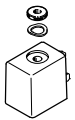

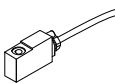


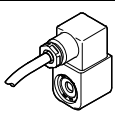


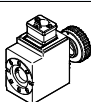






Solenoid coils



Solenoid coils

Product range overview

Version	Type	For valve series												→ Page/ Internet		
		MFH	MOFH	JMFH	JMFDH	NVF3	MUFH	MN1H	JMN1H	JMN1DH	VZWM-L	VSNC	VUVS		VZWE	
F solenoid coil																
	MSF	■	■	■	■	■	■	-	-	-	-	-	-	-	4	
	VACF 	-	-	-	-	-	-	-	-	-	-	-	■	■	-	12 15
F solenoid coil for explosive atmospheres (→ certification)																
	MSF...-EX	■	■	■	■	■	■	-	-	-	-	-	-	-	8	
N solenoid coil																
	VACN-N 	-	-	-	-	-	-	-	-	-	-	-	■	-	-	17
N solenoid coil for explosive atmospheres (→ certification)																
	VACN-N 	-	-	-	-	-	-	-	-	-	-	-	■	-	-	20 22 24 26
N1 solenoid coil																
	MSN1	-	-	-	-	-	-	■	■	■	-	-	-	-	28	
S solenoid coil																
	VACS	-	-	-	-	-	-	-	-	-	-	-	■	-	31	
H solenoid coil																
	MH-2	-	-	-	-	-	-	-	-	-	■	-	-	-	34	
H1 solenoid coil																
	VACN-H1	-	-	-	-	-	-	-	-	-	-	-	-	■	37	
D solenoid coil																
	MD-2	-	-	-	-	-	-	-	-	-	■	-	-	-	40	

 Note

ATEX certification is only effective in combination with other ATEX-certified components.

→ www.festo.com/en/ex

Solenoid coils

Selection aid

Solenoid valves and corresponding solenoid coils								
Valve series	Valve type	Solenoid coil						
		S	D	F	H	H1	N	N1
Standard valves to ISO 5599-1	MN1H, JMN1H, JMN1DH	-	-	-	-	-	-	■
	MFH, JMFH, JMFHDH	-	-	■	-	-	-	-
	MDH, JMDH	-	■	-	-	-	-	-
Standard NAMUR valves	NVF3	-	-	■	-	-	-	-
	MN1H	-	-	-	-	-	-	■
Solenoid valves VSNC	VSNC	-	-	■	-	-	■	-
Tiger 2000	MFH, JMFH	-	-	■	-	-	-	-
Tiger Classic	MFH, MOFH, JMFH, JMFHDH	-	-	■	-	-	-	-
Directly actuated solenoid valves	MDH, MODH	-	■	-	-	-	-	-
VS series	VUVS	■	-	■	-	-	-	-
M5 Compact System	MUFH	-	-	■	-	-	-	-
Process directional control valves	VZWM-L	-	■	-	■	-	-	-
	VZWE	-	-	-	-	■	-	-



Solenoid coils MSF

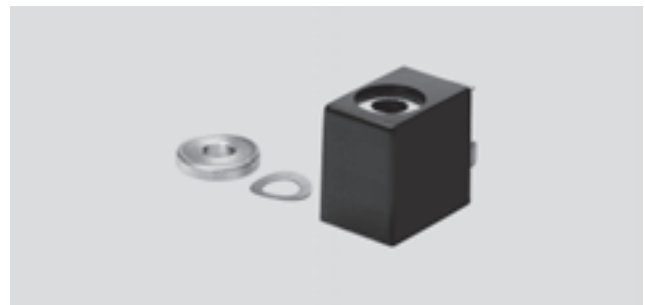
Type codes

MSFG		-	12	-		-		-	
Type									
MSFG	F solenoid coil, for direct current								
MSFW	F solenoid coil, for alternating current								
Operating voltage									
12	12 V DC								
12DC	12 V DC								
42DC	42 V DC								
24/42	24 V DC/42 V AC								
24	24 V AC								
24AC	24 V AC								
48AC	48 V AC								
110	110 V AC								
110AC	110 V AC								
230	230 V AC								
230AC	230 V AC								
240AC	240 V AC								
Frequency									
50/60	50 Hz and 60 Hz								
-	No AC voltage								
Electrical connection									
DS	Plug connector to EN 175301, type B								
-	Plug connector to industry standard, type B								
Scope of delivery									
OD	Without plug socket								
-	With plug socket								

Solenoid coils MSF

Technical data

-  Voltage
12 ... 42 V DC
24 ... 240 V AC
-  Temperature range
-5 ... +40 °C
- In accordance with VDE regulation 0580, insulation class F
- Can be replaced without interrupting the pneumatic circuit
- Low power consumption and temperature rise



General technical data	
Type of mounting	Via knurled nut
Mounting position	Any (can be rotated 360° on the armature tube)
Max. tightening torque of plug socket [Nm]	0.4
Product weight [g]	55

Materials	
Solenoid coil	Duroplast, copper, steel
Note on materials	RoHS-compliant

Electrical data	
Electrical connection	3-pin
	Plug connector to industry standard, type B
Min. pickup time [ms]	10
Permissible voltage fluctuations [%]	-10 / +10
Duty cycle [%]	100
Switching position display	No
Degree of protection to EN 60529	IP65 with plug socket

Characteristic coil data									
Operating voltage	12 V DC	24 V DC	42 V DC	24 V AC	42 V AC	48 V AC	110 V AC	230 V AC	240 V AC
Power [W]	4.1	4.5	5.5	-	-	-	-	-	-
Pick-up power, 50 Hz [VA]	-	-	-	9	9	9	9	9	9
Holding power, 50 Hz [VA]	-	-	-	7	7	7	7	7	7
Power factor cos(phi)	-	-	-	0.7	0.7	0.7	0.7	0.7	0.7
Frequency [Hz]	-	-	-	50/60	50/60	50/60	50/60	50/60	50/60
Permissible frequency fluctuations [%]	-	-	-	-5 / +5	-5 / +5	-5 / +5	-5 / +5	-5 / +5	-5 / +5

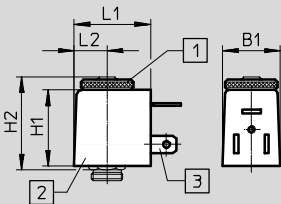
Operating and environmental conditions										
Operating voltage	12 V DC	24 V DC	42 V DC	24 V AC	42 V AC	48 V AC	110 V AC	230 V AC	240 V AC	
Ambient temperature [°C]	-5 ... +40						-5 ... +40			
CE marking (see declaration of conformity)	-						To EU Low Voltage Directive			

Solenoid coils MSF


Technical data

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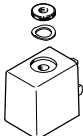
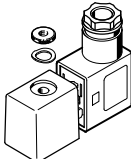

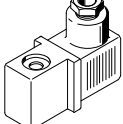
Dimensions Download CAD data → www.festo.com



1 Retaining nut
 2 Solenoid coil
 (can be rotated 360° on the armature tube)
 3 Plug pins

 Note
 Can only be used on aluminium valves with valve body dimensions ≥ 26 x 16 x 14 mm


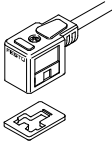


Type	B1	H1	H2	L1	L2
MSFG-...	22	29	33.8	29.5	12.5
MSFW-...					

