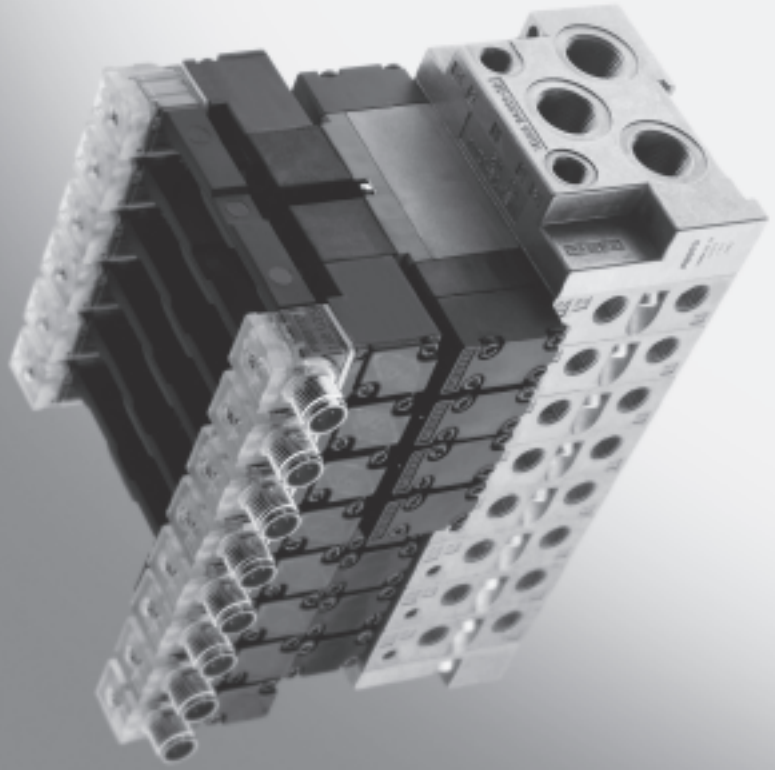
Valve terminal type 14 VDMA-01/02, ISO 15 407-1

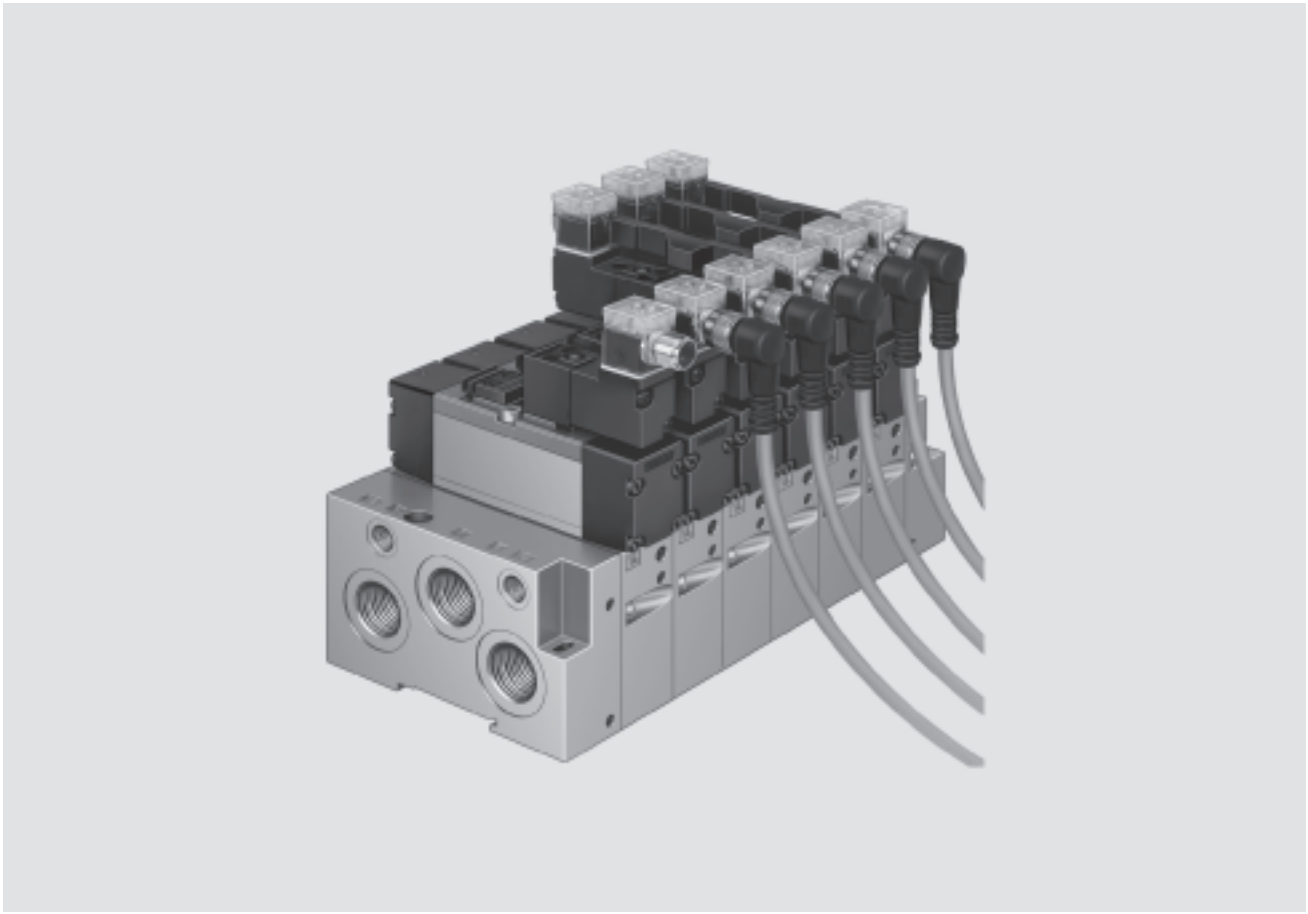
FESTO



- ISO valve terminal
- High flow rates up to 1000 l/min
- Operating voltage either 12 V DC or 230 V AC
- Two valve sizes on the terminal
- Sturdy metal design

Valve terminal type 14 VDMA-01/02, ISO 15 407-1

Key features



Modular

Festo valve terminals for VDMA 24 563 are of modular design and can be equipped with 2 to 16 standard valves. Fewer valves may also be installed, in which case vacant positions are sealed with blanking plates.

Various electrical connection options such as

- 5-pin central plug M12 to EN 60 947-5-2
- 4-pin central plug M8
- Standard connection (square plug)

can be selected.

Flexible

- A valve terminal can have multiple pressure zones and vacuum operation.
- Conversions and extensions are possible at any time.
- Wide range of valve functions, for example 2x 3/2-way valves, in one housing.
- The new generation of valve housings are all the same size. The valve terminals are therefore capable of providing versatile and flexible solutions to a variety of pneumatic control technology requirements.

Reliable

- Sturdy and durable components made of high-quality metal/plastic with IP65 protection.
- The new generation of valves are made of flame-retardant materials.
- Fast error diagnosis thanks to LEDs on the valves or via connector plugs.
- All valves feature manual override.
- Reliability of service through replaceable valves.
- Labelling systems for valves, connection plugs and cables.

Easy to assemble

- Fully assembled and tested unit.
- Captive screws and seals.
- Valves are replaced by undoing just two screws.
- No tube removal required for valve replacement.
- Mounting on H-rail.
- Lower costs for selection, ordering, assembly and commissioning.

