

## Solenoid coils

# FESTO



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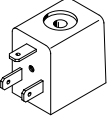
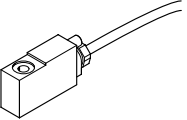
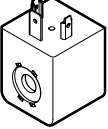
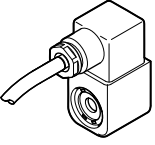
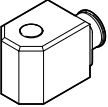

Quickest delivery – wherever, whenever  
Expected high Festo quality  
Easy and fast to select


With the Festo Core Range, we have selected the most important products and functions from our broad product catalogue, and added the quickest delivery.

The Core Range offers you the best value for your automation tasks.

Just look  
for the  
star!

Product range overview

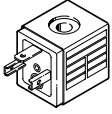
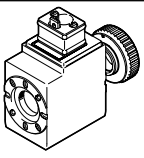
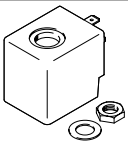
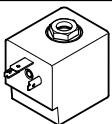
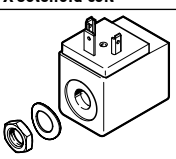
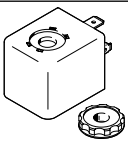
Design	Type	For valve series										→ Page/ Internet
		MFH	MOFH	JMFH	JMFDH	NVF3	MUFH	VOFD	VOFC	VSNC	VUVS	
<b>F solenoid coil</b>												
	MSF	■	■	■	■	■	■	-	-	-	-	5
	VACF	-	-	-	-	-	-	-	-	■	■	11 10 15
<b>F solenoid coil for potentially explosive atmospheres (→ certification)</b>												
	MSF...EX	■	■	■	■	■	■	-	-	-	-	8
	VACF...EX4-M	■	■	■	■	■	-	-	-	-	-	17
<b>N solenoid coil</b>												
	VACN-N	-	-	-	-	-	-	-	-	■	-	19
<b>N solenoid coil for potentially explosive atmospheres (→ certification)</b>												
	VACN...-EX2-N	-	-	-	-	-	-	-	-	■	-	22
	VACN...-U4-M	-	-	-	-	-	-	-	-	-	-	24
	VACN...-EX4-M	-	-	-	-	-	-	-	-	-	-	26
	VACN...-EX4-A	-	-	-	-	-	-	-	-	-	-	28
<b>C solenoid coil</b>												
	VACC-S13	-	-	-	-	-	-	■	■	-	-	30
	VACC-S18	-	-	-	-	-	-	■	-	-	-	37


 **Note**

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

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

## Product range overview

Design	Type	For valve series						→ Page/ Internet
		MN1H	JMN1H	JMN1DH	VZWM-L	VUVS	VZWE	
<b>N1 solenoid coil</b>								
	MSN1	■	■	■	-	-	-	53
<b>S solenoid coil</b>								
	VACS	-	-	-	-	■	-	55
<b>H solenoid coil</b>								
	MH-2	-	-	-	■	-	-	60
<b>H1 solenoid coil</b>								
	VACN-H1	-	-	-	-	-	■	62
<b>X solenoid coil</b>								
	VACN-X -V-	-	-	-	-	-	■	62
<b>D solenoid coil</b>								
	MD-2	-	-	-	■	-	-	65

 **Note**



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

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

## Selection aid

Solenoid valves and corresponding solenoid coils									
Valve series	Valve type	Solenoid coil							
		C	D	F	H	H1	N	N1	S
Standards-based valves to ISO 5599-1	MN1H, JMN1H, JMN1DH	-	-	-	-	-	-	■	-
	MFH, JMFH, JMFDH	-	-	■	-	-	-	-	-
	MDH, JMDH	-	■	-	-	-	-	-	-
Standards-based NAMUR valves	NVF3	-	-	■	-	-	-	-	-
	MN1H	-	-	-	-	-	-	■	-
Solenoid valves for process automation	VOFC	■	-	-	-	-	-	-	-
	VOFD	■	-	-	-	-	-	-	-
	VSNC	-	-	■	-	-	■	-	-
Tiger 2000	MFH, JMFH	-	-	■	-	-	-	-	-
Tiger Classic	MFH, MOFH, JMFH, JMFDH	-	-	■	-	-	-	-	-
Directly actuated solenoid valves	MDH, MODH	-	■	-	-	-	-	-	-
VS series	VUVS	-	-	■	-	-	-	-	■
M5 compact system	MUFH	-	-	■	-	-	-	-	-
Process control valves	VZWM-L	-	■	-	■	-	-	-	-
	VZWE	-	-	-	-	■	-	-	-

