

# Solenoid coils



Festo core product range  
Covers 80% of your automation tasks

Worldwide:  
Superb:  
Easy:

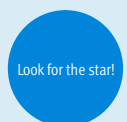
Always in stock  
Festo quality at an attractive price  
Reduces procurement and storing complexity



Generally ready for shipping ex works in 24 hours  
Held in stock in 13 service centres worldwide  
More than 2200 product

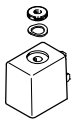
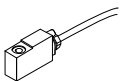

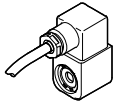





Generally ready for shipping ex works in 5 days  
Assembled for you in 4 service centres worldwide  
Up to  $6 \times 10^{12}$  variants per product series



# Solenoid coils





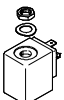

Product range overview


Version	Type	For valve series										→ Page/ Internet
		MFH	MOFH	JMFH	JMFDH	NVF3	MUFH	VOFD	VOFC	VSNC	VUVS	
<b>F solenoid coil</b>												
	MSF	■	■	■	■	■	■	-	-	-	-	5
	VACF	-	-	-	-	-	-	-	-	■	■	13 12 17
<b>F solenoid coil for explosive atmospheres (→ certification)</b>												
	MSF...EX	■	■	■	■	■	■	-	-	-	-	9
	VACF...EX4-M	■	■	■	■	■	-	-	-	-	-	19
<b>N solenoid coil</b>												
	VACN-N	-	-	-	-	-	-	-	-	■	-	21
<b>N solenoid coil for explosive atmospheres (→ certification)</b>												
	VACN...-EX2-N	-	-	-	-	-	-	-	-	■	-	24
	VACN...-U4-M	-	-	-	-	-	-	-	-	■	-	26
	VACN...-EX4-M	-	-	-	-	-	-	-	-	■	-	28
	VACN...-EX4-A	-	-	-	-	-	-	-	-	■	-	30
<b>C solenoid coil</b>												
	VACC-S13	-	-	-	-	-	-	■	■	-	-	32
	VACC-S18	-	-	-	-	-	-	■	-	-	-	39

 - Note  
 ATEX certification is only effective in combination with other ATEX-certified components.  
 → [www.festo.com/en/ex](http://www.festo.com/en/ex)

# Solenoid coils

Product range overview

Version	Type	For valve series						→ Page/ Internet
		MN1H	JMN1H	JMN1DH	VZWM-L	VUVS	VZWE	
<b>N1 solenoid coil</b>								
	MSN1	■	■	■	-	-	-	56
<b>S solenoid coil</b>								
	VACS	-	-	-	-	■	-	59
<b>H solenoid coil</b>								
	MH-2	-	-	-	■	-	-	62
<b>H1 solenoid coil</b>								
	VACN-H1	-	-	-	-	-	■	65
<b>X solenoid coil</b>								
	VACN-X	-	-	-	-	-	■	65
<b>D solenoid coil</b>								
	MD-2	-	-	-	■	-	-	68

 Note  
 ATEX certification is only effective in combination with other ATEX-certified components.  
 → [www.festo.com/en/ex](http://www.festo.com/en/ex)

# Solenoid coils

Selection aid



Solenoid valves and corresponding solenoid coils										
Valve series	Valve type	Solenoid coil								
		C	D	F	H	H1	N	N1	S	X
Standard valves to ISO 5599-1	MN1H, JMN1H, JMN1DH	-	-	-	-	-	-	■	-	-
	MFH, JMFH, JMFHDH	-	-	■	-	-	-	-	-	-
	MDH, JMDH	-	■	-	-	-	-	-	-	-
Standard NAMUR valves	NVF3	-	-	■	-	-	-	-	-	-
	MN1H	-	-	-	-	-	-	■	-	-
Solenoid valves for process automation	VOFC	■	-	-	-	-	-	-	-	-
	VOFD	■	-	-	-	-	-	-	-	-
	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	-		-		-	
<b>Type</b>									
MSFG	F solenoid coil, for direct current								
MSFW	F solenoid coil, for alternating current								
<b>Operating voltage</b>									
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								
<b>Frequency</b>									
50/60	50 Hz and 60 Hz								
-	No alternating voltage								
<b>Electrical connection</b>									
DS	Plug connector to EN 175301, type A								
-	Plug connector to industry standard, type B								
<b>Scope of delivery</b>									
OD	Without plug socket								
-	With plug socket								

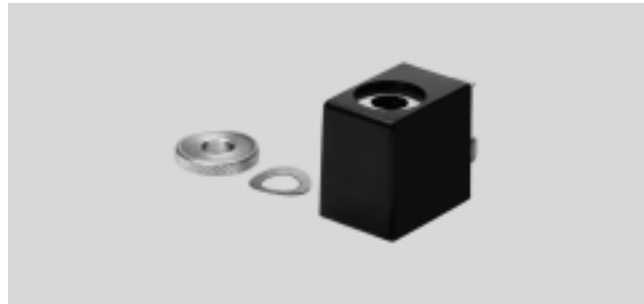
# Solenoid coils MSF

Technical data

FESTO

-  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
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) <sup>2)</sup>	-						To EU Low Voltage Directive <sup>1)</sup>			

1) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: [www.festo.com/sp](http://www.festo.com/sp) → Certificates.  
If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, further measures to reduce the emitted interference may be necessary.

2) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

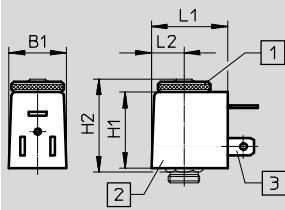
# Solenoid coils MSF

Technical data

FESTO

## Dimensions

Download CAD data → [www.festo.com](http://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  $\geq 26 \times 16 \times 14$  mm

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

## Ordering data

	Description	Operating voltage	Part No.	Type
<b>Solenoid coil, plug connector to industry standard, type B</b>				
	Without plug socket	12 V DC	34410	MSFG-12-OD
		24 V DC, 42 V AC	34411	MSFG-24/42-50/60-OD
		42 V DC	34413	MSFG-42-OD
		24 V AC	34415	MSFW-24-50/60-OD
		48 V AC	34418	MSFW-48-50/60-OD
		110 V AC	34420	MSFW-110-50/60-OD
		230 V AC	34422	MSFW-230-50/60-OD
		240 V AC	34424	MSFW-240-50/60-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
<b>Solenoid coil, plug connector to EN 175301, type A</b>				
	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°  Maritime classification <sup>1)</sup> see certificate	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


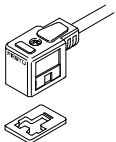
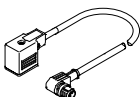


1) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

# Solenoid coils MSF

Technical data

FESTO

## ★ Core product range

Ordering data						
	Electrical connection	Description	Part No.	Type		
<b>Plug socket</b>						
	To industry standard, type B	Cable connection using clamping screws	Cable fitting Pg9	★ 34431	MSSD-F	
			Cable 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 fitting Pg9	34583	MSSD-C	
			Cable fitting M16	539709	MSSD-C-M16	
–		Cable fitting Pg11	177617	MSSD-C-TY-24DC		
<b>Connecting cable</b>						
	To industry standard, type B	Operating voltage 24 V DC, signal status display with LED	Cable length 0.6 m	3679778	NEBV-B2W3F-P-K-0.6-N-LE3	
			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 0.6 m	3579468	NEBV-B2W3-K-0.6-N-LE3	
			Cable length 2.5 m	30936	KMF-1-230AC-2,5	
	To EN 175301, type A	Operating voltage 24 V DC, signal status display with LED	Cable length 0.6 m	3679776	NEBV-A1W3F-P-K-0.6-N-LE3	
			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 up to 240 V	Cable length 0.6 m	3579466	NEBV-A1W3-K-0.6-N-LE3	
			Cable length 2.5 m	30932	KMC-1-230AC-2,5	
	• Electrical connection 1, to industry standard, type B • Electrical connection 2, M12x1, A-coded	Operating voltage 24 V DC, signal status display with LED	Cable length 0.3 m	3679773	NEBV-B2W3F-P-K-0.3-N-M12W3	
			Cable length 0.6 m	3679774	NEBV-B2W3F-P-K-0.6-N-M12W3	
			Operating voltage up to 240 V	Cable length 0.3 m	3579463	NEBV-B2W3-K-0.3-N-M12W3
				Cable length 0.6 m	3579464	NEBV-B2W3-K-0.6-N-M12W3
	• Electrical connection 1, to EN 175301, type A • Electrical connection 2, M12x1, A-coded	Operating voltage 24 V DC, signal status display with LED	Cable length 0.3 m	3679771	NEBV-A1W3F-P-K-0.3-N-M12W3	
			Cable length 0.6 m	3679772	NEBV-A1W3F-P-K-0.6-N-M12W3	
			Operating voltage up to 240 V	Cable length 0.3 m	3579461	NEBV-A1W3-K-0.3-N-M12W3
				Cable length 0.6 m	3579462	NEBV-A1W3-K-0.6-N-M12W3
	<b>Illuminating seal</b>					
		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		
<b>Inscription label</b>						
	–	Scope of delivery: 35 labels in frames	33362	KMC/F/V-BZ-35X		

Festo core product range

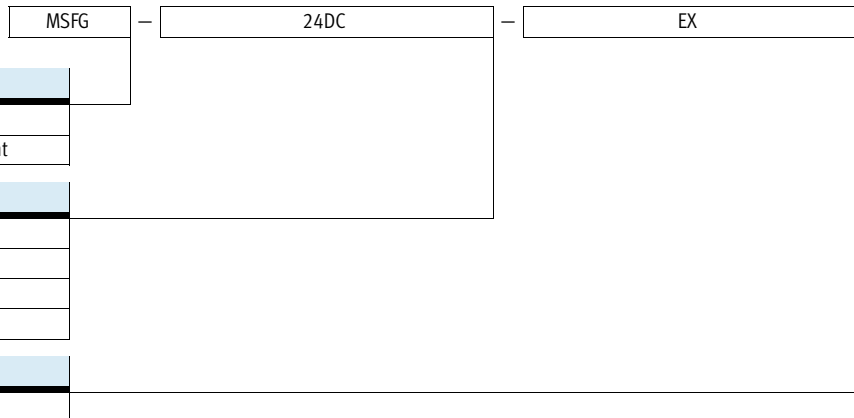
★ Generally ready for shipping ex works in 24 hours

☆ Generally ready for shipping ex works in 5 days



# Solenoid coils MSF...-EX

Type codes



# Solenoid coils MSF...-EX

Technical data

FESTO



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



General technical data	
Type of mounting	Via knurled nut
Mounting position	Any (can be rotated 360° on the armature tube)
Product weight [g]	55

Materials	
Solenoid coil	Steel, copper, duroplast
Winding	Copper
Note on materials	RoHS compliant

Electrical data	
Electrical connection	3-pin Plug pins with connection pattern to Festo standard for MSSD-F
Max. tightening torque of plug socket [Nm]	0.4
Min. pickup time [ms]	10
Permissible voltage fluctuations [%]	-10 / +10
Duty cycle [%]	100
Degree of protection to EN 60529	IP65 with plug socket

Characteristic coil data					
		Operating voltage			
		24 V DC	24 V AC	110 V AC	230 V AC
Power [W]	4.5	-	-	-	
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	
Permissible frequency fluctuations [%]	-	-5 / +5	-5 / +5	-5 / +5	

Operating and environmental conditions					
		Operating voltage			
		24 V DC	24 V AC	110 V AC	230 V AC
Ambient temperature [°C]	-5 ... +40	-	-	-5 ... +40	
CE marking (see declaration of conformity) <sup>2)</sup>	-	-	-	To EU Low Voltage Directive <sup>1)</sup>	

1) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, further measures to reduce the emitted interference may be necessary.

