



- Electrically or pneumatically actuated valves
- With internal or external pilot air
- Pneumatic or mechanical reset

Specified types in accordance with ATEX directive for potentially explosive atmospheres

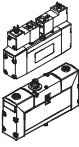
→ [www.festo.com/en/ex](http://www.festo.com/en/ex)

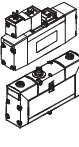
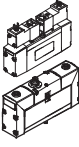
- 1 - Type discontinued  
Available up until 2010

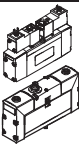
## Solenoid valves, to ISO 15407-1

Product range overview

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Function	Version	Type	ISO size		Nominal flow rate [l/min]	Working port on the sub-base		Operating voltage				
			02	01		G $\frac{1}{8}$	G $\frac{1}{4}$	[V DC]		[V AC]		
								12	24	24	110	230
2x 3/2-way valves in one housing	Mono-stable valve											
		MN2H-2x3-...	■	■	490/950	■	■	■	■	■	■	■
		MN2H-2x3-...-ZSR	■	■		■	■	-	■	-	-	-
		VSPA-...-T32-...R...	■	■	500/1,000	■	■	-	■	-	-	-

Function	Version	Type	ISO size		Nominal flow rate [l/min]	Working port on the sub-base		Operating voltage				
			02	01		G $\frac{1}{8}$	G $\frac{1}{4}$	[V DC]		[V AC]		
								12	24	24	110	230
5/2-way valves	Mono-stable valve											
		MN2H	■	■	500/1,000	■	■	■	■	■	■	■
		MN2H-...-ZSR	■	■	500/1,000	■	■	-	■	-	-	-
		VSPA-...-M52-...R...	■	■	500/1,000	■	■	-	■	-	-	-
	Bi-stable valve											
		JMN2H	■	■	500/1,000	■	■	■	■	■	■	■
		JMN2DH	■	■	500/1,000	■	■	■	■	■	■	■
		JMN2H-...-ZSR	■	■	500/1,000	■	■	-	■	-	-	-
		VSPA-...-B52-...R...	■	■	500/1,000	■	■	-	■	-	-	-
		JMN2DH-...-ZSR	■	■	500/1,000	■	■	-	■	-	-	-
		VSPA-...-D52-...R...	■	■	500/1,000	■	■	-	■	-	-	-

Function	Version	Type	ISO size		Nominal flow rate [l/min]	Working port on the sub-base		Operating voltage				
			02	01		G $\frac{1}{8}$	G $\frac{1}{4}$	[V DC]		[V AC]		
								12	24	24	110	230
5/3-way valves	Mono-stable valve											
		MN2H-5/3...	■	■	500/1,000	■	■	■	■	■	■	■
		MN2H-5/3-...-ZSR	■	■	500/1,000	■	■		■			
VSPA-...-P53-...R...		■	■	450/1,000	■	■		■				

## Solenoid valves, to ISO 15407-1

Product range overview

Type	Plug			Pilot air supply		Spring return		Normal position			→ Page/Internet
	Square	Central round		In- ter- nal	Ex- ter- nal	Pneu- matic	Mechan- ical	2x closed	2x open	1x open 1x closed	
	MEB	M8x1	M12x1								
<b>Mono-stable valve</b>											
MN2H-2x3...	■	-	-	■	■	■	-	■	■	■	12
MN2H-2x3-...-ZSR	-	-	■	■	■	■	-	■	■	■	12
VSVA-...-T32-...1R...	-	■	■	■	■	■	-	■	■	■	vsva

Type	Plug			Pilot air supply		Spring return		Signal processing			→ Page/Internet
	Square	Central round		Internal	External	Pneu- matic	Mechan- ical	Mono- stable	Bi-stable		
	MEB	M8x1	M12x1						Equally dominant	Dominant at 14	
<b>Mono-stable valve</b>											
MN2H	■	-	-	■	■	■	■	■	-	-	18
MN2H-...-ZSR	-	-	■	■	■	■	■	■	-	-	18
VSVA-...-M52-...1R...	-	■	■	■	■	■	■	■	-	-	vsva
<b>Bi-stable valve</b>											
JMN2H	■	-	-	■	■	-	-	-	■	-	24
JMN2DH	■	-	-	■	■	-	-	-	-	■	24
JMN2H-...-ZSR	-	-	■	■	■	-	-	-	■	-	24
VSVA-...-B52-...1R...	-	■	■	■	■	-	-	-	■	-	vsva
JMN2DH-...-ZSR	-	-	■	■	■	-	-	-	-	■	24
VSVA-...-D52-...1R...	-	■	■	■	■	-	-	-	-	■	vsva




Type	Plug			Pilot air supply		Normal position			→ Page/Internet
	Square	Central round		Internal	External	Closed	Exhausted	Pressurised	
	MEB	M8x1	M12x1						
<b>Mono-stable valve</b>									
MN2H-5/3...	■	-	-	■	■	■	■	■	30
MN2H-5/3-...-ZSR	-	-	■	■	■	■	■	■	30
VSVA-...-P53-...1R...	-	■	■	■	■	■	■	■	vsva


- 1 - Type discontinued  
Available up until 2010

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## Pneumatic valves, to ISO 15407-1

Product range overview

Function	Version	Type	ISO size	Nominal flow rate	Pneumatic working port on the sub-base	Reset method		→ Page/Internet
				[l/min]		Pneumatic spring	Mechanical spring	
5/2-way valves	Single pilot pneumatic valve							
		VL-5/2	02	500	G $\frac{1}{8}$	■	■	40
			01	1,000	G $\frac{1}{4}$	■	■	
	Double pilot pneumatic valve (first signal dominant)							
		J-5/2	02	500	G $\frac{1}{8}$	-	-	43
			01	1,000	G $\frac{1}{4}$	-	-	
	Double pilot pneumatic valve (dominant at 14)							
		JD-5/2	02	500	G $\frac{1}{8}$	-	-	43
			01	1,000	G $\frac{1}{4}$	-	-	

Function	Version	Type	ISO size	Nominal flow rate	Pneumatic working port on the sub-base	Normal position			→ Page/Internet
				[l/min]		Closed	Exhausted	Pressurised	
5/3-way valves	Single pilot pneumatic valve								
		VL-5/3...	02	500	G $\frac{1}{8}$	■	■	■	46
			01	1,000	G $\frac{1}{4}$	■	■	■	

## Solenoid valves MN2H, ISO 15 407-1

Type codes

		MN2H	-	5/3	G	-	01	-		-		-	ZSR	-	
<b>Type</b>															
MN2H	Single solenoid, with N2 solenoid coil														
JMN2H	Double solenoid, with N2 solenoid coil														
JMN2DH	Double solenoid, with N2 solenoid coil, with dominant signal														
<b>Valve function</b>															
2x3	2x 3/2-way valve														
5/2	5/2-way valve														
5/3	5/3-way valve														
<b>Normal position</b>															
O	Open														
G	Closed														
E	Exhausted														
B	Pressurised														
O-G	1x open, 1x closed														
<b>Size</b>															
02	ISO size 02														
D-02	ISO size 02														
01	ISO size 01														
D-01	ISO size 01														
<b>Type of reset</b>															
FR	Mechanical spring														
	Pneumatic spring														
<b>Pilot air supply</b>															
	Internal														
S	External														
<b>Electrical connection, operating voltage</b>															
Plug, square design to DIN EN 175301-803, type C															
12DCA	12 V DC														
110AC	110 V AC														
110VAC	110 V AC														
230AC	230 V AC														
230VAC	230 V AC														
Central plug, round design, M12x1															
ZSR	24 V DC														
<b>Generation</b>															
B	Series B														

- 1 - Type discontinued  
Available up until 2010

## Solenoid valves VSVA, ISO 15 407-1

Type codes

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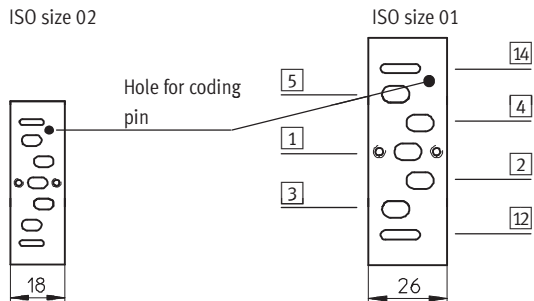
VSVA		B	T	32	C	A	Z	H	A1	1	R2	L
<b>Valve family</b>												
VSVA	Standard valves ISO 15 407-1/-2											
<b>Valve type</b>												
B	Sub-base valve											
<b>Valve function</b>												
M	Single solenoid											
B	Double solenoid											
D	Double pilot with dominance on one side											
P	Mid-position											
T	2 single solenoid valves in one housing											
<b>Connections / switching positions</b>												
32	3/2-way valve											
52	5/2-way valve											
53	5/3-way valve											
<b>Normal position</b>												
C	Closed											
U	Open											
E	Exhausted											
H	T with 1x open, 1x closed											
	Double solenoid valve											
<b>Type of reset</b>												
A	Pneumatic spring											
M	Mechanical spring											
	Double solenoid valve											
<b>Pilot air supply</b>												
Z	External											
	Internal											
<b>Manual override facility</b>												
H	By pushing											
<b>Standard</b>												
A1	ISO size 01											
A2	ISO size 02											
<b>Operating voltage</b>												
1	24 V											
<b>Type of voltage</b>												
	DC											
<b>Electrical connection</b>												
R2	Central plug M8x1											
R5	Central plug M12x1											
<b>LED</b>												
L	Integrated											

## Solenoid valves, ISO 15 407-1

Peripherals overview

### Port pattern on sub-base to ISO 15 407-1

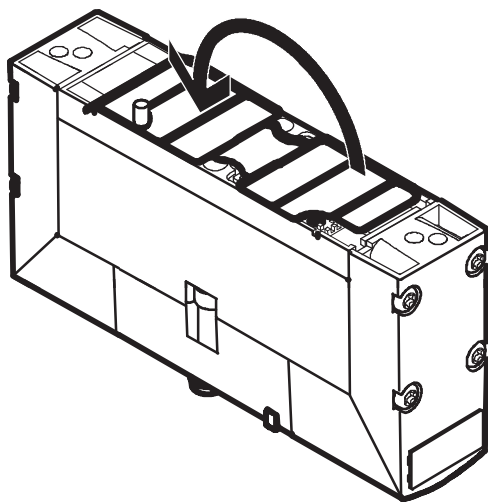
Extension of the standard given below



### VSVA

Conversion of pilot air exhaust

VSVA valve manifolds are supplied with ducted the pilot air exhaust. By turning the seal between the valve and manifold block, the exhaust can be diverted into the pilot duct 12 and it can thus be contained and silenced (see Figure).



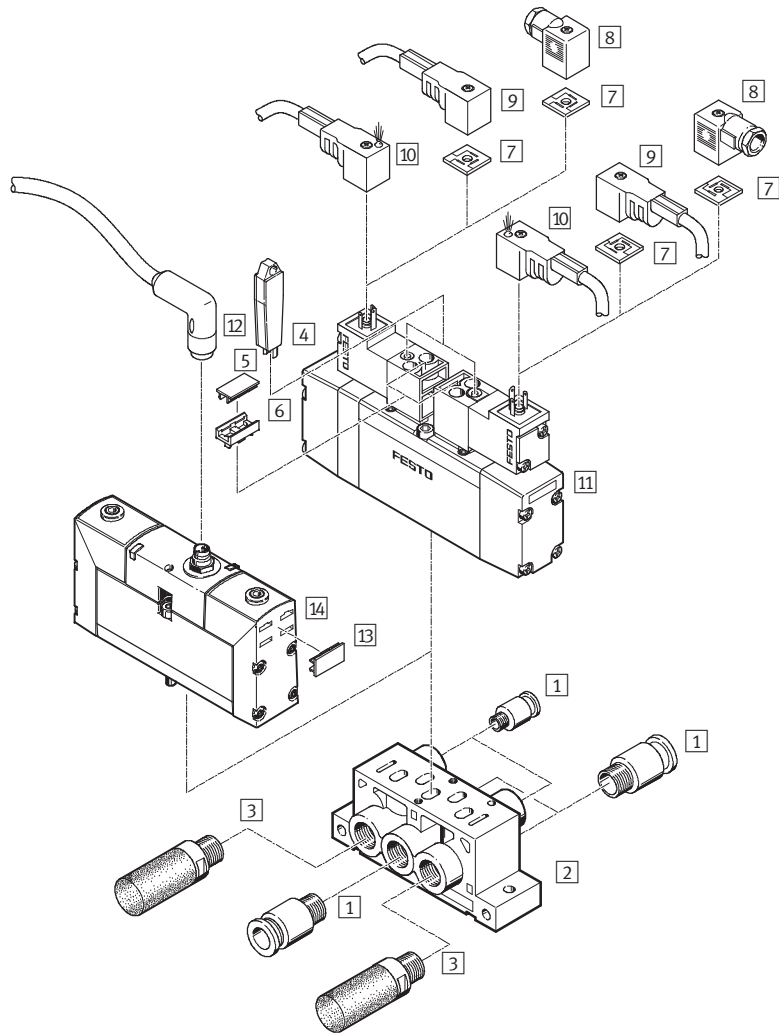
- 1 - Type discontinued  
Available up until 2010

## Solenoid valves, ISO 15 407-1

Peripherals overview

FESTO

### Individual mounting



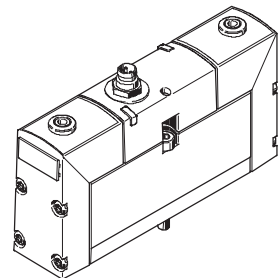
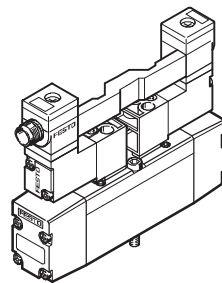
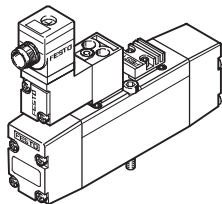
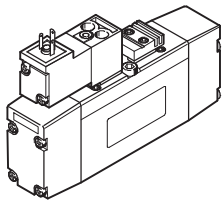
### Variants

MN2H-5/2-...

MN2H-5/2-...-ZSR

MN2H-2x3-...-  
ZSR, JMN2H-5/2-...-  
ZSR, MN2H-5/3-...-ZSR

VSVA-B-...-A1-1R2L  
VSVA-B-...-A1-1R5L





## Solenoid valves, ISO 15 407-1

Peripherals overview

Accessories		
	Brief description	→ Page/Internet
1	Push-in fitting QS	quick star
2	Individual sub-base NAS	49
-	Individual sub-base NAU	50
3	Silencers U	u
4	Manual override tool AHB-MEB	54
5	Inscription labels IBS-9x17	54
6	Inscription clip MN2H	53
7	Illuminating seal MEB-LD	56
8	Plug socket MSSD-EB	55
9	Plug socket with cable KMEB	55
10	Plug socket with cable and LED KMEB-...-LED	55
11	Solenoid valve MN2H	mn2h
12	Plug socket with cable	Round plug M12x1 or M8x1
13	Inscription labels IBS-9x20	55
14	Solenoid valve VSVA	vsva