Valve terminal configurator

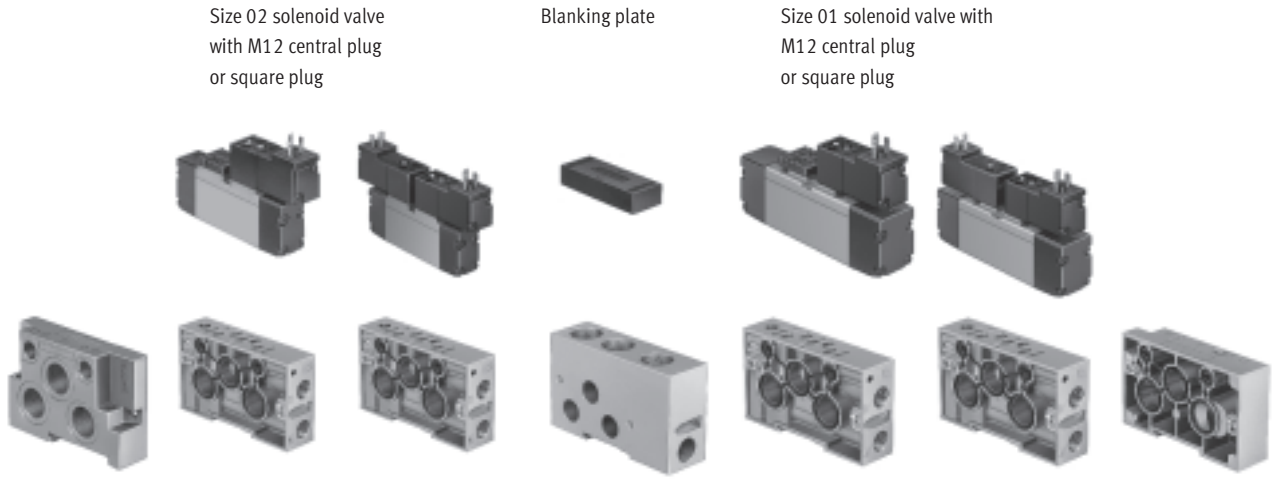
Online via: ➔ www.festo.com/en/engineering

A valve terminal configurator is available to help you select a suitable valve terminal. This makes it much easier for you to find the right product.

Valve terminals are equipped and assembled according to customer requirements. This results in minimal installation time. They are also fully inspected before shipment.

Valve terminal type 14 VDMA-01/02, ISO 15 407-1

Peripherals overview



Pneumatic components

The valve terminals include common supply ports and exhausts for all valves. The bus lines can be connected to the end plates, or via adapter plates.

The valve terminals are available in 2 sizes with corresponding flow rates:
- Size 01: 1000 l/min
- Size 02: 500 l/min

It is also possible to combine both sizes.

A wide range of valve types is available:
- 2 x 3/2-way valve
  2x closed, 2x open or
  1x closed and 1x open
- 5/2-way valve, single solenoid
- 5/2-way valve, double solenoid
- 5/2-way valve, double solenoid, with dominating signal
- 5/3-way valve,
  mid-position exhausted,
  pressurised or closed

Two pressure zones with different pressures (three with mixed sizes) can be created with the help of isolating discs for the supply and exhaust lines.

The standard model valve terminal is equipped with an M8 or M12 central plug.
Connection is also possible by means of individual standard plugs upon request.
Terminals are available in sizes 01 and 02. An adapter plate can be used to mix sizes, in which case assembly is started at the left with size 02.

Blanking plates
Blanking plates are used to seal off vacant valve positions.

Creating pressure zones
Different supply pressures are made possible within a single valve terminal by installing an isolating disc between two sub-bases. In doing so, the isolating disc must be inserted from the left into the sub-base.
Supply and exhaust are on the right. Usually, only line 1 has to be isolated. In special cases, isolating discs may also be inserted into exhaust lines 3 and 5.

Pilot control
Solenoid actuated valves are used.
The standard voltage is 24 V DC.
Other voltages are possible (12 V DC, 24 V AC, 110 V AC and 230 V AC). The square plug must be selected for 110 V AC and 230 V AC.

The selection of auxiliary pilot air for the entire valve terminal is made with the corresponding code letter in the order code. This assures selection of the correct valves.

Supply air can be taken from the main line, or from a separate air supply. A separate air supply is required in any event if supply pressure is less than 3 bar (including vacuum). In this case it is advisable to restrict pilot air to 6 bar with a suitable regulator.

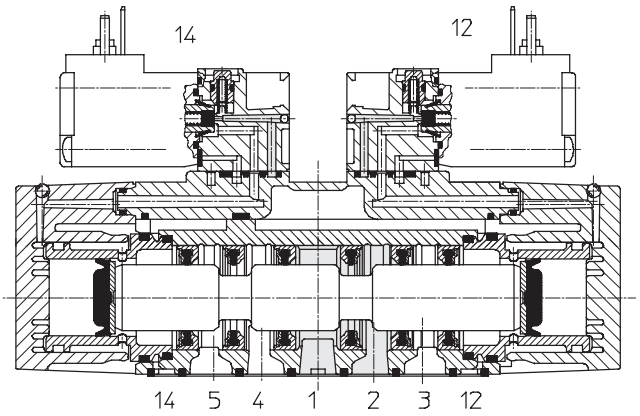
- Note

The various components which can be installed are included in the order tables.
➔ Internet: type 14

Valve terminal type 14 VDMA-01/02, ISO 15 407-1

Key features – Pneumatic components

Port identification for pneumatic connections



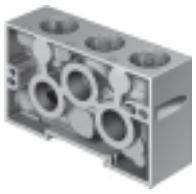
1 Compressed air supply
2 Working line
3 Exhaust, port 2
4 Working line
5 Exhaust, port 4
12 Pilot control exhaust (83, previously 82/84)
14 External supply of pilot air (81, previously 12/14)

Port 12 at the end plates is used for exhausting pilot air (83, previously 82/84). Even if pilot air is supplied internally this port must remain open or must be fitted with a silencer.

Note

Never plug port 12 (83).

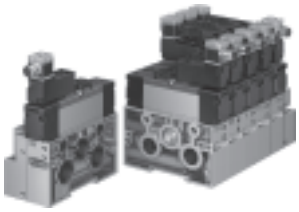
Valve terminal with mixed sizes



Lines 12 and 14 are interrupted within the adapter plate for adapting size 02 to size 01.

These must therefore be fed to both sides of the valve terminal if pilot air is supplied externally.

Isolating discs



Isolating discs allow for the creation of different pressure zones within a single valve terminal, or separate the exhaust lines in order to prevent the cylinders from influencing one another.

The isolating disc is inserted from the left, so that the valve mounted on the affected sub-base is supplied from, and exhausted to the right.

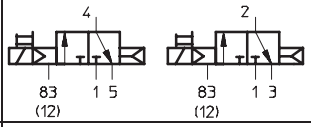
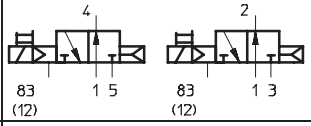
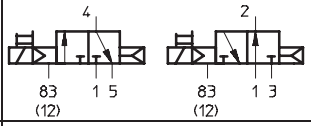
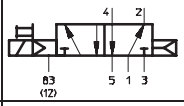
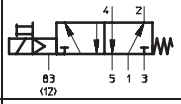
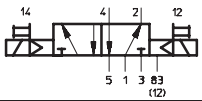
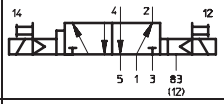
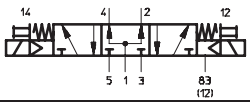
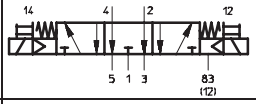
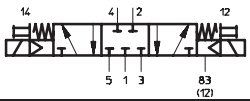
Manual override

The standard manual override is push-in, and is equipped with spring return.