Ordering data		Operating voltage	Part No.	Type
Solenoid coil, plug connector to industry standard, type B				
	Without plug socket	12 V DC	34410	MSFG-12DC-OD
		24 V DC, 42 V AC	34411	MSFG-24/42-50/60-OD
		42 V DC	34413	MSFG-42DC-OD
		24 V AC	34415	MSFW-24AC-OD
		48 V AC	34418	MSFW-48AC-OD
		110 V AC	34420	MSFW-110AC-OD
		230 V AC	34422	MSFW-230AC-OD
	With plug socket	12 V DC	4526	MSFG-12
		24 V DC, 42 V AC	4527	MSFG-24/42-50/60
		24 V AC	4534	MSFW-24-50/60
		110 V AC	6720	MSFW-110-50/60
		230 V AC	4540	MSFW-230-50/60
Solenoid coil, plug connector to EN 175301, type A				
	Without plug socket	24 V DC, 42 V AC	34412	MSFG-24/42-50/60-DS-OD
		230 V AC	175118	MSFW-230-50/60-DS-OD
	With plug socket, plug connector can be repositioned by 180° Certification: Germanischer Lloyd	24 V DC, 42 V AC	13264	MSFG-24/42-50/60-DS
		110 V AC	13265	MSFW-110-50/60-DS
		230 V AC	13266	MSFW-230-50/60-DS

Solenoid coils MSF

Technical data

FESTO

Ordering data					
	Electrical connection	Description	Part No.	Type	
Plug socket					
	To industry standard, type B	Cable connection using clamping screws	Cable conduit fitting Pg9	34431	MSSD-F
			Cable conduit fitting M16	539710	MSSD-F-M16
		Cable connection using insulation displacement technology	–	192746	MSSD-F-S-M16
	To EN 175301, type A	Cable connection using clamping screws	Cable conduit fitting Pg9	34583	MSSD-C
			Cable conduit fitting M16	539709	MSSD-C-M16
		–	Cable conduit fitting Pg11	177617	MSSD-C-TY-24DC
Connecting cable					
	To industry standard, type B	Operating voltage 24 V DC, switching status display via LED	Cable length 2.5 m	30935	KMF-1-24DC-2,5-LED
			Cable length 5 m	30937	KMF-1-24DC-5-LED
			Cable length 10 m	193458	KMF-1-24DC-10-LED
		Operating voltage up to 240 V	Cable length 2.5 m	30936	KMF-1-230AC-2,5
			Cable length 5 m	30938	KMF-1-230AC-5
			To EN 175301, type A	Operating voltage 24 V DC, switching status display via LED	Cable length 2.5 m
	Cable length 5 m	30933			KMC-1-24DC-5-LED
	Cable length 10 m	193459			KMC-1-24-10-LED
Operating voltage up to 240 V	Cable length 2.5 m	30932	KMC-1-230AC-2,5		
	Cable length 5 m	30934	KMC-1-230AC-5		
Illuminating seal					
	To industry standard, type B	Operating voltage 12 ... 24 V DC	19143	MF-LD-12-24DC	
		Operating voltage 230 V DC/V AC	19144	MF-LD-230AC	
	To EN 175301, type A	Operating voltage 12 ... 24 V DC	19145	MC-LD-12-24DC	
		Operating voltage 230 V DC/V AC	19146	MC-LD-230AC	
Inscription label					
	–	Scope of delivery: 35 labels in frames	33362	KMC/F/V-BZ-35X	

Solenoid coils MSF...-EX

Type codes



MSFG – 24DC – K5 – M – EX

Type	
MSFG	F solenoid coil, for direct current
MSFW	F solenoid coil, for alternating current
Operating voltage	
24	24 V DC
24DC	24 V DC
24AC	24 V AC
24-50/60	24 V AC, 50/60 Hz
110AC	110 V AC
110-50/60	110 V AC, 50/60 Hz
230AC	230 V AC
230-50/60	230 V AC, 50/60 Hz
Cable length	
	1 m
K5	5 m
KX	On request
ATEX specification	
	II 3 GD EEx nA II T130°C X
M	II 2 GD EExm II T5
Explosion protection	
EX	Explosion-proof to EN 50 028

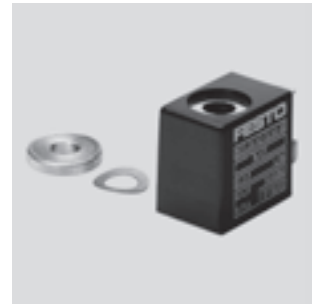
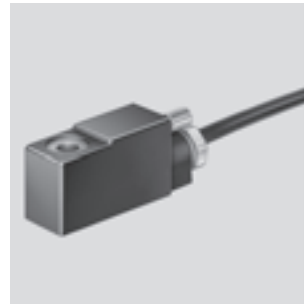
Solenoid coils MSF...-EX

Technical data

FESTO



- In accordance with ATEX directive
- In accordance with VDE regulation 0580, insulation class F
- Cable or plug connection
- Can be replaced without interrupting the pneumatic circuit
- Manifold assembly permissible (minimum distance from coil to coil 5 mm)



General technical data		Solenoid coil with connecting cable	Solenoid coil with plug pins
Type of mounting		Via knurled nut	
Mounting position		Any (can be rotated 360° on the armature tube)	
Product weight	[g]	170	55

Materials		Solenoid coil with connecting cable	Solenoid coil with plug pins
Solenoid coil		Steel, copper, aluminum, epoxy resin	Steel, copper, duroplast
Winding		Copper	Copper
Note on materials		RoHS-compliant	RoHS-compliant

Electrical data		Solenoid coil with connecting cable	Solenoid coil with plug pins
Electrical connection		– Cable	3-pin Plug pins with connection pattern to Festo standard for MSSD-F
Conductor nominal cross section	[mm ²]	0.75	–
Max. tightening torque of plug socket	[Nm]	–	0.4
Min. pickup time	[ms]	10	
Permissible voltage fluctuations	[%]	–10 / +10	
Duty cycle	[%]	100	
Switching position display		No	
Degree of protection to EN 60529		IP65 with plug socket	

Characteristic coil data		Solenoid coil with connecting cable				Solenoid coil with plug pins			
Operating voltage		24 V DC	24 V AC	110 V AC	230 V AC	24 V DC	24 V AC	110 V AC	230 V AC
Power	[W]	4.3	–	–	–	4.5	–	–	–
	[VA]	–	4.4	4.4	4.2	–	–	–	–
Pick-up power, 50 Hz	[VA]	–	–	–	–	–	9	9	9
Holding power, 50 Hz	[VA]	–	–	–	–	–	7	7	7
Power factor cos(phi)		–	–	–	–	–	0.7	0.7	0.7
Frequency	[Hz]	–	50/60	50/60	50/60	–	50/60	50/60	50/60
Permissible frequency fluctuations	[%]	–	–5 / +5	–5 / +5	–5 / +5	–	–5 / +5	–5 / +5	–5 / +5

Operating and environmental conditions		Solenoid coil with connecting cable				Solenoid coil with plug pins			
Operating voltage		24 V DC	24 V AC	110 V DC	230 V AC	24 V DC	24 V AC	110 V AC	230 V AC
Ambient temperature	[°C]	–20 ... +40		–20 ... +40		–5 ... +40		–5 ... +40	
CE marking (see declaration of conformity)		–		To EU Low Voltage Directive		–		To EU Low Voltage Directive	

Solenoid coils MSF...-EX

Technical data



ATEX		
	Solenoid coil with connecting cable	Solenoid coil with plug pins
ATEX category for gas	II 2G	II 3G
Ignition protection type for gas	Ex mb II T5	Ex nA IIC T4X Gc
ATEX category for dust	II 2D	II 3D
Ignition protection type for dust	Ex tD A21 IP65 T95°C	Ex tc IIIC T130°C X Dc IP65
Explosion-proof temperature [°C] rating	-20 ≤ Ta ≤ +40	-5 ≤ Ta ≤ +40
Notified body for the quality inspection	0123	-
CE marking (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)	To EU Explosion Protection Directive (ATEX)
Explosion protection certification outside the EU	EPL Gb (CN)	-
	EPL Gc (CN)	EPL Gc (CN)
	EPL Db (CN)	-
	EPL Dc (CN)	EPL Dc (CN)
	EPL Gb (RU)	-
	EPL Gc (RU)	-
	EPL Db (RU)	-
	EPL Dc (RU)	-

Dimensions Download CAD data → www.festo.com

Solenoid coil with connecting cable

- 1 Solenoid coil
- 2 Protective earth connection
- 3 Heat-resistant rubber tubing, Ø 6.1 ... 7.9 mm
- 4 Retaining nut (tightening torque 100 ... 150 Ncm)
- 5 Cable length

Note
Can only be used on aluminium valves with valve body dimensions ≥ 25 x 25 x 17 mm