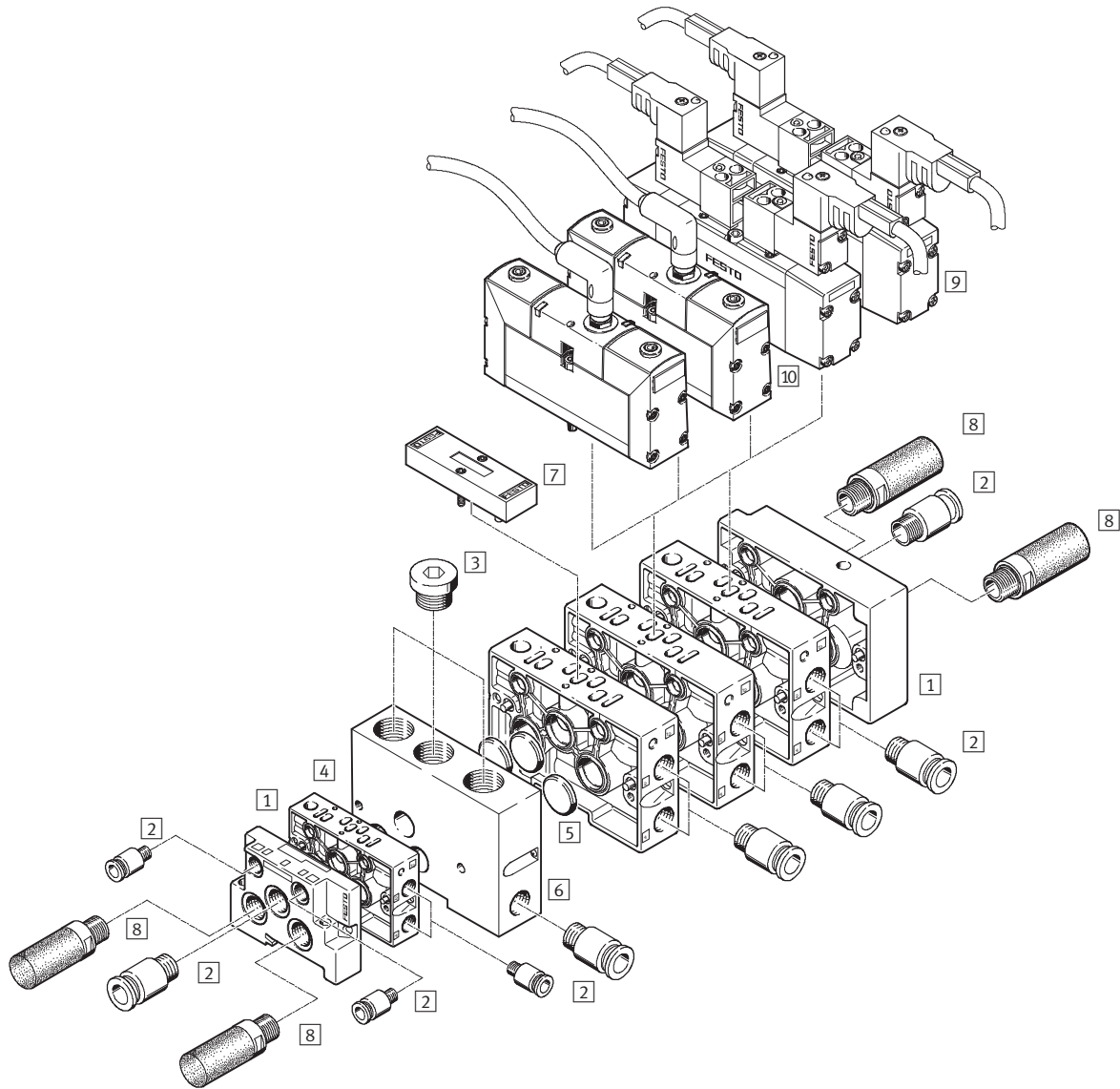
- 1 - Type discontinued  
Available up until 2010

## Solenoid valves, ISO 15 407-1

Peripherals overview

FESTO

### Manifold mounting



### Variants

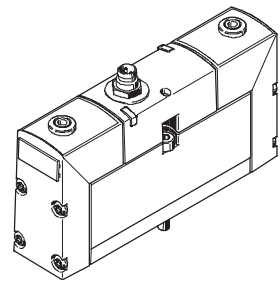
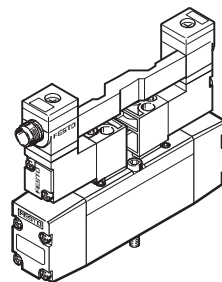
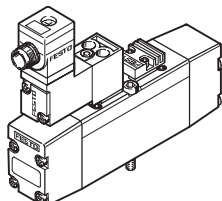
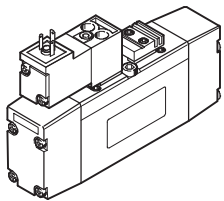
MN2H-5/2-...

MN2H-5/2-...-ZSR

MN2H-2x3-...-  
ZSR, JMN2H-5/2-...-  
ZSR, MN2H-5/3-...-ZSR

VSVA-B-...-A1-1R2L


VSVA-B-...-A1-1R5L



## Solenoid valves, ISO 15 407-1


Peripherals overview

Accessories		
	Brief description	→ Page/Internet
1	End plate kit NEV	50
2	Push-in fitting QS	quick star
3	Blanking plugs B	55
4	Manifold sub-base NAW	50
5	Isolating disc NSC	53
6	Intermediate plate NZV	51
7	Blanking plate NDV	51
8	Silencers U	u
9	Solenoid valve MN2H	Port pattern to ISO 15 407-1, corresponding plug sockets → 55 mn2h
10	Solenoid valve VSVA	Port pattern to ISO 15 407-1, corresponding plug sockets → 55 vsva

 Note

When supplying different pressure zones, both a left and right isolating disc for the pressure supply and for the pilot line are needed for pilot air.


For design reasons, only the silencer U- $\frac{3}{8}$ -B can be screwed into ports 3 and 5 when assembling ISO size 02 mounting rails.


-  - Type discontinued  
Available up until 2010

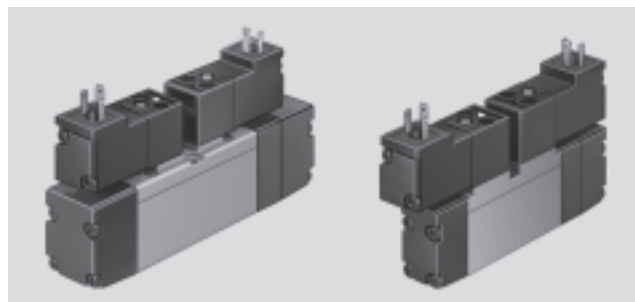
## Solenoid valves MN2H, ISO 15 407-1

Technical data – 2x 3/2-way valves

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-  - Flow rate  
490 ... 950 l/min

-  - Voltage  
12, 24 V DC  
24, 110, 230 V AC



General technical data			
ISO size		02	01
Valve function		2x 3/2-way, single solenoid	
Constructional design		Piston spool	
Sealing principle		Soft	
Actuation type		Electrical	
Type of reset		Pneumatic spring	
Type of control		Piloted	
Pilot air supply		Internal	
Direction of flow		Non reversible	
Exhaust function		Flow control	
Manual override facility		Via tool accessory, detenting	
Type of mounting		Via through-holes	
Assembly position		Any	
Nominal size	[mm]	6	8
Standard nominal flow rate	[l/min]	440	950
Grid dimension	[mm]	19	27
Pneumatic connection	1, 2, 3, 4, 5	G $\frac{1}{8}$	G $\frac{1}{4}$
	12, 14	M5	M5
Product weight	[g]	210	320
Noise level	[dB (A)]	75	

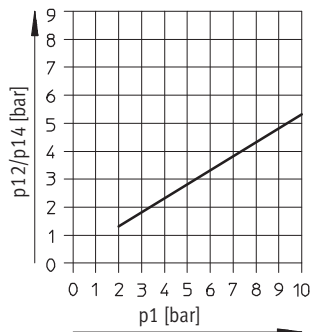
Operating and environmental conditions			
ISO size		02	01
Operating medium		Filtered compressed air, lubricated or unlubricated Vacuum	
Operating pressure	Internal pilot air supply	[bar]	2 ... 10
	External pilot air supply	[bar]	-0.9 ... 10      -0.9 ... 16
Pilot pressure	[bar]	2 ... 10 <sup>1)</sup>	
Ambient temperature	[°C]	-10 ... +50	
Temperature of medium	[°C]	-10 ... +50	

1) Pilot pressure dependent on operating pressure → Graph

## Solenoid valves MN2H, ISO 15 407-1

Technical data – 2x 3/2-way valves

### Minimum pilot pressure p12, p14 as a function of the operating pressure p1 (external pilot air supply)



### Valve response times [ms]

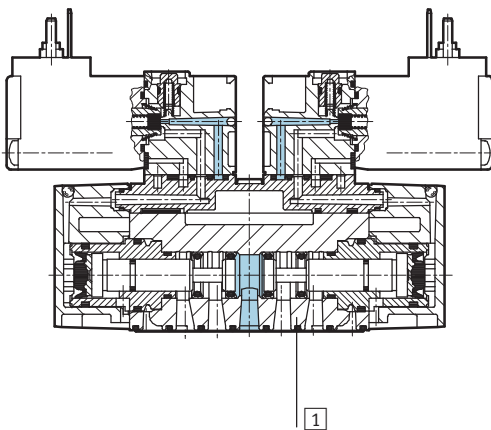
ISO size	02	01
On	15	20
Off	16	33

### Electrical data

Electrical connection		Plug, square design to EN 175301-803, type C
		Central plug, round design, M12x1
Operating voltage	D.C. voltage [V DC]	12, 24 +10%/-15%
	AC voltage [V AC]	24, 110/230 ±10% (50 ... 60 Hz)
Coil characteristics	D.C. voltage [W]	1.5
	AC voltage [VA]	Pull: 3 Hold: 2.4
Protection class to EN 60 529		IP65 (in combination with plug socket)
CE symbol		73/23/EEC (low voltage)

### Materials

Sectional view



1	Housing	Die-cast aluminium, polyacetate
-	Seals	Nitrile rubber
	Material note	Designs free of copper and PTFE → Ordering data

- 1 - Type discontinued  
Available up until 2010

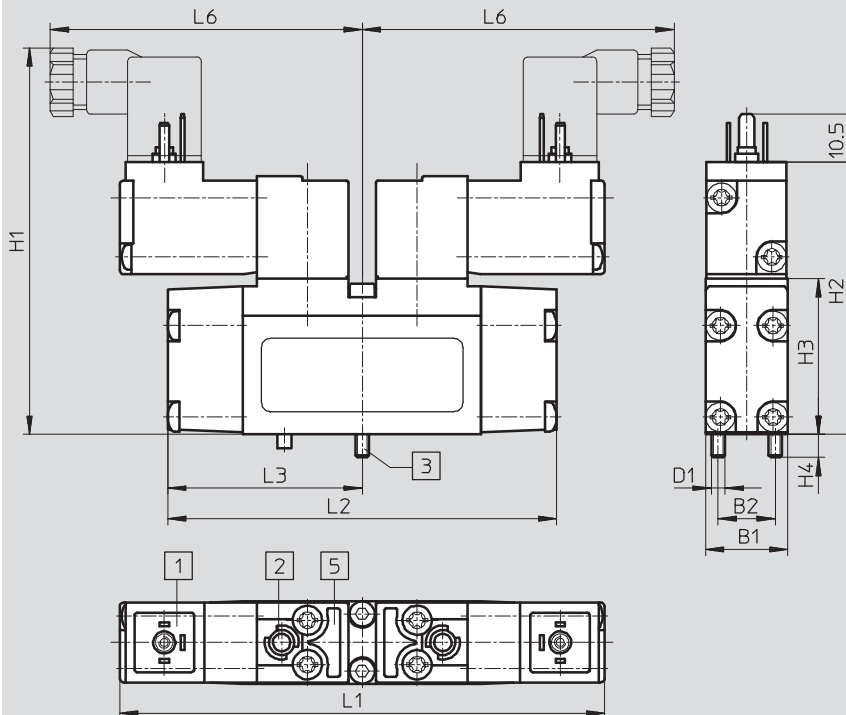
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## Solenoid valves MN2H, ISO 15 407-1

Technical data – 2x 3/2-way valves

### Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)



- 1 Plug socket connection pattern to EN 175301-803, type C
- 2 Manual override
- 3 Captive mounting screws
- 5 Slot for inscription clip

ISO size	B1	B2	D1	H1	H2	H3	H4	L1	L2	L3	L6
02	18	12.5	M3	92	59.5	34	5	106	85	42.5	70
01	26.2	19	M4	93	60.5	35	7	108	110	55	71

- 1 - Type discontinued  
Available up until 2010

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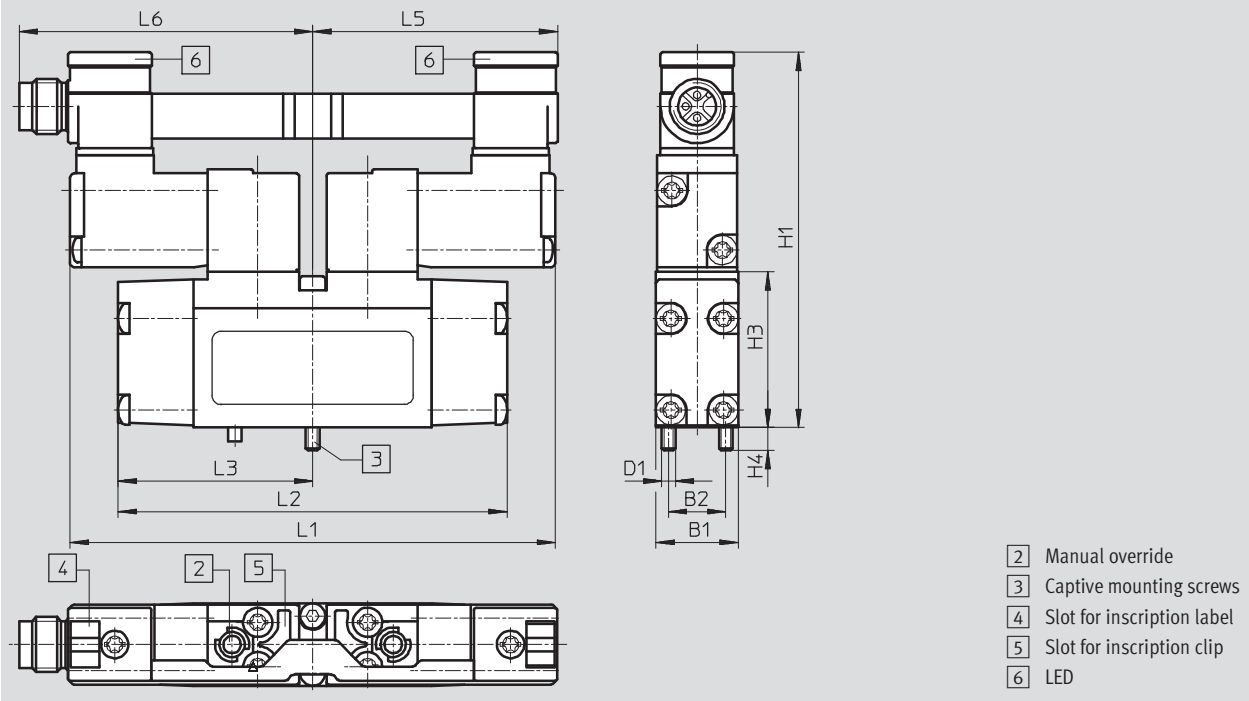
## Solenoid valves MN2H, ISO 15 407-1

Technical data – 2x 3/2-way valves

### Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

MN2H-...-ZSR with round central plug

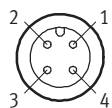


- 2 Manual override
- 3 Captive mounting screws
- 4 Slot for inscription label
- 5 Slot for inscription clip
- 6 LED


ISO size	B1	B2	D1	H1	H3	H4	L2	L3	L5	L6
02	18	12.5	M3	82	34	5	85	42.5	52.5	64.2
01	26.2	19	M4	85	35	7	110	55	53.5	65.2

### M12 central plug – Terminal allocation

Duo connection



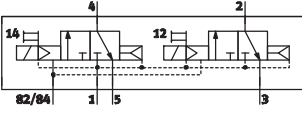
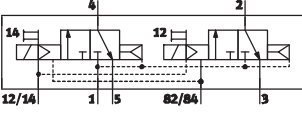
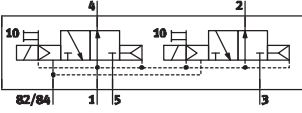
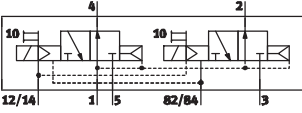
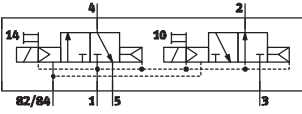
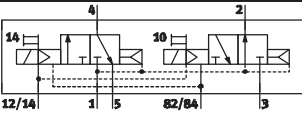
- 1 Unused
- 2 Signal (+) Solenoid 12
- 3 com (-)
- 4 Signal (+) Solenoid 14

-  - Type discontinued  
Available up until 2010

FESTO

## Solenoid valves MN2H, ISO 15 407-1

Technical data – 2x 3/2-way valves

Ordering data – ISO size 02					
Circuit symbol	Description	Voltage	Central plug <sup>1)</sup>	Part No.	Type
	Normally closed, internal pilot air supply	24 V DC	–	187 976	MN2H-2x3G-02 <sup>2)</sup>
		12 V DC, 24 V AC	–	191 372	MN2H-2x3G-02-12DCA
		110 V AC	–	191 374	MN2H-2x3G-02-110AC
		230 V AC	–	191 376	MN2H-2x3G-02-230AC
		24 V DC	■	191 370	MN2H-2x3G-02-ZSR
	Normally closed, external pilot air supply	24 V DC	–	187 979	MN2H-2x3G-02-S <sup>2)</sup>
		12 V DC, 24 V AC	–	191 373	MN2H-2x3G-02-S-12DCA
		110 V AC	–	191 375	MN2H-2x3G-02-S-110AC
		230 V AC	–	191 377	MN2H-2x3G-02-S-230AC
		24 V DC	■	191 371	MN2H-2x3G-02-S-ZSR
	Normally open, internal pilot air supply	24 V DC	–	187 977	MN2H-2x3O-02 <sup>2)</sup>
		12 V DC, 24 V AC	–	191 380	MN2H-2x3O-02-12DCA
		110 V AC	–	191 382	MN2H-2x3O-02-110AC
		230 V AC	–	191 384	MN2H-2x3O-02-230AC
		24 V DC	■	191 378	MN2H-2x3O-02-ZSR
	Normally open, external pilot air supply	24 V DC	–	187 980	MN2H-2x3O-02-S <sup>2)</sup>
		12 V DC, 24 V AC	–	191 381	MN2H-2x3O-02-S-12DCA
		110 V AC	–	191 383	MN2H-2x3O-02-S-110AC
		230 V AC	–	191 385	MN2H-2x3O-02-S-230AC
		24 V DC	■	191 379	MN2H-2x3O-02-S-ZSR
	Normally 1x closed, 1x open, internal pilot air supply	24 V DC	–	187 978	MN2H-2x3O-G-02 <sup>2)</sup>
		12 V DC, 24 V AC	–	191 388	MN2H-2x3O-G-02-12DCA
		110 V AC	–	191 390	MN2H-2x3O-G-02-110AC
		230 V AC	–	191 392	MN2H-2x3O-G-02-230AC
		24 V DC	■	191 386	MN2H-2x3O-G-02-ZSR
	Normally 1x closed, 1x open, external pilot air supply	24 V DC	–	187 981	MN2H-2x3O-G-02-S <sup>2)</sup>
		12 V DC, 24 V AC	–	191 389	MN2H-2x3O-G-02-S-12DCA
		110 V AC	–	191 391	MN2H-2x3O-G-02-S-110AC
		230 V AC	–	191 393	MN2H-2x3O-G-02-S-230AC
		24 V DC	■	191 387	MN2H-2x3O-G-02-S-ZSR