A detenting manual override can be created with the help of a tool which can be attached to the respective valve as required.

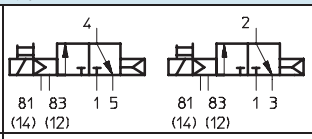
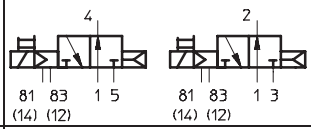
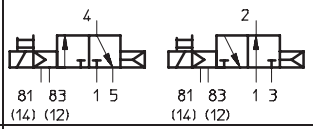
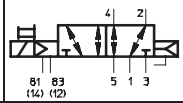
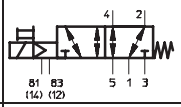
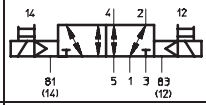
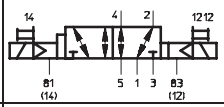
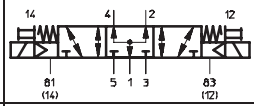
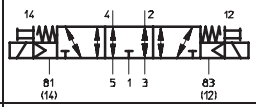
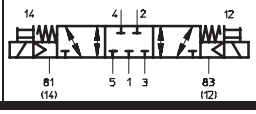
Valve terminal type 14 VDMA-01/02, ISO 15 407-1

Key features – Pneumatic components

Valve function				
Code	Circuit symbol	ISO Size 01	ISO Size 02	Description
without auxiliary pilot air				
K		■	■	• 2x 3/2-way valve • Normally closed
N		■	■	• 2x 3/2-way valve • Normally open
H		■	■	• 2x 3/2-way valve • Normal position 1x closed 1x open
M		■	■	• 5/2-way valve, single solenoid • Pneumatic spring
F		■	■	• 5/2-way valve, single solenoid • Spring return
J		■	■	• 5/2-way valve, double solenoid
D		■	■	• 5/2-way valve, double solenoid • Dominating signal at 14
B		■	■	• 5/3-way valve • Mid-position pressurised
E		■	■	• 5/3-way valve • Mid-position exhausted
G		■	■	• 5/3-way valve • Mid-position closed

Valve terminal type 14 VDMA-01/02, ISO 15 407-1

Key features – Pneumatic components

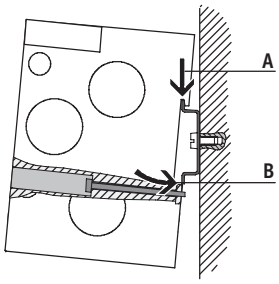
Valve function				
Code	Circuit symbol	ISO Size 01	ISO Size 02	Description
with auxiliary pilot air				
K		■	■	• 2x 3/2-way valve • Normally closed
N		■	■	• 2x 3/2-way valve • Normally open
H		■	■	• 2x 3/2-way valve • Normal position 1x closed 1x open
M		■	■	• 5/2-way valve, single solenoid • Pneumatic spring
F		■	■	• 5/2-way valve, single solenoid • Spring return
J		■	■	• 5/2-way valve, double solenoid
D		■	■	• 5/2-way valve, double solenoid • Dominating signal at 14
B		■	■	• 5/3-way valve • Mid-position pressurised
E		■	■	• 5/3-way valve • Mid-position exhausted
G		■	■	• 5/3-way valve • Mid-position closed

Note

For vacuum operation valves require a filter. This is to avoid that foreign matter is drawn into the valve (e.g. when using a suction cup).

Horizontal linking				
Code		ISO		Description
		Size 01	Size 02	
A		■	■	Blanking plate
W		■	■	Intermediate plate, size 02/size 01
U		■	■	Isolating discs, line 3/5
V		■	■	Isolating disc, line 1

H-rail mounting of valve terminal



The valve terminal is attached to the H-rail (see arrow A).
The terminal is then rotated on the H-rail and secured by tightening the retaining screw (see arrow B).

- - Note

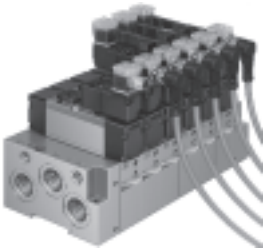
Avoid dynamic loads when using H-rail mounting. Otherwise the valve terminal can detach from the H-rail.

Valve terminal type 14 VDMA-01/02, ISO 15 407-1

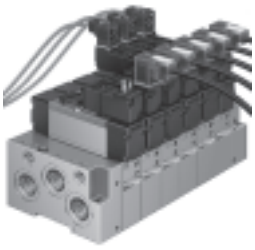
Key features – Electrical components

Electrical connection

M12 central plug



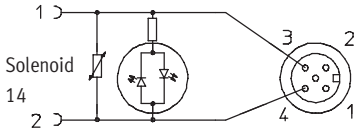
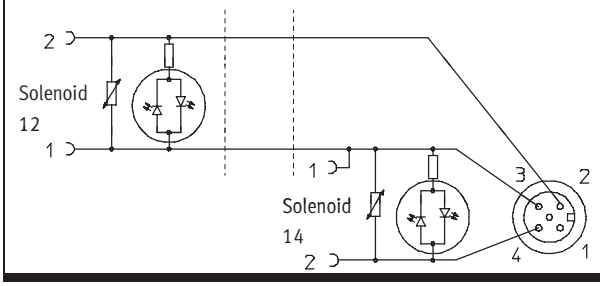
Standard connection



The electrical side of the valve terminal type 14 is established using pre-assembled cables.

The connection to the controller can be established with individual cables.

Pin allocation for M12 central plug

Connection diagrams	Pin	Electrical connection	Cable colour[1]	Designation
2-pin				
	1	–	brown	unused
	2	–	white	unused
	3	com (–)	blue	0 V
	4	Signal (+) Solenoid 14[2]	black	Pilot solenoid coil 14
3-pin				
	1		brown	unused
	2	Signal (+) Solenoid 12[2]	white	Pilot solenoid coil 12
	3	com (–)	blue	0 V
	4	Signal (+) Solenoid 14[2]	black	Pilot solenoid coil 14

1) When using the socket with cable MSSD-EB-M12... or KMEB-1...
2) Connect max. 24 V (–15%/+10%)

Electrical accessories

Code		Description
M12 central plug		
S		Plug socket M12, 4-pin, angled, Pg7
K		Pre-assembled cable with socket M12, 1 m long
Standard connection		
E		Standard plug socket
F		Plug socket with LED and cable, 2.5 m long
G		Plug socket with LED and cable, 5 m long
I		Plug socket for 230 V with cable, 2.5 m long
J		Plug socket for 230 V with cable, 5 m long

Valve terminal type 14 VDMA-01/02, ISO 15 407-1

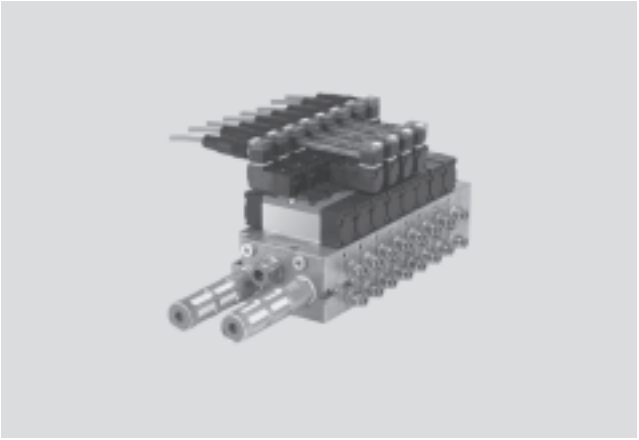
Technical data

FESTO

- Flow rate
  VDMA size 01: 1000 l/min
  VDMA size 02: 500 l/min

- Valve width
  Size 01: 26 mm
  Size 02: 18 mm

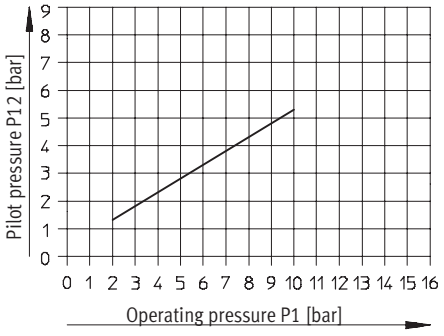
- Voltage
  24 V DC
  12 V DC
  24 V AC
  110 V AC
  230 V AC



