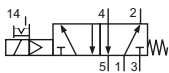


Technical details

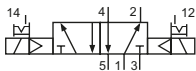
Connection	ISO 5599/1
Nominal size	Size 1: 9 mm
Nominal size	Size 2: 13 mm
	Size 3: 14 mm
Temperature range	-10°C ... +70°C
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Alternatively the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Body: Al (anodized), seals: NBR and POM, inner parts: Al, stainless steel and brass
Protection	IP 65 according to EN 60529
	Valves in accordance with 2014/34/EU (ATEX) available. (Chapter 13)



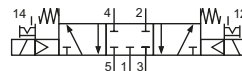
Electrically operated spool valve. The manual override is detent and is operated by screw driver.

5/2-way-valves


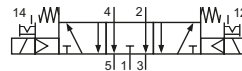
MI-01-511-HN-xxx
 MI-02-511-HN-xxx
 MI-03-511-HN-xxx
 5/2-way, single solenoid, mechanical spring return



MI-01-520-HN-xxx
 MI-02-520-HN-xxx
 MI-03-520-HN-xxx
 5/2-way, double solenoid

5/3-way-valves


MI-01-530-HN-xxx
 MI-02-530-HN-xxx
 MI-03-530-HN-xxx
 5/3-way, center position closed



MI-01-533-HN-xxx
 MI-02-533-HN-xxx
 MI-03-533-HN-xxx
 5/3-way, center position exhausted

Please complete: xxx = electrical option

Electrical options

Nominal voltage	Power consumption	Specifics	Plug connection*1	-xxx
12 V DC	4.2 W		Form B industrial norm	-411
12 V DC	2.2 W	max. 8 bar	Form B industrial norm	-431
24 V DC	4.2 W		Form B industrial norm	-412
24 V DC	4.8 W		M 12	-012
24 V DC	2.2 W	max. 8 bar	Form B industrial norm	-432
24 V DC	2.5 W	max. 8 bar	M 12	-032
24 V AC	7/4 VA		Form B industrial norm	-422
115 V AC	7/4 VA		Form B industrial norm	-426
230 V AC	7/4 VA		Form B industrial norm	-427

*1 Plug socket not included, suitable plug sockets see page 4-38.

Series MI-01, MI-02, MI-03

ISO 5599/1, Size 1 to 3

Technical data

Model-no.:	MI-01-511	MI-01-520	MI-01-530	MI-01-533
Operating pressure* (bar)	2.5...10	2...10	3...10	3...10
Pilot pressure* (bar)	2.5...10	2...10	3...10	3...10
Flow rate (Nl/min)	1700	1700	1610	1610
Response time (ms) at 6 bar	on: 15 off: 27	on: 13 off: 13	on: 17 off: 19	on: 17 off: 19
Weight (kg)	0.480	0.645	0.620	0.620

Model-no.:	MI-02-511	MI-02-520	MI-02-530	MI-02-533
Operating pressure* (bar)	2...10	2...10	3...10	3...10
Pilot pressure* (bar)	2...10	2...10	3...10	3...10
Flow rate (Nl/min)	2020	2020	2020	2020
Response time (ms) at 6 bar	on: 29 off: 57	on: 17 off: 17	on: 20 off: 27	on: 20 off: 27
Weight (kg)	0.708	0.850	0.847	0.847

Model-no.:	MI-03-511	MI-03-520	MI-03-530	MI-03-533
Operating pressure* (bar)	2...10	2...10	3...10	3...10
Pilot pressure* (bar)	2...10	2...10	3...10	3...10
Flow rate (Nl/min)	4150	4150	4150	4150
Response time (ms) at 6 bar	on: 32 off: 57	on: 20 off: 20	on: 22 off: 55	on: 22 off: 55
Weight (kg)	1.115	1.287	1.277	1.277