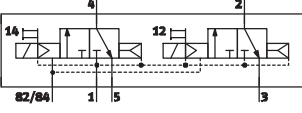
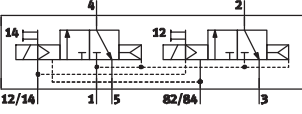
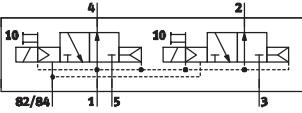
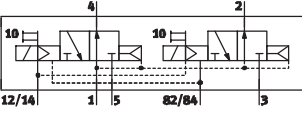
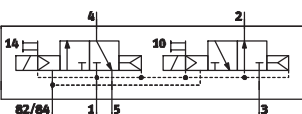
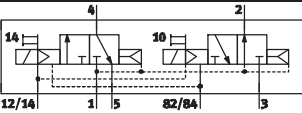
1) Included in the scope of delivery

2) Free of copper and PTFE




## Solenoid valves MN2H, ISO 15 407-1

Technical data – 2x 3/2-way valves

Ordering data – ISO size 01					
Circuit symbol	Description	Voltage	Central plug <sup>1)</sup>	Part No.	Type
	Normally closed, internal pilot air supply	24 V DC	–	187 970	MN2H-2x3G-01 <sup>2)</sup>
		12 V DC, 24 V AC	–	191 342	MN2H-2x3G-01-12DCA
		110 V AC	–	191 344	MN2H-2x3G-01-110AC
		230 V AC	–	191 346	MN2H-2x3G-01-230AC
		24 V DC	■	191 340	MN2H-2x3G-01-ZSR
	Normally closed, external pilot air supply	24 V DC	–	187 973	MN2H-2x3G-01-S <sup>2)</sup>
		12 V DC, 24 V AC	–	191 343	MN2H-2x3G-01-S-12DCA
		110 V AC	–	191 345	MN2H-2x3G-01-S-110AC
		230 V AC	–	191 347	MN2H-2x3G-01-S-230AC
		24 V DC	■	191 341	MN2H-2x3G-01-S-ZSR
	Normally open, internal pilot air supply	24 V DC	–	187 971	MN2H-2x30-01 <sup>2)</sup>
		12 V DC, 24 V AC	–	191 350	MN2H-2x30-01-12DCA
		110 V AC	–	191 352	MN2H-2x30-01-110AC
		230 V AC	–	191 354	MN2H-2x30-01-230AC
		24 V DC	■	191 348	MN2H-2x30-01-ZSR
	Normally open, external pilot air supply	24 V DC	–	187 974	MN2H-2x30-01-S <sup>2)</sup>
		12 V DC, 24 V AC	–	191 351	MN2H-2x30-01-S-12DCA
		110 V AC	–	191 353	MN2H-2x30-01-S-110AC
		230 V AC	–	191 355	MN2H-2x30-01-S-230AC
		24 V DC	■	191 349	MN2H-2x30-01-S-ZSR
	Normally 1x closed, 1x open, internal pilot air supply	24 V DC	–	187 972	MN2H-2x30-G-01 <sup>2)</sup>
		12 V DC, 24 V AC	–	191 358	MN2H-2x30-G-01-12DCA
		110 V AC	–	191 360	MN2H-2x30-G-01-110AC
		230 V AC	–	191 362	MN2H-2x30-G-01-230AC
		24 V DC	■	191 356	MN2H-2x30-G-01-ZSR
	Normally 1x closed, 1x open, external pilot air supply	24 V DC	–	187 975	MN2H-2x30-G-01-S <sup>2)</sup>
		12 V DC, 24 V AC	–	191 359	MN2H-2x30-G-01-S-12DCA
		110 V AC	–	191 361	MN2H-2x30-G-01-S-110AC
		230 V AC	–	191 363	MN2H-2x30-G-01-S-230AC
		24 V DC	■	191 357	MN2H-2x30-G-01-S-ZSR

1) Included in the scope of delivery


2) Free of copper and PTFE


-  - Type discontinued  
Available up until 2010

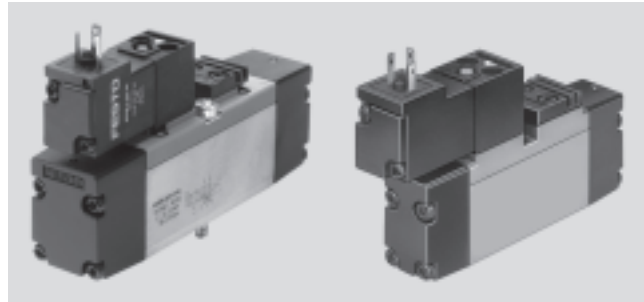
## Solenoid valves MN2H, ISO 15 407-1

Technical data 5/2-way valves

FESTO

-  - Flow rate  
500 ... 1,000 l/min

-  - Voltage  
12, 24 V DC  
24, 110, 230 V AC



General technical data			
ISO size	02		01
Valve function	5/2-way, single solenoid		
Constructional design	Piston spool		
Sealing principle	Soft		
Actuation type	Electrical		
Type of reset	Mechanical or pneumatic spring		
Type of control	Piloted		
Pilot air supply	Internal or external		
Direction of flow	Non reversible		
Exhaust function	Flow control		
Manual override facility	Via tool accessory, detenting		
Type of mounting	Via through-holes		
Assembly position	Any		
Nominal size	[mm]	6	8
Standard nominal flow rate	[l/min]	500	1,000
Grid dimension	[mm]	19	27
Pneumatic connection	1, 2, 3, 4, 5	G $\frac{1}{8}$	G $\frac{1}{4}$
	12, 14	M5	M5
Product weight	[g]	160	270
Noise level	[dB (A)]	75	

Operating and environmental conditions						
ISO size	02			01		
Type of reset	Pneumatic		Mechanical	Pneumatic		Mechanical
Operating medium	Filtered compressed air, lubricated or unlubricated Vacuum					
Operating pressure	Internal pilot air supply	[bar]	2 ... 10	3 ... 10	2 ... 10	3 ... 10
	External pilot air supply	[bar]	-0.9 ... +10	-0.9 ... +10	-0.9 ... +16	-0.9 ... +16
Pilot pressure		[bar]	2 ... 10	3 ... 10	2 ... 10	3 ... 10
Ambient temperature		[°C]	-10 ... +50			
Temperature of medium		[°C]	-5 ... +50			

Valve response times [ms]						
ISO size	02			01		
Type of reset	Pneumatic		Mechanical	Pneumatic		Mechanical
On	23		18	31	24	
Off	27		34	43	58	

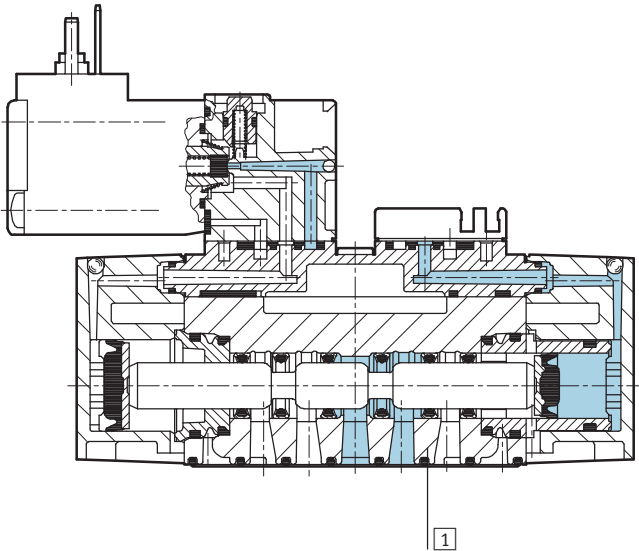
## Solenoid valves MN2H, ISO 15 407-1

Technical data – 5/2-way valves


Electrical data			
Electrical connection		Plug, square design to EN 175301-803, type C	
		Central plug, round design, M12x1	
Operating voltage	D.C. voltage	[V DC]	12, 24 +10%/-15%
	AC voltage	[V AC]	24, 110/230 ±10% (50 ... 60 Hz)
Coil characteristics	D.C. voltage	[W]	1.5
	AC voltage	[VA]	Pull: 3 Hold: 2.4
Protection class to EN 60 529		IP65 (in combination with plug socket)	
CE symbol		73/23/EEC (low voltage)	

### Materials

Sectional view



1	Housing	Die-cast aluminium, polyacetate
-	Seals	Nitrile rubber
Material note		Designs free of copper and PTFE → Ordering data

-  - Type discontinued  
Available up until 2010

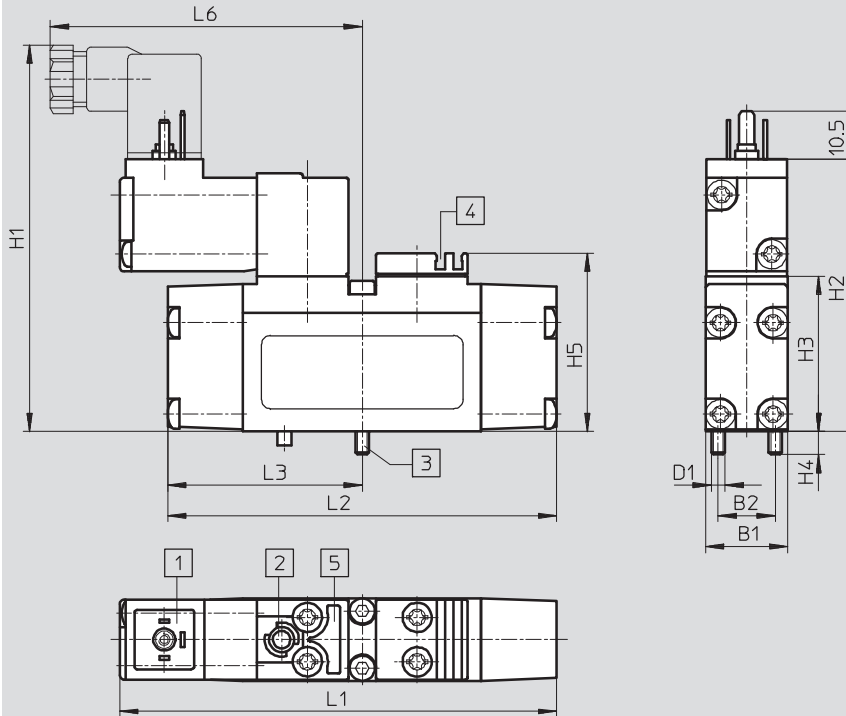
## Solenoid valves MN2H, ISO 15 407-1

Technical data – 5/2-way valves

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### Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)



- 1 Plug socket connection pattern to EN 175301-803, type C
- 2 Manual override
- 3 Captive mounting screws
- 4 Slot for inscription label
- 5 Slot for inscription clip

Type	B1	B2	D1	H1	H2	H3	H4	H5	L1	L2	L3	L6
ISO size 02												
MN2H-5/2-...	18	12.5	M3	92	59.5	34	5	39	95.5	85	42.5	70
MN2H-5/2-...-FR									107.5	97		
ISO size 01												
MN2H-5/2-...	26.2	19	M4	93	60.5	35	7	42	109	110	55	71
MN2H-5/2-...-FR												

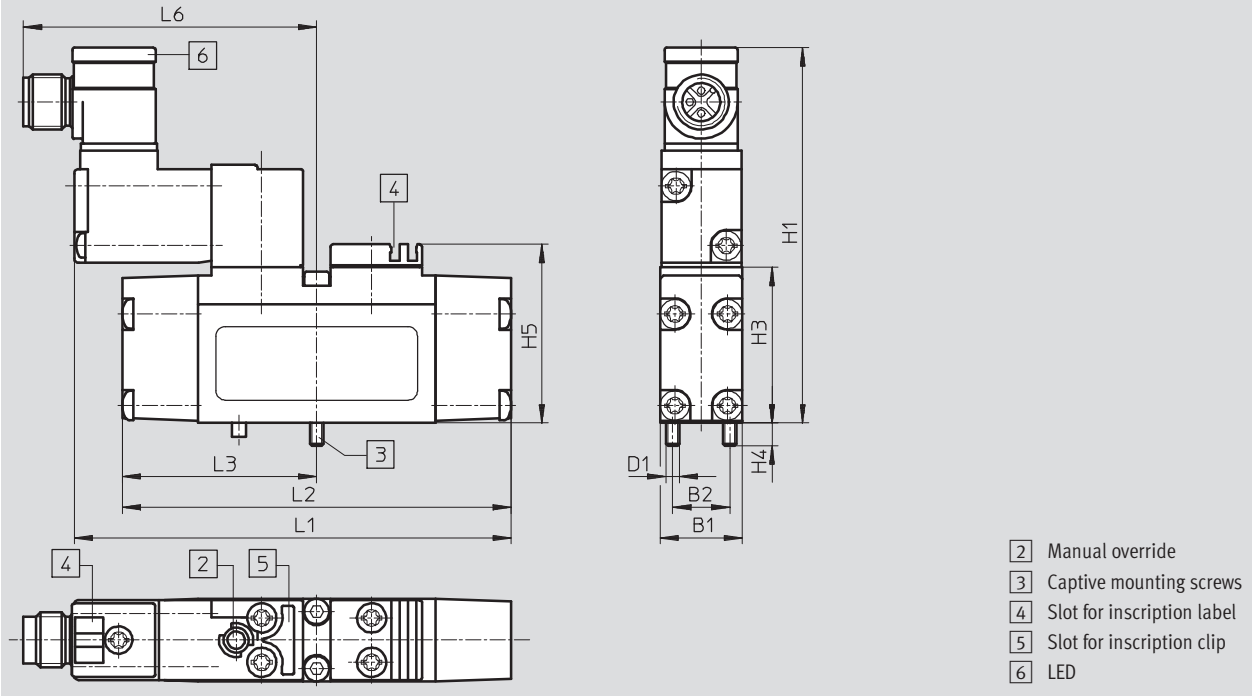
## Solenoid valves MN2H, ISO 15 407-1

Technical data – 5/2-way valves

### Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

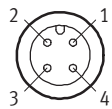
MN2H-...-ZSR with round central plug




Type	B1	B2	D1	H1	H3	H4	H5	L1	L2	L3	L6
ISO size 02											
MN2H-5/2-...-ZSR	18	12.5	M3	82	34	5	39	95.5	85	42.5	64.2
MN2H-5/2-...-FR-ZSR								107.5	97		
ISO size 01											
MN2H-5/2-...-ZSR	26.2	19	M4	85	35	7	42	109	110	55	65.2
MN2H-5/2-...-FR-ZSR											

### M12 central plug – Terminal allocation

Mono connection



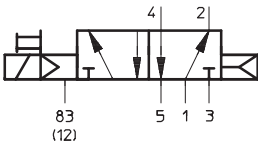
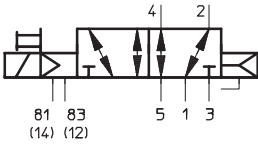
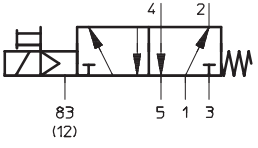
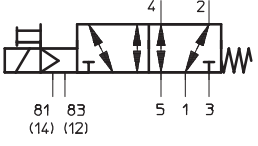
- 1 Unused
- 2 Unused
- 3 com (-)
- 4 Signal (+) Solenoid 14