General technical data			
ISO		Size 01	Size 02
Constructional design, valves		Piston spool valve with sealing ring cartridge	
Width	[mm]	27	19
Nominal size	[mm]	8	6
Type of mounting, valve		On sub-base with connection to VDMA 24 563	
Mounting position		Any	
Manual override		Push-type, self-resetting/detenting (tool)	
Pneumatic connections			
Supply port	1	G¼ (sub-base)	G⅛ (sub-base)
Exhaust port	3/5	G¼ (sub-base)	G⅛ (sub-base)
Working lines	2/4	G¼ (sub-base)	G⅛ (sub-base)
Pilot air port	12/14	M5 (sub-base)	
Pilot exhaust air port	82/84	M5 (sub-base), only valves with code K, N, H	

Pressure range [bar]											
Valve function order code		K	N	H	M	F	J	D	B	E	G
Operating pressure	Size 01	2 ... 10			–0.9 ... +16						
	Size 02	2 ... 10			–0.9 ... +10						
Operating pressure for valve terminal with internal pilot air supply	Size 01	2 ... 10			2 ... 10				3 ... 10		
	Size 02	2 ... 10			2 ... 10				3 ... 10		
Pilot pressure		2 ... 10			2 ... 10		2 ... 10		3 ... 10		

Minimal pilot pressure p12 as a function of the operating pressure p1 (with auxiliary pilot air)



Valve terminal type 14 VDMA-01/02, ISO 15 407-1

Technical data

Valve response times [ms]											
Valve function order code		K	N	H	M	F	J	D	B	E	G
Size 01	on	22	22	22	31	31	–	16	23	23	23
	off	33	33	33	43	43	–	18	52	52	52
	change-over	–	–	–	–	–	18	–	–	–	–
Size 02	on	15	15	15	23	23	–	–	18	18	17
	off	16	16	16	27	27	–	–	30	28	22
	change-over	–	–	–	–	–	16	16	–	–	–

Operating and environmental conditions											
Valve function order code		K	N	H	M	F	J	D	B	E	G
Operating medium		Filtered compressed air, lubricated or unlubricated, or vacuum➔ LEERER MERKER									
Ambient temperature	[°C]	–10 ... +50									
Temperature of medium	[°C]	–5 ... +50									
Storage temperature	[°C]	–20 ... +40									
Corrosion resistance class CRC[1)]		2									

1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

Electrical data											
Valve function order code		K	N	H	M	F	J	D	B	E	G
Electromagnetic compatibility		Interference emission tested to EN 61 000-6-4, industry									
		Interference immunity[1)] tested to EN 61 000-6-2, industry									
Protection against electric shock (protection against direct and indirect contact to EN 60204-1/IEC 204)		By means of PELV power supply unit (12/14 V DC)									
Operating voltage	[V]										
• D.C. voltage		12, 24 +10%/–15%									
• A.C. voltage		24, 110/230 ±10%, 50 ... 60 Hz									
Electrical power consumption	[W]										
• D.C. voltage		1.5									
• A.C. voltage		Pull: 3 Hold: 2.4									
Duty cycle		100%									
Protection class to EN 60 529		IP65 (with plug socket)									

Materials											
Valve function order code		K	N	H	M	F	J	D	B	E	G
Valve		Die-cast aluminium, polyacetate (POM)									
Seal		Nitrile rubber (perbunan)									

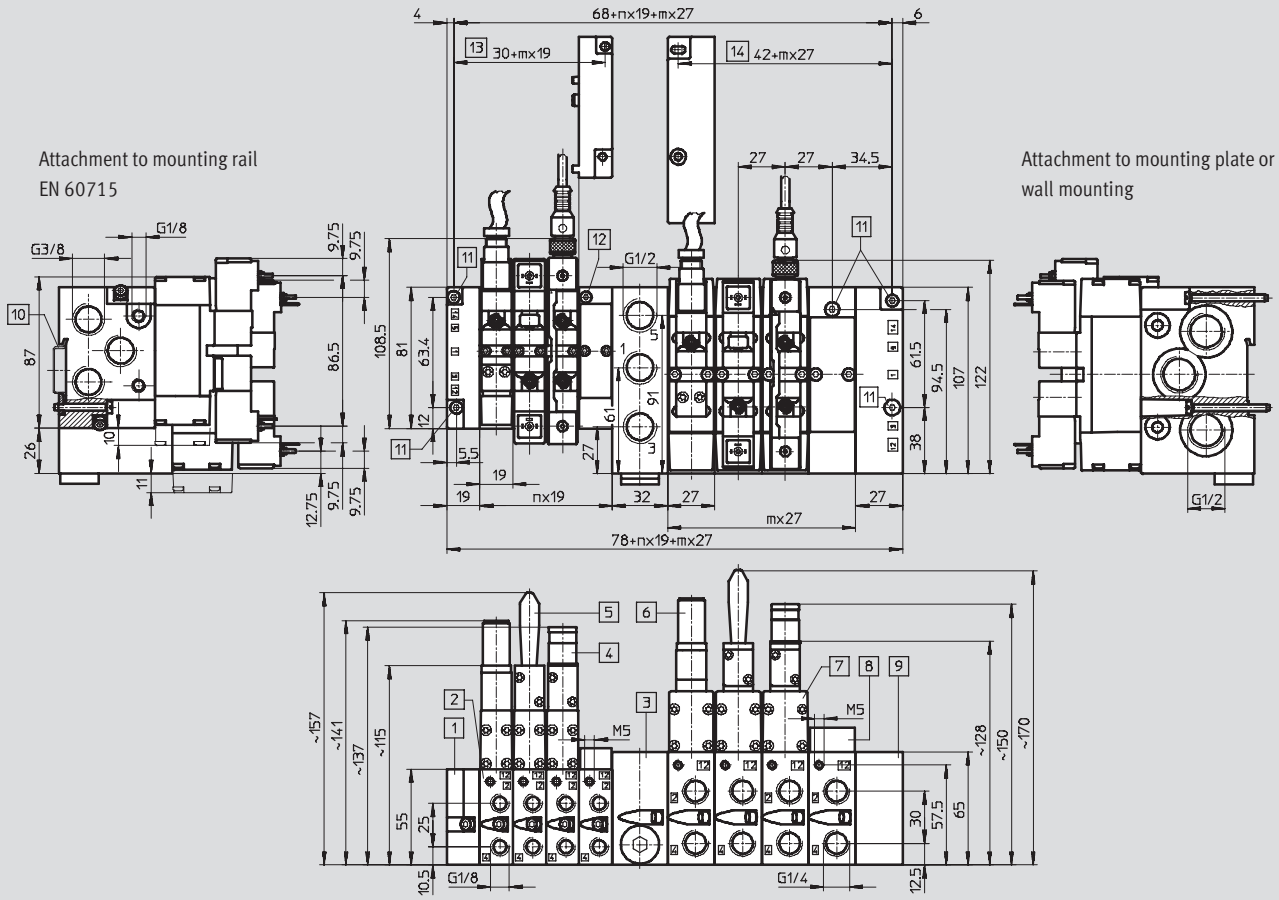
Product weight [g]	Approx. weights									
Valve function order code	K	N	H	M	F	J	D	B	E	G
Size 01	320			340		320		270		
Size 02	210			220		210		160		