* max. 8 bar at 2.2 W and 2.5 W

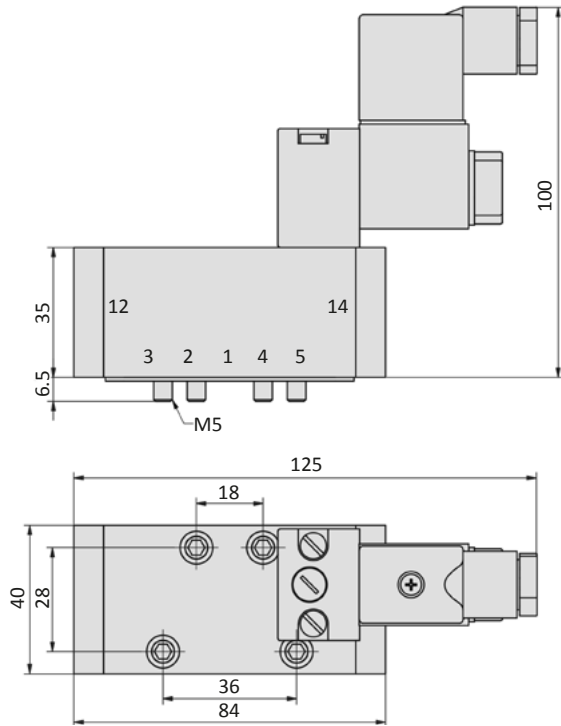
Accessories



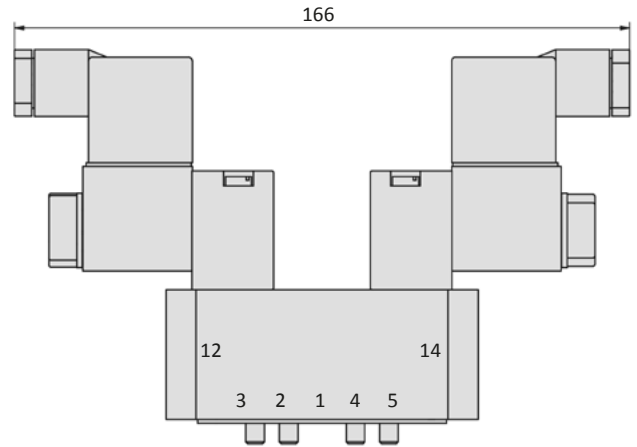
Manifolds and Accessories: www.airtec.de