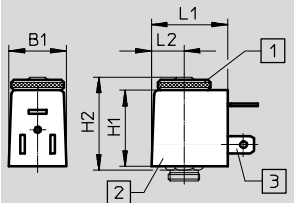
2) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

# Solenoid coils MSF...-EX


Technical data

ATEX	
ATEX category for gas	II 3G
Type of ignition protection for gas	Ex nA IIC T4X Gc
ATEX category for dust	II 3D
Type of ignition protection for dust	Ex tc IIIC T130 °C X Dc IP65
Explosion ambient temperature [°C]	$-5 \leq T_a \leq +40$
CE marking (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)
Explosion protection certification outside the EU	EPL Gc (CN)
	EPL Dc (CN)

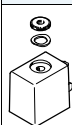
**Dimensions** Download CAD data → [www.festo.com](http://www.festo.com)



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

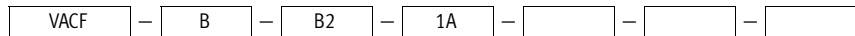
 Note  
 Can only be used on aluminium valves with valve body dimensions  $\geq 26 \times 16 \times 14$  mm

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

Ordering data		Part No.	Type
Solenoid coil			
	Explosion-proof, without plug socket	24 V DC	<b>536931</b> MSFG-24-EX
		24 V AC	<b>536932</b> MSFW-24-50/60-EX
		110 V AC	<b>536933</b> MSFW-110-50/60-EX
		230 V AC	<b>536934</b> MSFW-230-50/60-EX

# Solenoid coils VACF



Type codes



Type	
VACF	Solenoid coil, F series
Solenoid coil type	
A	Width 30 mm, for 8 mm armature tube
B	Width 22 mm, for 8 mm armature tube
Electrical connection	
A1	Connection pattern type A, to EN 175301
B2	Connection pattern type B, to industry standard
C1	Connection pattern type C, to EN 175301
K1	Cable
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
3A	230 V AC, 50/60 Hz
3W	230/240 V AC, 50/60 Hz
Cable length	
-	None
1	12 V DC
5	24 V DC
20	24 V DC
ATEX certification EU	
-	None
EX4	ATEX category II 2GD
Type of ignition protection	
-	None
M	Moulded encapsulation

# Solenoid coils VACF-A-A1

## Technical data

-  Voltage  
12 ... 48 V DC  
24 ... 240 V AC
-  Temperature range  
-20 ... +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 in increments of 45° 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 A
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]		2.8	2.6	2.8	-	-	-	-
Pick-up power, 50 Hz [VA]		-	-	-	2.5	2.5	2.7	3.9
Holding power, 50 Hz [VA]		-	-	-	1.7	1.7	1.9	2.8
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]		-20 ... +50					-20 ... +50	
Corrosion resistance class CRC <sup>1)</sup>		2					2	
CE marking (see declaration of conformity) <sup>2)</sup>		-					To EU Low Voltage Directive	
Certification		c UL us - Recognized (OL)	-	-	c UL us - Recognized (OL)	-	-	
Maritime classification <sup>2)</sup>		See certificate					See certificate	
Certificate issuing authority		DNVGL-TAA000011J					DNVGL-TAA000011J	

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.

2) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

# Solenoid coils VACF-A-A1

Technical data

FESTO

## ★ Core product range

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

1 Plug pattern to EN 175301-803, type A  
 2 Knurled nut (seal set for solenoid coil)  
 3 Solenoid coil (can be rotated in increments of 45° 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-A-A1-...	29.5	24	18	6.3	8.2	22.5	M3	47.4	35.3	15	9.9	20.8	24	30	7.9	5



Ordering data			
	Description	Part No.	Type
<b>Solenoid coil</b>			
	Without plug socket, connection pattern to EN 175301-803, type A	12 V DC	<b>8030821</b> VACF-A-A1-5
		24 V DC	★ <b>8030822</b> VACF-A-A1-1
		48 V DC	<b>8030823</b> VACF-A-A1-7
		24 V AC	<b>8030824</b> VACF-A-A1-1A
		48 V AC	<b>8030825</b> VACF-A-A1-7A
		110/120 V AC	<b>8030826</b> VACF-A-A1-16B
		230/240 V AC	<b>8030828</b> VACF-A-A1-3W
<b>Seal set</b>			
	To achieve degree of protection IP67	For solenoid coil VACF	<b>8034611</b> VAMC-B10-A-B-S8

Festo core product range

- ★ Generally ready for shipping ex works in 24 hours
- ☆ Generally ready for shipping ex works in 5 days

# 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 in increments of 45° 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 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]		3.4	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
Surge resistance [kV]		-	-	-	-	-	2.5	4

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]		-20 ... +50					-20 ... +50	
Corrosion resistance class CRC <sup>1)</sup>		2					2	
Degree of contamination		-					3	
CE marking (see declaration of conformity) <sup>2)</sup>		-					To EU Low Voltage Directive	
Certification		c UL us - Recognized (OL)	-	-	c UL us - Recognized (OL)	-	-	
Maritime classification <sup>2)</sup>		See certificate					See certificate	
Certificate issuing authority		DNVGL-TAA000011)					DNVGL-TAA000011)	

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.

2) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

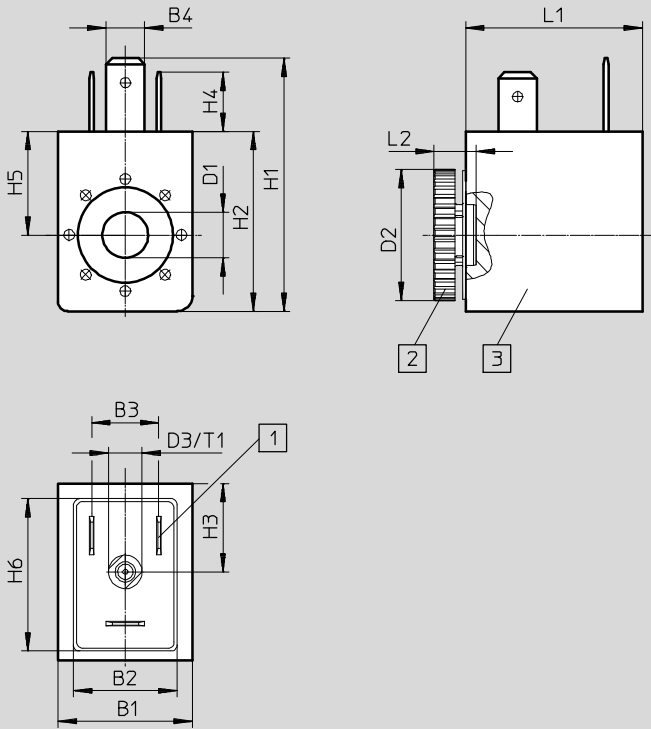
# Solenoid coils VACF-B-B2

Technical data

FESTO

## Dimensions

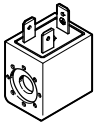

Download CAD data → [www.festo.com](http://www.festo.com)



- 1 Plug pattern to industry standard, type B
- 2 Knurled nut (seal set for solenoid coil)
- 3 Solenoid coil (can be rotated in increments of 45° 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
<b>Solenoid coil</b>			
	Without plug socket, connection pattern to industry standard, type B	12 V DC	<b>8030801</b> VACF-B-B2-5
		24 V DC	<b>8030802</b> VACF-B-B2-1
		48 V DC	<b>8030803</b> VACF-B-B2-7
		24 V AC	<b>8030804</b> VACF-B-B2-1A
		48 V AC	<b>8030805</b> VACF-B-B2-7A
		110/120 V AC	<b>8030806</b> VACF-B-B2-16B
		230/240 V AC	<b>8030808</b> VACF-B-B2-3W
<b>Seal set</b>			
	To achieve degree of protection IP67	<b>8034609</b>	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 in increments of 45° 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]		3.4	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
Surge resistance [kV]		-	-	-	-	-	2.5	4

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]		-20 ... +50					-20 ... +50	
Corrosion resistance class CRC <sup>1)</sup>		2					2	
Degree of contamination		-					3	
CE marking (see declaration of conformity) <sup>3)</sup>		-					To EU Low Voltage Directive <sup>2)</sup>	
Certification		c UL us - Recognized (OL)		-	c UL us - Recognized (OL)	-	-	

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.

2) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: [www.festo.com/sp](http://www.festo.com/sp) → Certificates.  
If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, further measures to reduce the emitted interference may be necessary.

3) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

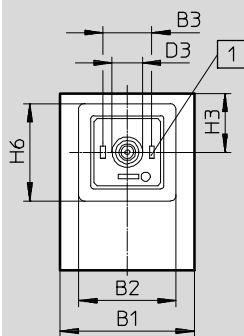
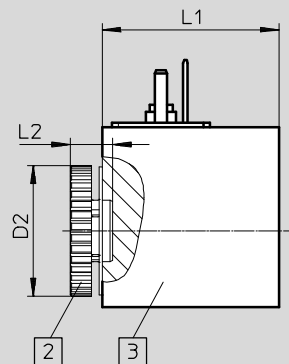
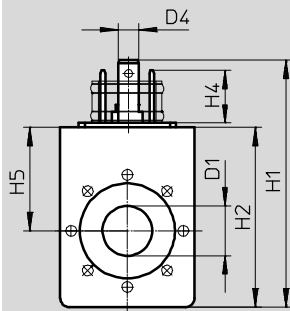
# Solenoid coils VACF-B-C1

Technical data

FESTO

## Dimensions

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



- 1 Plug pattern to EN 175301-803, type C
- 2 Knurled nut (seal set for solenoid coil)
- 3 Solenoid coil (can be rotated in increments of 45° 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

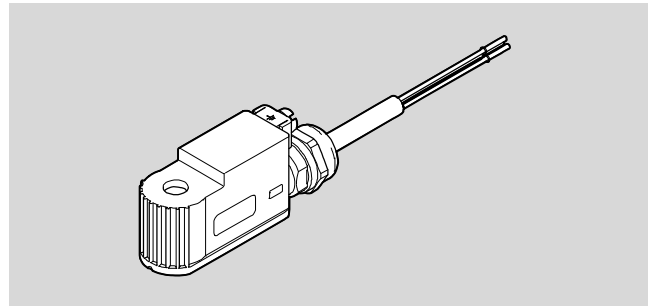
## Ordering data

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

# Solenoid coils VACF-B-K1

## Technical data

-  Voltage  
24 V DC  
24 ... 230 V AC
-  Temperature range  
-30 ... +40 °C
- In accordance with ATEX directive
- Can be replaced without interrupting the pneumatic circuit



General technical data	
Type of mounting	Via knurled nut
Mounting position	Any (can be rotated in increments of 45° on the armature tube)
Switching position display	No
Product weight [g]	170

Materials	
Solenoid coil	Aluminium, epoxy resin, copper, steel
Winding	Copper
Note on materials	RoHS compliant

Electrical data	
Electrical connection	Cable with open end, 3-wire
Nominal conductor cross section [mm <sup>2</sup> ]	0.75
Permissible voltage fluctuations	-10 / +10
Duty cycle [%]	100
Degree of protection to EN 60529	IP65

Characteristic coil data					
Operating voltage		24 V DC	24 V AC	110 V AC	230 V AC
Power	[W]	4.36	-	-	-
	[VA]	-	3.85	4.18	5
Frequency	[Hz]	-	50/60	50/60	50/60
Permissible frequency fluctuations	[%]	-	-5 / +5	-5 / +5	-5 / +5
Min. pickup time	[ms]	10	10	10	10

Operating and environmental conditions	
Ambient temperature [°C]	-30 ... +40
Corrosion resistance class CRC <sup>1)</sup>	0 – No corrosion stress
CE marking (see declaration of conformity) <sup>2)</sup>	To EU Explosion Protection Directive (ATEX)

1) Corrosion resistance class CRC 0 to Festo standard FN 940070  
No corrosion stress. Applies to small, optically irrelevant standard parts such as threaded pins, circlips and clamping sleeves which are usually only available in a phosphated or burnished version (and possibly oiled) as well as to ball bearings (for components < CRC 3) and plain bearings.

2) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

# Solenoid coils VACF-B-K1

Technical data

ATEX	
ATEX category for gas	II 2G
Type of ignition protection for gas	Ex mb IIC T5 Gb
ATEX category for dust	II 2D
Type of ignition protection for dust	Ex mb IIIC T95°C Db
Explosion ambient temperature [°C]	-30 ≤ Ta ≤ +40
Explosion protection certification outside the EU	EPL Gb (IEC-EX)
	EPL Db (IEC-EX)
	EPL Gb (BR)
	EPL Db (BR)
	EPL Gb (CN)
	EPL Db (CN)
Certificate issuing authority	IBExU 16 ATEX1146X
	IECEX IBE16.0024X
	DNV17.0013X
	GVJ17.1077X

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

- 1 Solenoid coil
- 2 Equipotential bonding terminal
- 3 Heat-resistant rubber tubing
- 4 Knurled nut
- 5 Length depending on order

Type	B1	H1	H2	L1	L2	L3
VACF-B-K1-...	22	27	31.7	55.5	11.8	50

Ordering data					
	Description	Operating voltage	Cable length	Part No.	Type
	Cable with open end, 3-wire	24 V DC	1 m	<b>8059804</b>	<b>VACF-B-K1-1-1-EX4-M</b>
			5 m	<b>8059805</b>	<b>VACF-B-K1-1-5-EX4-M</b>
			10 m	<b>8059806</b>	<b>VACF-B-K1-1-10-EX4-M</b>
			20 m	<b>8059807</b>	<b>VACF-B-K1-1-20-EX4-M</b>
		24 V AC	1 m	<b>8059808</b>	<b>VACF-B-K1-1A-1-EX4-M</b>
		110 V AC	1 m	<b>8059811</b>	<b>VACF-B-K1-16B-1-EX4-M</b>
			5 m	<b>8059812</b>	<b>VACF-B-K1-16B-5-EX4-M</b>
		230 V AC	1 m	<b>8059809</b>	<b>VACF-B-K1-3A-1-EX4-M</b>
			5 m	<b>8059810</b>	<b>VACF-B-K1-3A-5-EX4-M</b>

# 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
3A	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

FESTO

-  Voltage  
24 V DC  
110, 230 V AC

• Can be replaced without interrupting the pneumatic circuit

-  Temperature range  
-20 ... +60 °C



General technical data	
Type of mounting	Via knurled nut
Mounting position	Any (can be rotated in increments of 45° 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	
Surge resistance [kV]	-	2.5		4		

Operating and environmental conditions			
Nominal operating voltage [V]	24 DC	110 AC	230 AC
Ambient temperature [°C]	-20 ... +60	-20 ... +60	
Corrosion resistance class CRC <sup>1)</sup>	2	2	
Degree of contamination	-	3	
CE marking (see declaration of conformity) <sup>2)</sup>	-	To EU Low Voltage Directive	
Maritime classification <sup>2)</sup>	See certificate		
Certificate issuing authority	DNVGL-TAA000011		

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.

2) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

# Solenoid coils VACN-N

Technical data

FESTO

## ★ Core product range

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

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

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

Ordering data		Part No.	Type
<b>Solenoid coil</b>			
	Without plug socket, connection pattern to EN 175301-803, type A	24 V DC	★ <b>8029144</b> VACN-N-A1-1
		110 V AC	<b>8029134</b> VACN-N-A1-16B
		230 V AC	<b>8029135</b> VACN-N-A1-3A
<b>Plug socket</b>			
	Operating voltage 230 V DC/V AC	Cable fitting Pg9	<b>34583</b> MSSD-C
		Cable fitting M16	<b>539709</b> MSSD-C-M16
		Operating voltage 24 V DC, signal status display with LED	Cable fitting Pg11
<b>Connecting cable</b>			
	Operating voltage 24 V DC, signal status display with LED	Cable length 0.6 m	<b>3679776</b> NEBV-A1W3F-P-K-0.6-N-LE3
		Cable length 2.5 m	<b>30931</b> KMC-1-24DC-2,5-LED
		Cable length 5 m	<b>30933</b> KMC-1-24DC-5-LED
	Operating voltage 230 V DC/V AC	Cable length 10 m	<b>193459</b> KMC-1-24-10-LED
		Cable length 0.6 m	<b>3579466</b> NEBV-A1W3-K-0.6-N-LE3
		Cable length 2.5 m	<b>30932</b> KMC-1-230AC-2,5
	Electrical connection 2, M12x1, A-coded Operating voltage 24 V DC, signal status display with LED	Cable length 5 m	<b>30934</b> KMC-1-230AC-5
		Cable length 0.3 m	<b>3679771</b> NEBV-A1W3F-P-K-0.3-N-M12W3
	Electrical connection 2, M12x1, A-coded Operating voltage 230 V DC/V AC	Cable length 0.6 m	<b>3679772</b> NEBV-A1W3F-P-K-0.6-N-M12W3
		Cable length 0.3 m	<b>3579461</b> NEBV-A1W3-K-0.3-N-M12W3
	Operating voltage 230 V DC/V AC	Cable length 0.6 m	<b>3579462</b> NEBV-A1W3-K-0.6-N-M12W3
		Cable length 0.6 m	<b>3579462</b> NEBV-A1W3-K-0.6-N-M12W3
<b>Illuminating seal</b>			
	Operating voltage 24 V DC	<b>19145</b>	MC-LD-12-24DC
	Operating voltage 230 V DC/V AC	<b>19146</b>	MC-LD-230AC

Festo core product range ★ Generally ready for shipping ex works in 24 hours  
☆ Generally ready for shipping ex works in 5 days

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

Technical data



- Non-sparking solenoid coil
- Category "II 3G" and "II 3D"
- Type of ignition protection 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 in increments of 45° 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 <sup>1)</sup>	2
CE marking (see declaration of conformity) <sup>2)</sup>	To EU Explosion Protection Directive (ATEX)
Maritime classification <sup>2)</sup>	See certificate
Certificate issuing authority	DNVGL-TAA000011]

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.

2) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.



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

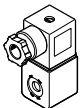
Technical data

ATEX	
ATEX category for gas	II 3G
Type of ignition protection for gas	Ex nA IIC T5/T4 X Gc
ATEX category for dust	II 3D
Type of ignition protection for dust	Ex tc IIIC T95°C/T105°C X Dc
Explosion ambient temperature [°C]	-20 ≤ Ta ≤ +60

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

3 Solenoid coil  
4 Mounting screw M3

Type	B1	H1	H2	L1	L2
VACN-N-A1-...-EX2-N	30	38.5	29.5	64	35.5

Ordering data		Part No.	Type
	With plug socket included in delivery, connection pattern to EN 175301-803, type A	24 V DC	<b>8029136</b> VACN-N-A1-1-EX2-N
		110 V AC	<b>8029137</b> VACN-N-A1-16B-EX2-N
		230 V AC	<b>8029138</b> VACN-N-A1-3A-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 in increments of 45° 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	
Corrosion resistance class CRC <sup>1)</sup>	2	2	
CE marking (see declaration of conformity) <sup>2)</sup>	-	To EU Low Voltage Directive	
Maritime classification <sup>2)</sup>	See certificate		
Certificate issuing authority	DNVGL-TAA000011		

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.

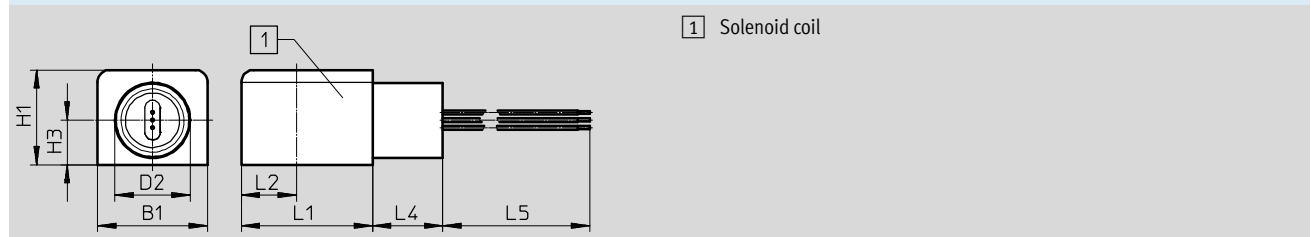
2) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

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

Technical data

ATEX		
Type of ignition protection for gas	AEx m II T4	
	Ex m II T4	
Explosion ambient temperature [°C]	-20 ≤ Ta ≤ +60	
Explosion protection certification outside the EU	EPL Gb (US)	
	Class I, Div. 1 (US)	Class I, Div. 1 (CA)
	Class I, Div. 2 (US)	Class I, Div. 2 (CA)
	Class II, Div. 1 (US)	Class II, Div. 1 (CA)
Certificate issuing authority	CSA 265489	
	FM 3053936	

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



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	<b>8029146</b> VACN-N-K11-1-0.5-U4-M
		110 V AC	<b>8029145</b> VACN-N-K11-16B-0.5-U4-M
		230 V AC	<b>8029140</b> VACN-N-K11-3A-0.5-U4-M

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

Technical data



- Category "II 2G" and "II 2D"
- Type of ignition protection 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 in increments of 45° 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

Operating and environmental conditions	
Ambient temperature [°C]	-20 ... +50
Corrosion resistance class CRC <sup>1)</sup>	2
CE marking (see declaration of conformity) <sup>2)</sup>	To EU Explosion Protection Directive (ATEX)
Maritime classification <sup>2)</sup>	See certificate
Certificate issuing authority	DNVGL-TAA000011J

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.

2) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

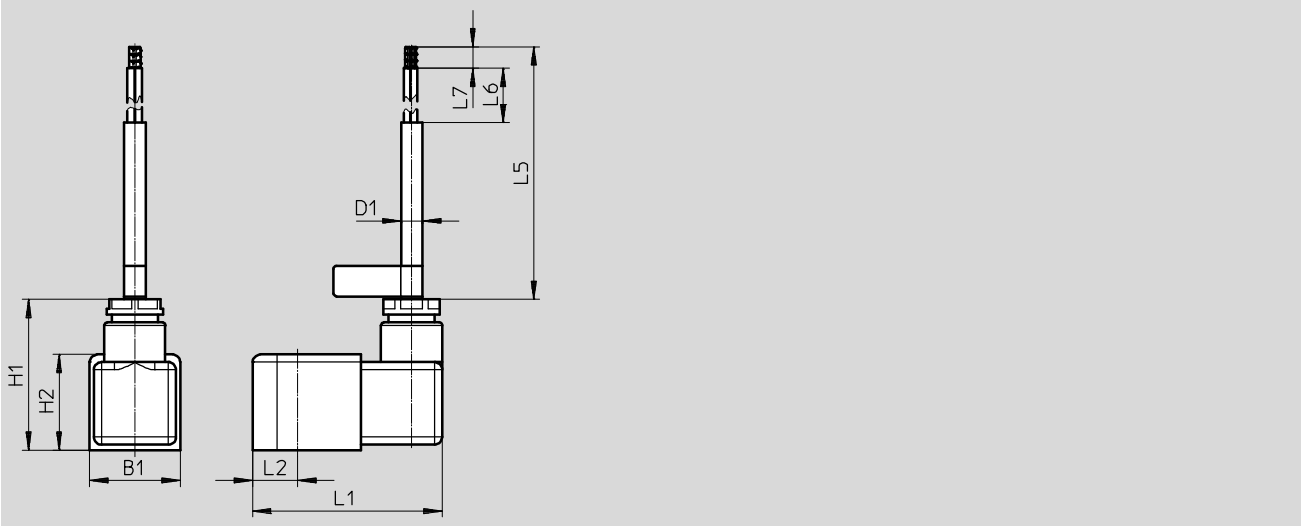
# Solenoid coils VACN-N-...-EX4-M

Technical data

ATEX	
ATEX category for gas	II 2G
Type of ignition protection for gas	Ex mb IIC T6
ATEX category for dust	II 2D
Type of ignition protection for dust	Ex mb tb IIIC T80°C
Explosion ambient temperature [°C]	-20 ≤ Ta ≤ +50
Explosion protection certification outside the EU	EPL Db (BR), EPL Db (IEC-EX), EPL Gb (BR), EPL Gb (IEC-EX)
Certificate issuing authority	DNV 15.0189X IECEX PTB 15.0016X PTB 14 ATEX 2027 X

## Dimensions

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



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	<b>8029143</b> VACN-N-K1-1-EX4-M
		110 V AC	<b>8029142</b> VACN-N-K1-16B-EX4-M
		230 V AC	<b>8029141</b> VACN-N-K1-3A-EX4-M

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

Technical data

FESTO



- Intrinsically safe solenoid coil
- Category "II 2G" and "II 2D"
- Type of ignition protection for gas "Ex ia"
- 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 in increments of 45° 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
Required current consumption [mA]	≥27
Effective internal capacitance	Negligibly low
Effective internal inductance	Negligibly low

Operating and environmental conditions	
Ambient temperature [°C]	-20 ... +50
Corrosion resistance class CRC <sup>1)</sup>	2
CE marking (see declaration of conformity) <sup>2)</sup>	To EU Explosion Protection Directive (ATEX)
Maritime classification <sup>2)</sup>	See certificate
Certificate issuing authority	DNVGL-TAA000011

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.

2) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

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

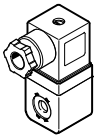
Technical data

ATEX	
ATEX category for gas	II 2G
Type of ignition protection for gas	Ex ia IIC T6, T4 Ga
ATEX category for dust	II 2D
Type of ignition protection for dust	Ex tb IIIC T80°C, T130°C Db IP65
Explosion ambient temperature [°C]	T4,T130°C: -40°C ≤ Ta ≤ +85°C
	T6,T80°C: -40°C ≤ Ta ≤ +50°C
Explosion protection certification outside the EU	EPL Db (BR), EPL Db (IEC-EX), EPL Ga (BR), EPL Gb (IEC-EX), EPL Gb (IN), EPL Db (IN)
Certificate issuing authority	DNV 15.0188 IECEX PTB 15.0013 PTB 09 ATEX 2043

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

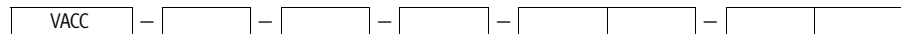
3 Solenoid coil  
4 Mounting screw M3

Type	B1	H1	H2	L1	L2
VACN-N-A1-...-EX4-A	30	38.5	29.5	67.7	39.2

Ordering data		Part No.	Type
	Intrinsically safe solenoid coil with plug socket included in delivery, connection pattern to EN 175301-803, type A	24 V DC	<b>8029139</b> VACN-N-A1-1-EX4-A

# Solenoid coils VACC-S13

Type codes



Type	
VACC	Solenoid coil, C series

Solenoid coil type	
S13	Solenoid coil, for 13 mm armature tube

Power consumption	
11	1.1 W
18	1.8 W

Electrical connection	
A1	Connection pattern type A, to EN 175301
K4	Cable fitting, metric

Operating voltage	
1U	24 V DC and AC
2U	110 V DC and AC
3U	230 V DC and AC
27U	60 V DC and AC
1	24 V DC

Circuitry	
-	None
F	With fuse



ATEX certification EU	
-	None
EX4	ATEX category II 2GD

Type of ignition protection	
-	None
A	Intrinsically safe
ME	Moulded encapsulation, enhanced safety



# Solenoid coils VACC-S13-18-A1

Technical data

-  Voltage  
24 V DC  
24 V AC/DC  
110 V AC/DC  
230 V AC/DC
-  Temperature range  
-20 ... +60 °C

Nominal power  
2 watt at 24 V DC



General technical data	
Type of mounting	Via knurled nut
Type of actuation	Electrical
Mounting position	Any
Product weight	[g] 210

Materials	
Housing	PA, UP
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
Permissible voltage fluctuations	[%] -15 ... 10
Duty cycle	[%] 100
Degree of protection to EN 60529	IP65 with plug socket
Insulation class	H

Characteristic coil data								
Nominal operating voltage		24 V DC	24 V AC/DC		110 V AC/DC		230 V AC/DC	
Frequency	[Hz]	-	40/65	-	40/65	-	40/65	-
Power	[W]	1.8	-	1.8	-	1.8	-	1.8
	[VA]	-	1.8	-	1.8	-	1.8	-

Operating and environmental conditions					
Nominal operating voltage		24 V DC	24 V AC/DC	110 V AC/DC	230 V AC/DC
Ambient temperature	[°C]	-20 ... 60		-20 ... 60	
Corrosion resistance class CRC <sup>1)</sup>		4		4	
CE marking (see declaration of conformity) <sup>2)</sup>		-		To EU Low Voltage Directive (only for alternating voltage AC)	

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.

2) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

# Solenoid coils VACC-S13-18-A1

Technical data

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

1 Plug pattern type A, to EN 175301-803

Type	B1	D1	H1	L1	L2	L3
VACC-S13-18-A1-...	36	13.1	41	67	55	18

Ordering data		Part No.	Type
	Plug connector type A, to EN 175301-803	24 V DC	<b>562889</b> VACC-S13-18-A1-1
		24 V AC/DC	<b>562890</b> VACC-S13-18-A1-1U
		110 V AC/DC	<b>562891</b> VACC-S13-18-A1-2U
		230 V AC/DC	<b>562892</b> VACC-S13-18-A1-3U

# Solenoid coils VACC-S13-11-...-EX4A

Technical data

-  - Voltage  
24 V DC

Nominal power  
1.1 watt at 24 V DC



General technical data	
Type of mounting	Via knurled nut
Type of actuation	Electrical
Mounting position	Any
Product weight	[g] 330

Materials	
Housing	PA, UP
Note on materials	Contains paint-wetting impairment substances RoHS compliant

Electrical data	
Electrical connection	Terminal box, cable entry thread metric, M20x1.5
Permissible voltage fluctuations	[%] -15 ... 10
Duty cycle	[%] 100
Maximum input power, $P_i$	[W] 1.2
Maximum input voltage, $U_i$	[V] 32
Maximum input current, $I_i$	[A] 0.2
Required current consumption, $I_{min}$	[mA] 16
Degree of protection to EN 60529	IP64
Insulation class	H

Characteristic coil data	
Nominal operating voltage	[V DC] 14 ... 32
Power	[W] 0.22 ... 1.1
Effective internal capacitance, $C_i$	Negligibly low
Effective internal inductance, $L_i$	Negligibly low

Operating and environmental conditions	
Corrosion resistance class CRC <sup>1)</sup>	4
CE mark (see declaration of conformity) <sup>3)</sup>	To EU EMC Directive <sup>2)</sup> To EU Explosion Protection Directive (ATEX)

- 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.
- 2) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: [www.festo.com/sp](http://www.festo.com/sp) → Certificates.  
If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, further measures to reduce the emitted interference may be necessary.
- 3) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

# Solenoid coils VACC-S13-11-...-EX4A

Technical data

ATEX	
ATEX category for gas	II 2G
Type of ignition protection for gas	Ex ia IIC T6, T5 Gb
ATEX category for dust	II 2D
Type of ignition protection for dust	Ex ia IIIC T80°C, T95°C Db
Explosion ambient temperature	T5, T95°C: $-30^{\circ}\text{C} \leq T_a \leq +65^{\circ}\text{C}$
	T6, T80°C: $-30^{\circ}\text{C} \leq T_a \leq +50^{\circ}\text{C}$
Explosion protection certification outside the EU	EPL Db (BR), EPL Db (CN), EPL Db (IEC-EX), EPL Db (KR)
	EPL Gb (BR), EPL Gb (CN), EPL Gb (IEC-EX), EPL Gb (KR)
Certificate issuing authority	BVS15 ATEXE030X
	IECEX BVS 15.0020X
	NEPSI GYJ17.1234X
	INMETRO DNV 17.0043X
	KGS 17-GA4BO-0393X
	KGS 17-GA4BO-0392X

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


1 Terminal box, cable entry thread M20x1.5

Type	B1	D1	H1	L1	L2	L3	L4	L5
VACC-S13-11-K4-1-EX4A	37	13.1	41	131	98	18	23	51

Ordering data			
	Description	Part No.	Type
	Terminal box, cable entry thread metric, M20x1.5	<b>562896</b>	<b>VACC-S13-11-K4-1-EX4A</b>

# Solenoid coils VACC-S13-18-...-EX4ME

Technical data

-  Voltage
- 24 V AC/DC
- 60 V AC/DC
- 110 V AC/DC
- 230 V AC/DC

Nominal power  
2 watt at 24 V DC



General technical data	
Type of mounting	Via knurled nut
Type of actuation	Electrical
Mounting position	Any
Product weight	[g] 330

Materials	
Housing	PA, UP
Note on materials	Contains paint-wetting impairment substances RoHS compliant

Electrical	
Electrical connection	Terminal box, cable entry thread metric, M20x1.5
Permissible voltage fluctuations	[%] -15 ... 10
Duty cycle	[%] 100
Insulation class	H
Degree of protection to EN 60529	IP64 (IP65 with internal fuse protection)

Characteristic coil data											
Nominal operating voltage		24 V AC/DC		24 V AC/DC With fuse		60 V AC/DC		110 V AC/DC		230 V AC/DC	
Frequency	[Hz]	40/65	-	40/65	-	40/65	-	40/65	-	40/65	-
Power	[W]	-	1.8	-	1.8	-	1.8	-	1.8	-	1.8
	[VA]	1.8	-	1.8	-	1.8	-	1.8	-	1.8	-

Operating and environmental conditions	
Corrosion resistance class CRC <sup>1)</sup>	4
CE marking (see declaration of conformity) <sup>2)</sup>	To EU Explosion Protection Directive (ATEX)

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.

2) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

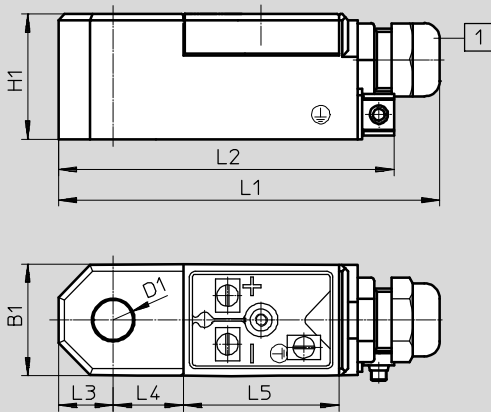
# Solenoid coils VACC-S13-18-...-EX4ME

Technical data

ATEX		
	Solenoid coil without internal fuse	Solenoid coil with internal fuse
ATEX category for gas	II 2G	II 2G
Type of ignition protection for gas	Ex e mb IIC T6, T5, T4 Gb	Ex e mb IIC T6 Gb
ATEX category for dust	II 2D	II 2D
Type of ignition protection for dust	ExtbIIICT85°C,T95°C,T130°C Db	Ex tb IIIC T70°C Db
Explosion ambient temperature [°C]	T4, T130°C: -20°C ≤ Ta ≤ +60°C	-
	T5, T95°C: -20°C ≤ Ta ≤ +60°C	-
	T6, T80°C: -20°C ≤ Ta ≤ +50°C	T6, T70°C: -20°C ≤ Ta ≤ +40°C
Explosion protection certification outside the EU	EPL Db (BR)	EPL Db (BR)
	EPL Db (CN)	EPL Db (CN)
	EPL Db (IEC-EX)	EPL Db (IEC-EX)
	EPL Gb (BR)	EPL Gb (BR)
	EPL Gb (CN)	EPL Gb (CN)
	EPL Gb (IEC-EX)	EPL Gb (IEC-EX)
Certificate issuing authority	BVS15 ATEXE029X	BVS15 ATEXE029X
	IECEX BVS15.0075 X	IECEX BVS15.0075X
	NEPSI GYJ17.1235X	NEPSI GYJ17.1235X
	INMETRO DNV 17.0042X	INMETRO DNV 17.0042X

## Dimensions

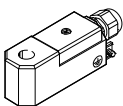
Download CAD data → [www.festo.com](http://www.festo.com)



1 Terminal box, cable entry thread M20x1.5

Type	B1	D1	H1	L1	L2	L3	L4	L5
VACC-S13-18-K4-...-EX4ME	37	13.1	41	125	98	18	23	51
VACC-S13-18-K4-27U-EX4ME					111			

## Ordering data

Description		Part No.	Type
	Terminal box, cable entry thread metric, M20x1.5		
	24 V AC/DC	<b>562893</b>	<b>VACC-S13-18-K4-1U-EX4ME</b>
	24 V AC/DC With fuse	<b>570784</b>	<b>VACC-S13-18-K4-1UF-EX4ME</b>
	60 V AC/DC	<b>8040578</b>	<b>VACC-S13-18-K4-27U-EX4ME</b>
	110 V AC/DC	<b>562894</b>	<b>VACC-S13-18-K4-2U-EX4ME</b>
230 V AC/DC	<b>562895</b>	<b>VACC-S13-18-K4-3U-EX4ME</b>	

# Solenoid coils VACC-S18

Type codes



Type	
VACC	Solenoid coil, C series

Solenoid coil type	
S18	Solenoid coil, for 18 mm armature tube

Power consumption	
18	1.8 W
25	2.5 W
35	3.5 W
70	7 W
120	12 W

Electrical connection	
A1	Connection pattern type A, to EN 175301
K4	Cable fitting, metric
K5	Cable fitting NPT

Operating voltage	
1A	24 V AC, 50/60 Hz
1U	24 V DC and AC
2A	110 V AC/50-60 Hz
2U	110 V DC and AC
3A	230 V AC/50-60 Hz
3U	230 V DC and AC
7U	48 V DC and AC
16U	120 V DC and AC
1	24 V DC
3	230 V DC
7	48 V DC
16	120 V DC
27	60 V DC

Circuitry	
-	None
F	With fuse



Certification	
-	Without certification
EX4	ATEX category II 2GD
U2	Hazardous environment for USA and Canada (to NEC 500) cULus

Type of ignition protection	
-	None
D	Flameproof enclosure
ME	Moulded encapsulation, enhanced safety

# Solenoid coils VACC-S18-35-A1

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## Technical data

-  Voltage  
24 V DC  
24 V AC  
110 V AC  
230 V AC
-  Temperature range  
-20 ... +60 °C

Nominal power  
3.6 watt at 24 V DC



General technical data					
Nominal operating voltage	[V]	24 V DC	24 V AC	110 V AC	230 V AC
Type of mounting		Via knurled nut			
Type of actuation		Electrical			
Mounting position		Any			
Product weight	[g]	530		580	

Materials	
Solenoid coil	Steel, PA
Note on materials	Contains paint-wetting impairment substances RoHS compliant

Electrical data	
Electrical connection	Plug pins, 3-pin, with connection pattern type A, to EN 175301-803
Permissible voltage fluctuations	[%] -15 ... 10
Duty cycle	[%] 100
Degree of protection to EN 60529	IP65 with plug socket
Insulation class	H

Characteristic coil data					
Nominal operating voltage		24 V DC	24 V AC	110 V AC	230 V AC
Frequency	[Hz]	-	50/60	50/60	50/60
Power	[W]	3.5	-	-	-
	[VA]	-	3.5	3.5	3.5

Operating and environmental conditions					
Nominal operating voltage		24 V DC	24 V AC	110 V AC	230 V AC
Ambient temperature	[°C]	-20 ... 60		-20 ... 60	
Corrosion resistance class CRC <sup>1)</sup>		4		4	
CE marking (see declaration of conformity) <sup>2)</sup>		-		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.
- 2) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.