Type	B1	H1	H2	H3	L1	L2	L4	L5	L6
MSFG-...-M-EX	22	30	35	11	57	13.3	33.6	50	10
MSFW-...-M-EX									

Solenoid coil with plug pins

- 1 Retaining nut (tightening torque 0.4 Nm)
- 2 Solenoid coil
- 3 Plug pins for plug sockets MSSD-F

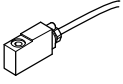
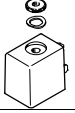
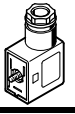
Note
Can only be used on aluminium valves with valve body dimensions ≥ 26 x 16 x 14 mm

Type	B1	H1	H2	L1	L2
MSFG-...-EX	22	29	33.8	29.5	12.5
MSFW-...-EX					

Solenoid coils MSF...-EX

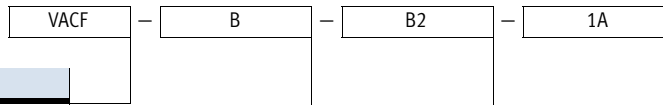
Technical data

FESTO

Ordering data					
Description			Part No.	Type	
Solenoid coil with connecting cable					
	Explosion-proof, with moulded-in cable	24 V DC	Cable length 1 m	535619	MSFG-24DC-M-EX
			Cable length 5 m	535621	MSFG-24DC-K5-M-EX
			Cable length on request	538215	MSFG-24DC-KX-M-EX
		24 V AC	Cable length 1 m	535623	MSFW-24AC-M-EX
			Cable length on request	538216	MSFW-24AC-KX-M-EX
		110 V AC	Cable length 1 m	535622	MSFW-110AC-M-EX
			Cable length 5 m	535624	MSFW-110AC-K5-M-EX
			Cable length on request	538218	MSFW-110AC-KX-M-EX
		230 V AC	Cable length 1 m	535620	MSFW-230AC-M-EX
			Cable length 5 m	535625	MSFW-230AC-K5-M-EX
		Cable length on request	538217	MSFW-230AC-KX-M-EX	
Solenoid coil with plug pins					
	Explosion-proof, without plug socket	24 V DC	536931	MSFG-24-EX	
		24 V AC	536932	MSFW-24-50/60-EX	
		110 V AC	536933	MSFW-110-50/60-EX	
		230 V AC	536934	MSFW-230-50/60-EX	
Plug socket					
	For solenoid coils with plug pins, cable connection with clamping screws		34431	MSSD-F	

Solenoid coils VACF-B



Type codes



Type	
VACF	Solenoid coil, F series
Solenoid coil type	
B	Width 22 mm, for 8 mm armature tube
Electrical connection	
B2	Connection pattern type B, to industry standard
C1	Connection pattern type C, to EN 175301
Operating voltage	
5	12 V DC
1	24 V DC
7	48 V DC
1A	24 V AC, 50/60 Hz
7A	48 V AC, 50/60 Hz
16B	110/120 V AC, 50/60 Hz
3W	230/240 V AC, 50/60 Hz

Solenoid coils VACF-B-B2

Technical data

-  Voltage
12 ... 48 V DC
24 ... 240 V AC
-  Temperature range
-10 ... +50 °C
- In accordance with VDE regulation 0580, insulation class H
- Can be replaced without interrupting the pneumatic circuit



General technical data	
Type of mounting	Via knurled nut
Mounting position	Any (can be rotated at 45° steps on the armature tube)
Product weight [g]	50

Materials	
Housing seal set	Aluminium, HNBR
Housing	PA, steel
Pin contact	Tin-plated brass
Winding	Copper
Note on materials	RoHS-compliant

Electrical data	
Electrical connection	Plug pins, 3-pin, with connection pattern to industry standard, type B
Permissible voltage fluctuations [%]	-10 / +10
Duty cycle [%]	100
Degree of protection to EN 60529	IP65 with plug socket
Insulation class	H

Characteristic coil data								
Operating voltage		12 V DC	24 V DC	48 V DC	24 V AC	48 V AC	110/120 V AC	230/240 V AC
Power [W]		3.5	3.3	3.4	-	-	-	-
Pick-up power, 50 Hz [VA]		-	-	-	3.9	3.9	4.4	5.8
Holding power, 50 Hz [VA]		-	-	-	2.6	2.7	3.3	4.6
Frequency [Hz]		-	-	-	50/60	50/60	50/60	50/60

Operating and environmental conditions									
Operating voltage		12 V DC	24 V DC	48 V DC	24 V AC	48 V AC	110/120 V AC	230/240 V AC	
Ambient temperature [°C]		-10 ... +50					-10 ... +50		
Corrosion resistance class CRC ¹⁾		2					2		
CE marking (see declaration of conformity)		-					To EU Low Voltage Directive		

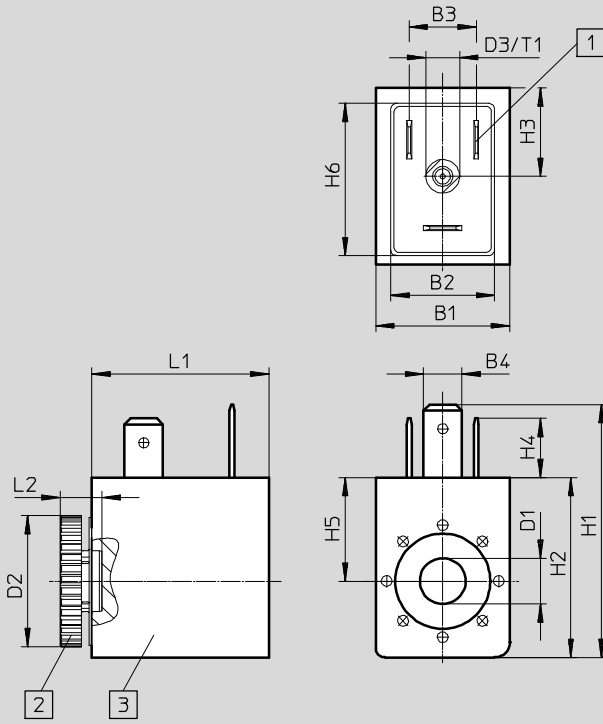
1) Corrosion resistance class 2 to Festo standard 940070
Components subject to moderate corrosion stress. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications or media such as coolants or lubricating agents.

Solenoid coils VACF-B-B2

Technical data

Dimensions

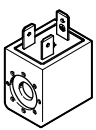

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- 1 Plug pattern to industry standard, type B
- 2 Knurled nut (seal set for solenoid coil)
- 3 Solenoid coil
(can be rotated at 45° steps on the armature tube, push on in any direction)



Type	B1	B2	B3	B4	D1	D2	D3	H1	H2	H3	H4	H5	H6	L1	L2	T1
VACF-B-B2-...	22	17	11	6.3	8.2	21.5	M3	41.5	29.5	14.5	9.7	17	25	29	6.9	5

Ordering data

Description		Part No.	Type
	Without plug socket, connection pattern to industry standard, type B	12 V DC	8030801 VACF-B-B2-5
		24 V DC	8030802 VACF-B-B2-1
		48 V DC	8030803 VACF-B-B2-7
		24 V AC	8030804 VACF-B-B2-1A
		48 V AC	8030805 VACF-B-B2-7A
		110/120 V AC	8030806 VACF-B-B2-16B
		230/240 V AC	8030808 VACF-B-B2-3W
	To achieve protection to IP67	8034609	VAMC-B10-B-B-S8

Solenoid coils VACF-B-C1

Technical data

-  Voltage
12 ... 48 V DC
24 ... 240 V AC
-  Temperature range
-10 ... +50 °C
- In accordance with VDE regulation 0580, insulation class H
- Can be replaced without interrupting the pneumatic circuit



General technical data	
Type of mounting	Via knurled nut
Mounting position	Any (can be rotated at 45° steps on the armature tube)
Product weight [g]	50

Materials	
Housing seal set	Aluminium, HNBR
Housing	PA, steel
Pin contact	Tin-plated brass
Winding	Copper
Note on materials	RoHS-compliant

Electrical data	
Electrical connection	Plug pins, 3-pin, with connection pattern to EN 175301-803, type C
Permissible voltage fluctuations [%]	-10 / +10
Duty cycle [%]	100
Degree of protection to EN 60529	IP65 with plug socket
Insulation class	H