Dimensions

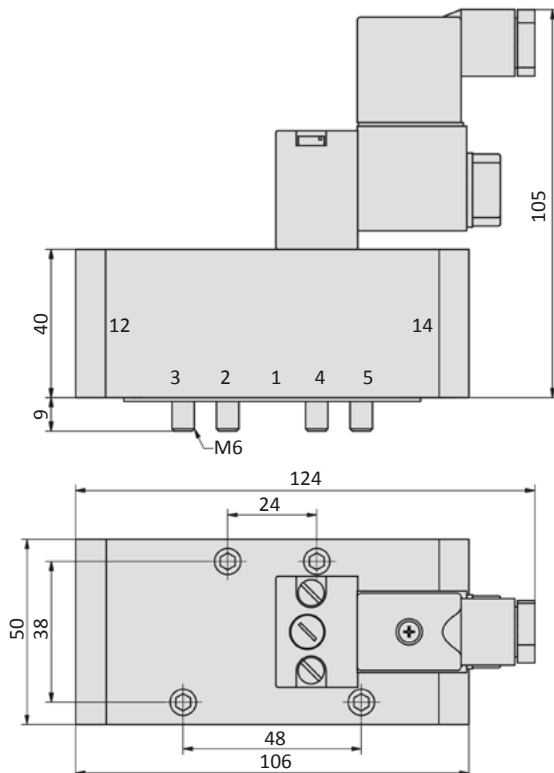
MI-01-511-HN



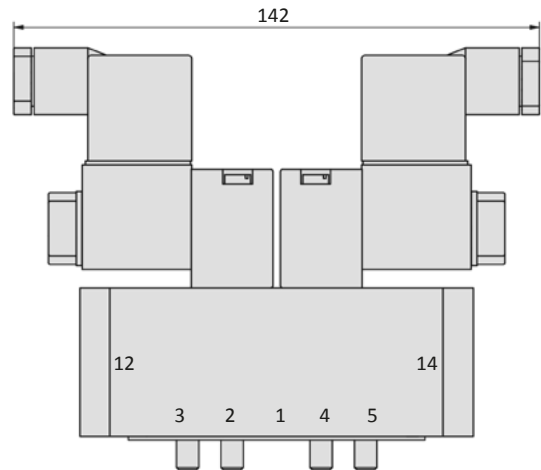
MI-01-520-HN, MI-01-53x-HN



MI-02-511-HN



MI-02-520-HN, MI-02-53x-HN

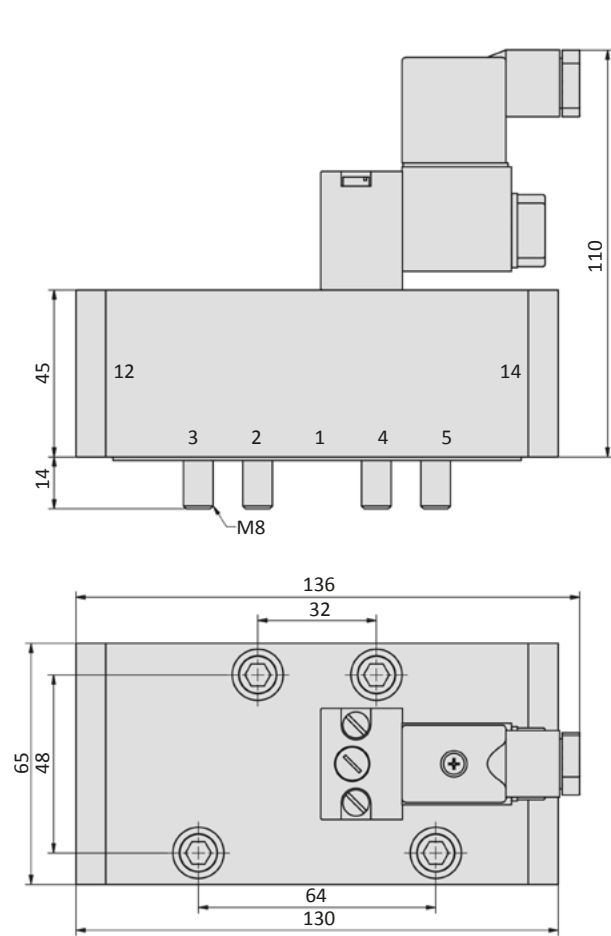


Series MI-01, MI-02, MI-03

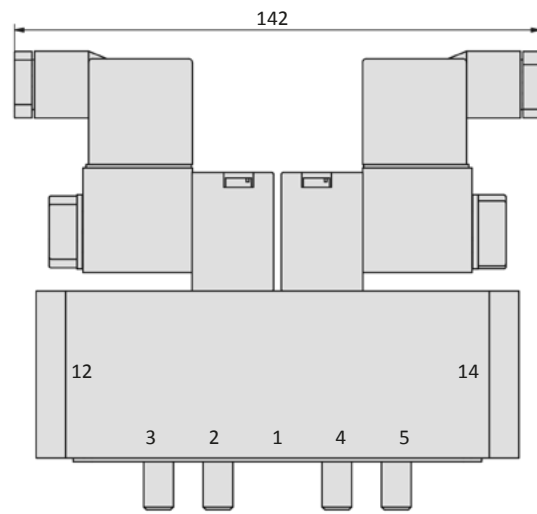
ISO 5599/1, Size 1 to 3

Dimensions

MI-03-511-HN



MI-03-520-HN, MI-03-53x-HN



- 1 = pressure inlet
- 2,4 = outlets
- 3,5 = exhausts

Plug socket (not included in scope of delivery) can be repositioned by 180°.

Solenoid coil can be repositioned by 2 x 90°.

Form A according to DIN EN 175301-803

Overall width	27 mm
Contact distance	18 mm
Contacts	2P + E
Protection	IP 65 according to EN 60529 requires a profile gasket
For use with series	



Model-no.:	28-ST-03	28-ST-11-112
Voltage (AC/DC)	0 - 250 V	24 V
Status indicator	no	yes
Protective circuit	no	yes (Varistor)
Connecting cable	without	without
Wire cross section	max. 1.5 mm ²	max. 1.5 mm ²
Ø Connecting cable	6 - 8 mm	6 - 8 mm

Form B according to DIN EN 175301-803

Overall width	22 mm
Contact distance	10 mm
Contacts	2P + E
Protection	IP 65 according to EN 60529 requires a flat gasket
For use with series	



Model-no.:	28-ST-01-G
Voltage (AC/DC)	0 - 250 V
Status indicator	no
Protective circuit	no
Connecting cable	without
Wire cross section	max. 1.5 mm ²
Ø Connecting cable	6 - 8 mm