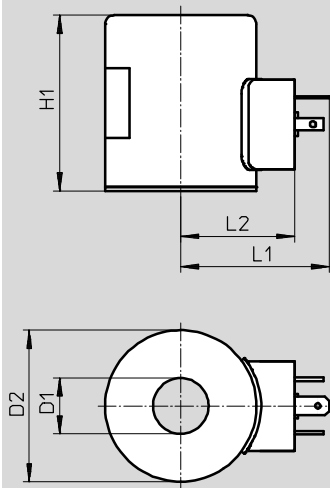
# Solenoid coils VACC-S18-35-A1

Technical data

**FESTO**


## Dimensions

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Type	D1 ∅	D2 ∅	H1	L1	L2
VACC-S18-35-A1-1	18.2	50	58	50	38
VACC-S18-35-A1-1A					
VACC-S18-35-A1-2A					
VACC-S18-35-A1-3A					

## Ordering data

	Description	Part No.	Type
	Plug connector type A, to EN 175301-803	24 V DC	<b>562906</b> VACC-S18-35-A1-1
		24 V AC	<b>562907</b> VACC-S18-35-A1-1A
		110 V AC	<b>562908</b> VACC-S18-35-A1-2A
		230 V AC	<b>562909</b> VACC-S18-35-A1-3A

# Solenoid coils VACC-S18-120-A1

Technical data

-  Voltage
  - 24 V DC
  - 24 V AC
  - 110 V AC
  - 230 V AC
-  Temperature range
  - 20 ... +60 °C

Nominal power  
12 watt at 24 V DC



General technical data	
Type of mounting	Via knurled nut
Type of actuation	Electrical
Mounting position	Any
Product weight	[g] 530

Materials	
Housing	PA, steel
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
Permissible voltage fluctuations	[%] -15 ... 10
Duty cycle	[%] 100
Degree of protection to EN 60529	IP65 with plug socket
Insulation class	H

Characteristic coil data					
Nominal operating voltage		24 V DC	24 V AC	110 V AC	230 V AC
Frequency	[Hz]	-	50/60	50/60	50/60
Power	[W]	12.0	-	-	-
	[VA]	-	12.0	12.0	12.0

Operating and environmental conditions					
Nominal operating voltage		24 V DC	24 V AC	110 V AC	230 V AC
Ambient temperature	[°C]	-20 ... 60		-20 ... 60	
Corrosion resistance class CRC <sup>1)</sup>		4		4	
CE marking (see declaration of conformity) <sup>2)</sup>		-		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.

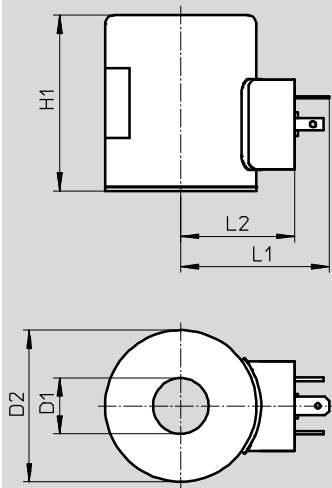
2) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

# Solenoid coils VACC-S18-120-A1

Technical data


## Dimensions

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



Type	D1 ∅	D2 ∅	H1	L1	L2
VACC-S18-120-A1-1	18.2	50	58	50	38
VACC-S18-120-A1-1A					
VACC-S18-120-A1-2A					
VACC-S18-120-A1-3A					



## Ordering data

	Description	Part No. Type	
			Plug connector type A, to EN 175301-803
		24 V AC	<b>8040890</b> VACC-S18-120-A1-1A
		110 V AC	<b>8040582</b> VACC-S18-120-A1-2A
		230 V AC	<b>8040584</b> VACC-S18-120-A1-3A

# Solenoid coils VACC-S18-18-...-EX4D

FESTO

Technical data

-  Voltage  
230 V AC
  -  Temperature range  
-20 ... +90 °C
- Nominal power  
3 watt at 230 V AC



General technical data	
Type of mounting	Via knurled nut
Type of actuation	Electrical
Mounting position	Any
Product weight	[g] 1700

Materials	
Housing	Wrought aluminium alloy, grey cast iron
Note on materials	Contains paint-wetting impairment substances RoHS compliant

Electrical data		
Electrical connection	K4	Terminal box, cable entry thread metric, M20x1.5
	K5	Terminal box, cable entry thread NPT, 1/2 NPT
Permissible voltage fluctuations	[%]	-15 ... 10
Duty cycle	[%]	100
Degree of protection to EN 60529		IP65 with plug socket
Insulation class		H

Characteristic coil data		
Nominal operating voltage	[V AC]	230
Frequency	[Hz]	50/60
Power	[VA]	1.8

ATEX		
ATEX category for gas	II 2G	
Type of ignition protection for gas	Ex d IIC T6, T5, T4 Gb	
ATEX category for dust	II 2D	
Type of ignition protection for dust	Ex tb IIIC T80°C, T95°C, T130°C Db	
Explosion ambient temperature	[°C]	T4, T130°C: -50°C ≤ Ta ≤ +90°C
		T5, T95°C: -50°C ≤ Ta ≤ +55°C
		T6, T80°C: -50°C ≤ Ta ≤ +40°C
Explosion protection certification outside the EU		EPL Db (BR), EPL Db (CN), EPL Db (IEC-EX), EPL Db (IN), EPL Db (KR)
		EPL Gb (BR), EPL Gb (CN), EPL Gb (IEC-EX), EPL Gb (IN), EPL Gb (KR)
Certificate issuing authority		NEPSI GYJ17.1236X
		BVS15ATEXE135
		IECEXBVS.15.0116
		PESO P396315
		INMETRO DNV 17.0040X
		KGS 16-GA4BO-0897X KGS 16-GA4BO-0896X

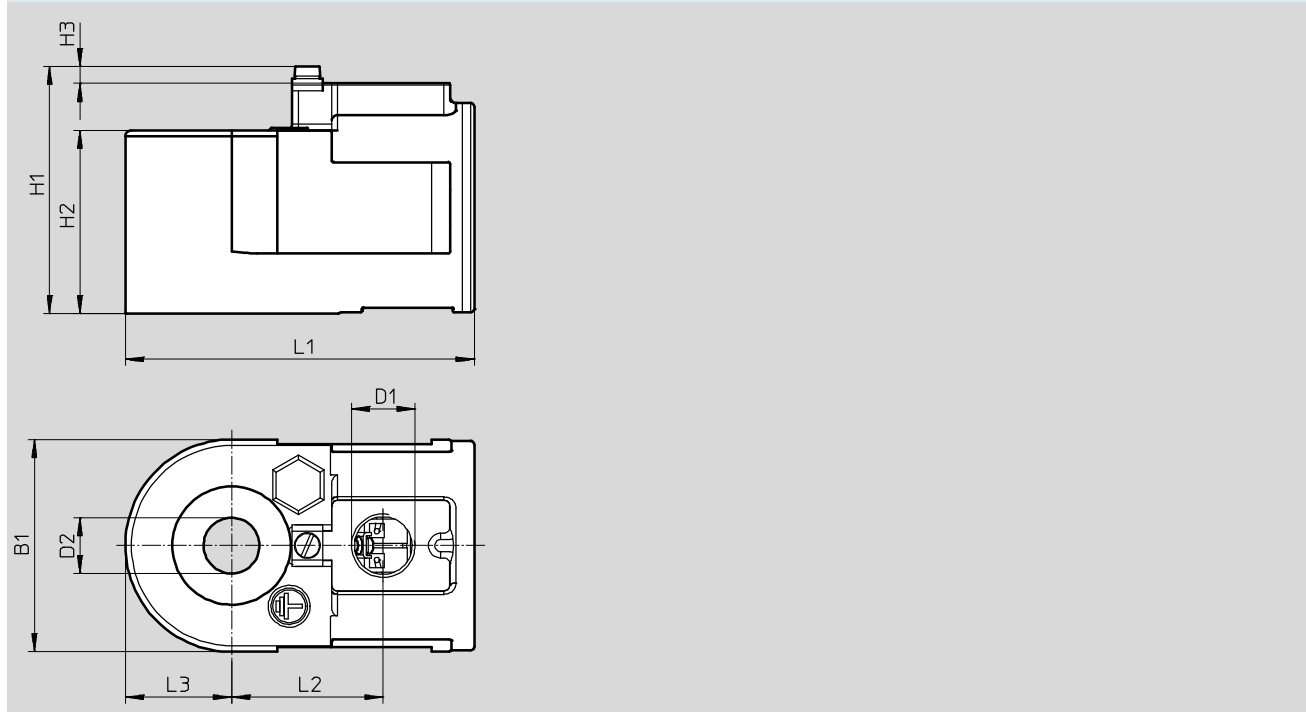
# Solenoid coils VACC-S18-18-...-EX4D

Technical data


Operating and environmental conditions	
Corrosion resistance class CRC <sup>1)</sup>	4
CE marking (see declaration of conformity) <sup>2)</sup>	To EU Explosion Protection Directive (ATEX)

- 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.
- 2) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

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





Type	B1	D1	D2 ∅	H1	H2	H3	L1	L2	L3
VACC-S18-18-K4-3A-EX4D	70	M20x1.5	18.2	82	60.5	6	115	50	35
VACC-S18-18-K5-3A-EX4D		1/2 NPT							

Ordering data			
	Description	Part No.	Type
	Terminal box, cable fitting metric, M20x1.5	3504741	VACC-S18-18-K4-3A-EX4D
	Terminal box, cable fitting NPT, 1/2 NPT	3546734	VACC-S18-18-K5-3A-EX4D

# Solenoid coils VACC-S18-25-...-EX4D

FESTO

Technical data

-  Voltage  
24 V AC/DC  
110 V AC/DC  
230 V AC/DC
  -  Temperature range  
-20 ... +60 °C
- Nominal power  
2.5 watt at 24 V DC



General technical data	
Type of mounting	Via knurled nut
Type of actuation	Electrical
Mounting position	Any
Product weight	[g] 1700

Materials	
Housing	Wrought aluminium alloy, grey cast iron
Note on materials	Contains paint-wetting impairment substances RoHS compliant

Electrical data		
Electrical connection	K4	Terminal box, cable entry thread metric, M20x1.5
	K5	Terminal box, cable entry thread NPT, 1/2 NPT
Permissible voltage fluctuations	[%]	-15 ... 10
Duty cycle	[%]	100
Degree of protection to EN 60529		IP65
Insulation class		H

Characteristic coil data				
Nominal operating voltage		24 V AC/DC	110 V AC/DC	230 V AC/DC
Frequency	[Hz]	40/65	40/65	40/65
Power	[W]	2.5	2.5	2.5
	[VA]	2.5	2.5	2.5

ATEX		
ATEX category for gas	II 2G	
Type of ignition protection for gas	Ex d IIC T6, T5, T4 Gb	
ATEX category for dust	II 2D	
Type of ignition protection for dust	Ex tb IIIC T80°C, T95°C, T130°C Db	
Explosion ambient temperature	[°C]	T4, T130°C: -50°C ≤ Ta ≤ +90°C
		T5, T95°C: -50°C ≤ Ta ≤ +55°C
		T6, T80°C: -50°C ≤ Ta ≤ +40°C
Explosion protection certification outside the EU		EPL Db (BR), EPL Db (CN), EPL Db (IEC-EX), EPL Db (IN), EPL Db (KR)
		EPL Gb (BR), EPL Gb (CN), EPL Gb (IEC-EX), EPL Gb (IN), EPL Gb (KR)
Certificate issuing authority		NEPSI GYJ17.1236X
		BVS15ATEXE135
		IECEXBVS.15.0116
		PESO P396315
		INMETRO DNV 17.0040X
		KGS 16-GA4BO-0897X KGS 16-GA4BO-0896X