Characteristic coil data							
Operating voltage	12 V DC	24 V DC	48 V DC	24 V AC	48 V AC	110/120 V AC	230/240 V AC
Power [W]	3.5	3.3	3.4	-	-	-	-
Pick-up power, 50 Hz [VA]	-	-	-	3.9	3.9	4.4	5.8
Holding power, 50 Hz [VA]	-	-	-	2.6	2.7	3.3	4.6
Frequency [Hz]	-	-	-	50/60	50/60	50/60	50/60

Operating and environmental conditions							
Operating voltage	12 V DC	24 V DC	48 V DC	24 V AC	48 V AC	110/120 V AC	230/240 V AC
Ambient temperature [°C]	-10 ... +50					-10 ... +50	
Corrosion resistance class CRC ¹⁾	2					2	
CE marking (see declaration of conformity)	-					To EU Low Voltage Directive	

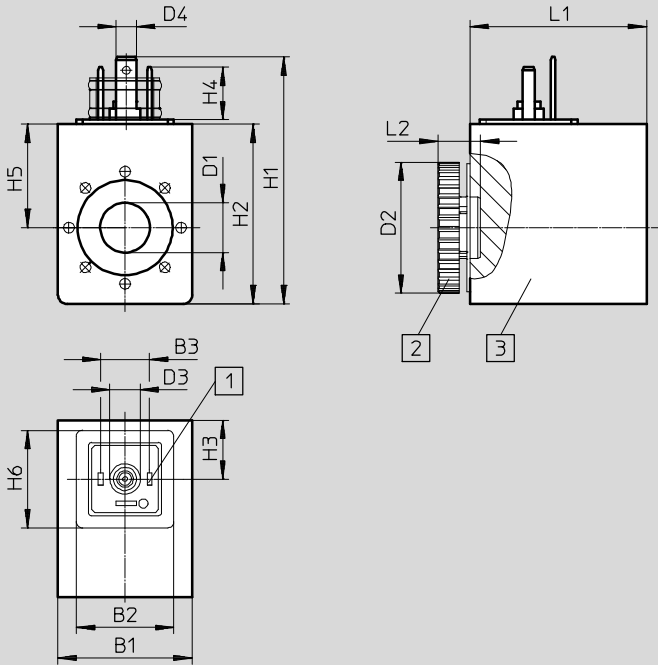
1) Corrosion resistance class 2 to Festo standard 940070
Components subject to moderate corrosion stress. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications or media such as coolants or lubricating agents.

Solenoid coils VACF-B-C1

Technical data

Dimensions

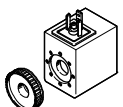

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- 1** Plug pattern to EN 175301-803, type C
- 2** Knurled nut (seal set for solenoid coil)
- 3** Solenoid coil
(can be rotated at 45° steps on the armature tube, push on in any direction)

Type	B1	B2	B3	D1	D2	D3	D4	H1	H2	H3	H4	H5	H6	L1	L2
VACF-B-C1-...	22	16	8	8.2	21.5	27	3.3	40.5	29.5	9.7	8.6	17	16	29	6.9

Ordering data

Description		Part No.	Type
Solenoid coil			
 Without plug socket, connection pattern to EN 175301-803, type C	12 V DC	8030810	VACF-B-C1-5
	24 V DC	8030811	VACF-B-C1-1
	48 V DC	8030812	VACF-B-C1-7
	24 V AC	8030813	VACF-B-C1-1A
	48 V AC	8030814	VACF-B-C1-7A
	110/120 V AC	8030815	VACF-B-C1-16B
	230/240 V AC	8030817	VACF-B-C1-3W
Seal set			
 To achieve protection to IP67	For solenoid coil VACF	8034609	VAMC-B10-B-B-S8

Solenoid coils VACN-N

Type codes

VACN – N – K11 – 16B – 0,5 – [] – U4 – M

Type

VACN	Solenoid coil, N series
------	-------------------------

Solenoid coil type

N	N solenoid coil, for 9 mm armature tube
---	---

Electrical connection

A1	Connection pattern type A, to EN 175301
----	---

K1	With 3 m cable
----	----------------

K11	With 0.6 m cable
-----	------------------

Operating voltage

1	24 V DC
---	---------

3 A	230 V AC, 50/60 Hz
-----	--------------------

16B	120 V AC or 110 V AC
-----	----------------------

Cable length

–	3 m
---	-----

0,5	0.6 m
-----	-------

ATEX certification EU

–	Without certification
---	-----------------------

EX2	ATEX category II 3D
-----	---------------------

EX4	ATEX category II 2D
-----	---------------------

Additional certifications

–	Without certification
---	-----------------------

U4	Explosion protection certification for USA
----	--

Type of ignition protection

–	None
---	------



A	Intrinsically safe
---	--------------------

M	Encapsulation
---	---------------

N	Non-sparking
---	--------------

Solenoid coils VACN-N

Technical data

-  Voltage
24 V DC
110, 230 V AC
-  Temperature range
-20 ... +60 °C
- Can be replaced without interrupting the pneumatic circuit



General technical data	
Type of mounting	Via knurled nut
Mounting position	Any (can be rotated at 45° steps on the armature tube)
Product weight [g]	95

Materials	
Housing	Steel, polymer
Winding	Copper
Pin contacts	Brass
Note on materials	RoHS-compliant

Electrical data	
Electrical connection	Plug pins, 3-pin, with connection pattern to EN 175301-803, type A
Permissible voltage fluctuations [%]	-10 / +10
Duty cycle [%]	100
Insulation class	F
Enamelled wire insulation class	F
Degree of protection to EN 60529	IP65 with plug socket

Characteristic coil data						
Nominal operating voltage [V]	24 DC	110 AC		230 AC		
Frequency [Hz]	-	50	60	50	60	
Power [W]	0.7	-	-	-	-	
Pick-up power [VA]	-	5.2	4.2	6.2	4.9	
Holding power [VA]	-	3.1	2.5	3.7	2.9	

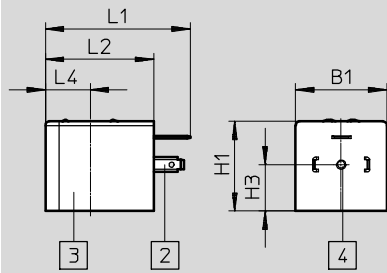
Operating and environmental conditions			
Nominal operating voltage [V]	24 DC	110 AC	230 AC
Ambient temperature [°C]	-20 ... +60	-20 ... +60	-20 ... +60
Corrosion resistance class CRC ¹⁾	2	2	2
CE marking (see declaration of conformity)	-	To EU Low Voltage Directive	To EU Low Voltage Directive

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

Solenoid coils VACN-N

Technical data


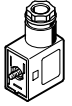


Dimensions

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- 2 Plug pattern to EN 175301-803, type A
- 3 Solenoid coil
- 4 M3 mounting screw

Type	B1	H1	H3	L1	L2	L4
VACN-N-A1-...	30	29.5	15.3	47.6	35.5	14.7

Ordering data

	Description	Part No.	Type
Solenoid coil			
	Without plug socket, connection pattern to EN 175301-803, type A	24 V DC	8029144 VACN-N-A1-1
		230 V AC	8029135 VACN-N-A1-3A
		110 V AC	8029134 VACN-N-A1-16B
Plug socket			
	Operating voltage 230 V DC/V AC	Cable conduit fitting Pg9	34583 MSSD-C
		Cable conduit fitting M16	539709 MSSD-C-M16
	Operating voltage 24 V DC, switching status display via LED	Cable conduit fitting Pg11	177617 MSSD-C-TV-24DC
Connecting cable			
	Operating voltage 24 V DC, switching status display via LED	Cable length 2.5 m	30931 KMC-1-24DC-2,5-LED
		Cable length 5 m	30933 KMC-1-24DC-5-LED
		Cable length 10 m	193459 KMC-1-24-10-LED
	Operating voltage 230 V DC/V AC	Cable length 2.5 m	30932 KMC-1-230AC-2,5
		Cable length 5 m	30934 KMC-1-230AC-5
Illuminating seal			
	Operating voltage 24 V DC	19145 MC-LD-12-24DC	
	Operating voltage 230 V DC/V AC	19146 MC-LD-230AC	