-  - Type discontinued  
Available up until 2010

## Solenoid valves MN2H, ISO 15 407-1

Technical data – 5/2-way valves

FESTO

Ordering data – ISO size 02					
Circuit symbol	Description	Voltage	Central plug <sup>1)</sup>	Part No.	Type
	Pneumatic reset, internal pilot air supply	12 V DC, 24 V AC	–	<b>187 890</b>	<b>MN2H-5/2-02-12DCA</b>
		24 V DC	–	<b>161 088</b>	<b>MN2H-5/2-D-02</b>
		24 V DC	–	<b>184 308</b>	<b>MN2H-5/2-D-02-B<sup>2)</sup></b>
		110 V AC	–	<b>161 908</b>	<b>MN2H-5/2-D-02-110AC</b>
		230 V AC	–	<b>161 922</b>	<b>MN2H-5/2-D-02-230AC</b>
		24 V DC	■	<b>191 323</b>	<b>MN2H-5/2-02-ZSR</b>
	Pneumatic reset, external pilot air supply	12 V DC, 24 V AC	–	<b>187 891</b>	<b>MN2H-5/2-02-S-12DCA</b>
		24 V DC	–	<b>161 089</b>	<b>MN2H-5/2-D-02-S</b>
		24 V DC	–	<b>184 309</b>	<b>MN2H-5/2-D-02-S-B<sup>2)</sup></b>
		110 V AC	–	<b>161 909</b>	<b>MN2H-5/2-D-02-S-110AC</b>
		230 V AC	–	<b>161 923</b>	<b>MN2H-5/2-D-02-S-230AC</b>
		24 V DC	■	<b>191 324</b>	<b>MN2H-5/2-02-S-ZSR</b>
	Mechanical reset, internal pilot air supply	12 V DC, 24 V AC	–	<b>187 926</b>	<b>MN2H-5/2-02-FR-12DCA</b>
		24 V DC	–	<b>161 090</b>	<b>MN2H-5/2-D-02-FR</b>
		24 V DC	–	<b>184 310</b>	<b>MN2H-5/2-D-02-FR-B<sup>2)</sup></b>
		110 V AC	–	<b>161 910</b>	<b>MN2H-5/2-D-02-FR-110AC</b>
		230 V AC	–	<b>161 924</b>	<b>MN2H-5/2-D-02-FR-230AC</b>
		24 V DC	■	<b>191 325</b>	<b>MN2H-5/2-02-FR-ZSR</b>
	Mechanical reset, external pilot air supply	12 V DC, 24 V AC	–	<b>187 927</b>	<b>MN2H-5/2-02-FR-S-12DCA</b>
		24 V DC	–	<b>161 091</b>	<b>MN2H-5/2-D-02-FR-S</b>
		24 V DC	–	<b>184 311</b>	<b>MN2H-5/2-D-02-FR-S-B<sup>2)</sup></b>
		110 V AC	–	<b>161 911</b>	<b>MN2H-5/2-D-02-FR-S-110AC</b>
		230 V AC	–	<b>161 925</b>	<b>MN2H-5/2-D-02-FR-S-230AC</b>
		24 V DC	■	<b>191 326</b>	<b>MN2H-5/2-02-FR-S-ZSR</b>

1) Included in the scope of delivery

2) Free of copper and PTFE


## Solenoid valves MN2H, ISO 15 407-1

Technical data – 5/2-way valves

Ordering data – ISO size 01					
Circuit symbol	Description	Voltage	Central plug <sup>1)</sup>	Part No.	Type
	Pneumatic reset, internal pilot air supply	12 V DC, 24 V AC	–	<b>187 876</b>	<b>MN2H-5/2-01-12DCA</b>
		24 V DC	–	<b>161 067</b>	<b>MN2H-5/2-D-01<sup>2)</sup></b>
		110 V AC	–	<b>161 880</b>	<b>MN2H-5/2-D-01-110AC</b>
		230 V AC	–	<b>161 894</b>	<b>MN2H-5/2-D-01-230AC</b>
		24 V DC	■	<b>191 309</b>	<b>MN2H-5/2-01-ZSR<sup>2)</sup></b>
	Pneumatic reset, external pilot air supply	12 V DC, 24 V AC	–	<b>187 877</b>	<b>MN2H-5/2-01-S-12DCA</b>
		24 V DC	–	<b>161 068</b>	<b>MN2H-5/2-D-01-S<sup>2)</sup></b>
		110 V AC	–	<b>161 881</b>	<b>MN2H-5/2-D-01-S-110AC</b>
		230 V AC	–	<b>161 895</b>	<b>MN2H-5/2-D-01-S-230AC</b>
		24 V DC	■	<b>191 310</b>	<b>MN2H-5/2-01-S-ZSR<sup>2)</sup></b>
	Mechanical reset, internal pilot air supply	12 V DC, 24 V AC	–	<b>187 878</b>	<b>MN2H-5/2-01-FR-12DCA</b>
		24 V DC	–	<b>161 069</b>	<b>MN2H-5/2-D-01-FR<sup>2)</sup></b>
		110 V AC	–	<b>161 882</b>	<b>MN2H-5/2-D-01-FR-110AC</b>
		230 V AC	–	<b>161 896</b>	<b>MN2H-5/2-D-01-FR-230AC</b>
		24 V DC	■	<b>191 311</b>	<b>MN2H-5/2-01-FR-ZSR<sup>2)</sup></b>
	Mechanical reset, external pilot air supply	12 V DC, 24 V AC	–	<b>187 879</b>	<b>MN2H-5/2-01-FR-S-12DCA</b>
		24 V DC	–	<b>161 070</b>	<b>MN2H-5/2-D-01-FR-S<sup>2)</sup></b>
		110 V AC	–	<b>161 883</b>	<b>MN2H-5/2-D-01-FR-S-110AC</b>
		230 V AC	–	<b>161 897</b>	<b>MN2H-5/2-D-01-FR-S-230AC</b>
		24 V DC	■	<b>191 312</b>	<b>MN2H-5/2-01-FR-S-ZSR<sup>2)</sup></b>

1) Included in the scope of delivery


2) Free of copper and PTFE


-  - Type discontinued  
Available up until 2010

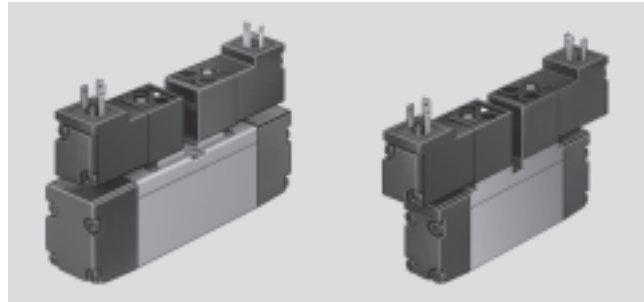
## Solenoid valves JMN2H, ISO 15 407-1

FESTO

Technical data – 5/2-way valves, double solenoid

-  - Flow rate  
Size 01: 1,000 l/min.  
Size 02: 500 l/min

-  - Voltage  
12, 24 V DC  
24, 110, 230 V AC



General technical data			
ISO size		02	01
Valve function		5/2-way, double pilot	
Constructional design		Piston spool	
Sealing principle		Soft	
Actuation type		Electrical	
Type of control		Piloted	
Pilot air supply		Internal	
Direction of flow		Non reversible	
Exhaust function		Flow control	
Manual override facility		Via tool accessory, detenting	
Type of mounting		Via through-holes	
Assembly position		Any	
Nominal size	[mm]	6	8
Standard nominal flow rate	[l/min]	500	1,000
Grid dimension	[mm]	19	27
Pneumatic connection	1, 2, 3, 4, 5	G $\frac{1}{8}$	G $\frac{1}{4}$
	12, 14	M5	M5
Product weight	[g]	210	320
Noise level	[dB (A)]	75	

Operating and environmental conditions			
ISO size		02	01
Operating medium		Filtered compressed air, lubricated or unlubricated Vacuum	
Operating pressure	Internal pilot air supply	[bar]	2 ... 10
	External pilot air supply	[bar]	-0.9 ... +10
Pilot pressure		[bar]	2 ... 10
Ambient temperature		[°C]	-10 ... +50
Temperature of medium		[°C]	-5 ... +50

Valve response times [ms]					
ISO size		02		01	
		Dominant signal at 14		Dominant signal at 14	
On/changeover	-	16		-	16
Off/changeover	16	16		18	18



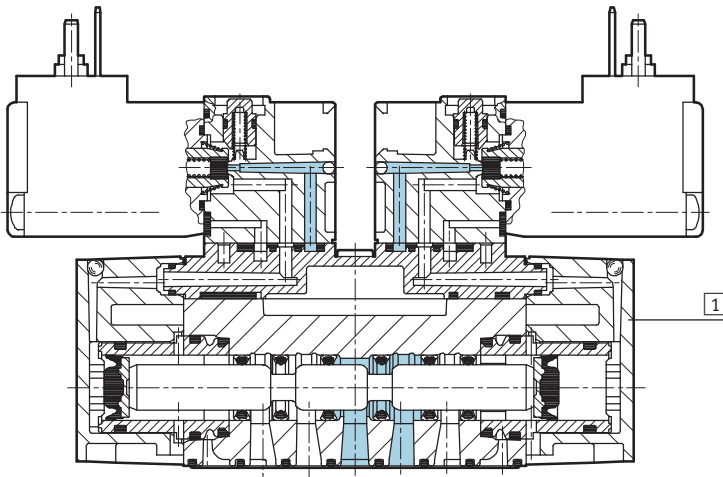
## Solenoid valves JMN2H, ISO 15 407-1

Technical data – 5/2-way valves, double solenoid


Electrical data			
Electrical connection		Plug, square design to EN 175301-803, type C	
		Central plug, round design, M12x1	
Operating voltage	D.C. voltage	[V DC]	12, 24 +10%/-15%
	AC voltage	[V AC]	24, 110/230 ±10% (50 ... 60 Hz)
Coil characteristics	D.C. voltage	[W]	1.5
	AC voltage	[VA]	Pull: 3 Hold: 2.4
Protection class to EN 60 529		IP65 (in combination with plug socket)	
CE symbol		73/23/EEC (low voltage)	

### Materials

Sectional view



1	Housing	Die-cast aluminium, polyacetate
-	Seals	Nitrile rubber
Material note		Designs free of copper and PTFE → Ordering data

-  - Type discontinued  
Available up until 2010

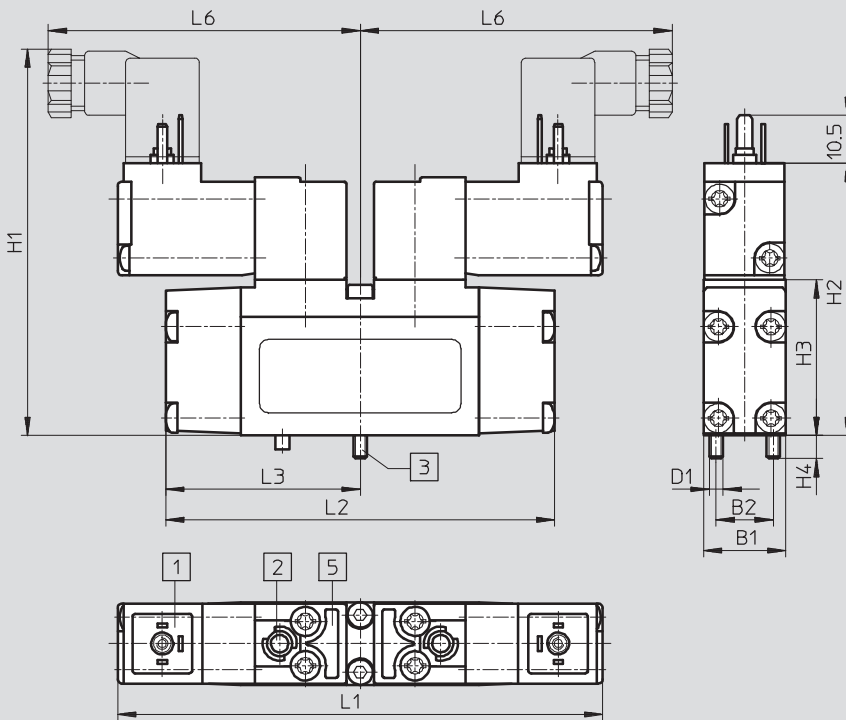
## Solenoid valves JMN2H, ISO 15 407-1

Technical data – 5/2-way valves, double solenoid

FESTO

### Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)



- 1 Plug socket connection pattern to EN 175301-803, type C
- 2 Manual override
- 3 Captive mounting screws
- 5 Slot for inscription clip

ISO size	B1	B2	D1	H1	H2	H3	H4	L1	L2	L3	L6
02	18	12.5	M3	92	59.5	34	5	106	85	42.5	70
01	26.2	19	M4	93	60.5	35	7	108	110	55	71

- 1 - Type discontinued  
Available up until 2010

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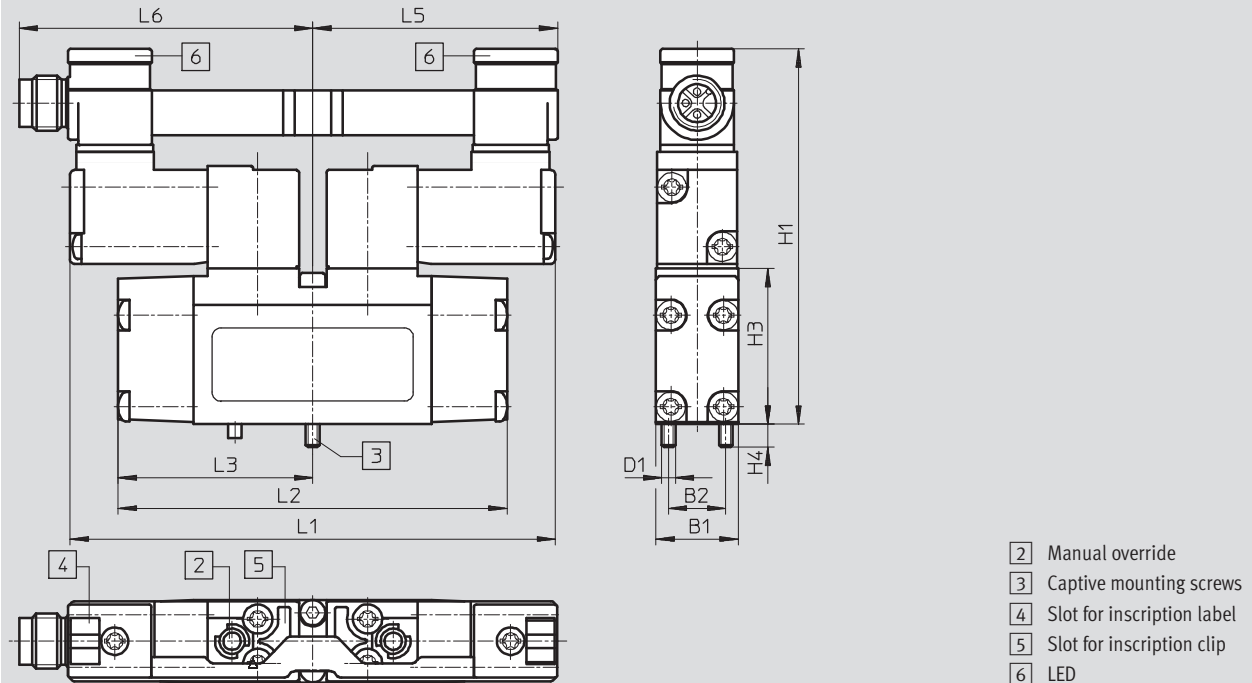
## Solenoid valves JMN2H, ISO 15 407-1

Technical data – 5/2-way valves, double solenoid

### Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

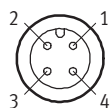
JMN2H/JMN2DH...-ZSR with round central plug




ISO size	B1	B2	D1	H1	H3	H4	L2	L3	L5	L6
02	18	12.5	M3	82	34	5	85	42.5	52.5	64.2
01	26.2	19	M4	85	35	7	110	55	53.5	65.2

### M12 central plug – Terminal allocation

Duo connection



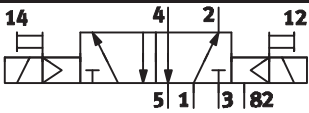
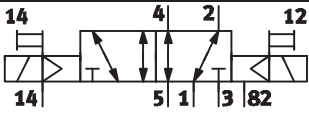
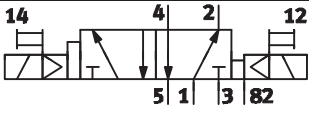
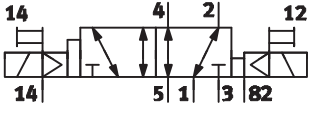
- 1 Unused
- 2 Signal (+) Solenoid 12
- 3 com (-)
- 4 Signal (+) Solenoid 14

-  - Type discontinued  
Available up until 2010

## Solenoid valves JMN2H, ISO 15 407-1

FESTO

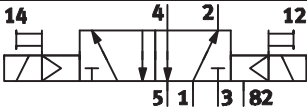
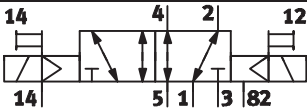
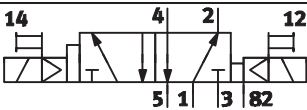
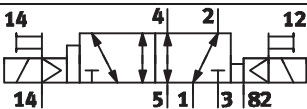
Technical data – 5/2-way valves, double solenoid