## Data sheet

-  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 changed 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 to industry standard, type B	Plug to EN 175301, type A
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	-	-	-	-	-	-
Pickup 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 area of use, see the EC declaration of conformity at: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

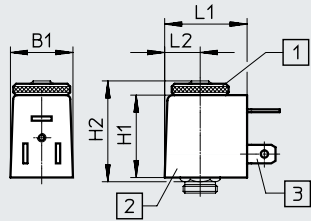
If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.

2) Additional information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

Data sheet

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 ≥ 26 x 16 x 14 mm

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


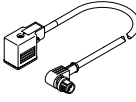
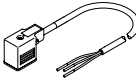

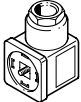
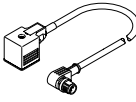
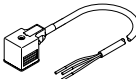

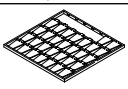
Ordering data

Description	Operating voltage	Part no.	Type	
<b>Solenoid coil, plug 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	
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 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 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/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

## Data sheet

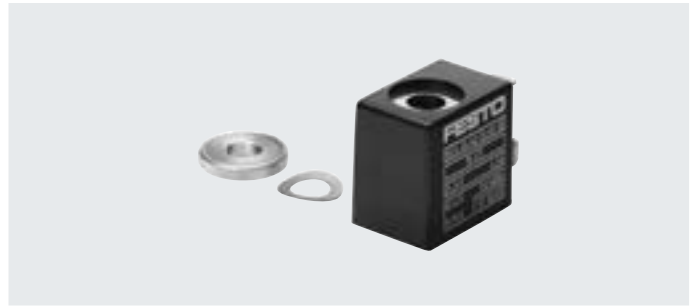
## ★ Core Range

Ordering data		Description	Cable length [m]	Part no.	Type	
<b>Accessories for solenoid coil with electrical connection to industry standard, type B</b>						
	Angled socket	Screw terminal	Cable connector Pg9	–	★ 34431	MSSD-F
			Cable connector M16	–	59710	MSSD-F-M16
		Insulation displacement technology	Cable connector M16	–	192746	MSSD-F-S-M16
	PUR cable sheath, connection technology M12x1 A-coded	24 AC/DC	• Signal status indication	0.3	3679773	NEBV-B2W3F-P-K-0.3-N-M12W3
			• Protective circuit	0.6	3679774	NEBV-B2W3F-P-K-0.6-N-M12W3
		110 AC/DC	–	0.3	3579463	NEBV-B2W3-K-0.3-N-M12W3
			–	0.6	3579464	NEBV-B2W3-K-0.6-N-M12W3
	PUR cable sheath	24 AC/DC	• Signal status indication	0.6	3679778	NEBV-B2W3F-P-K-0.6-N-LE3
		230 AC/DC	–			
	PVC cable sheath	24 V DC	Signal status indication	2.5	★ 30935	KMF-1-24DC-2.5-LED
				5	30937	KMF-1-24DC-5-LED
230 V AC		–	10	193458	KMF-1-24DC-10-LED	
			2.5	30936	KMF-1-230AC-2.5	
	Illuminating seal	12 ... 24 V DC	Signal status indication	–	19143	MF-LD-12-24DC
		230 V DC/V AC	Signal status indication	–	19144	MF-LD-230AC
<b>Accessories for solenoid coil with electrical connection to EN 175301, type A</b>						
	Angled socket	Screw terminal	Cable connector Pg9	–	34583	MSSD-C
			Cable connector M16	–	539709	MSSD-C-M16
		Insulation displacement technology	Cable connector M16	–	192748	MSSD-C-S-M16
	PUR cable sheath, connection technology M12x1 A-coded	24 AC/DC	• Signal status indication	0.3	3679771	NEBV-A1W3F-P-K-0.3-N-M12W3
			• Protective circuit	0.6	3679772	NEBV-A1W3F-P-K-0.6-N-M12W3
		110 AC/DC	–	0.3	3579461	NEBV-A1W3-K-0.3-N-M12W3
			–	0.6	3579462	NEBV-A1W3-K-0.6-N-M12W3
	PUR cable sheath	24 AC/DC	• Signal status indication	0.6	3679776	NEBV-A1W3F-P-K-0.6-N-LE3
		230 AC/DC	–			
	PVC cable sheath	24 V DC	Signal status indication	2.5	30931	KMC-1-24DC-2.5-LED
				5	30933	KMC-1-24DC-5-LED
230 V AC		–	10	193459	KMC-1-24DC-10-LED	
			2.5	30932	KMC-1-230AC-2.5	
	Illuminating seal	12 ... 24 V DC	Signal status indication	–	19145	MC-LD-12-24DC
		230 V DC/V AC	Signal status indication	–	19146	MC-LD-230AC
<b>Inscription label</b>						
	–	Scope of delivery: 35 labels in frames		33362	KMC/F/V-BZ-35X	