Solenoid coils VACN-N-...-EX2-N

Technical data



- Non-sparking solenoid coil
- Category "II 3G" and "II 3D"
- Ignition protection type for gas "Ex nA"
- ATEX certification
- Can be replaced without interrupting the pneumatic circuit



General technical data	
Type of mounting	Via knurled nut
Mounting position	Any (can be rotated at 45° steps on the armature tube)
Product weight [g]	95

Materials	
Housing	Steel, polymer
Winding	Copper
Pin contacts	Brass
Note on materials	RoHS-compliant

Electrical data	
Electrical connection	Plug pins, 3-pin, with connection pattern to EN 175301-803, type A
Permissible voltage fluctuations [%]	-10 / +10
Duty cycle [%]	100
Insulation class	F
Enamelled wire insulation class	H
Degree of protection to EN 60529	IP65 with plug socket

Characteristic coil data						
Nominal operating voltage [V]	24 DC	110 AC			230 AC	
Frequency [Hz]	-	50	60	50	60	
Power [W]	2.1	-	-	-	-	
Pick-up power [VA]	-	6.9	5.4	6.9	5.4	
Holding power [VA]	-	4.1	3.2	4.1	3.3	

Operating and environmental conditions	
Ambient temperature [°C]	-20 ... +60
Corrosion resistance class CRC ¹⁾	2
CE marking (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)

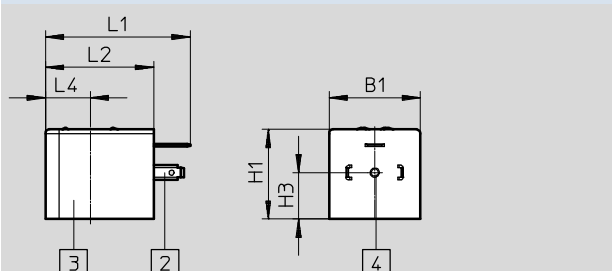
1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

Solenoid coils VACN-N-...-EX2-N

Technical data

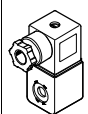
ATEX	
ATEX category for gas	II 3G
Ignition protection type for gas	Ex nA IIC T5/T4 X Gc
ATEX category for dust	II 3D
Ignition protection type for dust	Ex tc IIIC T95°C/T105°C X Dc
Explosion-proof temperature rating [°C]	-20 ≤ Ta ≤ +60
CE marking (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)

Dimensions Download CAD data → www.festo.com



- 2 Plug pattern to EN 175301-803, type A
- 3 Solenoid coil
- 4 M3 mounting screw

Type	B1	H1	H3	L1	L2	L4
VACN-N-A1-...-EX2-N	30	29.5	15.3	51.6	39.2	14.7

Ordering data				
	Description	Part No.	Type	
Solenoid coil				
	With plug socket in scope of delivery, connection pattern to EN 175301-803, type A	24 V DC	8029136	VACN-N-A1-1-EX2-N
		230 V AC	8029138	VACN-N-A1-3A-EX2-N
		110 V AC	8029137	VACN-N-A1-16B-EX2-N

Solenoid coils VACN-N-...-U4-M

Technical data



- Encapsulated solenoid coil with insulating conduit connection
- Explosion protection certification "Class I", "Class II" and "Class III"
- FM certification
- Can be replaced without interrupting the pneumatic circuit



General technical data	
Type of mounting	Via knurled nut
Mounting position	Any (can be rotated at 45° steps on the armature tube)
Product weight [g]	207

Materials	
Housing	Steel, polymer
Winding	Copper
Note on materials	Contains paint-wetting impairment substances RoHS-compliant

Electrical data	
Electrical connection	Cable
Cable length [m]	0.61
Permissible voltage fluctuations [%]	-10 / +10
Duty cycle [%]	100
Insulation class	H
Enamelled wire insulation class	H
Degree of protection to EN 60529	IP65

Characteristic coil data			
Nominal operating voltage [V]	24 DC	110 AC	230 AC
Frequency [Hz]	-	60	50
Power [W]	4.6	-	-
Pick-up power [VA]	-	10	11.5
Holding power [VA]	-	6.8	8

Operating and environmental conditions			
Nominal operating voltage	24 V DC	110 V AC	230 V AC
Ambient temperature [°C]	-20 ... +60	-20 ... +60	-20 ... +60
Corrosion resistance class CRC ¹⁾	2	2	2
CE marking (see declaration of conformity)	-	To EU Low Voltage Directive	To EU Low Voltage Directive

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

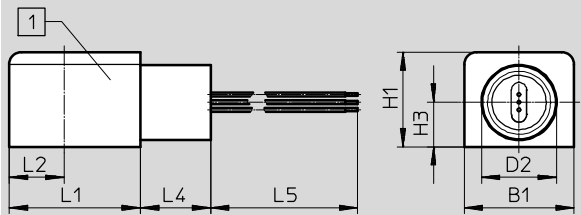
Solenoid coils VACN-N-...-U4-M

FESTO

Technical data

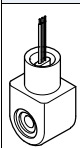
ATEX	
Explosion-proof temperature rating [°C]	$-20 \leq T_a \leq +60$
CE marking (see declaration of conformity)	To EU Low Voltage Directive
Explosion protection certification outside the EU	Class I, Div. 1 (US)
	Class I, Div. 2 (US)
	Class II (US)
	Class III (US)

Dimensions Download CAD data → www.festo.com



1 Solenoid coil

Type	B1	D2	H1	H3	L1	L2	L4	L5
VACN-N-K11-...	36	24.6	31	14.5	43	18	23	610

Ordering data				
	Description	Part No.	Type	
	Moulded-in cable	24 V DC	8029146	VACN-N-K11-1-0.5-U4-M
		230 V AC	8029140	VACN-N-K11-3A-0.5-U4-M
		110 V AC	8029145	VACN-N-K11-16B-0.5-U4-M

Solenoid coils VACN-N-...-EX4-M

Technical data



- Category "II 2G" and "II 2D"
- Ignition protection type for gas "Ex mb"
- ATEX certification
- Can be replaced without interrupting the pneumatic circuit



General technical data	
Type of mounting	Via knurled nut
Mounting position	Any (can be rotated at 45° steps on the armature tube)
Product weight [g]	353

Materials	
Housing	Steel, polymer
Winding	Copper
Note on materials	RoHS-compliant

Electrical data	
Electrical connection	Cable
Cable length [m]	3
Cable diameter [mm]	7
Permissible voltage fluctuations [%]	-10 / +10
Duty cycle [%]	100
Insulation class	F
Enamelled wire insulation class	H
Degree of protection to EN 60529	IP65 with plug socket

Characteristic coil data			
Nominal operating voltage [V]	24 DC	110 AC	230 AC
Frequency [Hz]	-	50/60	50/60
Power [W]	2.6	-	-
[VA]	-	2.4	2.1

Operating and environmental conditions	
Ambient temperature [°C]	-20 ... +50
Corrosion resistance class CRC ¹⁾	2
CE marking (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
 Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

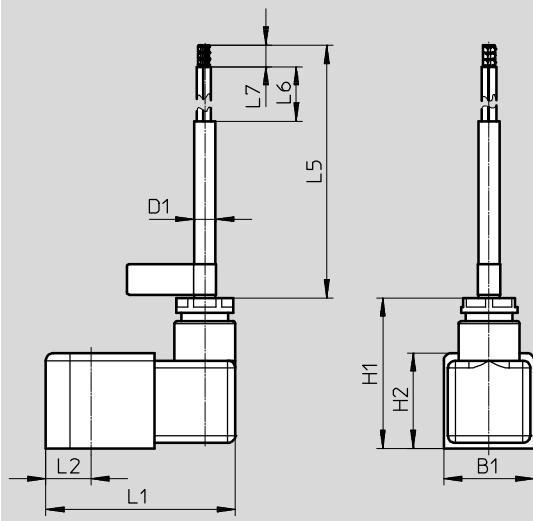
Solenoid coils VACN-N-...-EX4-M

Technical data

ATEX	
ATEX category for gas	II 2G
Ignition protection type for gas	Ex mb IIC T6
ATEX category for dust	II 2D
Ignition protection type for dust	Ex mb tb IIIC T80°C
Explosion-proof temperature rating [°C]	$-20 \leq T_a \leq +50$
Notified body for the quality inspection	0344
CE marking (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)
Explosion protection certification outside the EU	EPL Gb (IEC-EX)
	EPL Db (IEC-EX)