Ordering data – ISO size 02					
Circuit symbol	Description	Voltage	Central plug <sup>1)</sup>	Part No.	Type
	Internal pilot air supply	12 V DC, 24 V AC	–	<b>187 928</b>	<b>JMN2H-5/2-02-12DCA</b>
		24 V DC	–	<b>161 092</b>	<b>JMN2H-5/2-D-02</b>
		110 V AC	–	<b>161 912</b>	<b>JMN2H-5/2-D-02-110AC</b>
		230 V AC	–	<b>161 926</b>	<b>JMN2H-5/2-D-02-230AC</b>
		24 V DC	■	<b>191 333</b>	<b>JMN2H-5/2-02-ZSR</b>
	External pilot air supply	12 V DC, 24 V AC	–	<b>187 929</b>	<b>JMN2H-5/2-02-S-12DCA</b>
		24 V DC	–	<b>161 093</b>	<b>JMN2H-5/2-D-02-S</b>
		110 V AC	–	<b>161 913</b>	<b>JMN2H-5/2-D-02-S-110AC</b>
		230 V AC	–	<b>161 927</b>	<b>JMN2H-5/2-D-02-S-230AC</b>
		24 V DC	■	<b>191 334</b>	<b>JMN2H-5/2-02-S-ZSR</b>
	With dominant signal at 14, internal pilot air supply	12 V DC, 24 V AC	–	<b>187 930</b>	<b>JMN2DH-5/2-02-12DCA</b>
		24 V DC	–	<b>161 094</b>	<b>JMN2DH-5/2-D-02</b>
		110 V AC	–	<b>161 914</b>	<b>JMN2DH-5/2-D-02-110AC</b>
		230 V AC	–	<b>161 928</b>	<b>JMN2DH-5/2-D-02-230AC</b>
		24 V DC	■	<b>191 335</b>	<b>JMN2DH-5/2-02-ZSR</b>
	With dominant signal at 14, external pilot air supply	12 V DC, 24 V AC	–	<b>187 931</b>	<b>JMN2DH-5/2-02-S-12DCA</b>
		24 V DC	–	<b>161 095</b>	<b>JMN2DH-5/2-D-02-S</b>
		110 V AC	–	<b>161 915</b>	<b>JMN2DH-5/2-D-02-S-110AC</b>
		230 V AC	–	<b>161 929</b>	<b>JMN2DH-5/2-D-02-S-230AC</b>
		24 V DC	■	<b>191 336</b>	<b>JMN2DH-5/2-02-S-ZSR</b>

1) Included in the scope of delivery


## Solenoid valves JMN2H, ISO 15 407-1

Technical data – 5/2-way valves, double solenoid

Ordering data – ISO size 01					
Circuit symbol	Description	Voltage	Central plug <sup>1)</sup>	Part No.	Type
	Internal pilot air supply	12 V DC, 24 V AC	–	<b>187 880</b>	<b>JMN2H-5/2-01-12DCA</b>
		24 V DC	–	<b>161 071</b>	<b>JMN2H-5/2-D-01<sup>2)</sup></b>
		110 V AC	–	<b>161 884</b>	<b>JMN2H-5/2-D-01-110AC</b>
		230 V AC	–	<b>161 898</b>	<b>JMN2H-5/2-D-01-230AC</b>
		24 V DC	■	<b>191 319</b>	<b>JMN2H-5/2-01-ZSR<sup>2)</sup></b>
	External pilot air supply	12 V DC, 24 V AC	–	<b>187 881</b>	<b>JMN2H-5/2-01-S-12DCA</b>
		24 V DC	–	<b>161 072</b>	<b>JMN2H-5/2-D-01-S<sup>2)</sup></b>
		110 V AC	–	<b>161 885</b>	<b>JMN2H-5/2-D-01-S-110AC</b>
		230 V AC	–	<b>161 899</b>	<b>JMN2H-5/2-D-01-S-230AC</b>
		24 V DC	■	<b>191 320</b>	<b>JMN2H-5/2-01-S-ZSR<sup>2)</sup></b>
	With dominant signal at 14, internal pilot air supply	12 V DC, 24 V AC	–	<b>187 882</b>	<b>JMN2DH-5/2-01-12DCA</b>
		24 V DC	–	<b>161 073</b>	<b>JMN2DH-5/2-D-01<sup>2)</sup></b>
		110 V AC	–	<b>161 886</b>	<b>JMN2DH-5/2-D-01-110AC</b>
		230 V AC	–	<b>161 900</b>	<b>JMN2DH-5/2-D-01-230AC</b>
		24 V DC	■	<b>191 321</b>	<b>JMN2DH-5/2-01-ZSR<sup>2)</sup></b>
	With dominant signal at 14, external pilot air supply	12 V DC, 24 V AC	–	<b>187 883</b>	<b>JMN2DH-5/2-01-S-12DCA</b>
		24 V DC	–	<b>161 074</b>	<b>JMN2DH-5/2-D-01-S<sup>2)</sup></b>
		110 V AC	–	<b>161 887</b>	<b>JMN2DH-5/2-D-01-S-110AC</b>
		230 V AC	–	<b>161 901</b>	<b>JMN2DH-5/2-D-01-S-230AC</b>
		24 V DC	■	<b>191 322</b>	<b>JMN2DH-5/2-01-S-ZSR<sup>2)</sup></b>

1) Included in the scope of delivery


2) Free of copper and PTFE


-  - Type discontinued  
Available up until 2010

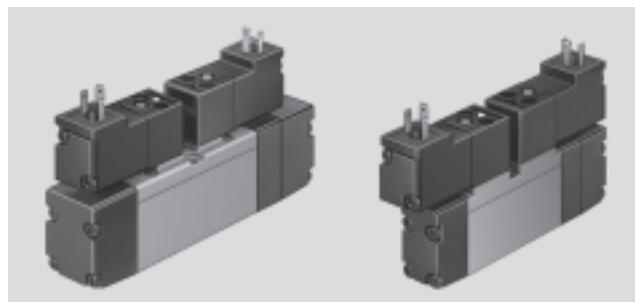
## Solenoid valves MN2H, ISO 15 407-1

Technical data – 5/3-way valves

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-  - Flow rate  
500 ... 1,000 l/min

-  - Voltage  
12, 24 V DC  
24, 110, 230 V AC



General technical data			
ISO size		02	01
Valve function		5/3-way, single solenoid	
Constructional design		Piston spool	
Sealing principle		Soft	
Actuation type		Electrical	
Type of reset		Mechanical spring	
Type of control		Piloted	
Pilot air supply		Internal	
Direction of flow		Non reversible	
Exhaust function		Flow control	
Manual override facility		Via tool accessory, detenting	
Type of mounting		Via through-holes	
Assembly position		Any	
Nominal size	[mm]	6	8
Standard nominal flow rate	[l/min]	500	1,000
Grid dimension	[mm]	19	27
Pneumatic connection	1, 2, 3, 4, 5	G $\frac{1}{8}$	G $\frac{1}{4}$
	12, 14	M5	M5
Product weight	[g]	220	340
Noise level	[dB (A)]	75	

Operating and environmental conditions			
ISO size		02	01
Operating medium		Filtered compressed air, lubricated or unlubricated Vacuum	
Operating pressure	Internal pilot air supply	[bar]	3 ... 10
	External pilot air supply	[bar]	-0.9 ... +10
Pilot pressure		[bar]	3 ... 10
Ambient temperature		[°C]	-10 ... +50
Temperature of medium		[°C]	-5 ... +50

## Solenoid valves MN2H, ISO 15 407-1

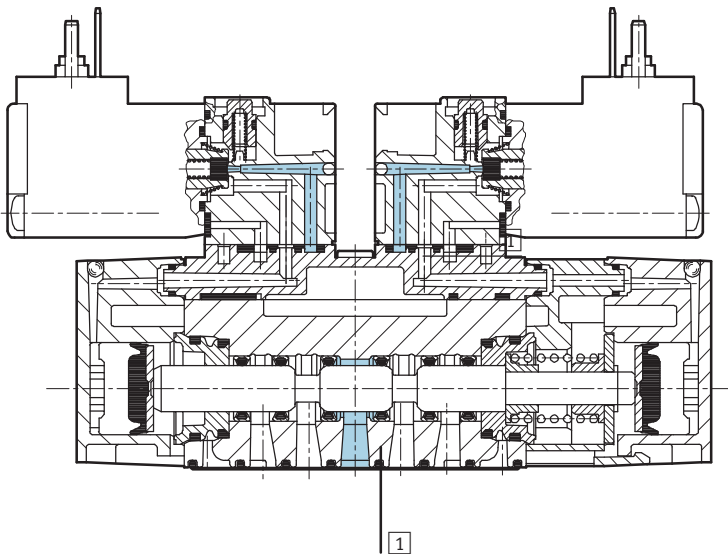
Technical data – 5/3-way valves

Valve response times [ms]			
ISO size		02	01
Closed	On	17	23
	Off	22	52
Exhausted	On	18	23
	Off	28	52
Pressurised	On	18	23
	Off	30	52


Electrical data			
Electrical connection	Construction		Plug, square design to EN 175301-803, type C
			Central plug, round design, M12x1
Operating voltage	D.C. voltage	[V DC]	12, 24 +10 %/-15 %
	AC voltage	[V AC]	24, 110/230 ±10 % (50 ... 60 Hz)
Coil characteristics	D.C. voltage	[W]	1.5
	AC voltage	[VA]	Pull: 3 Hold: 2.4
Protection class to EN 60 529			IP65 (in combination with plug socket)
CE certification			In accordance with EU Directive 73/23/EEC

### Materials

Sectional view



1	Housing	Die-cast aluminium, polyacetate
-	Seals	Nitrile rubber
Material note		Designs free of copper and PTFE → Ordering data

-  - Type discontinued  
Available up until 2010

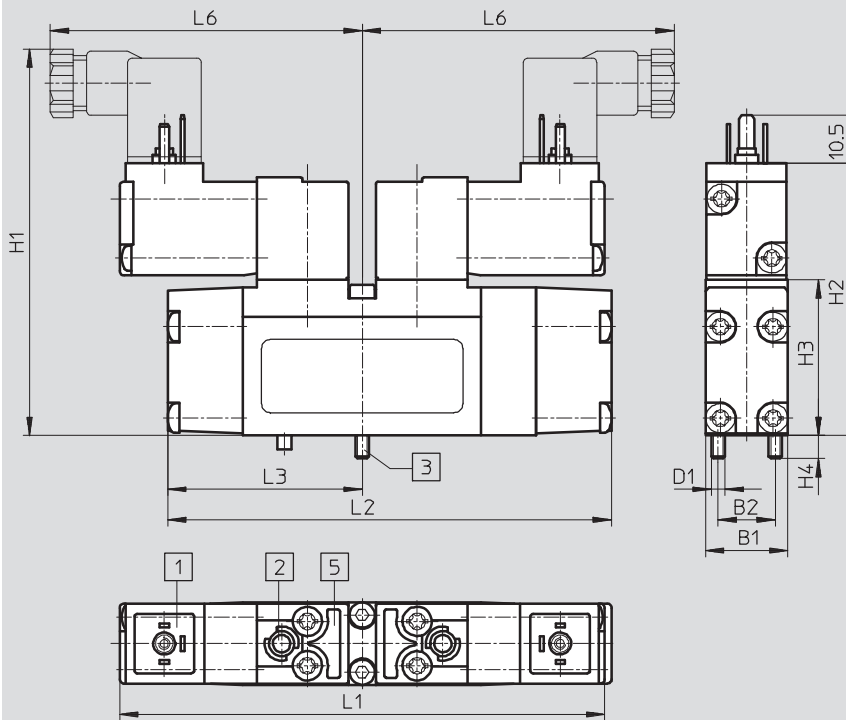
## Solenoid valves MN2H, ISO 15 407-1

Technical data – 5/3-way valves

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### Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)



- 1 Plug socket connection pattern to EN 175301-803, type C
- 2 Manual override
- 3 Captive mounting screws
- 5 Slot for inscription clip

ISO size	B1	B2	D1	H1	H2	H3	H4	L1	L2	L3	L6
02	18	12.5	M3	92	59.5	34	5	106	97	42.5	70
01	26.2	19	M4	93	60.5	35	7	108	124	55	71



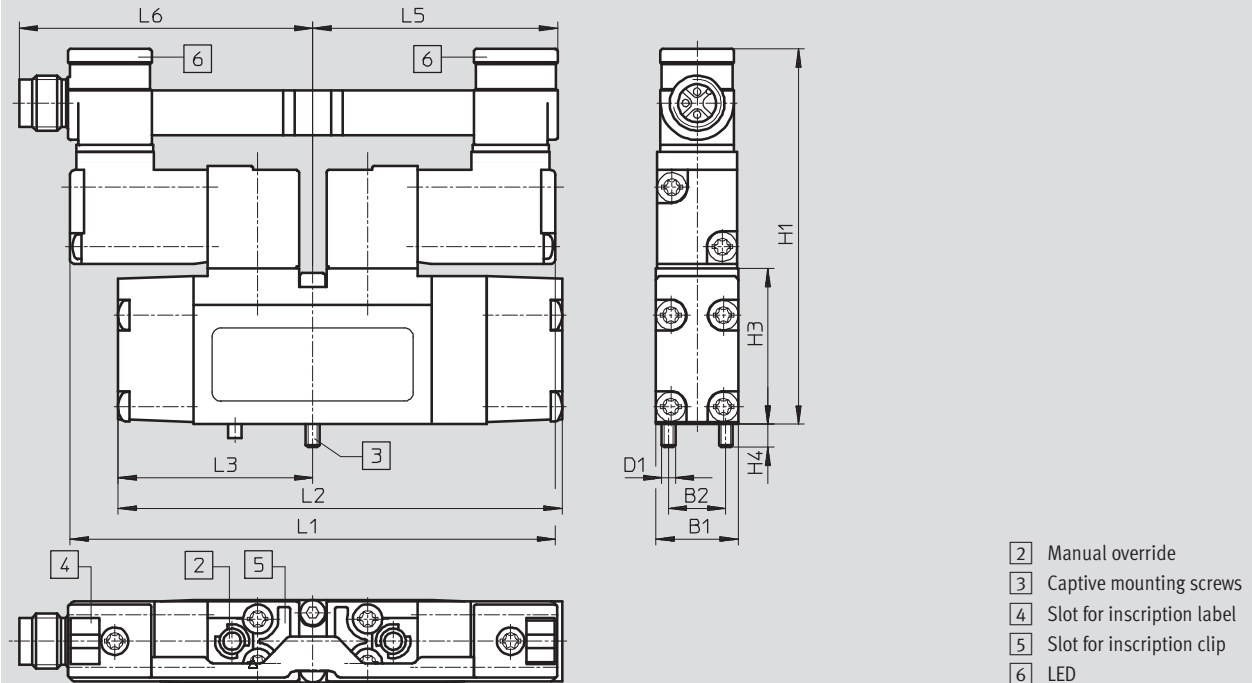
## Solenoid valves MN2H, ISO 15 407-1

Technical data – 5/3-way valves

### Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

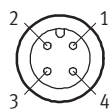
MN2H-...-ZSR with round central plug




ISO size	B1	B2	D1	H1	H3	H4	L2	L3	L4	L6
02	18	12.5	M3	82	34	5	97	42.5	52.5	64.2
01	26.2	19	M4	85	35	7	124	55	53.5	65.2

### M12 central plug – Terminal allocation

Duo connection



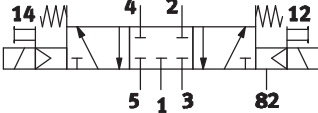
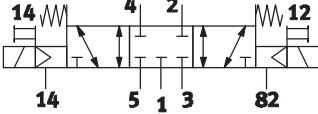
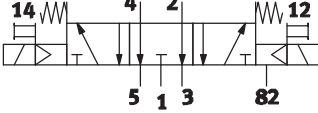
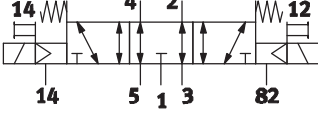
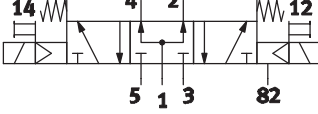
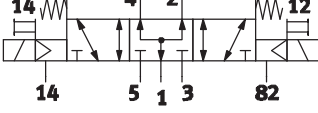
- 1 Unused
- 2 Signal (+) Solenoid 12
- 3 com (-)
- 4 Signal (+) Solenoid 14