Nominal flow rate [l/min]										
Valve function order code	K	N	H	M	F	J	D	B	E	G
Size 01	950			1000						
Size 02	490			500						

Valve terminal type 14 VDMA-01/02, ISO 15 407-1

Technical data

Dimensions Download CAD data ➔ **www.festo.com**



1 End plate, left-hand NEV-...-VDMA
2 Manifold sub-base NAW-...-VDMA
3 Intermediate plate NZV-01/02-VDMA
4 Plug socket KM12-M12-GSWD-1-4
5 Manual override
6 Plug socket KMEB-1-24...
7 Solenoid valve
8 Blanking plate NDV-...-VDMA
9 End plate, right-hand NEV-...-VDMA
10 H-rail NRH-35-2000
11 Mounting screws M4
12 Mounting screws M3
13 Dimension for valve terminal with size 02 valves
14 Dimension for valve terminal with size 01 valves

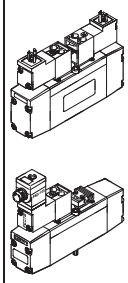
m Number of size 01 valves
n Number of size 02 valves

Valve terminal type 14 VDMA-01/02, ISO 15 407-1

Ordering data – Individual valve

Ordering data

Valves on individual sub-base

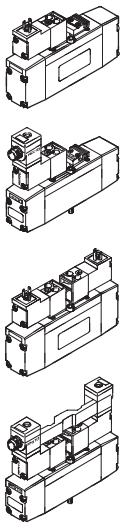
	Code	Valve function	ISO	Voltage	Type	Part No.
without auxiliary pilot air						
	K	• 2x 3/2-way valve • Normally closed	01	24 V DC	**MN2H-2x3G-01**	**187 970**
				12 V DC, 24 V AC	**MN2H-2x3G-01-12DCA**	**191 342**
				110 V AC	**MN2H-2x3G-01-110VAC**	**191 344**
				230 V AC	**MN2H-2x3G-01-230AC**	**191 346**
				24 V DC, central plug	**MN2H-2x3G-01-ZSR**	**191 340**
			02	24 V DC	**MN2H-2x3G-02**	**187 976**
				12 V DC, 24 V AC	**MN2H-2x3G-02-12DCA**	**191 372**
				110 V AC	**MN2H-2x3G-02-110VAC**	**191 374**
				230 V AC	**MN2H-2x3G-02-230AC**	**191 376**
				24 V DC, central plug	**MN2H-2x3G-02-ZSR**	**191 370**
	N	• 2x 3/2-way valve • Normally open	01	24 V DC	**MN2H-2x3O-01**	**187 971**
				12 V DC, 24 V AC	**MN2H-2x3O-01-12DCA**	**191 350**
				110 V AC	**MN2H-2x3O-01-110VAC**	**191 352**
				230 V AC	**MN2H-2x3O-01-230VAC**	**191 354**
				24 V DC, central plug	**MN2H-2x3O-01-ZSR**	**191 348**
			02	24 V DC	**MN2H-2x3O-02**	**187 977**
				12 V DC, 24 V AC	**MN2H-2x3O-02-12DCA**	**191 380**
				110 V AC	**MN2H-2x3O-02-110VAC**	**191 382**
				230 V AC	**MN2H-2x3O-02-230VAC**	**191 384**
				24 V DC, central plug	**MN2H-2x3O-02-ZSR**	**191 378**
	H	• 2x 3/2-way valve • Normal position 1x open 1x closed	01	24 V DC	**MN2H-2x3O-G-01**	**187 972**
				12 V DC, 24 V AC	**MN2H-2x3O-G-01-12DCA**	**191 358**
				110 V AC	**MN2H-2x3O-G-01-110VAC**	**191 360**
				230 V AC	**MN2H-2x3O-G-01-230AC**	**191 362**
				24 V DC, central plug	**MN2H-2x3O-G-01-ZSR**	**191 356**
			02	24 V DC	**MN2H-2x3O-G-02**	**187 978**
				12 V DC, 24 V AC	**MN2H-2x3O-G-02-12DCA**	**191 388**
				110 V AC	**MN2H-2x3O-G-02-110VAC**	**191 390**
				230 V AC	**MN2H-2x3O-G-02-230AC**	**191 392**
				24 V DC, central plug	**MN2H-2x3O-G-02-ZSR**	**191 386**

Valve terminal type 14 VDMA-01/02, ISO 15 407-1

Ordering data – Individual valve

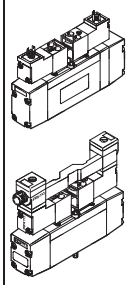
Ordering data

Valves on individual sub-base

	Code	Valve function	ISO	Voltage	Type	Part No.
without auxiliary pilot air						
	M	• 5/2-way valve, single solenoid	01	24 V DC	**MN2H-5/2-D-01**	**161 067**
				12 V DC, 24 V AC	**MN2H-5/2-01-12DCA**	**187 876**
				110 V AC	**MN2H-5/2-D-01-110AC**	**161 880**
				230 V AC	**MN2H-5/2-D-01-230AC**	**161 894**
				24 V DC, central plug	**MN2H-5/2-01-ZSR**	**191 309**
			02	24 V DC	**MN2H-5/2-D-02**	**161 088**
				12 V DC, 24 V AC	**MN2H-5/2-02-12DCA**	**187 890**
				110 V AC	**MN2H-5/2-D-02-110AC**	**161 908**
				230 V AC	**MN2H-5/2-D-02-230AC**	**161 922**
				24 V DC, central plug	**MN2H-5/2-02-ZSR**	**191 323**
	F	• 5/2-way valve, single solenoid • Spring return	01	24 V DC	**MN2H-5/2-D-01-FR**	**161 069**
				12 V DC, 24 V AC	**MN2H-5/2-01-FR-12DCA**	**187 878**
				110 V AC	**MN2H-5/2-D-01-FR-110AC**	**161 882**
				230 V AC	**MN2H-5/2-D-01-FR-230AC**	**161 896**
				24 V DC, central plug	**MN2H-5/2-01-FR-ZSR**	**191 311**
			02	24 V DC	**MN2H-5/2-D-02-FR**	**161 090**
				12 V DC, 24 V AC	**MN2H-5/2-02-FR-12DCA**	**187 926**
				110 V AC	**MN2H-5/2-D-02-FR-110AC**	**161 910**
				230 V AC	**MN2H-5/2-D-02-FR-230AC**	**161 924**
				24 V DC, central plug	**MN2H-5/2-02-FR-ZSR**	**191 325**
	J	• 5/2-way valve, double solenoid	01	24 V DC	**JMN2H-5/2-D-01**	**161 071**
				12 V DC, 24 V AC	**JMN2H-5/2-01-12DCA**	**187 880**
				110 V AC	**JMN2H-5/2-D-01-110AC**	**161 884**
				230 V AC	**JMN2H-5/2-D-01-230AC**	**161 898**
				24 V DC, central plug	**JMN2H-5/2-01-ZSR**	**191 319**
			02	24 V DC	**JMN2H-5/2-D-02**	**161 092**
				12 V DC, 24 V AC	**JMN2H-5/2-02-12DCA**	**187 928**
				110 V AC	**JMN2H-5/2-D-02-110AC**	**161 912**
				230 V AC	**JMN2H-5/2-D-02-230AC**	**161 926**
				24 V DC, central plug	**JMN2H-5/2-02-ZSR**	**191 333**
	D	• 5/2-way valve, double solenoid • Dominating signal	01	24 V DC	**JMN2DH-5/2-D-01**	**161 073**
				12 V DC, 24 V AC	**JMN2DH-5/2-01-12DCA**	**187 882**
				110 V AC	**JMN2DH-5/2-D-01-110AC**	**161 886**
				230 V AC	**JMN2DH-5/2-D-01-230AC**	**161 900**
				24 V DC, central plug	**JMN2DH-5/2-01-ZSR**	**191 321**
			02	24 V DC	**JMN2DH-5/2-D-02**	**161 094**
				12 V DC, 24 V AC	**JMN2DH-5/2-02-12DCA**	**187 930**
				110 V AC	**JMN2DH-5/2-D-02-110AC**	**161 914**
				230 V AC	**JMN2DH-5/2-D-02-230AC**	**161 928**
				24 V DC, central plug	**JMN2DH-5/2-02-ZSR**	**191 335**