## Data sheet



- In accordance with the ATEX Directive
- In accordance with VDE regulation 0580, insulation class F
- Plug connection
- Can be changed without interrupting the pneumatic circuit
- Manifold assembly permissible (minimum clearance 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 plug 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	-	-	-
Pickup 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 area of use, see the EC declaration of conformity at: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.

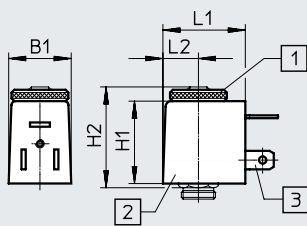
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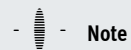
## Data sheet

ATEX	
ATEX category 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-proof 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

Description		Operating voltage	Part no.	Type
	Explosion-proof, without plug socket	24 V DC	536931	MSFG-24-EX
		24 V AC	536932	MSFW-24-50/60-EX
		110 V AC	536933	MSFW-110-50/60-EX
		230 V AC	536934	MSFW-230-50/60-EX

## Type codes

<b>001</b>	<b>Series</b>	
<b>VACF</b>	Solenoid coil, series F	

<b>002</b>	<b>Solenoid coil type</b>	
<b>B</b>	Solenoid coil, size 22/8	
<b>A</b>	Solenoid coil size 30/8	

<b>003</b>	<b>Electrical connection</b>	
<b>A1</b>	Connection pattern type A, to EN 175 301	
<b>B2</b>	Connection pattern type B, industry standard	
<b>C1</b>	Connection pattern type C, to EN 175 301	
<b>K1</b>	Cable	



<b>004</b>	<b>Nominal operating voltage</b>	
<b>5</b>	12 V DC	
<b>1</b>	24 V DC	
<b>1A</b>	24 V AC/50-60 Hz	
<b>7</b>	48 V DC	
<b>7A</b>	48 V AC/50-60 Hz	
<b>16B</b>	120 V AC/60 Hz and 110V AC/50-60 Hz	
<b>3A</b>	230 V AC/50-60 Hz	
<b>3W</b>	230 V AC/240 V AC/50-60 Hz	

<b>005</b>	<b>Cable length [m]</b>	
<b>1</b>	1	
<b>5</b>	5	
<b>10</b>	10	
<b>20</b>	20	

<b>006</b>	<b>EU certification</b>	
	None	
<b>EX4</b>	II 2GD	

<b>007</b>	<b>Type of ignition protection</b>	
	None	
<b>M</b>	Encapsulation	

## Data sheet

-  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 changed 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 plug 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	-	-	-	-
Pickup 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-TAA000011]					DNVGL-TAA000011]	

1) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

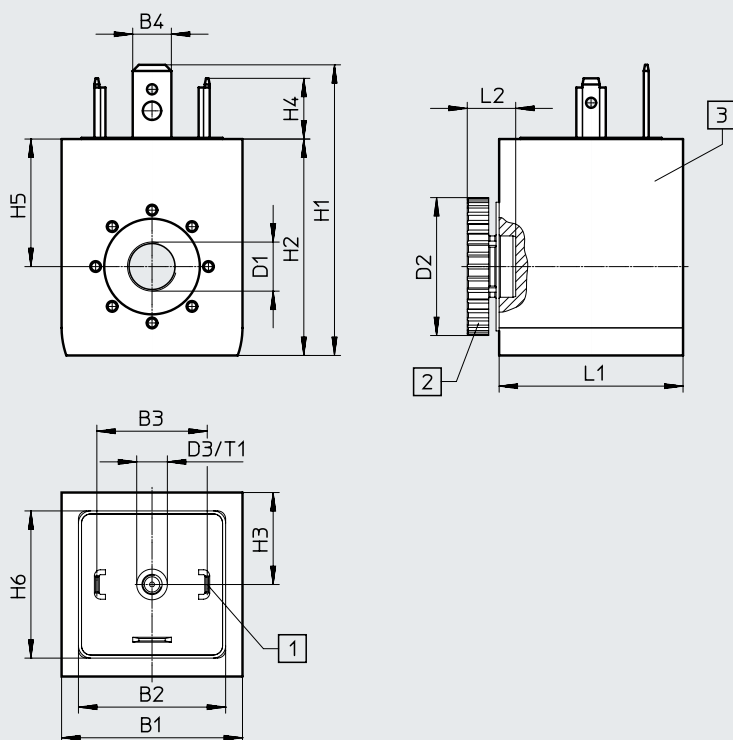
2) Additional information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

## Data sheet

### ★ Core Range

#### Dimensions

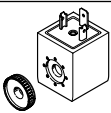
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- [1] Plug pattern to EN 175301-803, type A
- [2] Knurled nut (seal set for solenoid coil)
- [3] Solenoid coil  
(can be rotated in increments of 45° on the armature tube, can be pushed on in any direction)

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	Operating voltage	Product weight	Part no.	Type
<b>Solenoid coil</b>				
 Without plug socket, plug pattern to EN 175301-803, type A	12 V DC	83.1 g	8030821	VACF-A-A1-5
	24 V DC	82.6 g	★ 8030822	VACF-A-A1-1
	48 V DC	82.7 g	8030823	VACF-A-A1-7
	24 V AC	83.4 g	8030824	VACF-A-A1-1A
	48 V AC	82.3 g	8030825	VACF-A-A1-7A
	110/120 V AC	82.4 g	8030826	VACF-A-A1-16B
	230/240 V AC	79.2 g	8030828	VACF-A-A1-3W
<b>Seal set</b>				
To achieve protection to IP67	12.6 g	8034611	VAMC-B10-A-B-S8	

## Data sheet

-  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 changed 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 plug pattern to industry standard, type B (11 mm)
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	-	-	-	-
Pickup 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	
Pollution degree		-					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-TAA000011J					DNVGL-TAA000011J	

1) Corrosion resistance class CRC 2 to Festo standard FN 940070

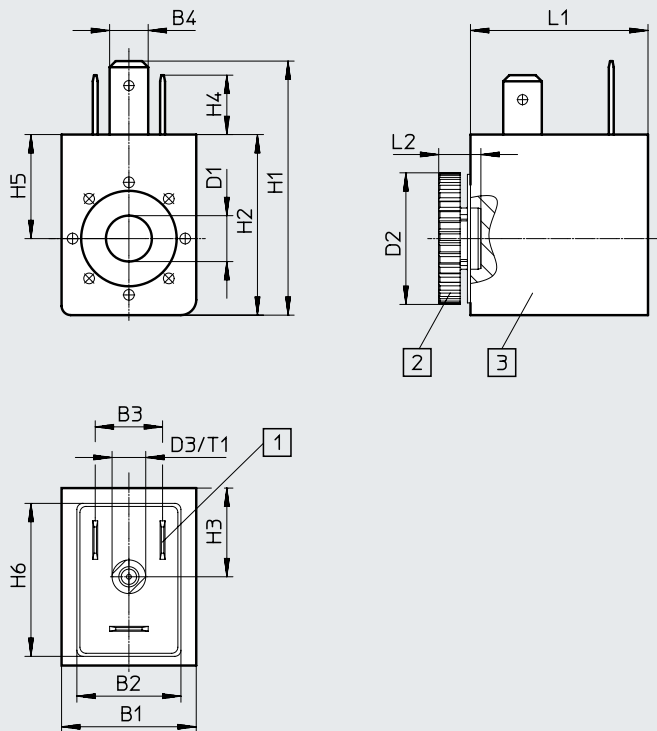
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