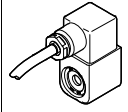
Dimensions

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Type	B1	D1	H1	H2	L1	L2	L5	L6	L7
VACN-N-K1-...	29.7	7	49.3	31.3	67	14.8	3000	43	7

Ordering data

	Description	Part No.	Type
	With plug socket, with 3 m cable	24 V DC	8029143 VACN-N-K1-1-EX4-M
		230 V AC	8029141 VACN-N-K1-3A-EX4-M
		110 V AC	8029142 VACN-N-K1-16B-EX4-M

Solenoid coils VACN-N-...-EX4-A

Technical data



- Encapsulated solenoid coil
- Category "II 2G" and "II 2D"
- Ignition protection type for gas "Ex mb"
- ATEX certification
- Can be replaced without interrupting the pneumatic circuit



General technical data	
Type of mounting	Via knurled nut
Mounting position	Any (can be rotated at 45° steps on the armature tube)
Product weight [g]	114

Materials	
Housing	Steel, polymer
Winding	Copper
Note on materials	RoHS-compliant

Electrical data	
Electrical connection	Plug connector, connection pattern to EN 175301-803, type A
Permissible voltage [%] fluctuations	-10 / +10
Duty cycle [%]	100
Insulation class	F
Enamelled wire insulation class	H
Degree of protection to EN 60529	IP65 with plug socket

Characteristic coil data	
Nominal operating voltage [V]	24 DC
Max. input voltage [V]	28 DC
Max. input current [mA]	115
Effective internal capacitance	Negligibly low
Effective internal inductance	Negligibly low

Operating and environmental conditions	
Ambient temperature [°C]	-20 ... +50
Corrosion resistance class CRC ¹⁾	2
CE marking (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)

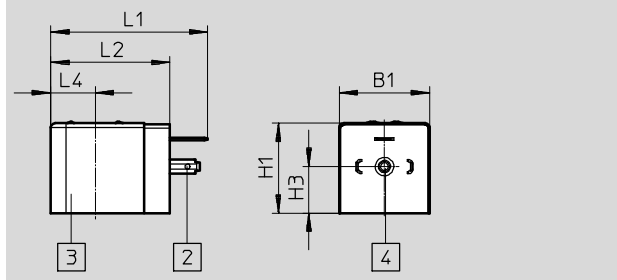
1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

Solenoid coils VACN-N-...-EX4-A

Technical data

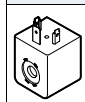
ATEX	
ATEX category for gas	II 2G
Ignition protection type for gas	Ex ia IIC T6/T4 X
ATEX category for dust	II 2D
Ignition protection type for dust	Ex tbIIIC T80°C/T130°C Db IP65
Explosion-proof temperature rating	T4: $-40 \leq T_a \leq +85$ T6: $-40 \leq T_a \leq +50$
CE marking (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)
Explosion protection certification outside the EU	EPL Ga (IEC-EX)
	EPL Db (IEC-EX)

Dimensions Download CAD data → www.festo.com



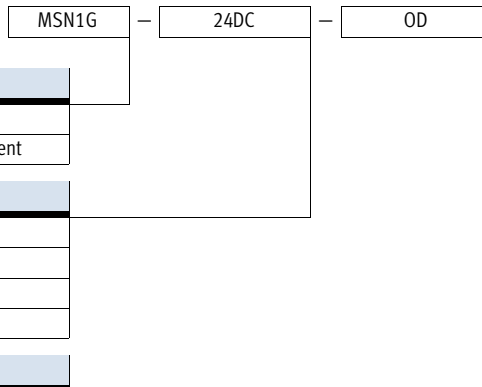
- 2 Plug pattern to EN 175301-803, type A
- 3 Solenoid coil
- 4 M3 mounting screw

Type	B1	H1	H3	L1	L2	L4
VACN-N-A1-...-EX4-A	30	29.5	15.3	51.2	39.2	14.7

Ordering data				
	Description	Part No.	Type	
Solenoid coil				
	Encapsulated solenoid coil without plug socket, connection pattern to EN 175301-803, type A	24 V DC	8029139	VACN-N-A1-1-EX4-A

Solenoid coils MSN1



Type codes



Type	
MSN1G	N1 solenoid coil, for direct current
MSN1W	N1 solenoid coil, for alternating current
Operating voltage	
24DC	24 V DC
24AC/12DC	12 V DC/24 V AC
110AC	110 V AC
230AC	230 V AC
Scope of delivery	
OD	Without plug socket
-	Without plug socket

Solenoid coils MSN1

Technical data

-  Voltage
12 V DC
24 V DC
24 ... 230 V AC
-  Temperature range
-10 ... +50 °C
- Can be replaced without interrupting the pneumatic circuit
- Connection pattern to EN 175301-803, type A
- Free of copper, PTFE and silicone



General technical data	
Type of mounting	Clamped using retaining clamp
Mounting position	Any (can be rotated 360° on the armature tube)
Product weight [g]	80

Materials	
Housing	PA
Pin contact	Steel
Winding	Copper
Note on materials	Free of copper and PTFE

Electrical data						
Operating voltage	12 V DC	24 V DC	24 V AC	110 V AC	120 V AC	230 V AC
Electrical connection	Plug pins, 3-pin, with connection pattern to EN 175301-803, type A					
	Clip-on	-	Clip-on	-	-	-
Min. pickup time [ms]	10	10	10			10
Permissible voltage fluctuations [%]	-15 / +10	-15 / +10	At 50 Hz: -10 / +10 At 60 Hz: -10 / +20			-10 / +10
Duty cycle [%]	100	100	100			100
Degree of protection to EN 60529	IP65 with plug socket		IP65 with plug socket			

Characteristic coil data									
Operating voltage	12 V DC	24 V DC	24 V AC	110 V AC	120 V AC	230 V AC			
Power [W]	5	2.5	-	-	-	-			
Pick-up power, 50 Hz [VA]	-	-	7.5	5	7.5	5	7.5	5	
Holding power, 50 Hz [VA]	-	-	5	3.7	5	3.7	3.7	5	3.7
Power factor cos(phi)	-	-	0.7		0.7		0.7		0.7
Frequency [Hz]	-	-	50	60	50	60	60	50	60

Operating and environmental conditions						
Operating voltage	12 V DC	24 V DC	24 V AC	110 V AC	120 V AC	230 V AC
Ambient temperature [°C]	-10 ... +50	-10 ... +50	-10 ... +50	-10 ... +50		
Temperature of medium [°C]	-10 ... +50	-10 ... +50	-10 ... +50	-10 ... +50		
CE marking (see declaration of conformity)	-	-	-	To EU Low Voltage Directive		
Approval	-	c UL us - Recognized (OL)	-	Germanischer Lloyd		

Solenoid coils MSN1

Technical data

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1 Solenoid coil
(can be rotated 360° on the armature tube)

2 Safety clip

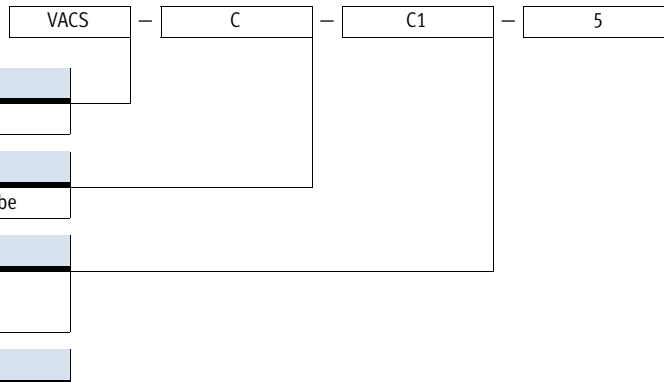
3 Plug pins with connection pattern to EN 175301-803, type A