Ordering data

Valves on individual sub-base

	Code	Valve function	ISO	Voltage	Type	Part No.
without auxiliary pilot air						
	B	• 5/3-way valve • Mid-position pressurised	01	24 V DC	**MN2H-5/3B-D-01**	**161 079**
				12 V DC, 24 V AC	**MN2H-5/3B-01-12DCA**	**187 888**
				110 V AC	**MN2H-5/3B-D-01-110AC**	**161 892**
				230 V AC	**MN2H-5/3B-D-01-230AC**	**161 906**
				24 V DC, central plug	**MN2H-5/3B-01-ZSR**	**191 317**
			02	24 V DC	**MN2H-5/3B-D-02**	**161 100**
				12 V DC, 24 V AC	**MN2H-5/3B-02-12DCA**	**187 936**
				110 V AC	**MN2H-5/3B-D-02-110AC**	**161 920**
				230 V AC	**MN2H-5/3B-D-02-230AC**	**161 934**
				24 V DC, central plug	**MN2H-5/3B-02-ZSR**	**191 331**
	E	• 5/3-way valve • Mid-position exhausted	01	24 V DC	**MN2H-5/3E-D-01**	**161 077**
				12 V DC, 24 V AC	**MN2H-5/3E-01-12DCA**	**187 886**
				110 V AC	**MN2H-5/3E-D-01-110AC**	**161 890**
				230 V AC	**MN2H-5/3E-D-01-230AC**	**161 905**
				24 V DC, central plug	**MN2H-5/3E-01-ZSR**	**191 315**
			02	24 V DC	**MN2H-5/3E-D-02**	**161 098**
				12 V DC, 24 V AC	**MN2H-5/3E-02-12DCA**	**187 934**
				110 V AC	**MN2H-5/3E-D-02-110AC**	**161 918**
				230 V AC	**MN2H-5/3E-D-02-230AC**	**161 932**
				24 V DC, central plug	**MN2H-5/3E-02-ZSR**	**191 329**
	G	• 5/3-way valve • Mid-position closed	01	24 V DC	**MN2H-5/3G-D-01**	**161 075**
				12 V DC, 24 V AC	**MN2H-5/3G-01-12DCA**	**187 884**
				110 V AC	**MN2H-5/3G-D-01-110AC**	**161 888**
				230 V AC	**MN2H-5/3G-D-01-230AC**	**161 902**
				24 V DC, central plug	**MN2H-5/3G-01-ZSR**	**191 313**
			02	24 V DC	**MN2H-5/3G-D-02**	**161 096**
				12 V DC, 24 V AC	**MN2H-5/3G-02-12DCA**	**187 932**
				110 V AC	**MN2H-5/3G-D-02-110AC**	**161 916**
				230 V AC	**MN2H-5/3G-D-02-230AC**	**161 930**
				24 V DC, central plug	**MN2H-5/3G-02-ZSR**	**191 327**

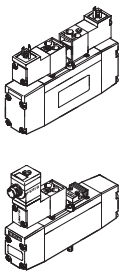
Valve terminal type 14 VDMA-01/02, ISO 15 407-1

Ordering data – Individual valve

FESTO

Ordering data

Valves on individual sub-base

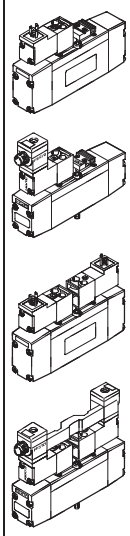
	Code	Valve function	ISO	Voltage	Type	Part No.
with auxiliary pilot air						
	K	• 2x 3/2-way valve • Normally closed	01	24 V DC	**MN2H-2x3G-01-S**	**187 973**
				12 V DC, 24 V AC	**MN2H-2x3G-01-S-12DCA**	**191 343**
				110 V AC	**MN2H-2x3G-01-S-110AC**	**191 345**
				230 V AC	**MN2H-2x3G-01-S-230AC**	**191 347**
				24 V DC, central plug	**MN2H-2x3G-01-S-ZSR**	**191 341**
			02	24 V DC	**MN2H-2x3G-02-S**	**187 979**
				12 V DC, 24 V AC	**MN2H-2x3G-02-S-12DCA**	**191 373**
				110 V AC	**MN2H-2x3G-02-S-110AC**	**191 375**
				230 V AC	**MN2H-2x3G-02-S-230AC**	**191 377**
				24 V DC, central plug	**MN2H-2x3G-02-S-ZSR**	**191 371**
	N	• 2x 3/2-way valve • Normally open	01	24 V DC	**MN2H-2x3O-01-S**	**187 974**
				12 V DC, 24 V AC	**MN2H-2x3O-01-S-12DCA**	**191 351**
				110 V AC	**MN2H-2x3O-01-S-110VAC**	**191 353**
				230 V AC	**MN2H-2x3O-01-S-230VAC**	**191 355**
				24 V DC, central plug	**MN2Hx-2x3O-01-S-ZSR**	**191 349**
			02	24 V DC	**MN2H-2x3O-02-S**	**187 980**
				12 V DC, 24 V AC	**MN2H-2x3O-02-S-12DCA**	**191 381**
				110 V AC	**MN2H-2x3O-02-S-110VAC**	**191 383**
				230 V AC	**MN2H-2x3O-02-S-230VAC**	**191 385**
				24 V DC, central plug	**MN2Hx-2x3O-02-S-ZSR**	**191 379**
	H	• 2x 3/2-way valve • Normal position 1x open 1x closed	01	24 V DC	**MN2H-2x3O-G-01-S**	**187 975**
				12 V DC, 24 V AC	**MN2H-2x3O-G-01-S-12DCA**	**191 359**
				110 V AC	**MN2H-2x3O-G-01-S-110AC**	**191 361**
				230 V AC	**MN2H-2x3O-G-01-S-230AC**	**191 363**
				24 V DC, central plug	**MN2H-2x3O-G-01-S-ZSR**	**191 357**
			02	24 V DC	**MN2H-2x3O-G-02-S**	**187 981**
				12 V DC, 24 V AC	**MN2H-2x3O-G-02-S-12DCA**	**191 389**
				110 V AC	**MN2H-2x3O-G-02-S-110AC**	**191 391**
				230 V AC	**MN2H-2x3O-G-02-S-230AC**	**191 393**
				24 V DC, central plug	**MN2H-2x3O-G-02-S-ZSR**	**191 387**