2) Additional information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

Data sheet

Dimensions

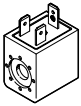

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- [1] Plug pattern to industry standard, type B
- [2] Knurled nut (seal set for solenoid coil)
- [3] Solenoid coil (can be rotated in increments of 45° on the armature tube, can be pushed on in any direction)

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	Operating voltage	Product weight	Part no.	Type
<b>Solenoid coil</b>				
 Without plug socket, plug pattern to industry standard, type B (11 mm)	12 V DC	55.6 g	8030801	VACF-B-B2-5
	24 V DC	56.5 g	8030802	VACF-B-B2-1
	48 V DC	55.9 g	8030803	VACF-B-B2-7
	24 V AC	55.8 g	8030804	VACF-B-B2-1A
	48 V AC	55.3 g	8030805	VACF-B-B2-7A
	110/120 V AC	52.3 g	8030806	VACF-B-B2-16B
	230/240 V AC	53 g	8030808	VACF-B-B2-3W
<b>Seal set</b>				
 To achieve protection to IP67	10 g	8034609	VAMC-B10-B-B-S8	

## Data sheet

-  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 changed 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 plug 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	–	–	–	–
Pickup 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

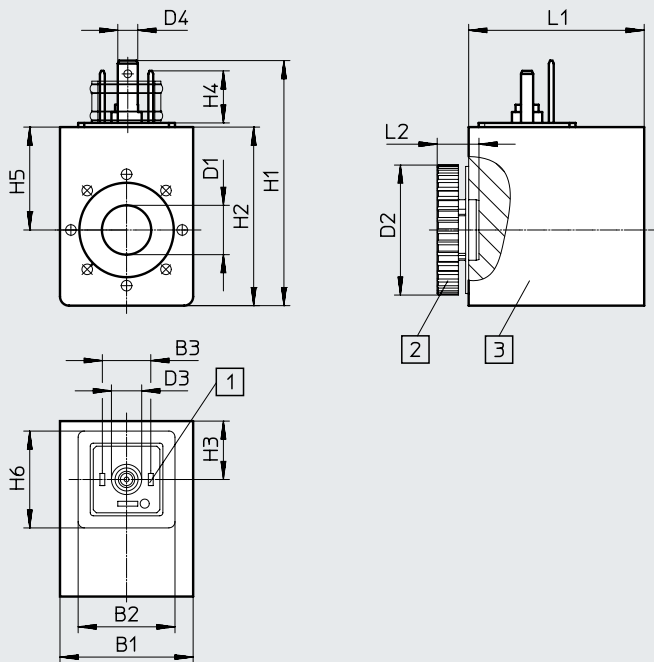
Operating voltage		12 V DC	24 V DC	48 V DC	24 V AC	48 V AC	110/120 V AC	230/240 V AC
Ambient temperature [°C]		-20 ... +50					-20 ... +50	
Corrosion resistance class CRC <sup>1)</sup>		2					2	
Pollution degree		–					3	
CE marking (see declaration of conformity) <sup>3)</sup>		–					To EU Low Voltage 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 can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.
- 2) For information about the area of use, see the EC declaration of conformity at: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.  
If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.
- 3) Additional information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

Data sheet

Dimensions

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- [1] Plug pattern to EN 175301-803, type C
- [2] Knurled nut (seal set for solenoid coil)
- [3] Solenoid coil  
(can be rotated 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