Form B industrial norm

Overall width	22 mm
Contact distance	11 mm
Contacts	2P + E
Protection	IP 65 according to EN 60529 requires a flat gasket
For use with series	M-04, M-05, M-07, M-22, KM-09, KM-10, MS-18, KN-05, MN-06, MI-01, MI-02, MI-03

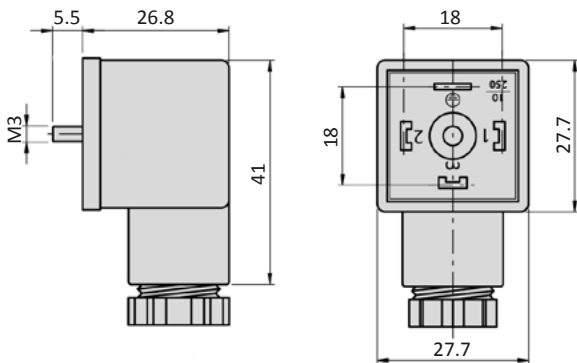


Model-no.:	28-ST-01	28-ST-04-112	28-ST-04-127	28-ST-06-112	28-ST-06-127	28-ST-06-K3-112	28-ST-06-K3-127
Voltage (AC/DC)	0 - 250 V	10 - 50 V	70 - 250 V	24 V	230 V	24 V	230 V
Status indicator	no	yes	yes	yes	yes	yes	yes
Protective circuit	no	no	no	yes (Varistor)	yes (Varistor)	yes (Varistor)	yes (Varistor)
Connecting cable	without	without	without	without	without	3 m	3 m
Wire cross section	max. 1.5 mm ²	max. 1.5 mm ²	max. 1.5 mm ²	max. 1.5 mm ²	max. 1.5 mm ²	3 x 0.75 mm ²	3 x 0.75 mm ²
Ø Connecting cable	6 - 8 mm	6 - 8 mm	6 - 8 mm	6 - 8 mm	6 - 8 mm		

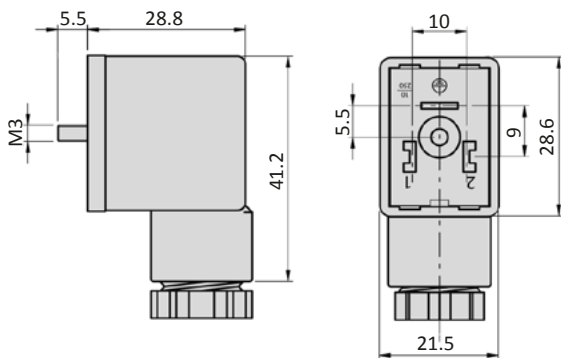
Plug sockets

Dimensions

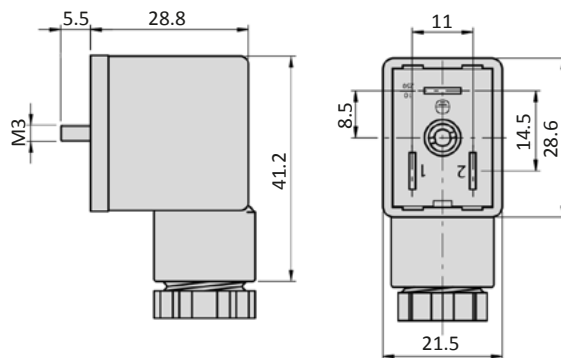
Form A according to DIN EN 175301-803



Form B according to DIN EN 175301-803



Form B industrial norm



Form A according to DIN EN 175301-803

Overall width	30 mm
Contact distance	18 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	



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

Model-no.:	23-SP-016-712	23-SP-016-722	23-SP-016-726	23-SP-016-727
Voltage	24 V DC	24 V AC	110/115 V AC	230 V AC/ 110 V DC
Power consumption DC	4.5 W	-	-	5.3 W
Power consumption AC	-	8.0 VA	7.6 VA/ 8.6 VA	7.9 VA
Specifics	Enhanced humidity resistance.			