-  - Type discontinued  
Available up until 2010

## Solenoid valves MN2H, ISO 15 407-1

Technical data – 5/3-way valves

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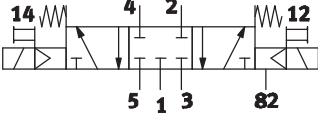
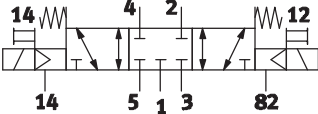
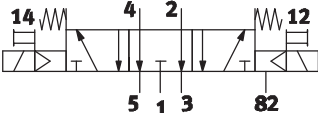
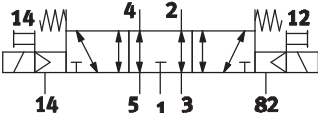
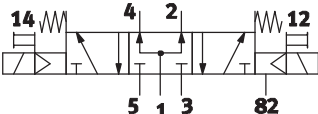
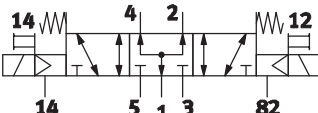
Ordering data – ISO size 02					
Circuit symbol	Description	Voltage	Central plug <sup>1)</sup>	Part No.	Type
	Normally closed, internal pilot air supply	12 V DC, 24 V AC	–	187 932	MN2H-5/3G-02-12DCA
		24 V DC	–	161 096	MN2H-5/3G-D-02
		24 V DC	–	184 316	MN2H-5/3G-D-02-B <sup>2)</sup>
		110 V AC	–	161 916	MN2H-5/3G-D-02-110AC
		230 V AC	–	161 930	MN2H-5/3G-D-02-230AC
		24 V DC	■	191 327	MN2H-5/3G-02-ZSR
	Normally closed, external pilot air supply	12 V DC, 24 V AC	–	187 933	MN2H-5/3G-02-S-12DCA
		24 V DC	–	161 097	MN2H-5/3G-D-02-S
		24 V DC	–	184 317	MN2H-5/3G-D-02-S-B <sup>2)</sup>
		230 V AC	–	161 917	MN2H-5/3G-D-02-S-110AC
		230 V AC	–	161 931	MN2H-5/3G-D-02-S-230AC
		24 V DC	■	191 328	MN2H-5/3G-02-S-ZSR
	Normally exhausted, internal pilot air supply	12 V DC, 24 V AC	–	187 934	MN2H-5/3E-02-12DCA
		24 V DC	–	161 098	MN2H-5/3E-D-02
		24 V DC	–	184 314	MN2H-5/3E-D-02-B <sup>2)</sup>
		110 V AC	–	161 918	MN2H-5/3E-D-02-110AC
		230 V AC	–	161 932	MN2H-5/3E-D-02-230AC
		24 V DC	■	191 329	MN2H-5/3E-02-ZSR
	Normally exhausted, external pilot air supply	12 V DC, 24 V AC	–	187 935	MN2H-5/3E-02-S-12DCA
		24 V DC	–	161 099	MN2H-5/3E-D-02-S
		24 V DC	–	184 315	MN2H-5/3E-D-02-S-B <sup>2)</sup>
		110 V AC	–	161 919	MN2H-5/3E-D-02-S-110AC
		230 V AC	–	161 933	MN2H-5/3E-D-02-S-230AC
		24 V DC	■	191 330	MN2H-5/3E-02-S-ZSR
	Normally pressurised, internal pilot air supply	12 V DC, 24 V AC	–	187 936	MN2H-5/3B-02-12DCA
		24 V DC	–	161 100	MN2H-5/3B-D-02
		24 V DC	–	184 312	MN2H-5/3B-D-02-B <sup>2)</sup>
		110 V AC	–	161 920	MN2H-5/3B-D-02-110AC
		230 V AC	–	161 934	MN2H-5/3B-D-02-230AC
		24 V DC	■	191 331	MN2H-5/3B-02-ZSR
	Normally pressurised, external pilot air supply	12 V DC, 24 V AC	–	187 937	MN2H-5/3B-02-S-12DCA
		24 V DC	–	161 101	MN2H-5/3B-D-02-S
		24 V DC	–	184 313	MN2H-5/3B-D-02-S-B <sup>2)</sup>
		110 V AC	–	161 921	MN2H-5/3B-D-02-S-110AC
		230 V AC	–	161 935	MN2H-5/3B-D-02-S-230AC
		24 V DC	■	191 332	MN2H-5/3B-02-S-ZSR

1) Included in the scope of delivery

2) Free of copper and PTFE

**Solenoid valves MN2H, ISO 15 407-1**

Technical data – 5/3-way valves

Ordering data – ISO size 01					
Circuit symbol	Description	Voltage	Central plug <sup>1)</sup>	Part No.	Type
	Normally closed, internal pilot air supply	12 V DC, 24 V AC	–	<b>187 884</b>	<b>MN2H-5/3G-01-12DCA</b>
		24 V DC	–	<b>161 075</b>	<b>MN2H-5/3G-D-01<sup>2)</sup></b>
		110 V AC	–	<b>161 888</b>	<b>MN2H-5/3G-D-01-110AC</b>
		230 V AC	–	<b>161 902</b>	<b>MN2H-5/3G-D-01-230AC</b>
		24 V DC	■	<b>191 313</b>	<b>MN2H-5/3G-01-ZSR<sup>2)</sup></b>
	Normally closed, external pilot air supply	12 V DC, 24 V AC	–	<b>187 885</b>	<b>MN2H-5/3G-01-S-12DCA</b>
		24 V DC	–	<b>161 076</b>	<b>MN2H-5/3G-D-01-S<sup>2)</sup></b>
		110 V AC	–	<b>161 889</b>	<b>MN2H-5/3G-D-01-S-110AC</b>
		230 V AC	–	<b>161 903</b>	<b>MN2H-5/3G-D-01-S-230AC</b>
		24 V DC	■	<b>191 314</b>	<b>MN2H-5/3G-01-S-ZSR<sup>2)</sup></b>
	Normally exhausted, internal pilot air supply	12 V DC, 24 V AC	–	<b>187 886</b>	<b>MN2H-5/3E-01-12DCA</b>
		24 V DC	–	<b>161 077</b>	<b>MN2H-5/3E-D-01<sup>2)</sup></b>
		110 V AC	–	<b>161 890</b>	<b>MN2H-5/3E-D-01-110AC</b>
		230 V AC	–	<b>161 904</b>	<b>MN2H-5/3E-D-01-230AC</b>
		24 V DC	■	<b>191 315</b>	<b>MN2H-5/3E-01-ZSR<sup>2)</sup></b>
	Normally exhausted, external pilot air supply	12 V DC, 24 V AC	–	<b>187 887</b>	<b>MN2H-5/3E-01-S-12DCA</b>
		24 V DC	–	<b>161 078</b>	<b>MN2H-5/3E-D-01-S<sup>2)</sup></b>
		110 V AC	–	<b>161 891</b>	<b>MN2H-5/3E-D-01-S-110AC</b>
		230 V AC	–	<b>161 905</b>	<b>MN2H-5/3E-D-01-S-230AC</b>
		24 V DC	■	<b>191 316</b>	<b>MN2H-5/3E-01-S-ZSR<sup>2)</sup></b>
	Normally pressurised, internal pilot air supply	12 V DC, 24 V AC	–	<b>187 888</b>	<b>MN2H-5/3B-01-12DCA</b>
		24 V DC	–	<b>161 079</b>	<b>MN2H-5/3B-D-01<sup>2)</sup></b>
		110 V AC	–	<b>161 892</b>	<b>MN2H-5/3B-D-01-110AC</b>
		230 V AC	–	<b>161 906</b>	<b>MN2H-5/3B-D-01-230AC</b>
		24 V DC	■	<b>191 317</b>	<b>MN2H-5/3B-01-ZSR<sup>2)</sup></b>
	Normally pressurised, external pilot air supply	12 V DC, 24 V AC	–	<b>187 889</b>	<b>MN2H-5/3B-01-S-12DCA</b>
		24 V DC	–	<b>161 080</b>	<b>MN2H-5/2-D-01-S<sup>2)</sup></b>
		110 V AC	–	<b>161 893</b>	<b>MN2H-5/3B-D-01-S-110AC</b>
		230 V AC	–	<b>161 907</b>	<b>MN2H-5/3B-D-01-S-230AC</b>
		24 V DC	■	<b>191 318</b>	<b>MN2H-5/3B-01-S-ZSR<sup>2)</sup></b>

1) Included in the scope of delivery

2) Free of copper and PTFE

- 1 - Type discontinued  
Available up until 2010

FESTO

## Pneumatic valves, ISO 15 407-1

Type code

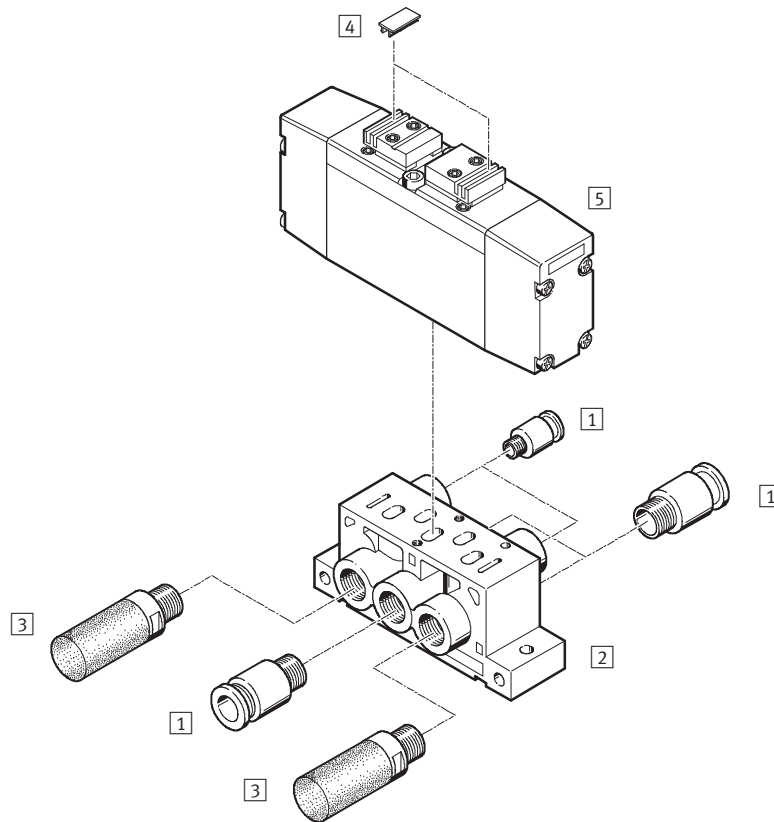
		VL	-	5/3	G	-	01	-	
<b>Type</b>									
VL	Single pilot								
J	Double pilot								
JD	Double pilot, with dominant signal								
<b>Valve function</b>									
5/2	5/2-way valve								
5/3	5/3-way valve								
<b>Normal position</b>									
G	Closed								
E	Exhausted								
B	Pressurised								
<b>Size</b>									
02	ISO size 02								
D-02	ISO size 02								
01	ISO size 01								
D-01	ISO size 01								
<b>Type of reset</b>									
FR	Mechanical spring								
	Pneumatic spring								

## Pneumatic valves, ISO 15 407-1

Peripherals overview

FESTO

### Individual mounting

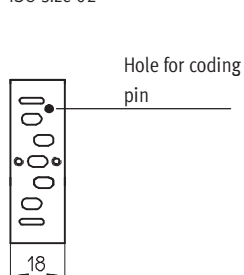


Accessories		Brief description	→ Page/Internet
1	Push-in fitting QS	For connecting compressed air tubing with standard O.D.	quick star
2	Individual sub-base NAS	With lateral ports	49
-	Individual sub-base NAU	With ports underneath	50
3	Silencer	For fitting in exhaust ports	u
4	Inscription labels IBS-9x17	For identifying the valves	54
5	Pneumatic valve	Port pattern to ISO 15 407-1	4

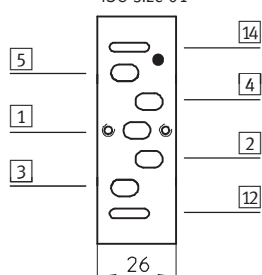
### Port pattern on sub-base to ISO 15 407-1

Standard updates given below

ISO size 02



ISO size 01



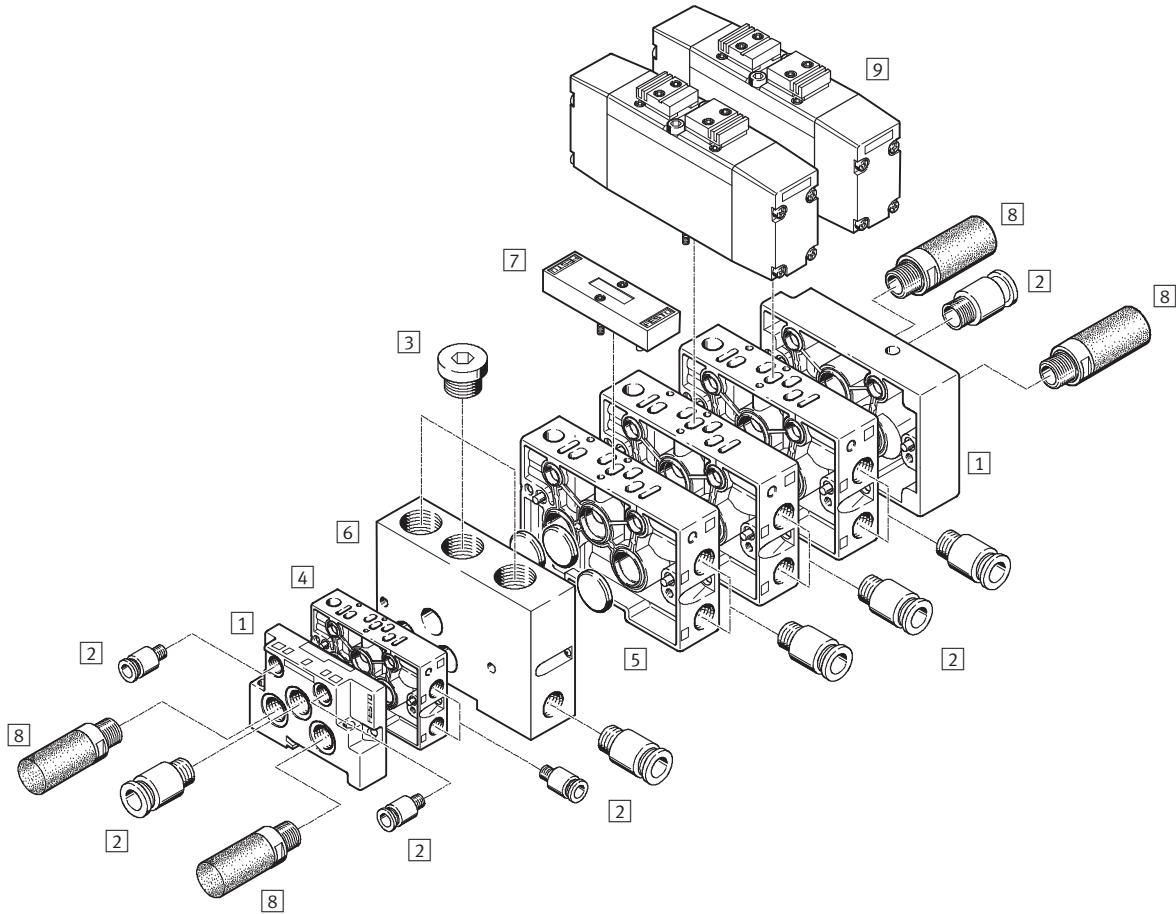
- 1 - Type discontinued  
Available up until 2010

## Pneumatic valves, ISO 15 407-1

Peripherals overview

FESTO


### Manifold mounting



## Pneumatic valves, ISO 15 407-1

Peripherals overview

Accessories		
	Brief description	→ Page/Internet
1	End plate kit NEV	50
2	Push-in fitting QS	quick star
3	Blanking plug B	55
4	Manifold sub-base NAW	50
5	Isolating disc NSC	53
6	Intermediate plate NZV	51
7	Blanking plate NDV	51
8	Silencer	u
9	Pneumatic valve	4

-  - Note

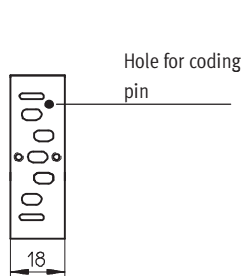
When supplying different pressure zones, both a left and right isolating disc for the pressure supply and for the pilot line are needed for pilot air.

For design reasons, only the silencer U- $\frac{3}{8}$ -B can be screwed into ports 3 and 5 when assembling ISO size 02 mounting rails.