Type	B1	H1	L1	L2
MSN1...	30	30	35.5	14.5

Ordering data		Part No.	Type
Solenoid coil			
	Without plug socket, connection pattern to EN 175301-803, type A	24 V DC	123060 MSN1G-24DC-OD
		12 V DC, 24 V AC	170152 MSN1W-24AC/12DC
		110 V AC, 120 V AC	123061 MSN1W-110AC-OD
		230 V AC	123062 MSN1W-230AC-OD
Plug socket			
	Cable connection using clamping screws	34583	MSSD-C
	Cable connection using insulation displacement technology	192748	MSSD-C-S-M16
Connecting cable			
	Operating voltage 24 V DC, switching status display via LED	Cable length 2.5 m	30931 KMC-1-24DC-2,5-LED
		Cable length 5 m	30933 KMC-1-24DC-5-LED
		Cable length 10 m	193459 KMC-1-24DC-10-LED
	Operating voltage up to 240 V	Cable length 2.5 m	30932 KMC-1-230AC-2,5
		Cable length 5 m	30934 KMC-1-230AC-5
Illuminating seal			
	Operating voltage 12 ... 24 V DC	19145	MC-LD-12-24DC
	Operating voltage 230 V DC/V AC	19146	MC-LD-230AC
Inscription label			
	Scope of delivery: 35 labels in frames	33362	KMC/F/V-BZ-35X

Solenoid coils VACS

Type codes





Type	
VACS	Solenoid coil, S series
Solenoid coil type	
C	Width 20 mm, for 8 mm armature tube
Electrical connection	
C1	Connection pattern type C, to EN 175301
Operating voltage	
5	12 V DC
1	24 V DC
7	48 V DC
1A	24 V AC, 50/60 Hz
7A	48 V AC, 50/60 Hz
16B	110/120 V AC, 50/60 Hz
3W	230/240 V AC, 50/60 Hz

Solenoid coils VACS

Technical data

FESTO

-  Voltage
12 ... 48 V DC
24 ... 240 V AC
-  Temperature range
-10 ... +50 °C
- In accordance with VDE regulation 0580, insulation class H
- Connection pattern to EN 175301-803, type C
- Can be replaced without interrupting the pneumatic circuit



General technical data	
Type of mounting	Via knurled nut
Mounting position	Any (can be rotated at 45° steps on the armature tube)

Materials	
Housing seal set	Aluminium, HNBR
Housing	PA, steel
Winding	Copper
Note on materials	RoHS-compliant

Electrical data	
Electrical connection	Plug pins, 3-pin, with connection pattern to EN 175301-803, type C
Permissible voltage fluctuations [%]	-10 / +10
Duty cycle [%]	100
Degree of protection to EN 60529	IP65 with plug socket
Insulation class	H

Characteristic coil data							
Operating voltage	12 V DC	24 V DC	48 V DC	24 V AC	48 V AC	110/120 V AC	230/240 V AC
Power [W]	2.6	2.6	2.4	-	-	-	-
Pick-up power, 50 Hz [VA]	-	-	-	2.5	2.5	2.3	3.0
Holding power, 50 Hz [VA]	-	-	-	1.8	1.9	1.7	2.3
Frequency [Hz]	-	-	-	50/60	50/60	50/60	50/60

Operating and environmental conditions							
Operating voltage	12 V DC	24 V DC	48 V DC	24 V AC	48 V AC	110/120 V AC	230/240 V AC
Ambient temperature [°C]	-10 ... +50					-10 ... +50	
Corrosion resistance class CRC ¹⁾	2					2	
CE marking (see declaration of conformity)	-					To EU Low Voltage Directive	

1) Corrosion resistance class 2 to Festo standard 940070
Components subject to moderate corrosion stress. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications or media such as coolants or lubricating agents.

Solenoid coils VACS

Technical data

Dimensions Download CAD data → www.festo.com

1 Knurled nut (seal set for solenoid coil)
 2 Plug pattern to EN 175301-803, type C
 3 Solenoid coil (can be rotated at 45° steps on the armature tube, push on in any direction)

Type	B1	H1	H2	H3	L1	L2	L3
VACS-C-C1-...	17.6	25.4	30.6	16.3	27.8	12.3	24.1

Ordering data				
	Description		Part No.	Type
Solenoid coil				
	Without plug socket, connection pattern to EN 175301-803, type C	12 V DC	8025331	VACS-C-C1-5
		24 V DC	8025330	VACS-C-C1-1
		48 V DC	8025336	VACS-C-C1-7
		24 V AC	8025335	VACS-C-C1-1A
		48 V AC	8025337	VACS-C-C1-7A
		110/120 V AC	8025334	VACS-C-C1-16B
		230/240 V AC	8025338	VACS-C-C1-3W
Seal set				
	To achieve protection to IP67		2643771	VAMC-B10-C-B-S8

Solenoid coils MH-2



Type codes

FESTO

		MH-2	–	24VDC	–	PA
Type						
MH-2	Solenoid coil with lock nut (hex nut) G $\frac{1}{8}$					
Operating voltage						
24VDC	24 V DC					
110VAC	110 V AC					
230VAC	230 V AC					
Electrical connection						
PA	Connection pattern to EN 175301-803, type A					

Solenoid coils MH-2

Technical data

-  Voltage
24 V DC
110, 230 V AC
-  Temperature range
-20 ... +50 °C
- Can be replaced without interrupting the pneumatic circuit
- Connection pattern to EN 175301-803, type A



General technical data	
Type of mounting	Via lock nut
Max. tightening torque of fitting [Nm]	2
Mounting position	Any
Product weight [g]	150

Materials	
Solenoid coil	Duroplast, copper, steel
Winding	Copper
Note on materials	Contains paint-wetting impairment substances

Electrical data	
Electrical connection	Plug pins with connection pattern to EN 175301-803, type A
Min. pickup time [ms]	12
Permissible voltage fluctuations [%]	-10 / +10
Duty cycle [%]	100
Switching position display	No
Degree of protection to EN 60529	IP65 with plug socket

Characteristic coil data				
Operating voltage		24 V DC	110 V AC	230 V AC
Power	[W]	7.6	-	-
	[VA]	-	14	14
Power factor cos(phi)		-	0.7	0.7
Frequency	[Hz]	-	50/60	50/60
Permissible frequency fluctuations	[%]	-10 / +10	-10 / +10	-10 / +10

Operating and environmental conditions				
Operating voltage		24 V DC	110 V AC	230 V AC
Ambient temperature	[°C]	-20 ... +50	-20 ... +50	
CE marking (see declaration of conformity)		-	To EU Low Voltage Directive	

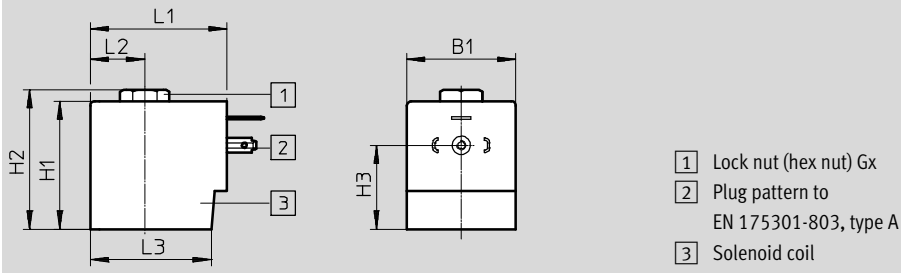
Solenoid coils MH-2

Technical data

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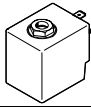
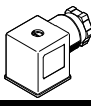
Dimensions

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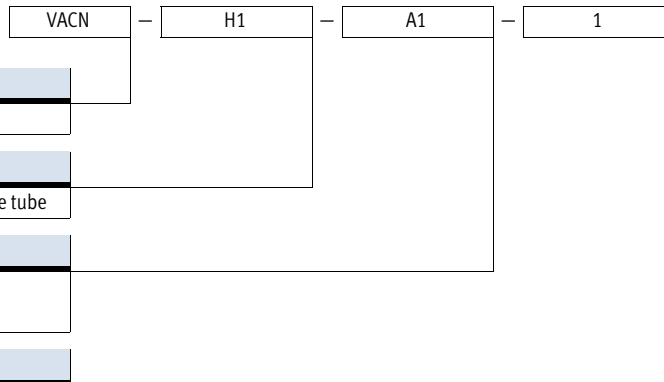
Type	B1	H1	H2	H3	L1	L2	L3
MH-2-...	35.8	42.1	45.9	27.6	45.5	18	39.8