Valve terminal type 14 VDMA-01/02, ISO 15 407-1

Ordering data – Individual valve

Ordering data

Valves on individual sub-base

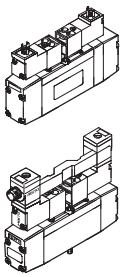
	Code	Valve function	ISO	Voltage	Type	Part No.
with auxiliary pilot air						
	M	• 5/2-way valve, single solenoid	01	24 V DC	**MN2H-5/2-D-01-S**	**161 068**
				12 V DC, 24 V AC	**MN2H-5/2-01-S-12DCA**	**187 877**
				110 V AC	**MN2H-5/2-D-01-S-110AC**	**161 881**
				230 V AC	**MN2H-5/2-D-01-S-230AC**	**161 895**
				24 V DC, central plug	**MN2H-5/2-01-S-ZSR**	**191 310**
			02	24 V DC	**MN2H-5/2-D-02-S**	**161 089**
				12 V DC, 24 V AC	**MN2H-5/2-02-S-12DCA**	**187 891**
				110 V AC	**MN2H-5/2-D-02-S-110AC**	**161 909**
				230 V AC	**MN2H-5/2-D-02-S-230AC**	**161 923**
				24 V DC, central plug	**MN2H-5/2-02-S-ZSR**	**191 324**
	F	• 5/2-way valve, single solenoid • Spring return	01	24 V DC	**MN2H-5/2-D-01-FR-S**	**161 070**
				12 V DC, 24 V AC	**MN2H-5/2-01-FR-S-12DCA**	**187 879**
				110 V AC	**MN2H-5/2-D-01-FR-S-110AC**	**161 883**
				230 V AC	**MN2H-5/2-D-01-FR-S-230AC**	**161 897**
				24 V DC, central plug	**MN2H-5/2-01-FR-S-ZSR**	**191 312**
			02	24 V DC	**MN2H-5/2-D-02-FR-S**	**161 090**
				12 V DC, 24 V AC	**MN2H-5/2-02-FR-S-12DCA**	**187 926**
				110 V AC	**MN2H-5/2-D-02-FR-S-110AC**	**161 910**
				230 V AC	**MN2H-5/2-D-02-FR-S-230AC**	**161 924**
				24 V DC, central plug	**MN2H-5/2-02-FR-S-ZSR**	**191 325**
	J	• 5/2-way valve, double solenoid	01	24 V DC	**JMN2H-5/2-D-01-S**	**161 072**
				12 V DC, 24 V AC	**JMN2H-5/2-01-S-12DCA**	**187 881**
				110 V AC	**JMN2H-5/2-D-01-S-110AC**	**161 885**
				230 V AC	**JMN2H-5/2-D-01-S-230AC**	**161 899**
				24 V DC, central plug	**JMN2H-5/2-01-S-ZSR**	**191 320**
			02	24 V DC	**JMN2H-5/2-D-02-S**	**161 093**
				12 V DC, 24 V AC	**JMN2H-5/2-02-S-12DCA**	**187 929**
				110 V AC	**JMN2H-5/2-D-02-S-110AC**	**161 913**
				230 V AC	**JMN2H-5/2-D-02-S-230AC**	**161 927**
				24 V DC, central plug	**JMN2H-5/2-02-S-ZSR**	**191 334**
	D	• 5/2-way valve, double solenoid • Dominating signal	01	24 V DC	**JMN2DH-5/2-D-01-S**	**161 074**
				12 V DC, 24 V AC	**JMN2DH-5/2-01-S-12DCA**	**187 883**
				110 V AC	**JMN2DH-5/2-D-01-S-110AC**	**161 887**
				230 V AC	**JMN2DH-5/2-D-01-S-230AC**	**161 901**
				24 V DC, central plug	**JMN2DH-5/2-01-S-ZSR**	**191 322**
			02	24 V DC	**JMN2DH-5/2-D-02-S**	**161 095**
				12 V DC, 24 V AC	**JMN2DH-5/2-02-S-12DCA**	**187 931**
				110 V AC	**JMN2DH-5/2-D-02-S-110AC**	**161 915**
				230 V AC	**JMN2DH-5/2-D-02-S-230AC**	**161 929**
				24 V DC, central plug	**JMN2DH-5/2-02-S-ZSR**	**191 336**

Valve terminal type 14 VDMA-01/02, ISO 15 407-1

Ordering data – Individual valve

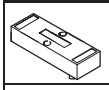
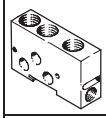
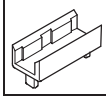
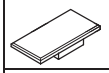
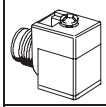
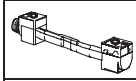
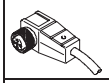
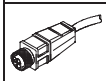
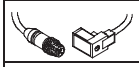
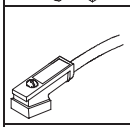
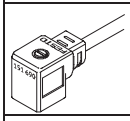
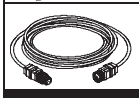
Ordering data

Valves on individual sub-base

	Code	Valve function	ISO	Voltage	Type	Part No.
with auxiliary pilot air						
	B	• 5/3-way valve • Mid-position pressurised	01	24 V DC	**MN2H-5/3B-D-01-S**	**161 080**
				12 V DC, 24 V AC	**MN2H-5/3B-01-S-12DCA**	**187 889**
				110 V AC	**MN2H-5/3B-D-01-S-110AC**	**161 893**
				230 V AC	**MN2H-5/3B-D-01-S-230AC**	**161 907**
				24 V DC, central plug	**MN2H-5/3B-01-S-ZSR**	**191 318**
			02	24 V DC	**MN2H-5/3B-D-02-S**	**161 101**
				12 V DC, 24 V AC	**MN2H-5/3B-02-S-12DCA**	**187 937**
				110 V AC	**MN2H-5/3B-D-02-S-110AC**	**161 921**
				230 V AC	**MN2H-5/3B-D-02-S-230AC**	**161 935**
				24 V DC, central plug	**MN2H-5/3B-02-S-ZSR**	**191 332**
	E	• 5/3-way valve • Mid-position exhausted	01	24 V DC	**MN2H-5/3E-D-01-S**	**161 078**
				12 V DC, 24 V AC	**MN2H-5/3E-01-S-12DCA**	**187 887**
				110 V AC	**MN2H-5/3E-D-01-S-110AC**	**161 891**
				230 V AC	**MN2H-5/3E-D-01-S-230AC**	**161 905**
				24 V DC, central plug	**MN2H-5/3E-01-S-ZSR**	**191 316**
			02	24 V DC	**MN2H-5/3E-D-02-S**	**161 099**
				12 V DC, 24 V AC	**MN2H-5/3E-02-S-12DCA**	**187 935**
				110 V AC	**MN2H-5/3E-D-02-S-110AC**	**161 919**
				230 V AC	**MN2H-5/3E-D-02-S-230AC**	**161 933**
				24 V DC, central plug	**MN2H-5/3E-02-S-ZSR**	**191 330**
	G	• 5/3-way valve • Mid-position closed	01	24 V DC	**MN2H-5/3G-D-01**	**161 076**
				12 V DC, 24 V AC	**MN2H-5/3G-01-12DCA**	**187 885**
				110 V AC	**MN2H-5/3G-D-01-110AC**	**161 889**
				230 V AC	**MN2H-5/3G-D-01-230AC**	**161 903**
				24 V DC, central plug	**MN2H-5/3G-01-ZSR**	**191 314**
			02	24 V DC	**MN2H-5/3G-D-02**	**161 097**
				12 V DC, 24 V AC	**MN2H-5/3G-02-12DCA**	**187 933**
				110 V AC	**MN2H-5/3G-D-02-110AC**	**161 917**
				230 V AC	**MN2H-5/3G-D-02-230AC**	**161 931**
				24 V DC, central plug	**MN2H-5/3G-02-ZSR**	**191 328**