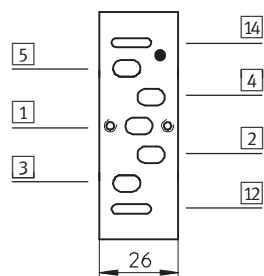
### Port pattern on sub-base to ISO 15 407-1


Standard updates given below

ISO size 02



ISO size 01




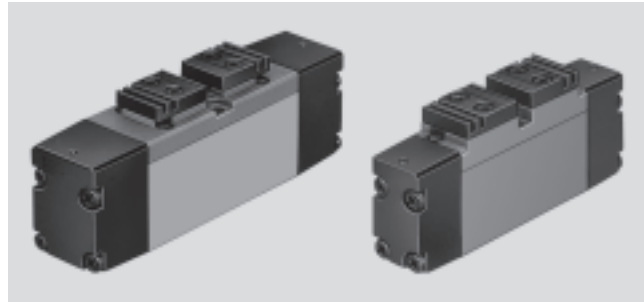
-  - Type discontinued  
Available up until 2010

## Pneumatic valves VL, ISO 15 407-1

Technical data – 5/2-way valves

FESTO

-  - Flow rate  
500 ... 1000 l/min



General technical data			
ISO size		02	01
Valve function		5/2-way, single pilot	
Constructional design		Piston spool	
Sealing principle		Soft	
Actuation type		Pneumatic	
Type of reset		Mechanical or pneumatic spring	
Type of pilot control		Direct	
Direction of flow	Pneumatic reset	Non-reversible	
	Mechanical reset	Reversible	
Exhaust function		With flow control	
Manual override		None	
Type of mounting		Via through-holes	
Mounting position		Any	
Nominal size	[mm]	6	8
Standard nominal flow rate	[l/min]	500	1000
Grid dimension	[mm]	19	27
Pneumatic connection	1, 2, 3, 4, 5	G $\frac{1}{8}$	G $\frac{1}{4}$
	12, 14	M5	M5
Product weight	[g]	120	230
Noise level	[dB (A)]	75	

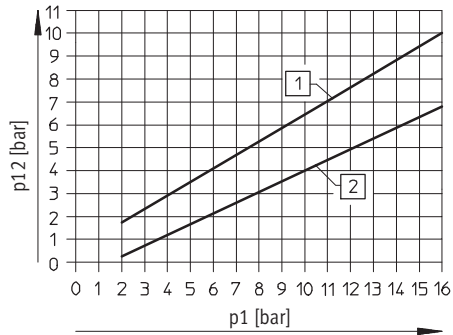
Operating and environmental conditions					
ISO size		02		01	
Type of reset		Pneumatic	Mechanical	Pneumatic	Mechanical
Operating medium		Filtered compressed air, lubricated or unlubricated			
		Vacuum			
Operating pressure	[bar]	2 ... 10	-0.9 ... +10	2 ... 16	-0.9 ... +16
Pilot pressure	[bar]	2 ... 10	3 ... 10	2 ... 16	3 ... 16
Ambient temperature	[°C]	-10 ... +60			
Temperature of medium	[°C]	-10 ... +60			



## Pneumatic valves VL, ISO 15 407-1

Technical data – 5/2-way valves

### Minimum pilot pressure $p_{12}$ , $p_{14}$ as a function of the operating pressure $p_1$ with auxiliary pilot air



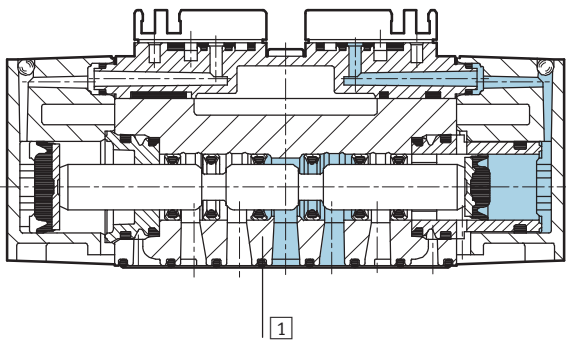
- 1 Switch-on pressure
- 2 Reset pressure

### Valve response times [ms]


ISO size	02		01	
Type of reset	Pneumatic	Mechanical	Pneumatic	Mechanical
On	11	8	18	10
Off	20	18	30	35

### Materials

Sectional view



1	Housing	Die-cast aluminium, polyacetate
-	Seals	Nitrile rubber

-  - Type discontinued  
Available up until 2010

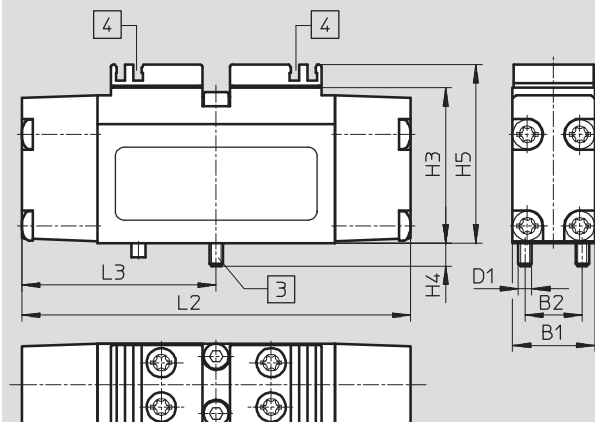
## Pneumatic valves VL, ISO 15 407-1



Technical data – 5/2-way valves

**FESTO**

### Dimensions

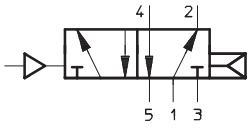
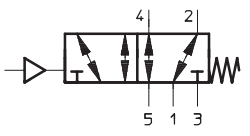
Download CAD data → [www.festo.com](http://www.festo.com)



-  Captive mounting screws
-  Slot for inscription label

Type	B1	B2	D1	H3	H4	H5	L2	L3
<b>ISO size 02</b>								
VL-5/2-...	18	12.5	M3	34	5	39	85	42.5
VL-5/2-...-FR							97	
<b>ISO size 01</b>								
VL-5/2-...	26.2	19	M4	35	7	42	110	55
VL-5/2-...-FR								

### Ordering data

ISO size	02		01		
Circuit symbol	Description	Part No.	Type	Part No.	Type
	Pneumatic reset	161 081	VL-5/2-D-02	161 060	VL-5/2-D-01
	Mechanical reset	161 082	VL-5/2-D-02-FR	161 061	VL-5/2-D-01-FR

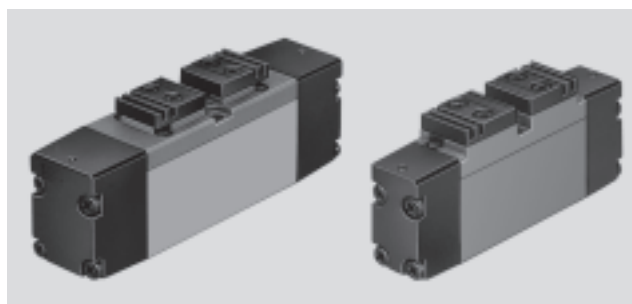
- 1 - Type discontinued  
Available up until 2010

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## Pneumatic valves J, ISO 15 407-1

Technical data – 5/2-way valves, double pilot

- 1 - Flow rate  
500 ... 1000 l/min



General technical data			
ISO size	02		01
Valve function	5/2-way, double pilot or double pilot with dominant signal		
Constructional design	Piston spool		
Sealing principle	Soft		
Actuation type	Pneumatic		
Type of pilot control	Direct		
Pilot air supply	Internal		
Direction of flow	Reversible		
Exhaust function	With flow control		
Manual override	None		
Type of mounting	Via through-holes		
Mounting position	Any		
Nominal size	[mm]	6	8
Standard nominal flow rate	[l/min]	500	1000
Grid dimension	[mm]	19	27
Pneumatic connection	1, 2, 3, 4, 5	G $\frac{1}{8}$	G $\frac{1}{4}$
	12, 14	M5	M5
Product weight	[g]	110	230
Noise level	[dB (A)]	75	

Operating and environmental conditions			
ISO size	02		01
Operating medium	Filtered compressed air, lubricated or unlubricated Vacuum		
Operating pressure	[bar]	-0.9 ... +10	-0.9 ... +16
Pilot pressure	[bar]	2 ... 10	2 ... 16
Ambient temperature	[°C]	-10 ... +60	
Temperature of medium	[°C]	-10 ... +60	

Valve response times [ms]				
ISO size	02	01		
		Dominant signal at 14	Dominant signal at 14	
On/changeover	-	6	9	
Off/changeover	6	6	10	

- 1 - Type discontinued  
Available up until 2010

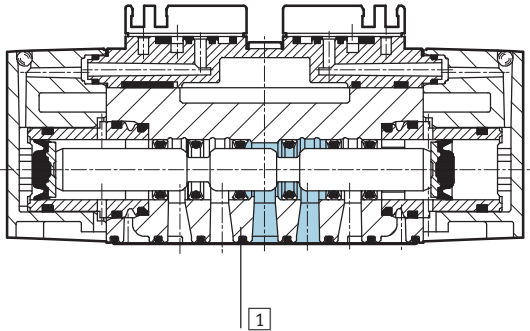
## Pneumatic valves J, ISO 15 407-1

Technical data – 5/2-way valves, double pilot

FESTO

### Materials

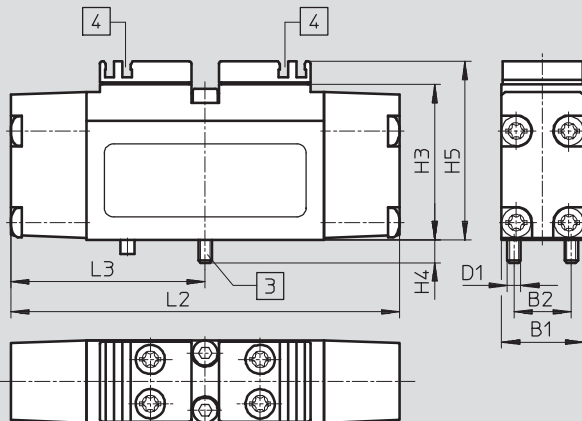
Sectional view



1	Housing	Die-cast aluminium, polyacetate
-	Seals	Nitrile rubber

### Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)




- 3 Captive mounting screws
- 4 Slot for inscription label

ISO size	B1	B2	D1	H3	H4	H5	L2	L3
02	18	12.5	M3	34	5	39	85	42.5
01	26.2	19	M4	35	7	42	110	55

## Pneumatic valves J, ISO 15 407-1

Technical data – 5/2-way valves, double pilot


Ordering data				
ISO size		02		01
Circuit symbol	Description	Part No.	Type	Part No. Type
	Double pilot valve	<b>161 083</b>	<b>J-5/2-D-02</b>	<b>161 062 J-5/2-D-01</b>
	Double pilot valve with dominant signal at 14	<b>161 084</b>	<b>JD-5/2-D-02</b>	<b>161 063 JD-5/2-D-01</b>

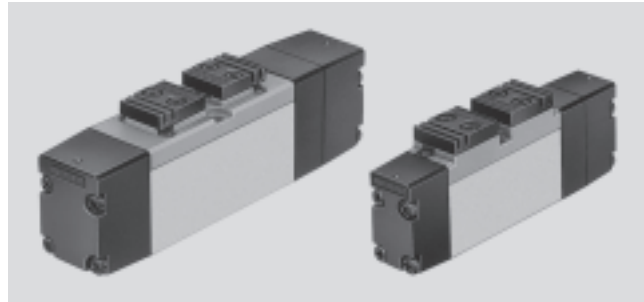
-  - Type discontinued  
Available up until 2010

## Pneumatic valves VL, ISO 15 407-1

Technical data – 5/3-way valves

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-  - Flow rate  
500 ... 1000 l/min



General technical data			
ISO size		02	01
Valve function		5/3-way, single pilot	
Constructional design		Piston spool	
Sealing principle		Soft	
Actuation type		Pneumatic	
Type of reset		Mechanical spring	
Type of pilot control		Direct	
Pilot air supply		Internal	
Direction of flow		Reversible	
Exhaust function		With flow control	
Manual override		None	
Type of mounting		Via through-holes	
Mounting position		Any	
Nominal size	[mm]	6	8
Standard nominal flow rate	[l/min]	500	1000
Grid dimension	[mm]	19	27
Pneumatic connection	1, 2, 3, 4, 5 12, 14	G $\frac{1}{8}$ M5	G $\frac{1}{4}$ M5
Product weight	[g]	120	330
Noise level	[dB (A)]	75	

Operating and environmental conditions			
ISO size		02	01
Operating medium		Filtered compressed air, lubricated or unlubricated Vacuum	
Operating pressure	[bar]	-0.9 ... +10	-0.9 ... +16
Pilot pressure	[bar]	3 ... 10	3 ... 16
Ambient temperature	[°C]	-10 ... +60	
Temperature of medium	[°C]	-10 ... +60	

Valve response times			
ISO size		02	01
Closed	On	9	13
	Off	18	32
Exhausted	On	8	13
	Off	18	38
Pressurised	On	9	13
	Off	18	33

- 1 - Type discontinued  
Available up until 2010

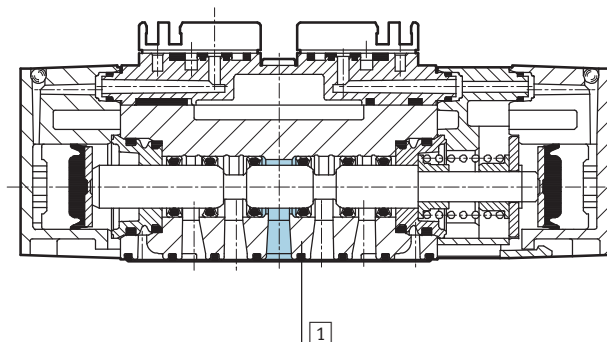
FESTO

## Pneumatic valves VL, ISO 15 407-1


Technical data – 5/3-way valves

### Materials

Sectional view



1	Housing	Die-cast aluminium, polyacetate
-	Seals	Nitrile rubber

-  - Type discontinued  
Available up until 2010

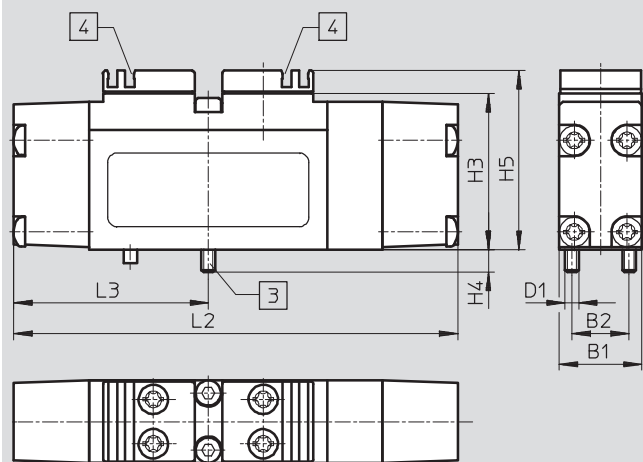
## Pneumatic valves VL, ISO 15 407-1

Technical data – 5/3-way valves

FESTO

### Dimensions

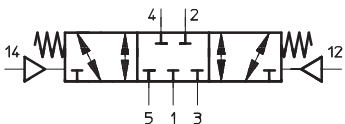
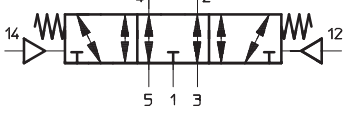
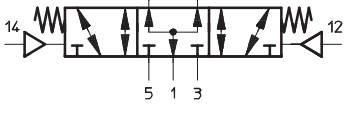
Download CAD data → [www.festo.com](http://www.festo.com)



- 3 Captive mounting screws
- 4 Slot for inscription label

ISO size	B1	B2	D1	H3	H4	H5	L2	L3
02	18	12.5	M3	34	5	39	97	42.5
01	26.2	19	M4	35	7	42	124	55

### Ordering data

ISO size	02	01
Circuit symbol	Description	Part No. Type
	Normally closed	<b>161 085 VL-5/3G-D-02</b> <b>161 064 VL-5/3G-D-01</b>
	Normally exhausted	<b>161 086 VL-5/3E-D-02</b> <b>161 065 VL-5/3E-D-01</b>
	Normally pressurised	<b>161 087 VL-5/3B-D-02</b> <b>161 066 VL-5/3B-D-01</b>

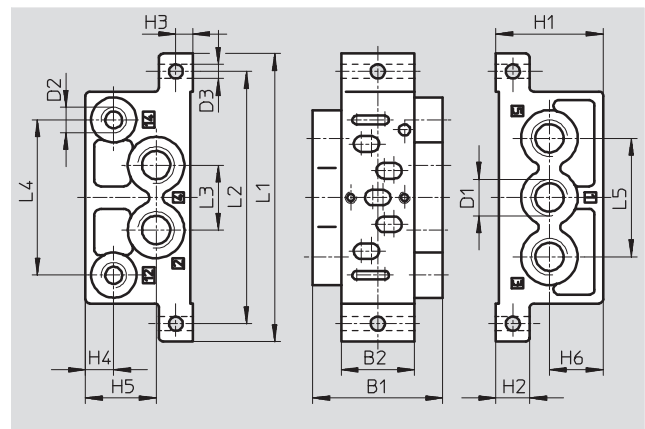
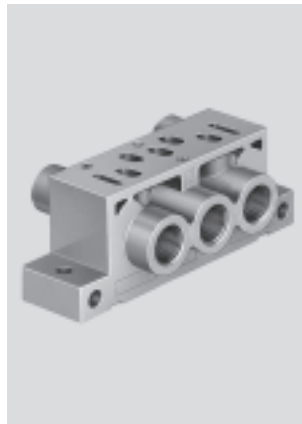


