

# Valve series MI-03

Connection pattern according to ISO 5599/1, size 3, 5/2- and 5/3-way NG 14  
4150 NI/min (4.217 Cv)



## Order code

MI-03-510-HN-412

Series and function

Coil options

### Standard coil <sup>1)</sup>

- 411 = 12 V DC, 4.2 W
- 412 = 24 V DC, 4.2 W
- 422 = 24 V AC, 7/4 VA
- 426 = 115 V AC, 7/4 VA
- 427 = 230 V AC, 7/4 VA
- 431 = 12 V DC, 2.2 W<sup>2)</sup>
- 432 = 24 V DC, 2.2 W<sup>2)</sup>

### Without coil and plug socket

- 500 = Power consumption 4.2 W, 7/4 VA
- 530 = Power consumption 2.2 W<sup>2)</sup>

### Coils with M12 connector and LED

- O12 = 24 V DC, 4.8 W
- O32 = 24 V DC, 2.5 W<sup>2)</sup>

### Coils with higher humidity resistance

- 712 = 24 V DC, 4.2 W without plug socket
- 727 = 230 V AC, 7/4 VA without plug socket

<sup>1)</sup> Plug socket see page 5.102.

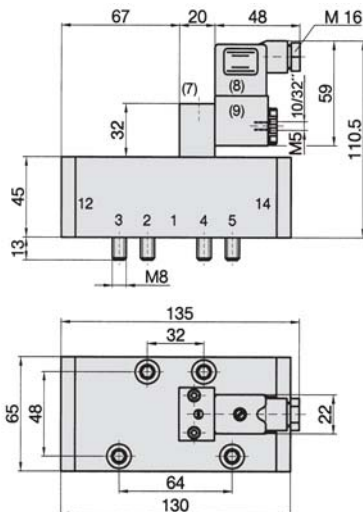
## Design, function and technical data

Spool valve actuated by an electrical signal. The mounting screws and seals are included.

Please specify required control voltage when ordering.

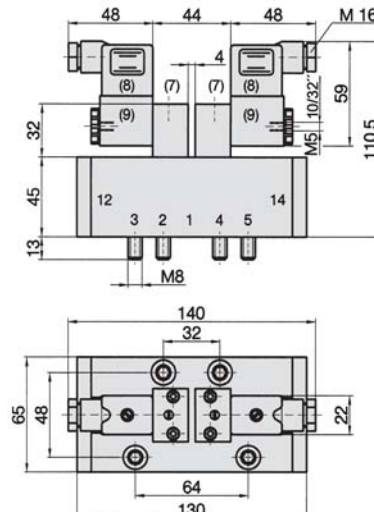
Valves of this series are available in explosion proof design in accordance with 2014/34/EU (ATEX). For further details see chapter 13 of this catalogue.

### MI-03-510-HN, MI-03-511-HN



- 1 = pressure inlet
- 2, 4 = outlets
- 3, 5 = exhaust
- 14 = Pilot air supply (via sub-base)
- (7) = manual override (detent)
- (8) = solenoid coil can be repositioned 4 x 90°
- (9) = plug socket can be repositioned by 180°

### MI-03-520-HN, MI-03-530-HN, MI-03-533-HN



- 1 = pressure inlet
- 2, 4 = outlets
- 3, 5 = exhaust
- 12, 14 = Pilot air supply (via sub-base)
- (7) = manual override (detent)
- (8) = solenoid coil can be repositioned 4 x 90°
- (9) = plug socket can be repositioned by 180°

Order number	MI-03-510-HN	MI-03-511-HN	MI-03-520-HN	MI-03-530-HN	MI-03-533-HN
Please complete according to order code.					
Function	5/2-way single solenoid air spring return	5/2-way single solenoid spring return	5/2-way double solenoid	5/3-way center position closed	5/3-way center position exhausted
Nominal size	14 mm				
Flow rate	4150 NI/min (4.217 Cv)				
Pressure range	2 ... 10 bar <sup>2)</sup> (29 ... 145 psi)			3 ... 10 bar <sup>2)</sup> (34 ... 145 psi)	
Response time at 6 bar	on 34 ms off 52 ms	on 32 ms off 57 ms	20 ms	on 22 ms off 55 ms	
Temperature range	- 10 °C ... + 70 °C (+ 14 °F ... + 158 °F)				
Materials	Body: Al (anodized), 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	1.105 kg (2.436 lbs.)	1.115 kg (2.458 lbs.)	1.287 kg (2.837 lbs.)	1.277 kg (2.815 lbs.)	

