes	yes	yes
<b>Protective circuit</b>	no	no	yes (varistor)	yes (varistor)
<b>Connecting cable</b>	without	without	without	3 m
<b>Wire cross section</b>	max. 0.75 mm <sup>2</sup>	max. 0.75 mm <sup>2</sup>	max. 0.75 mm <sup>2</sup>	3 x 0.5 mm <sup>2</sup>
<b>Ø Connecting cable</b>	4 - 6 mm	4 - 6 mm	4 - 6 mm	

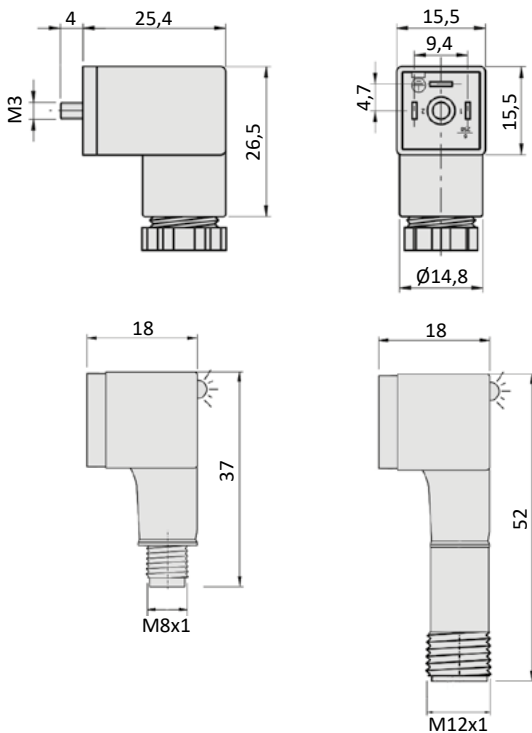
Model-no.:	28-ST-02-2-05	28-ST-02-2-07
<b>Voltage (AC/DC)</b>	24 V	24 V
<b>Status indicator</b>	yes	yes
<b>Protective circuit</b>	yes (varistor)	yes (varistor)
<b>Connection</b>	M8	M12



\* These plug sockets are fitted with integrated flat gaskets.

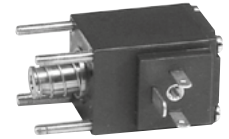
### Dimensions

#### Form C industrial norm



## 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 %

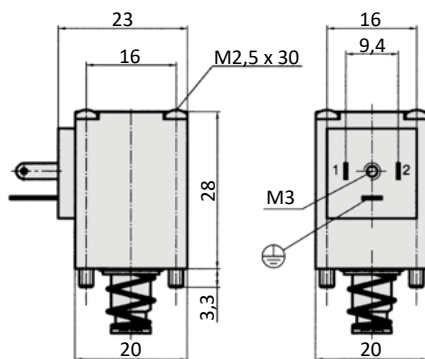


\* The max. applicable operating temperature depends on the temperature specification of the used valve.

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



# Voltage code

- 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 with coil, power consumption different from standard, without plug	shape according valve series	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			E 36 V
	F with coil, with enhanced humidity resistance, without plug, low temperature version	23-SP-011-1-711 23-SP-011-1-712		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