# Solenoid/pneumatic valves, ISO 15 407-1

Accessories

## Individual sub-base NAS

Materials:  
Die-cast aluminium  
Free of copper and PTFE



Dimensions and ordering data											
ISO size	B1	B2	D1	D2	D3 Ø	H1	H2	H3	H4	H5	H6
02	28.5	18	G $\frac{1}{8}$	M5	5.5	31	10	5	7	20	14.5
01	46	26	G $\frac{1}{4}$	G $\frac{1}{8}$	5	38	12	6	10	25	19

Dimensions and ordering data									
ISO size	L1	L2	L3	L4	L5	Weight [g]	Part No.	Type	
02	79	66.5	17	40	32	67	161 115	NAS- $\frac{1}{8}$ -02-VDMA	
01	102	89.4	23	55	42	160	161 109	NAS- $\frac{1}{4}$ -01-VDMA	

General technical data			
ISO size	02		01
Type of mounting	2 through-holes in housing		2 through-holes in housing
Pneumatic connection	1, 2, 3, 4, 5	G $\frac{1}{8}$	G $\frac{1}{4}$
	12, 14	M5	G $\frac{1}{8}$

# Solenoid/pneumatic valves, ISO 15 407-1

Accessories

## Manifold sub-base NAW

Material:  
Die-cast aluminium



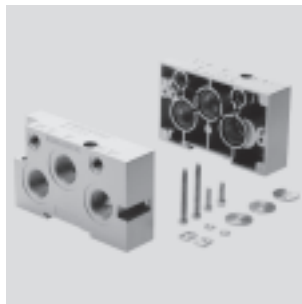
Ordering data – NAW for solenoid valves					
ISO size	Pneumatic connection		Weight [g]	Part No.	Type
	1, 2, 3, 4, 5	12, 14			
02	G $\frac{1}{8}$	M5	130	161 110	NAW- $\frac{1}{8}$ -02-VDMA
01	G $\frac{1}{4}$	M5	225	161 102	NAW- $\frac{1}{4}$ -01-VDMA

Ordering data – NAW for pneumatic valves					
ISO size	Pneumatic connection		Weight [g]	Part No.	Type
	1, 2, 3, 4, 5	12, 14			
02	G $\frac{1}{8}$	M5	130	161 111	NAW- $\frac{1}{8}$ -02-VDMA-VL
01	G $\frac{1}{4}$	M5	225	161 103	NAW- $\frac{1}{4}$ -01-VDMA-VL

Dimensions → 52

## End plate kit NEV

Material:  
Die-cast aluminium



Ordering data					
ISO size	Pneumatic connection		Weight [g]	Part No.	Type
	1, 2, 3, 4, 5	12, 14			
02	G $\frac{3}{8}$	G $\frac{1}{8}$	280	161 112	NEV-02-VDMA
01	G $\frac{1}{2}$	G $\frac{1}{8}$	445	161 104	NEV-01-VDMA

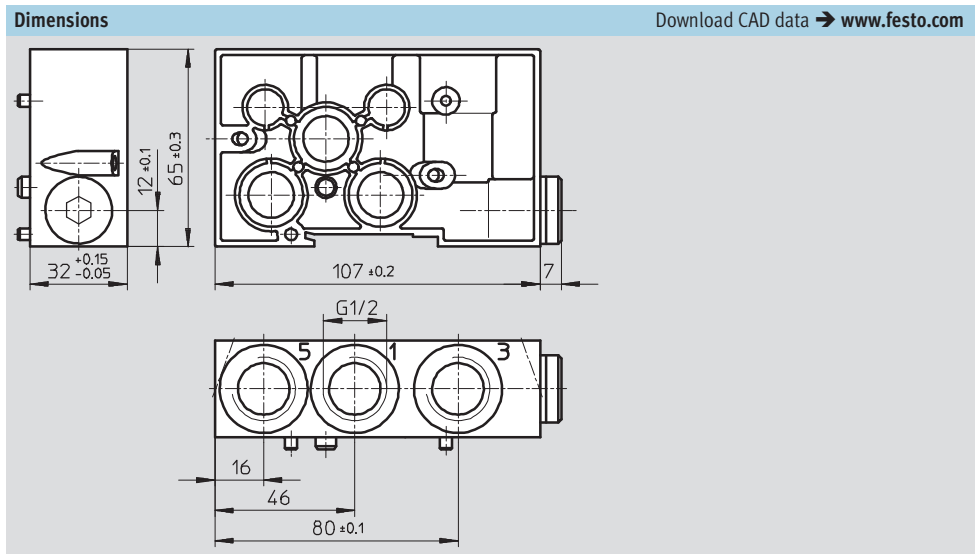
Dimensions → 52

# Solenoid/pneumatic valves, ISO 15 407-1

Accessories

## Intermediate plate NZV

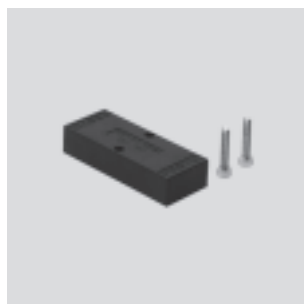
Material:  
Die-cast aluminium  
Free of copper and PTFE



Ordering data					
ISO size	Pneumatic connection		Weight [g]	Part No.	Type
	1, 2, 3, 4, 5	12, 14			
02, 01	G1/2	-	270	161 108	NZV-01/02-VDMA

## Blanking plate NDV

Material:  
Polymer  
Free of copper and PTFE



Ordering data				
ISO size	Weight [g]	Part No.	Type	
02	22	161 114	NDV-02-VDMA	
01	36	161 107	NDV-01-VDMA	

Dimensions → 52

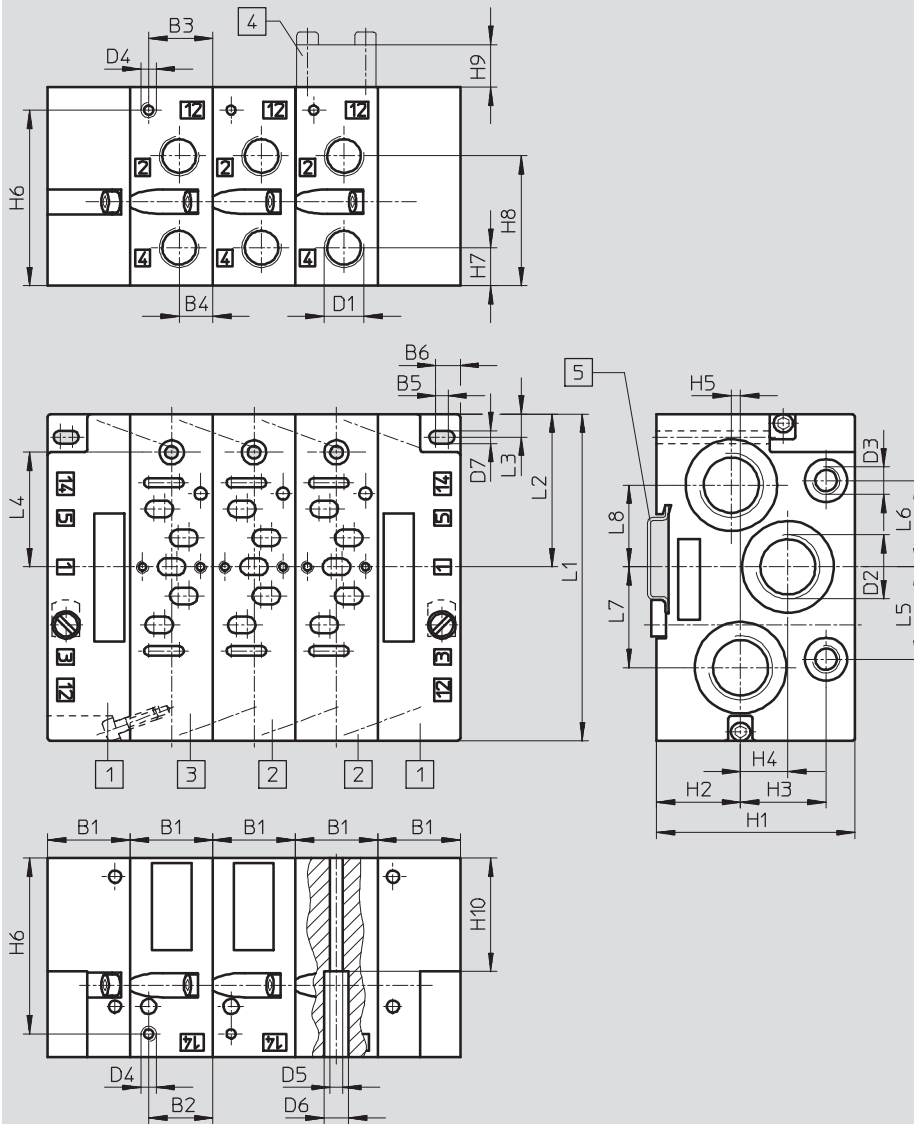
# Solenoid/pneumatic valves, ISO 15 407-1

Accessories

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## Dimensions – Manifold mounting

Download CAD data → [www.festo.com](http://www.festo.com)



- 1 End plate kit  
NEV-...VDMA  
→ 50
- 2 Manifold sub-base  
NAW-...-VDMA  
→ 50
- 3 Manifold sub-base  
NAW-...-VDMA-VL  
→ 50
- 4 Blanking plate  
NDV-...-VDMA  
→ 51
- 5 Mounting rail  
NRH-35-2000

Note  
For design reasons, only the silencer U-3/8-B can be screwed into ports 3 and 5 when assembling ISO size 02 mounting rails.

ISO size	B1	B2	B3	B4	B5	B6	D1	D2	D3	D4
02	19	6	13	7.5	1	4.5	G $\frac{1}{8}$	G $\frac{3}{8}$	G $\frac{1}{8}$	M5
01	27	21	21	11	4	8	G $\frac{1}{4}$	G $\frac{1}{2}$	G $\frac{1}{8}$	M5

ISO size	D5	D6	D7	H1	H2	H3	H4	H5	H6	H7
02	3.3	6.3	4.3	55	17	28.8	18.5	–	48	10.5
01	4.2	8	4.2	65	27.5	28	15.5	3	57.5	12.5

ISO size	H8	H9	H10	L1	L2	L3	L4	L5	L6	L7	L8
02	35.5	12	40	81	36.5	5.6	30.9	20	20	18	18
01	42.5	14	37	107	50	7.5	37.5	30.3	28.3	33	26.8

# Solenoid/pneumatic valves, ISO 15 407-1

Accessories

## Isolating disc NSC

Material:  
Aluminium



Ordering data – NSC for ports 1, 2, 3 (solenoid/pneumatic valves)			
ISO size	Weight [g]	Part No.	Type
02	2	161 113	NSC- $\frac{3}{8}$ -02-VDMA
01	2	161 105	NSC- $\frac{1}{2}$ -01-VDMA

Ordering data – NSC for ports 12, 14 (pneumatic valves)			
ISO size	Weight [g]	Part No.	Type
02	2	161 106	NSC- $\frac{1}{8}$ -01-VDMA
01	2	161 106	NSC- $\frac{1}{8}$ -01-VDMA

## Inscription clip MN2H-BZT-10X

for holding the inscription label IBS



Ordering data			
	Weight [g]	Part No.	Type
Inscription clip for valves MN2H (10 included in scope of delivery)	7	161 936	MN2H-BZT-10X

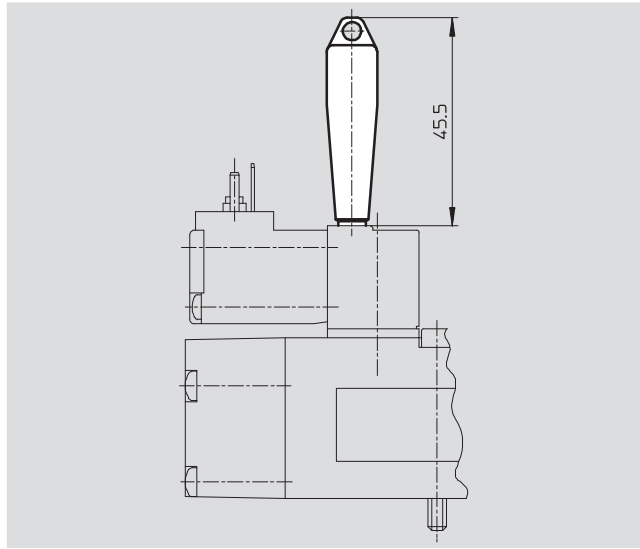
# Solenoid/pneumatic valves, ISO 15 407-1

Accessories

**FESTO**

## Manual override tool AHB

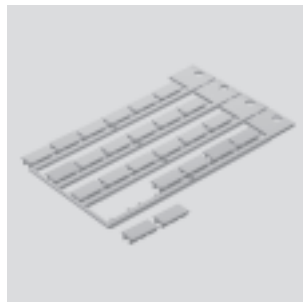
Material:  
Polymer



Ordering data			
For valve	Weight [g]	Part No.	Type
MN2H/JMN2H/JMN2DH	5	157 601	AHB-MEB

## Inscription label IBS



Material:  
Polymer






Ordering data		
	Part No.	Type
Inscription label for valves MN2H (24 in frames included in scope of delivery)	161 937	IBS-9x17
Inscription label for valves VSVA (24 in frames included in scope of delivery)	18 182	ISB-9x20



# Solenoid/pneumatic valves, ISO 15 407-1

Accessories

Ordering data		Part No.	Type
Blanking plugs			
		3570	B-3/8 <sup>1)</sup>
Silencers			
		→ Internet: u	

1) Scope of delivery 10 pieces



Ordering data – Plug sockets, plug socket cables for EB and N2 solenoid coils					
	Voltage	Cable length [m]	Switching status display with LED	Part No.	Type
Plug socket without cable <span style="float: right;">Technical data → Internet: mssd</span>					
	–	–	–	151 687	MSSD-EB
	–	–	–	539 712	MSSD-EB-M12
Plug socket without cable with insulation displacement technology <span style="float: right;">Technical data → Internet: mssd</span>					
	–	–	–	192 745	MSSD-EB-S-M14
Plug socket with cable <span style="float: right;">Technical data → Internet: kmeb</span>					
	24 V DC	2.5	■	151 688	KMEB-1-24-2,5-LED
	24 V DC	5	■	151 689	KMEB-1-24-5-LED
	24 V DC	10	■	193 457	KMEB-1-24-10-LED
	Up to 240 V	2.5	–	151 690	KMEB-1-230AC-2,5
	Up to 240 V	5	–	151 691	KMEB-1-230AC-5



Ordering data – Plug sockets, plug socket with cable for valves with central plug					
	Voltage	Cable length [m]	LED	Part No.	Type
Plug socket without cable <span style="float: right;">Technical data → Internet: sea-m12</span>					
	–	–	–	185 498	SEA-M12-4WD-PG7
Plug socket with cable <span style="float: right;">Technical data → Internet: km-12</span>					
	–	1	–	185 499	KM-12-M12-GSWD-1-4


# Solenoid/pneumatic valves, ISO 15 407-1

FESTO

Accessories

Ordering data – Plug sockets with cable M12x1 for VSVA valves						Technical data → Internet: sim-m12	
	Mounting	Connection	Switch output		Cable length [m]	Part No.	Type
			PNP	NPN			
Straight plug socket							
	Locknut M12x1	4-pin	■	■	5	<b>164 259</b>	<b>SIM-M12-4GD-5-PU</b>
Angled plug socket							
	Locknut M12x1	4-pin	■	■	5	<b>164 258</b>	<b>SIM-M12-4WD-5-PU</b>

Ordering data – Plug sockets with cable M8x1 for VSVA valves						Technical data → Internet: sim-m8	
	Mounting	Connection	Switch output		Cable length [m]	Part No.	Type
			PNP	NPN			
Straight plug socket							
	Locknut M8x1	4-pin	■	■	2.5	<b>158 960</b>	<b>SIM-M8-4GD-2,5-PU</b>
					5	<b>158 961</b>	<b>SIM-M8-4GD-5-PU</b>
Angled plug socket							
	Locknut M8x1	4-pin	■	■	2.5	<b>158 962</b>	<b>SIM-M8-4WD-2,5-PU</b>
					5	<b>158 963</b>	<b>SIM-M8-4WD-5-PU</b>

Ordering data – Illuminating seal for EB solenoid coils				Technical data → Internet: meb-ld	
	Voltage		Part No.	Type	
	[V DC]	[V AC]			
	12 ... 24	–	<b>151 717</b>	<b>MEB-LD-12-24DC</b>	
	–	230	<b>151 718</b>	<b>MEB-LD-230AC</b>	