Valve terminal type 14 VDMA-01/02, ISO 15 407-1

Accessories

Ordering data				
Designation		ISO	Type	Part No.
	Blanking plate	01	**NDV-01-VDMA**	**161 107**
		02	**NDV-02-VDMA**	**161 114**
	Intermediate plate, size 02/size 01		**NZV-01/02-VDMA**	**161 108**
	Isolating discs	01	**NSC-½-01-VDMA**	**161 105**
		02	**NSC-⅜-01-VDMA**	**161 113**
	Identification clip – holder		**MN2H-BTZ-10x**	**161 936**
	Inscription label 9x17		**IBS-9x17**	**161 937**
	Inscription label 9x20		**IBS-9x20**	**250 702**
	Manual override tool, detenting	02	**AHB-MEB**	**157 601**
	Plug socket, VDMA valves with central plug, for self-assembly		**MSSD-EB**	**151 687**
	Plug socket, VDMA valves with central plug M12 (MONO)		**MSSD-EB-M12-MONO**	**188 024**
	Plug socket, VDMA valves with central plug M12 (DUO)	02	**MSSD-EB-M12-DUO**	**188 025**
	Cable with socket, angled supply socket M12, 4-pin, 5 m cable		**SIM-M12-4WD-5-PU**	**164 258**
	Cable with socket, straight supply socket M12, 4-pin, 5 m cable		**SIM-M12-4GD-5-PU**	**164 259**
	Cable with socket, straight supply socket M12, 5-pin, 2.5 m cable		**SIM-M12-5GD-2,5-PU**	**175 715**
	Cable with socket, straight supply socket M12, 5-pin, 5 m cable		**SIM-M12-5GD-5-PU**	**175 716**
	Cable with socket, pre-assembled cable, M12 cube, 0.5 m		**KMEB-2-24-M12-0,5-LED**	**177 677**
	Cable with socket, pre-assembled cable, M12 cube, 2.5 m		**KMEB-2-24-M12-2,5-LED**	**177 679**
	Cable with socket, cube 24 V DC, PUR, 2.5m		**KMEB-2-24-2,5-LED**	**174 844**
	Cable with socket, cube 24 V DC, PUR, 5m		**KMEB-2-24-5-LED**	**174 845**
	Cable with socket, cube 0 ... 240 V AC, PUR, 2.5m		**KMEB-2-230-2,5**	**174 846**
	Cable with socket, cube 0 ... 240 V AC, PUR, 5m		**KMEB-2-230-5**	**174 847**
	Connecting cable, M12, 4-pin, 2.5 m		**KM12-M12-GSGD-2,5**	**18 684**
	Connecting cable, M12, 4-pin, 5 m		**KM12-M12-GSGD-5,0**	**18 686**

Product Range and Company Overview

A Complete Suite of Automation Services

Our experienced engineers provide complete support at every stage of your development process, including: conceptualization, analysis, engineering, design, assembly, documentation, validation, and production.

Custom Automation Components
Complete custom engineered solutions

Custom Control Cabinets
Comprehensive engineering support and on-site services

Complete Systems
Shipment, stocking and storage services

The Broadest Range of Automation Components

With a comprehensive line of more than 30,000 automation components, Festo is capable of solving the most complex automation requirements.

Electromechanical
Electromechanical actuators, motors, controllers & drives

Pneumatics
Pneumatic linear and rotary actuators, valves, and air supply

PLCs and I/O Devices
PLC's, operator interfaces, sensors and I/O devices

Supporting Advanced Automation... As No One Else Can!
Festo is a leading global manufacturer of pneumatic and electromechanical systems, components and controls for industrial automation, with more than 12,000 employees in 56 national headquarters serving more than 180 countries. For more than 80 years, Festo has continuously elevated the state of manufacturing with innovations and optimized motion control solutions that deliver higher performing, more profitable automated manufacturing and processing equipment. Our dedication to the advancement of automation extends beyond technology to the education and development of current and future automation and robotics designers with simulation tools, teaching programs, and on-site services.

Quality Assurance, ISO 9001 and ISO 14001 Certifications

Festo Corporation is committed to supply all Festo products and services that will meet or exceed our customers' requirements in product quality, delivery, customer service and satisfaction.

To meet this commitment, we strive to ensure a consistent, integrated, and systematic approach to management that will meet or exceed the requirements of the ISO 9001 standard for Quality Management and the ISO 14001 standard for Environmental Management.

9001: CERTCC5-16248-2006-AQ-ESN-TGA
ISO 9001
ISO 14001
DNV
Certified Company
14001: CERTCC5-16248A-2006-AQ-ESN-TGA

FSC Printed on recycled paper at New Horizon Graphic, Inc., FSC certified as an environmentally friendly printing plant.

Festo North America

United States

Customer Resource Center
502 Earth City Expy., Suite 125
Earth City, MO 63045

For ordering assistance, or to find
your nearest Festo Distributor,
Call: 1.800.99.FESTO
Fax: 1.800.96.FESTO
Email: customer.service@us.festo.com

For technical support,
Call: 1.866.GO.FESTO
Fax: 1.800.96.FESTO
Email: product.support@us.festo.com

Headquarters
Festo Corporation
395 Moreland Road
P.O. Box 18023
Hauppauge, NY 11788
www.festo.com/us

Sales Offices

Appleton
N. 922 Tower View Drive, Suite N
Greenville, WI 54942

Boston
120 Presidential Way, Suite 330
Woburn, MA 01801

Chicago
1441 East Business Center Drive
Mt. Prospect, IL 60056

Dallas
1825 Lakeway Drive, Suite 600
Lewisville, TX 75057

Detroit - Automotive Engineering Center
2601 Cambridge Court, Suite 320
Auburn Hills, MI 48326

New York
395 Moreland Road
Hauppauge, NY 11788

Silicon Valley
4935 Southfront Road, Suite F
Livermore, CA 94550

Design and Manufacturing Operations

East: 395 Moreland Road, Hauppauge, NY 11788

Central: 1441 East Business Center Drive, Mt. Prospect, IL 60056

West: 4935 Southfront Road, Suite F, Livermore, CA 94550

Mexico

Headquarters
Festo Pneumatic, S.A.
Av. Ceylán 3, Col. Tequesquinahuac
54020 Tlalnepantla, Edo. de México
Call: 011 52 [55] 53 21 66 00
Fax: 011 52 [55] 53 21 66 65
Email: festo.mexico@mx.festo.com
www.festo.com/mx

Canada

Headquarters
Festo Inc.
5300 Explorer Drive
Mississauga, Ontario L4W 5G4
Call: 1.905.624.9000
Fax: 1.905.624.9001
Email: info.ca@ca.festo.com
www.festo.com/ca

Festo Worldwide

Argentina Australia Austria Belarus Belgium Brazil Bulgaria Canada Chile China Colombia Croatia Czech Republic Denmark Estonia Finland France Germany Great Britain Greece Hong Kong Hungary India Indonesia Iran Ireland Israel Italy Japan Latvia Lithuania Malaysia Mexico Netherlands New Zealand Norway Peru Philippines Poland Romania Russia Serbia Singapore Slovakia Slovenia South Africa South Korea Spain Sweden Switzerland Taiwan Thailand Turkey Ukraine United States Venezuela

www.festo.com