<sup>2)</sup> max. 8 bar (max. 116 psi) at 2.2 W and 2.5 W.

# Accessories for standardized valve series

MI-01 (ISO-1), MI-02 (ISO-2), MI-03 (ISO-3)



## Solenoid coils, actuators

<b>Solenoid coils</b>	<b>23-SP-011-...</b>	Standard coil	page 4.280
	<b>23-SP-012-...</b>	Coil with 2,2 W power consumption	page 4.280
	<b>23-SP-011-5-O12</b>	Coil with M12 plug connection, 4,8 W, LED and circuit protection	page 4.282
	<b>23-SP-012-5-O32</b>	Coil with M12 plug connection, 2,5 W, LED and circuit protection	page 4.282
	<b>⊕-explosion proof</b>	Valves with explosion proof actuator see chapter 13	
<b>Actuators</b>	<b>23-R-013</b>	Standard actuator	
	<b>23-R-014</b>	Low power actuator	
<b>Plug sockets</b>	<b>28-ST-01</b>	Standard plug socket	page 4.283
	<b>28-ST-04-...</b>	Plug socket with LED	page 4.283
	<b>28-ST-06-...</b>	Plug socket with LED and circuit protection	page 4.283
	<b>28-ST-06-K3-...</b>	Plug socket with LED, circuit protection and cable	page 4.283

### User information

Low power consumption coils (2.2 W or 2.5 W) are for pressures up to 8 bar (116 psi) only. Valve actuator 23-R-014 is required. The actuator 23-R-014 is nickel plated. Make sure that the coils with the right power consumption are used.

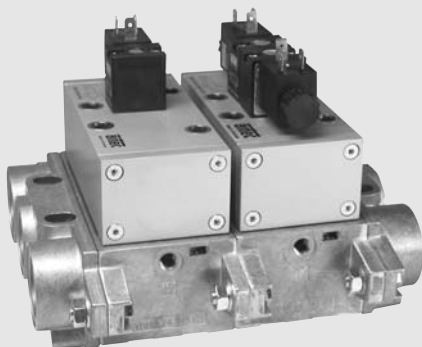
For outdoor applications or in areas with high humidity, use coil 23-SP-011-1-... or 23-SP-012-1-... (see page 4.280).

### The following types are available on request

Coils and sockets with contacts according to DIN EN 175301-803 type B (U-form).

Plug sockets with molded cable.

## Sub-base mounting for series MI-03



Sub-base will be delivered completely assembled with valves if requested.



Assembled sub-base with "n"-stations.  
ISO 5599/1, VDMA 24345 type C and D  
**MI-033/n**



Single sub-base, ports on side  
ISO 5599/1, VDMA 24345 type A  
**MI-031**



Modular element, one station  
ISO 5599/1, VDMA 24345 type C  
**MI-033**



End plate (1 pair)  
ISO 5599/1, VDMA 24345 type D  
**MI-03/E**



Blind plate for blank  
valve station  
**MI-03-V**

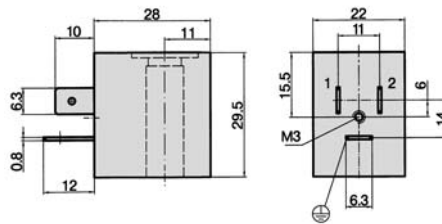
### Other single elements:

**20-I-03-02**

Seal disc for use between valve and sub-base.