Ordering data

	Description	Part No.	Type
Solenoid coil			
	Without plug socket, connection pattern to EN 175301-803, type A	24 V DC	549906 MH-2-24VDC-PA
		110 V AC	549907 MH-2-110VAC-PA
		230 V AC	549908 MH-2-230VAC-PA
Plug socket			
	3-pin, square design, connection pattern to EN 175301-803, type A	550067	MSSD-N

Solenoid coils VACN-H1

Type codes





Type	
VACN	Solenoid coil, N series
Solenoid coil type	
H1	H1 solenoid coil, for 14 mm armature tube
Electrical connection	
A1	Connection pattern type A, to EN 175301
Operating voltage	
1	24 V DC
2A	110 V AC, 50/60 Hz
3A	230 V AC, 50/60 Hz

Solenoid coils VACN-H1

Technical data

FESTO

-  Voltage
24 V DC
110, 240 V AC
 -  Temperature range
-20 ... +50 °C
- Can be replaced without interrupting the pneumatic circuit



General technical data	
Type of mounting	Via lock nut
Mounting position	Any (can be rotated 360° on the armature tube)
Product weight [g]	150

Materials	
Solenoid coil	Copper, steel, thermoplastic
Winding	Copper
Note on materials	Contains paint-wetting impairment substances RoHS-compliant

Electrical data	
Electrical connection	Plug pins, 3-pin, with connection pattern to EN 175301-803, type A
Max. tightening torque of fitting [Nm]	2
Min. pickup time [ms]	12
Permissible voltage fluctuations [%]	-10 / +10
Duty cycle [%]	100
Switching position display	No
Degree of protection to EN 60529	IP65 with plug socket

Characteristic coil data				
Operating voltage		24 V DC	110 V AC	230 V AC
Power	[W]	11.9	-	-
	[VA]	-	18.5	18.8
Power factor cos(phi)		-	0.7	0.7
Frequency	[Hz]	-	60	60

Operating and environmental conditions				
Operating voltage		24 V DC	110 V AC	230 V AC
Ambient temperature	[°C]	-20 ... +50	-20 ... +50	-20 ... +50
	[°C]	-20 ... +60 (with limited duty cycle)	-20 ... +60 (with limited duty cycle)	-20 ... +60 (with limited duty cycle)
Corrosion resistance class CRC ¹⁾		4	4	
CE marking (see declaration of conformity)		-	To EU Low Voltage Directive	

1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, for instance in the chemical or food industries. These applications may need to be supported by special tests (→ also FN 940082) using appropriate media.

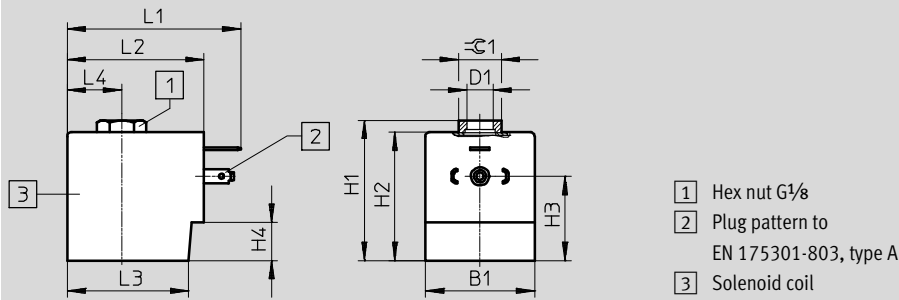
Solenoid coils VACN-H1

Technical data

FESTO

Dimensions

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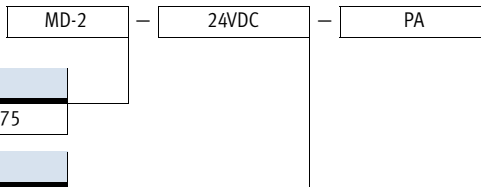
Type	B1	D1	H1	H2	H3	H4	L1	L2	L3	L4	∅C1
VACN-H1-A1-...	35.8	G1/8	45.9	42.1	27.6	12.5	57	45	39.8	17.9	14

Ordering data

	Description	Part No.	Type
Solenoid coil			
	Without plug socket, connection pattern to EN 175301-803, type A	24 V DC	8022877 VACN-H1-A1-1
		110 V AC	8022878 VACN-H1-A1-2A
		230 V AC	8022879 VACN-H1-A1-3A
Plug socket			
	Cable connection using clamping screws	34583	MSSD-C
	Cable connection using insulation displacement technology	192748	MSSD-C-S-M16
Connecting cable			
	Operating voltage 24 V DC, switching status display via LED	Cable length 2.5 m	30931 KMC-1-24DC-2,5-LED
		Cable length 5 m	30933 KMC-1-24DC-5-LED
		Cable length 10 m	193459 KMC-1-24DC-10-LED
	Operating voltage up to 240 V	Cable length 2.5 m	30932 KMC-1-230AC-2,5
		Cable length 5 m	30934 KMC-1-230AC-5

Solenoid coils MD-2



Type codes



Type	
MD-2	Solenoid coil with knurled nut M8x0.75
Operating voltage	
24VDC	24 V DC
110VAC	110 V AC
230VAC	230 V AC
Electrical connection	
PA	Connection pattern to EN 175301-803, type A

Solenoid coils MD-2

Technical data

-  Voltage
24 V DC
110, 230 V AC
-  Temperature range
-20 ... +50 °C
- Can be replaced without interrupting the pneumatic circuit
- Connection pattern to EN 175301-803, type A



General technical data	
Type of mounting	Via knurled nut
Max. tightening torque of fitting [Nm]	0.5
Mounting position	Any
Product weight [g]	110

Materials	
Solenoid coil	Duroplast, copper, steel
Winding	Copper

Electrical data	
Electrical connection	Plug pins with connection pattern to EN 175301-803, type A
Permissible voltage fluctuations [%]	-10 / +10
Duty cycle [%]	100
Switching position display	No
Degree of protection to EN 60529	IP65 with plug socket

Characteristic coil data			
Operating voltage	24 V DC	110 V AC	230 V AC
Power [W]	4.3	-	-
Pick-up power, 50 Hz [VA]	-	14.5	14.5
Holding power, 50 Hz [VA]	-	10.5	10.5
Power factor cos(phi)	-	0.7	0.7
Frequency [Hz]	-	50/60	50/60
Permissible frequency fluctuations [%]	-	-10 / +10	-10 / +10

Operating and environmental conditions			
Operating voltage	24 V DC	110 V AC	230 V AC
Ambient temperature [°C]	-20 ... +50	-20 ... +50	-20 ... +50
CE marking (see declaration of conformity)	-	To EU Low Voltage Directive	

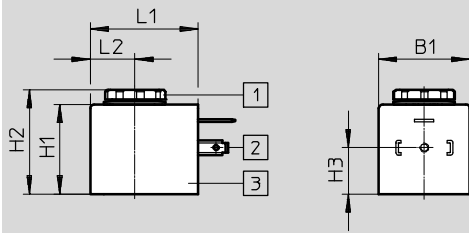
Solenoid coils MD-2

Technical data

FESTO

Dimensions

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- 1 Knurled nut M8xQ75
- 2 Plug pattern to EN 175301-803, type A
- 3 Solenoid coil

Type	B1	H1	H2	H3	L1	L2
MD-2-...	30	29.5	34.3	15.3	35.5	14.7

Ordering data

	Description	Part No.	Type
Solenoid coil			
	Without plug socket, connection pattern to EN 175301-803, type A	24 V DC	549903 MD-2-24VDC-PA
		110 V AC	549904 MD-2-110VAC-PA
		230 V AC	549905 MD-2-230VAC-PA
Plug socket			
	3-pin, square design, connection pattern to EN 175301-803, type A	550067	MSSD-N

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