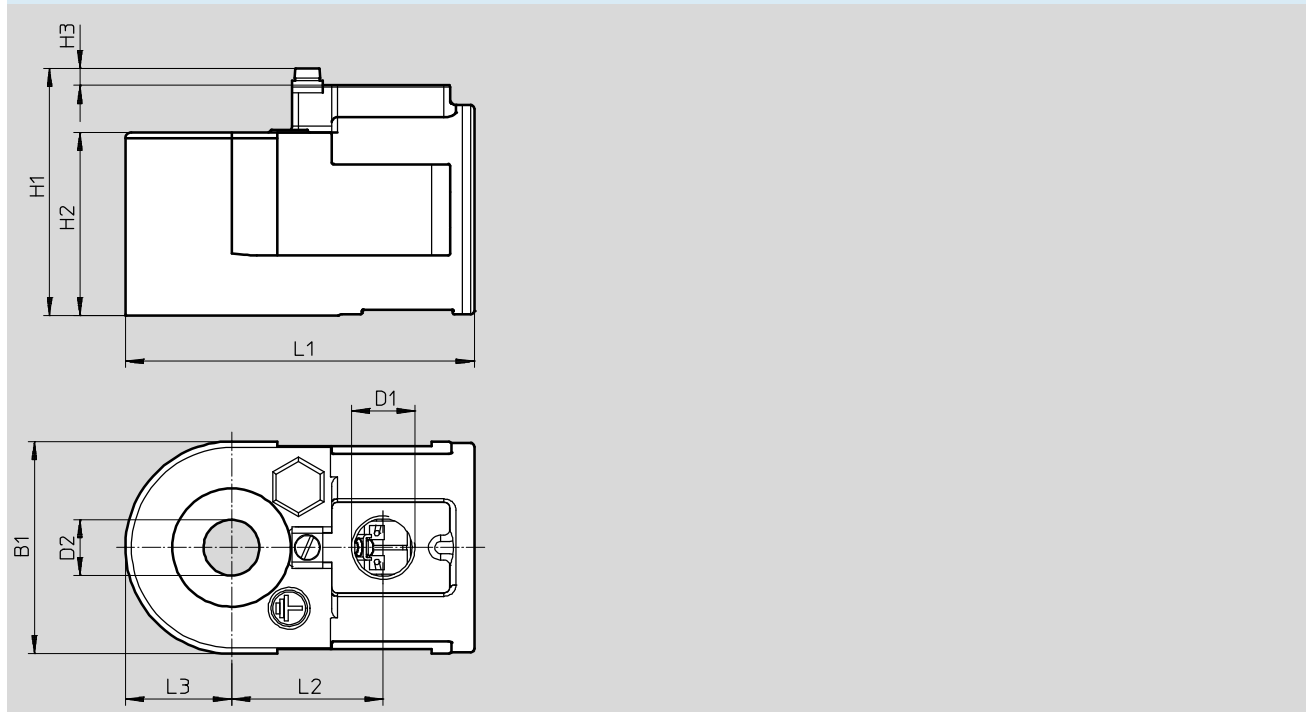
# Solenoid coils VACC-S18-25-...-EX4D

Technical data

Operating and environmental conditions	
Corrosion resistance class CRC <sup>1)</sup>	4
CE marking (see declaration of conformity) <sup>2)</sup>	To EU Explosion Protection Directive (ATEX)

- 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.
- 2) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

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



Type	B1	D1	D2 Ø	H1	H2	H3	L1	L2	L3
VACC-S18-25-K4-...U-EX4D	70	M20x1.5	18.2	82	60.5	6	115	50	35
VACC-S18-25-K5-...U-EX4D		1/2 NPT							



## Ordering data

	Description	Part No.	Type
	Terminal box, cable entry thread metric, M20x1.5	24 V AC/DC	<b>562903</b> VACC-S18-25-K4-1U-EX4D
		110 V AC/DC	<b>562904</b> VACC-S18-25-K4-2U-EX4D
		230 V AC/DC	<b>562905</b> VACC-S18-25-K4-3U-EX4D
	Terminal box, cable entry thread NPT, 1/2 NPT	24 V AC/DC	<b>562900</b> VACC-S18-25-K5-1U-EX4D
		110 V AC/DC	<b>562901</b> VACC-S18-25-K5-2U-EX4D
		230 V AC/DC	<b>562902</b> VACC-S18-25-K5-3U-EX4D

# Solenoid coils VACC-S18-70-...-EX4D

FESTO

Technical data

-  Voltage
    - 24 V AC/DC
    - 48 V AC/DC
    - 110 V AC/DC
    - 120 V AC/DC
    - 230 V AC/DC
  -  Temperature range
    - 20 ... +90 °C
- Nominal power  
7 watt at 24 V DC



General technical data	
Type of mounting	Via knurled nut
Type of actuation	Electrical
Mounting position	Any
Product weight	[g] 1700

Materials	
Housing	Wrought aluminium alloy, grey cast iron
Note on materials	Contains paint-wetting impairment substances RoHS compliant

Electrical data		
Electrical connection	K4	Terminal box, cable entry thread metric, M20x1.5
	K5	Terminal box, cable entry thread NPT, 1/2 NPT
Permissible voltage fluctuations	[%]	-15 ... 10
Duty cycle	[%]	100
Degree of protection to EN 60529		IP65
Insulation class		H

Characteristic coil data						
Nominal operating voltage		24 V AC/DC	48 V AC/DC	110 V AC/DC	120 V AC/DC	230 V AC/DC
Frequency	[Hz]	40/65	40/65	40/65	40/65	40/65
Power	[W]	7	7	7	7	7
	[VA]	7	7	7	7	7

ATEX		
ATEX category for gas	II 2G	
Type of ignition protection for gas	Ex d IIC T6, T5, T4 Gb	
ATEX category for dust	II 2D	
Type of ignition protection for dust	Ex tb IIIC T80°C, T95°C, T130°C Db	
Explosion ambient temperature	[°C]	T4, T130°C: -50°C ≤ Ta ≤ +90°C
		T5, T95°C: -50°C ≤ Ta ≤ +55°C
		T6, T80°C: -50°C ≤ Ta ≤ +40°C
Explosion protection certification outside the EU		EPL Db (BR), EPL Db (CN), EPL Db (IEC-EX), EPL Db (IN), EPL Db (KR)
		EPL Gb (BR), EPL Gb (CN), EPL Gb (IEC-EX), EPL Gb (IN), EPL Gb (KR)
Certificate issuing authority		NEPSI GYJ17.1236X
		BVS15ATEXE135
		IECEXBVS.15.0116
		PESO P396315
		INMETRO DNV 17.0040X
		KGS 16-GA4BO-0897X
		KGS 16-GA4BO-0896X



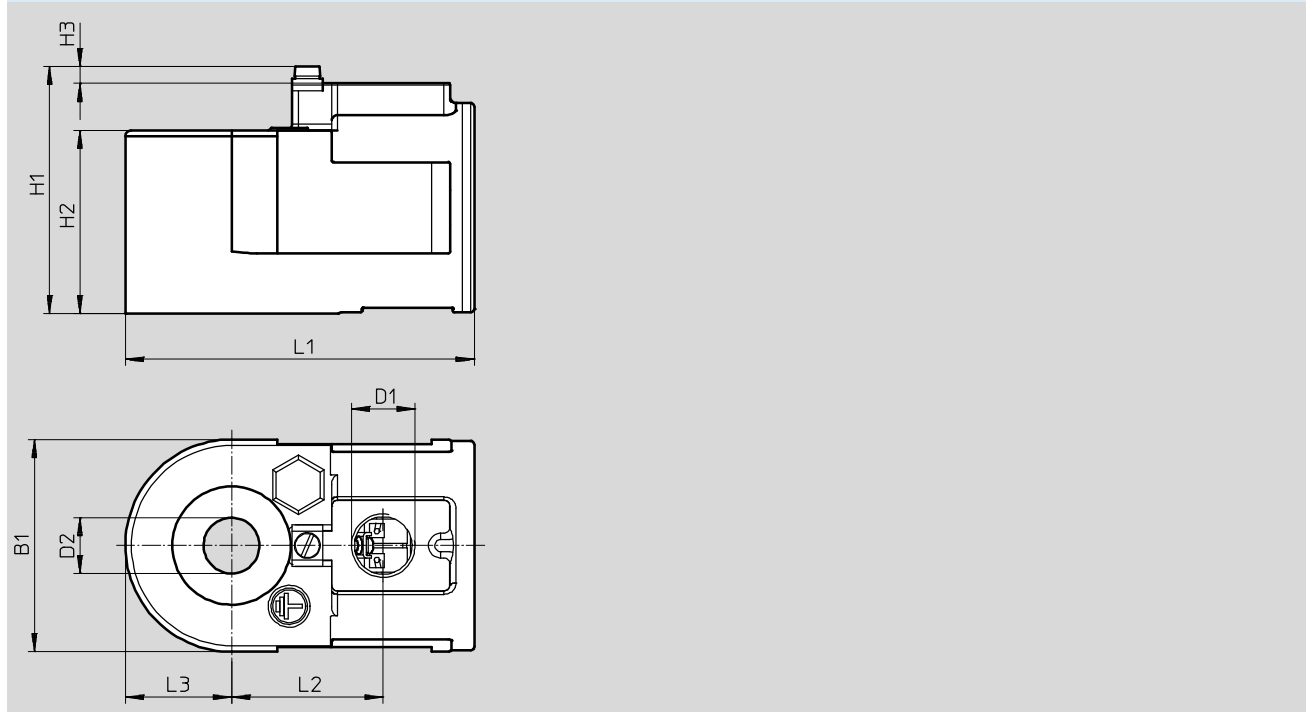
# Solenoid coils VACC-S18-70-...-EX4D

Technical data

Operating and environmental conditions	
Corrosion resistance class CRC <sup>1)</sup>	4
CE marking (see declaration of conformity) <sup>2)</sup>	To EU Explosion Protection Directive (ATEX)


- 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.
- 2) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

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



Type	B1	D1	D2 Ø	H1	H2	H3	L1	L2	L3
VACC-S18-70-K4-...-EX4D	70	M20x1.5	18.2	82	60.5	6	115	50	35
VACC-S18-70-K5-...-EX4D	70	1/2 NPT	18.2	82	60.5	6	115	50	35

## Ordering data

	Description	Part No.	Type
	Terminal box, cable fitting metric, M20x1.5	24 V AC/DC	<b>3504563</b> VACC-S18-70-K4-1U-EX4D
		48 V AC/DC	<b>3504574</b> VACC-S18-70-K4-7U-EX4D
		120 V AC/DC	<b>3504609</b> VACC-S18-70-K4-16U-EX4D
		230 V AC/DC	<b>3504639</b> VACC-S18-70-K4-3U-EX4D
	Terminal box, cable fitting NPT, 1/2 NPT	24 V AC/DC	<b>3546549</b> VACC-S18-70-K5-1U-EX4D
		48 V AC/DC	<b>3546588</b> VACC-S18-70-K5-7U-EX4D
		110 V AC/DC	<b>3546625</b> VACC-S18-70-K5-2U-EX4D
		230 V AC/DC	<b>3546662</b> VACC-S18-70-K5-3U-EX4D

# Solenoid coils VACC-S18-35-...-EX4ME

FESTO

Technical data

- L -	Voltage	Nominal power
	24 V AC/DC	3.4 watt at 24 V DC
	110 V AC/DC	
	230 V AC/DC	



General technical data	
Type of mounting	Via knurled nut
Type of actuation	Electrical
Mounting position	Any
Product weight	[g] 580

Materials	
Housing	PA, steel
Note on materials	Contains paint-wetting impairment substances RoHS compliant

Electrical data	
Electrical connection	Terminal box, cable entry thread metric, M20x1.5
Permissible voltage fluctuations	[%] -15 ... 10
Duty cycle	[%] 100
Degree of protection to EN 60529	IP65 with plug socket
Insulation class	H

Characteristic coil data					
Nominal operating voltage		24 V AC/DC	24 V AC/DC With fuse	110 V AC/DC	230 V AC/DC
Frequency	[Hz]	50/60	50/60	50/60	50/60
Power	[W]	3.5	3.5	3.5	3.5
	[VA]	3.5	3.5	3.5	3.5