5

Form B according to DIN EN 175301-803

Overall width	22 mm
Contact distance	10 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	



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

Model-no.:	23-SP-011-G-412	23-SP-011-G-427
Voltage	24 V DC	230 V AC
Power consumption DC	4.2 W	-
Power consumption AC	-	4.0 VA

Solenoid coils

Form B industrial norm

Overall width	22 mm
Contact distance	11 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-04, M-05, M-07, M-22, KM-09, KM-10, MS-18, KN-05, MN-06, MI-01, MI-02, MI-03



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

Model-no.:	23-SP-011-411	23-SP-011-412	23-SP-011-422	23-SP-011-426	23-SP-011-427	23-SP-012-431	43-SP-012-432
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 AC	-	-	4 VA	4 VA	4 VA	-	-

Model-no.:	23-SP-011-1-711	23-SP-011-1-712	23-SP-011-1-725	23-SP-011-1-727	23-SP-011-1-732
Voltage	12 V DC/ 24V AC	24 V DC/ 48 V AC	110/115 V AC	230 V AC	24 V DC
Power consumption DC	4.6 W	4.8 W	-	-	2.5 W
Power consumption AC	7.1 VA	7.7 VA	6.0 VA/ 7.6 VA	7.9 VA	-
Specifics	Enhanced humidity resistance.				

M12 connection

Overall width	22 mm
Contact distance	-
Contacts	2P
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	

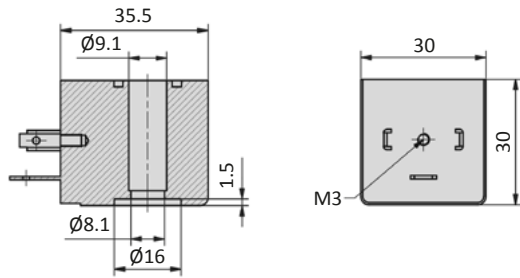


* The max. applicable operating temperature, depends on the temperature specification of the used valve.

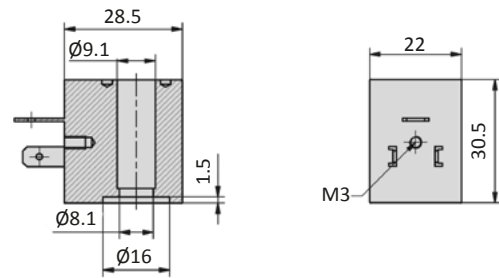
Model-no.:	23-SP-011-5-012	23-SP-012-5-032
Voltage	24 V DC	24 V DC
Power consumption DC	4.8 W	2.5 W
Power consumption AC	-	-
Specifics	Mounting on manifold not allowed. With integrated LED and protective circuit.	Min. mounting distance for manifold mounting is 20 mm. With integrated LED and protective circuit.

Dimensions

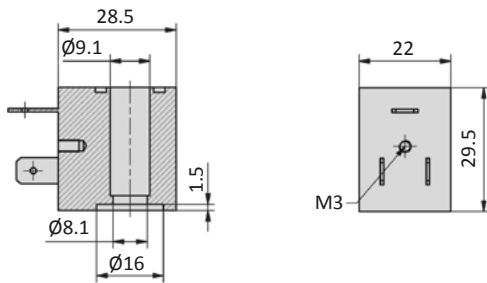
Form A according to DIN EN 175301-803



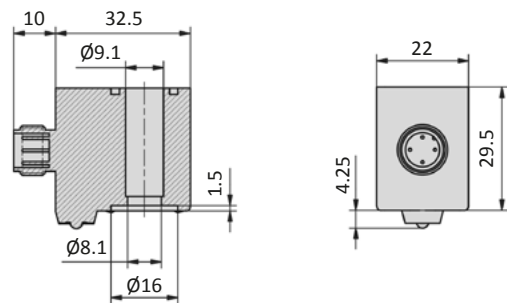
Form B according to DIN EN 175301-803



Form B industrial norm



M12 connection



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		3 AC ports 1/3/(5)	3 42 V
	4 with coil, without plug	according to valve	4 DC, low power consumption ports 1/3/(5)	4 48 V
	5 without coil	no	5 DC ports 2/(4)	5 110 V
	6 without pilot valve	no	6 DC ports 2/(4)	6 115 V
	7 with coil, with enhanced humidity resistance, without plug	according to valve	7 AC ports 2/(4)	7 230 V
	8 with coil, with enhanced humidity resistance, with plug	according to valve	8 DC, low power consumption ports 2/(4)	8 240 V
	9 ATEX 2GD, intrinsically safe, with plug width 30 mm	23-SP-038	9 without indication ports 2/(4)	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