# Accessories for electrically operated valves

## Solenoid coils



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

Order number	23-SP-011-411	23-SP-011-412	23-SP-011-422	23-SP-011-426	23-SP-011-427	23-SP-012-431	23-SP-012-432
Standard voltage	12 V DC	24 V DC	24 V AC	115 V AC	230 V AC	12 V DC	24 V DC
Power consumption DC	4.2 W	4.2 W				2.2 W	2.2 W
Power consumption 50 Hz			4 VA	4 VA	4 VA		
Degree of protection	IP 65 according to EN 60529 with connected plug socket						
Duty cycle	100 %						
Temperature range	- 20 °C ... + 50 °C (- 4 °F ... + 122 °F)						
Voltage tolerance	± 10 %						
Standard for series	MS-18, M-04, M-05, M-07, M-22, KM-09, KM-10, MF-05, MF-07, MN-06, KN-05, MI-01, MI-02, MI-03						

Other voltages on request.

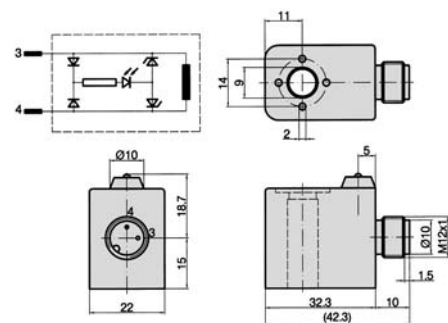
### Solenoid coils with connection pattern pursuant to DIN EN 175301-803 Shape B

(with enhanced humidity resistance)

Order number	23-SP-011-1-711	23-SP-011-1-712	23-SP-011-1-712	23-SP-011-1-722	23-SP-011-1-725	23-SP-011-1-727	23-SP-012-1-732
Standard voltage	12 V DC/24 V AC	24 V DC	48 V AC	12 V DC/24 V AC	110 V AC	230 V AC	24 V DC
Power consumption DC	4.6 W	4.8 W	-	5.5 W	-	-	2.5 W
Power consumption 50 Hz	7.1 VA	-	7.7 VA	8.9 VA	8.5 VA	7.9 VA	
Degree of protection	IP 65 according to EN 60529 with connected plug socket *1						
Duty cycle	100 %						
Temperature range	- 20 °C ... + 50 °C (- 4 °F ... + 122 °F)						
Voltage tolerance	± 10 %						
Standard for series	KMX-09, KMX-10, ICK-09, ICK-10, KN-55, KNX-55, ICKN-55						

\*1: IP67 pursuant to EN 60529 with plug socket and sealing set 20-SP-011/012-02

### Solenoid coils with M12 connection, with LED and protective circuit.



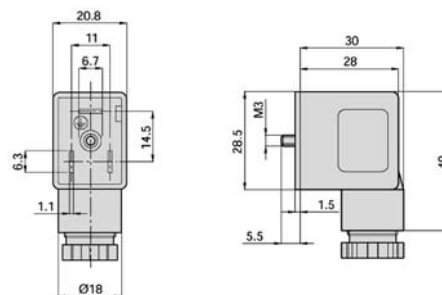
Order number	23-SP-011-5-O12	23-SP-012-5-O32
Standard voltage	24 V DC	24 V DC
Power consumption	4.8 W	2.5 W
Degree of protection	IP 65 according to EN 60529 with connected cable	
Duty cycle	100 %	
Temperature range	- 20 °C ... + 50 °C	
Voltage tolerance	± 10 %	

# Accessories for electrically operated valves

## Plug sockets for coil



**Plug sockets pursuant to DIN EN 175301-803 Shape B**  
(2pol. + PE, 21 x 28 mm, Contact distance 11 mm)



<b>Order number</b>	28-ST-01	28-ST-04-112	28-ST-04-127	28-ST-06-112	28-ST-06-127	28-ST-06-K3-112	28-ST-06-K3-127
<b>Standard voltage</b>	all	24 V DC	230 V AC	24 V DC	230 V AC	24 V DC	230 V AC
<b>Protective circuit</b>	no	no	no	yes	yes	yes	yes
<b>Status indicator</b>	without	yes	yes	yes	yes	yes	yes
<b>Degree of protection</b>	IP 65 pursuant to EN 60529 requires a flat gasket						
<b>Connecting cable</b>	without					3 m	3m
<b>Ø Connecting cable</b>	6 – 8 mm					–	–
<b>Max. wire cross section</b>	1,5 mm <sup>2</sup>					–	–
<b>for coil</b>	23-SP-011, 23-SP-011-1						

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