ATEX	
ATEX category for gas	II 2G
Type of ignition protection for gas	Ex e mb II T6, T5
ATEX category for dust	II 2D
Type of ignition protection for dust	Ex tD A21 IP65 T80°C, T95°C
Explosion ambient temperature	[°C]
	T5, T95°C: -20°C ≤ Ta ≤ +60°C T6, T80°C: -20°C ≤ Ta ≤ +50°C
Explosion protection certification outside the EU	EPL Db (BR), EPL Db (CN), EPL Db (KR)
	EPL Gb (BR), EPL Gb (CN), EPL Gb (KR)
Certificate issuing authority	NEPSI GYJ17.1237X
	PTB 08 ATEX 2033 X
	INMETRO TÜV 12.1946X
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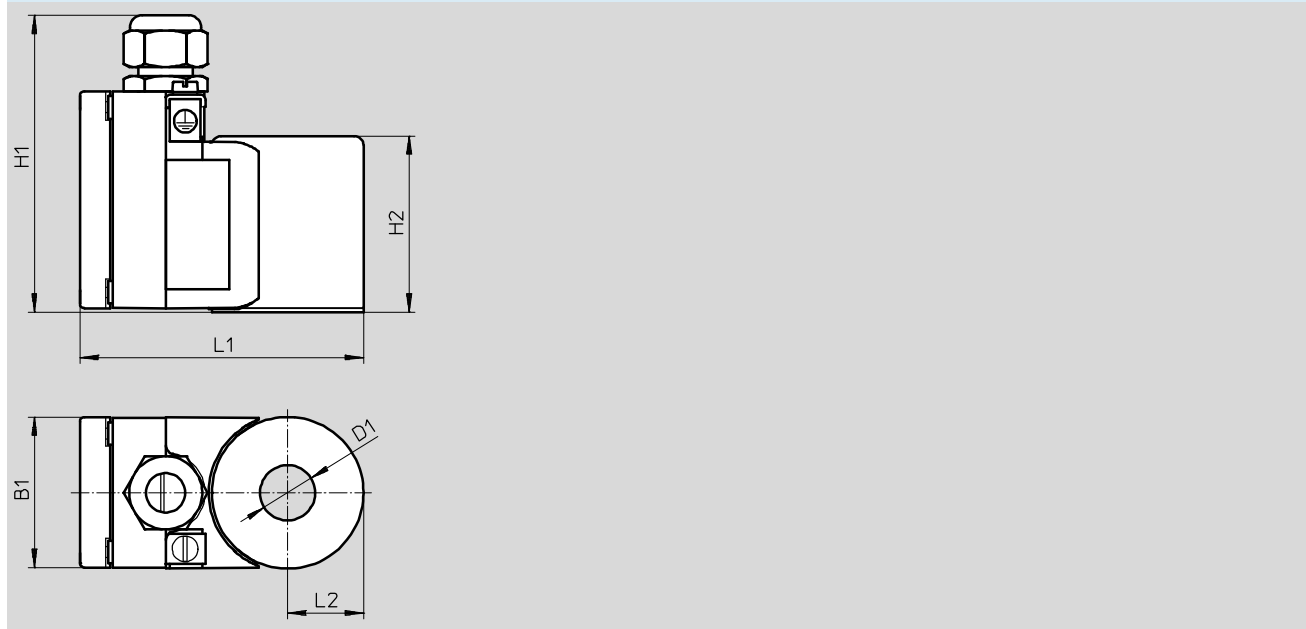
# Solenoid coils VACC-S18-35-...-EX4ME

Technical data

Operating and environmental conditions	
Corrosion resistance class CRC <sup>1)</sup>	4
CE marking (see declaration of conformity) <sup>2)</sup>	To EU Explosion Protection Directive (ATEX)

- 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.
- 2) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

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



Type	B1	D1 Ø	H1	H2	L1	L2
VACC-S18-35-K4-...-EX4ME	50	18.2	100	58	95	25

Ordering data			
	Description	Part No.	Type
	Terminal box, cable entry thread metric, M20x1.5	24 V AC/DC	<b>562897</b> VACC-S18-35-K4-1U-EX4ME
		24 V AC/DC With fuse	<b>570785</b> VACC-S18-35-K4-1UF-EX4ME
		110 V AC/DC	<b>562898</b> VACC-S18-35-K4-2U-EX4ME
		230 V AC/DC	<b>562899</b> VACC-S18-35-K4-3U-EX4ME

# Solenoid coils VACC-S18-120-...-EX4ME

FESTO

Technical data



Voltage  
24 V AC/DC  
48 V DC  
60 V DC  
110 V AC/DC  
230 V AC/DC

Nominal power  
12.0 watt at 24 V DC



General technical data	
Type of mounting	Via knurled nut
Type of actuation	Electrical
Mounting position	Any
Product weight	[g] 580

Materials	
Housing	PA, steel
Note on materials	Contains paint-wetting impairment substances RoHS compliant

Electrical data	
Electrical connection	Terminal box, cable entry thread metric, M20x1.5
Permissible voltage fluctuations	[%] -15 ... 10
Duty cycle	[%] 100
Degree of protection to EN 60529	IP65 with plug socket
Insulation class	H

Characteristic coil data							
Nominal operating voltage		24 V AC/DC	24 V AC/DC With fuse	48 V AC/DC	60 V AC/DC	110 V AC/DC	230 V AC/DC
Frequency	[Hz]	50/60	50/60	-	-	50/60	50/60
Power	[W]	12	12	12	12	12	12
	[VA]	12	12	-	-	12	12

ATEX	
ATEX category gas	II 2G
Type of ignition protection for gas	Ex e mb II T4
ATEX category for dust	II 2D
Type of ignition protection for dust	Ex tD A21 IP65 T130°C
Explosion ambient temperature	[°C] T4, T130°C: -20°C = Ta = +40°C
Explosion protection certification outside the EU	EPL Db (BR), EPL Db (CN), EPL Db (KR)
	EPL Db (BR), EPL Db (CN), EPL Db (KR)
Certificate issuing authority	NEPSI GYJ17.1237X
	PTB 08 ATEX 2033 X
	INMETRO TÜV 12.1946X
	KGS 16-GA4BO-0756X KGS 16-GA4BO-0755X

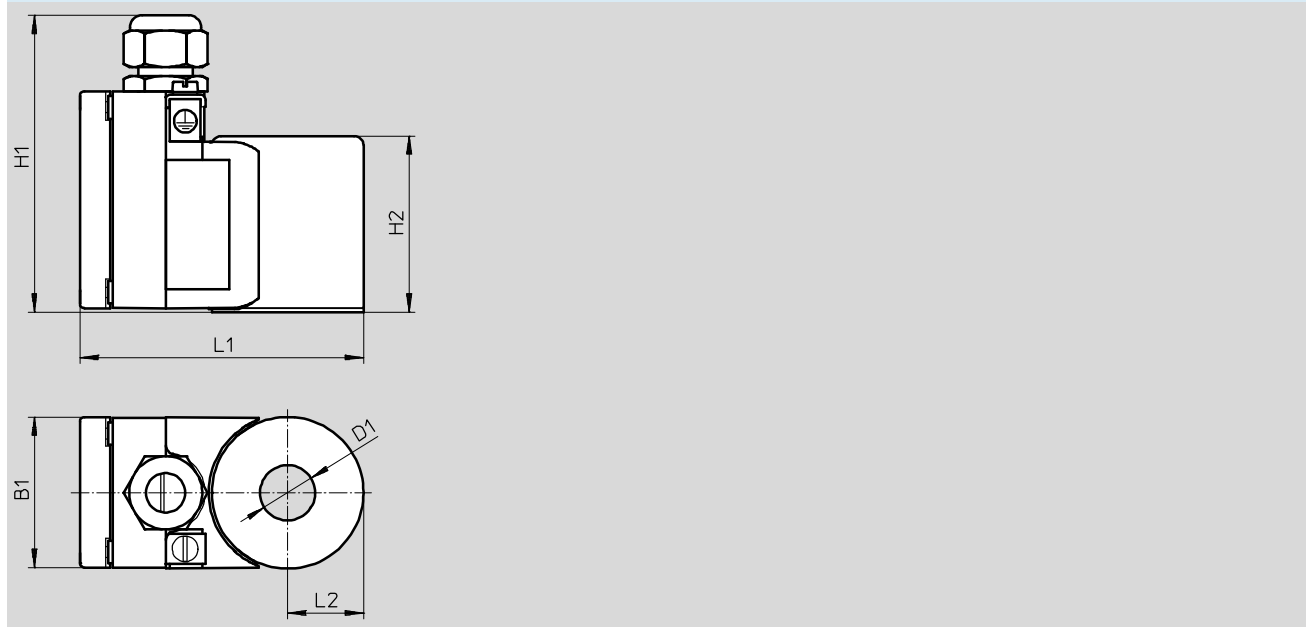
# Solenoid coils VACC-S18-120-...-EX4ME

Technical data

Operating and environmental conditions	
Corrosion resistance class CRC <sup>1)</sup>	4
CE marking (see declaration of conformity) <sup>2)</sup>	To EU Explosion Protection Directive (ATEX)

- 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.
- 2) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

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



Type	B1	D1 Ø	H1	H2	L1	L2
VACC-S18-120-K4-...-EX4ME	50	18.2	100	58	95	25

Ordering data			
	Description	Part No.	Type
	Terminal box, cable entry thread metric, M20x1.5	24 V AC/DC	<b>3536527</b> VACC-S18-120-K4-1U-EX4ME
		24 V AC/DC With fuse	<b>3535840</b> VACC-S18-120-K4-1UF-EX4ME
		48 V DC	<b>3536573</b> VACC-S18-120-K4-7-EX4ME
		60 V DC	<b>3536569</b> VACC-S18-120-K4-27-EX4ME
		110 V AC/DC	<b>3536565</b> VACC-S18-120-K4-2U-EX4ME
		230 V AC/DC	<b>3536568</b> VACC-S18-120-K4-3U-EX4ME

# Solenoid coils VACC-S18-70-...-U2D

FESTO

Technical data

- L - Voltage  
24 V DC  
48 V DC  
125 V DC  
220 V DC

Nominal power  
7.0 watt at 24 V DC



General technical data	
Type of mounting	Via knurled nut
Type of actuation	Electrical
Mounting position	Any
Product weight [g]	1700

Materials	
Housing	Grey cast iron, wrought aluminium alloy
Note on materials	Contains paint-wetting impairment substances RoHS compliant

Electrical data	
Electrical connection	Terminal box, cable entry thread 1/2 NPT
Permissible voltage fluctuations [%]	-15 ... 10
Duty cycle [%]	100
Degree of protection to EN 60529	IP65 with plug socket
Insulation class	H

Characteristic coil data				
Nominal operating voltage	24 V DC	48 V DC	125 V DC	220 V DC
Power [W]	7.0	7.0	7.0	7.0

Operating and environmental conditions				
Nominal operating voltage	24 V DC	48 V DC	125 V DC	220 V DC
Corrosion resistance class CRC <sup>1)</sup>	4		4	
CE marking (see declaration of conformity) <sup>2)</sup>	-		To EU Low Voltage Directive	

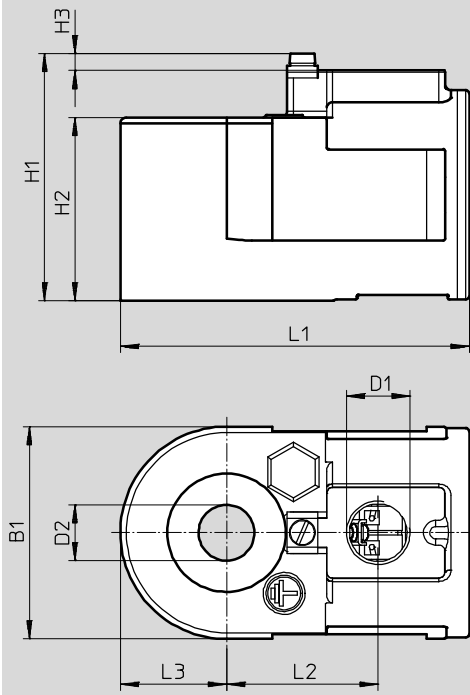
- 1) Corrosion resistance class CRC 4 to Festo standard FN 940070  
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, for instance in the chemical or food industries. These applications may need to be supported by special tests (→ also FN 940082) using appropriate media.
- 2) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

# Solenoid coils VACC-S18-70-...-U2D

Technical data


## Dimensions

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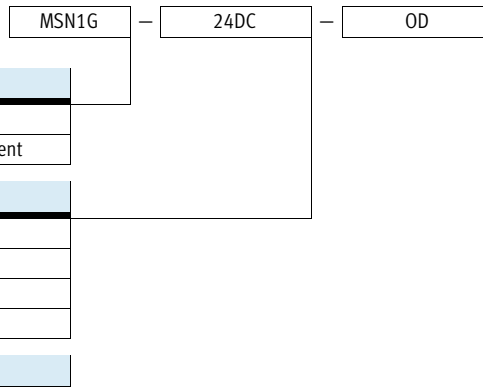
Type	B1	D1	D2 ∅	H1	H2	H3	L1	L2	L3
VACC-S18-70-K5-...-U2D	70	1/2 NPT	18.2	82	60.5	6	115	50	35

## Ordering data

Description	Part No.	Type
	Terminal box, cable entry thread 1/2 NPT	
	24 V DC	<b>3546816</b> VACC-S18-70-K5-1-U2D
	48 V DC	<b>3546876</b> VACC-S18-70-K5-7-U2D
	125 V DC	<b>3546913</b> VACC-S18-70-K5-16-U2D
	220 V DC	<b>3546949</b> VACC-S18-70-K5-3-U2D

# 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 mark (see declaration of conformity) <sup>1)</sup>	–	–	–	To EU Low Voltage Directive		
Approval certificate	–	c UL us - Recognised (OL)	–	–		
Maritime classification <sup>1)</sup>	–	–	–	See certificate		

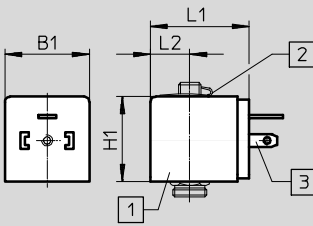
1) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

# Solenoid coils MSN1

Technical data

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




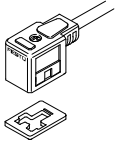
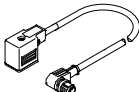




1 Solenoid coil  
 (can be rotated 360° on the armature tube)

2 Safety clip

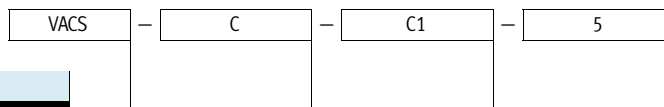
3 Plug pins with connection pattern to EN 175301-803, type A

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

Ordering data		Part No.	Type
<b>Solenoid coil</b>			
	Without plug socket, connection pattern to EN 175301-803, type A	24 V DC	<b>123060</b> <b>MSN1G-24DC-OD</b>
		12 V DC, 24 V AC	<b>170152</b> <b>MSN1W-24AC/12DC</b>
		110 V AC, 120 V AC	<b>123061</b> <b>MSN1W-110AC-OD</b>
		230 V AC	<b>123062</b> <b>MSN1W-230AC-OD</b>
<b>Plug socket</b>			
	Cable connection using clamping screws	<b>34583</b>	<b>MSSD-C</b>
	Cable connection using insulation displacement technology	<b>192748</b>	<b>MSSD-C-S-M16</b>
<b>Connecting cable</b>			
	Operating voltage 24 V DC, signal status display with LED	Cable length 0.6 m	<b>3679776</b> <b>NEBV-A1W3F-P-K-0.6-N-LE3</b>
		Cable length 2.5 m	<b>30931</b> <b>KMC-1-24DC-2,5-LED</b>
		Cable length 5 m	<b>30933</b> <b>KMC-1-24DC-5-LED</b>
		Cable length 10 m	<b>193459</b> <b>KMC-1-24-10-LED</b>
	Operating voltage up to 240 V	Cable length 0.6 m	<b>3579466</b> <b>NEBV-A1W3-K-0.6-N-LE3</b>
		Cable length 2.5 m	<b>30932</b> <b>KMC-1-230AC-2,5</b>
	Electrical connection 2, M12x1, A-coded Operating voltage 24 V DC, signal status display with LED	Cable length 0.3 m	<b>3679771</b> <b>NEBV-A1W3F-P-K-0.3-N-M12W3</b>
		Cable length 0.6 m	<b>3679772</b> <b>NEBV-A1W3F-P-K-0.6-N-M12W3</b>
	Electrical connection 2, M12x1, A-coded Operating voltage up to 240 V	Cable length 0.3 m	<b>3579461</b> <b>NEBV-A1W3-K-0.3-N-M12W3</b>
		Cable length 0.6 m	<b>3579462</b> <b>NEBV-A1W3-K-0.6-N-M12W3</b>
<b>Illuminating seal</b>			
	Operating voltage 12 ... 24 V DC	<b>19145</b>	<b>MC-LD-12-24DC</b>
	Operating voltage 230 V DC/V AC	<b>19146</b>	<b>MC-LD-230AC</b>
<b>Inscription label</b>			
	Scope of delivery: 35 labels in frames	<b>33362</b>	<b>KMC/F/V-BZ-35X</b>

# Solenoid coils VACS

Type codes



Type	
VACS	Solenoid coil, S series

Solenoid coil type	
C	Width 18 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

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-  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 in increments of 45° 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
Surge resistance [kV]		-	-	-	-	-	2.5	4

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 <sup>1)</sup>		2					2	
Degree of contamination		-					3	
CE marking (see declaration of conformity) <sup>2)</sup>		-					To EU Low Voltage Directive	
Certification		c UL us - Recognized (OL)		-	c UL us - Recognized (OL)		-	-

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.

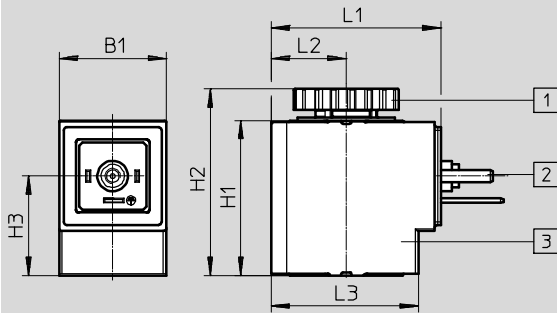
2) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

# Solenoid coils VACS

Technical data

## Dimensions

Download CAD data → [www.festo.com](http://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 in increments of 45° on the armature tube, push on in any direction)

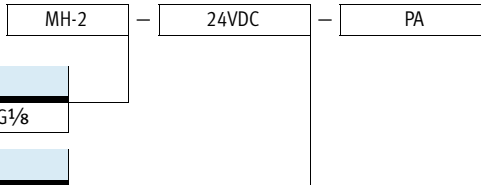
Type	B1	H1	H2	H3	L1	L2	L3
VACS-C-C1-...	17.6	25.4	30.6	16.3	27.8	12.3	24.1

## Ordering data

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

# Solenoid coils MH-2



Type codes



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
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]	7.9	-	-
	[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 mark (see declaration of conformity) <sup>1)</sup>		-	To EU Low Voltage Directive	

2) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

# Solenoid coils MH-2

Technical data

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## ★ Core product range

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

1 Lock nut (hex nut) G1/8  
2 Plug pattern to EN 175301-803, type A  
3 Solenoid coil

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
<b>Solenoid coil</b>				
	Without plug socket, connection pattern to EN 175301-803, type A	24 V DC	<b>549906</b>	<b>MH-2-24VDC-PA</b>
		110 V AC	<b>549907</b>	<b>MH-2-110VAC-PA</b>
		230 V AC	<b>549908</b>	<b>MH-2-230VAC-PA</b>
<b>Plug socket</b>				
	3-pin, square design, connection pattern to EN 175301-803, type A		★ <b>550067</b>	<b>MSSD-N</b>

Festo core product range

- ★ Generally ready for shipping ex works in 24 hours
- ☆ Generally ready for shipping ex works in 5 days




## Solenoid coils VACN-H1, VACN-X

Type codes

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

## Solenoid coils VACN-H1, VACN-X

Technical data

 Voltage  
24 V DC  
110, 240 V AC

- Can be replaced without interrupting the pneumatic circuit
- Connection pattern to EN 175301-803, type A
- For 14 mm armature tube



General technical data		
Type	VACN-H1	VACN-X
Type of mounting	Via lock nut	Via lock nut
Max. tightening torque of fitting [Nm]	2	2
Mounting position	Any	Any
Switching position indication	No	No
Product weight [g]	150	148

Materials		
Type	VACN-H1	VACN-X
Solenoid coil	Copper	Copper
	Steel	Steel
	Thermoplastic	Duroplast
Winding	Copper	Copper
Note on materials	Contains paint-wetting impairment substances	Contains paint-wetting impairment substances
	RoHS-compliant	RoHS-compliant

Electrical data	
Electrical connection	Plug
	Square design
	To EN 175301-803
	Type A
Permissible voltage fluctuations [%]	-10 / +10
Duty cycle [%]	100
Degree of protection	IP65
Note on degree of protection	In assembled state

Characteristic coil data							
		VACN-H1			VACN-X		
		24 V DC	110 V AC	230 V AC	24 V DC	110 V AC	230 V AC
Frequency [Hz]		-	50	50/60	-	60	60
Permissible frequency fluctuations [%]		-10 / +10	-10 / +10	-10 / +10	-10 / +10	-10 / +10	-10 / +10
Power [W]		11.9	-	-	12.0	-	-
	[VA]	-	-	-	-	18.5	18.8
Pickup power [VA]		-	36	36	-	-	-
Holding power [VA]		-	21.4	21.8	-	-	-
Power factor cos(phi)		0.7	0.7	0.7	0.7	0.7	0.7
Surge resistance [kV]		-	2.5	4	-	2.5	4
Min. pickup time [ms]		12	12	12	12	12	12

# Solenoid coils VACN-H1, VACN-X

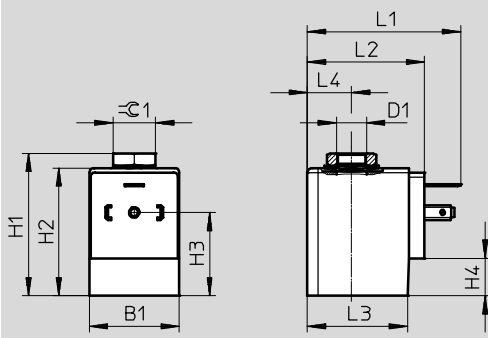
Data sheet

		VACN-H1			VACN-X		
		24 V DC	110 V AC	230 V AC	24 V DC	110 V AC	230 V AC
Ambient temperature	[°C]	-20 ... +50			-20 ... +60		
	[°C]	-20 ... +60 (with limited duty cycle)			-		
Corrosion resistance class CRC <sup>1)</sup>		4			2		
Contamination level		-	3		-	3	
CE marking (see declaration of conformity) <sup>2)</sup>		-	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.  
 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.
- 2) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.





## Dimensions

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



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	A/F 14
VACN-X-A1-...	29.5	M10x1	46.9	42	27.4	12.4	50.4	38.4	32.9	14.5	14 mm

## Ordering data

	Description	Retaining nut thread	Part no.	Type
<b>Solenoid coil</b>				
	Without plug socket, connection pattern to EN 175301-803, type A	24 V DC	G1/8	<b>8022877</b> VACN-H1-A1-1
			M10x1	<b>8049752</b> VACN-X-A1-1
		110 V AC	G1/8	<b>8022878</b> VACN-H1-A1-2A
			M10x1	<b>8049753</b> VACN-X-A1-2A 
		230 V AC	G1/8	<b>8022879</b> VACN-H1-A1-3A 
			M10x1	<b>8049754</b> VACN-X-A1-3A 



# Solenoid coils MD-2

Type codes

		MD-2	–	24VDC	–	PA
<b>Type</b>						
MD-2	Solenoid coil with knurled nut M8x0.75					
<b>Operating voltage</b>						
24VDC	24 V DC					
110VAC	110 V AC					
230VAC	230 V AC					
<b>Electrical connection</b>						
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
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]	6.8	-	-
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	
CE mark (see declaration of conformity) <sup>1)</sup>	-	To EU Low Voltage Directive	

1) Additional information [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

# Solenoid coils MD-2

Technical data



FESTO

## ★ Core product range

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

1 Knurled nut M8x0.75  
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
<b>Solenoid coil</b>			
	Without plug socket, connection pattern to EN 175301-803, type A	24 V DC	★ <b>549903</b> <b>MD-2-24VDC-PA</b>
		110 V AC	<b>549904</b> <b>MD-2-110VAC-PA</b>
		230 V AC	<b>549905</b> <b>MD-2-230VAC-PA</b>
<b>Plug socket</b>			
	3-pin, square design, connection pattern to EN 175301-803, type A	★ <b>550067</b>	<b>MSSD-N</b>

Festo core product range

- ★ Generally ready for shipping ex works in 24 hours
- ☆ Generally ready for shipping ex works in 5 days