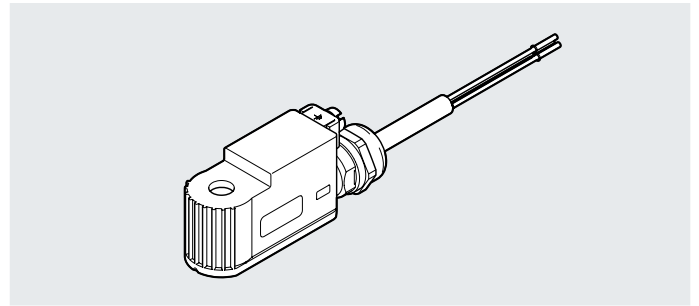
	Description	Operating voltage	Product weight	Part no.	Type
<b>Solenoid coil</b>					
	Without plug socket, plug pattern to EN 175301-803, type C	12 V DC	54.1 g	<b>8030810</b>	<b>VACF-B-C1-5</b>
		24 V DC	52.4 g	<b>8030811</b>	<b>VACF-B-C1-1</b>
		48 V DC	54.3 g	<b>8030812</b>	<b>VACF-B-C1-7</b>
		24 V AC	54 g	<b>8030813</b>	<b>VACF-B-C1-1A</b>
		48 V AC	53.5 g	<b>8030814</b>	<b>VACF-B-C1-7A</b>
		110/120 V AC	51 g	<b>8030815</b>	<b>VACF-B-C1-16B</b>
230/240 V AC	51.1 g	<b>8030817</b>	<b>VACF-B-C1-3W</b>		
<b>Seal set</b>					
	To achieve protection to IP67		10 g	<b>8034609</b>	<b>VAMC-B10-B-B-S8</b>



## Data sheet

-  Voltage  
24 V DC  
24 ... 230 V AC
-  Temperature range  
-30 ... +40°C

- In accordance with the ATEX Directive
- Can be changed 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 indication	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)
	To EU RoHS Directive

1) Corrosion resistance class CRC 0 to Festo standard FN 940070

No corrosion stress. Applies to small, visually unimportant standards-based parts such as threaded pins, circlips and clamping sleeves which are usually only available on the market in a phosphated or burnished version (and possibly oiled) as well as to ball bearings (for components < CRC 3) and plain bearings.

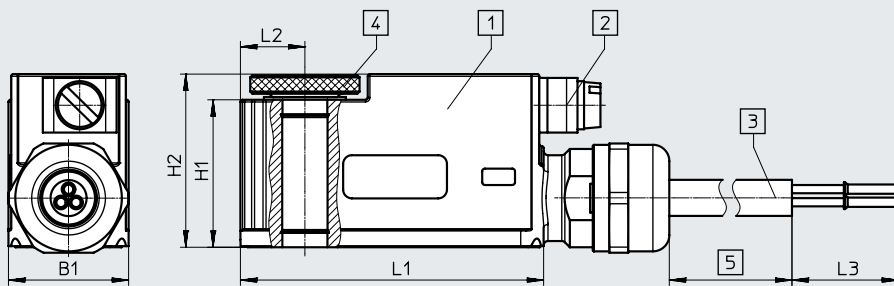
2) Additional information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

Data sheet

ATEX	
ATEX category 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-proof ambient temperature [°C]	-30 ≤ Ta ≤ +40
Explosion protection certification outside the EU	EPL Gb (IECEX)
	EPL Db (IEC Ex)
	EPL Gb (BR)
	EPL Db (BR)
	EPL Gb (CN)
Certificate issuing authority	IBExU 16 ATEX1146X
	IECEX IBE16.0024X
	DNV17.0013X
	GYJ17.1077X

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	8059804	VACF-B-K1-1-1-EX4-M
			5 m	8059805	VACF-B-K1-1-5-EX4-M
			10 m	8059806	VACF-B-K1-1-10-EX4-M
			20 m	8059807	VACF-B-K1-1-20-EX4-M
		24 V AC	1 m	8059808	VACF-B-K1-1A-1-EX4-M
			110 V AC	1 m	8059811
		230 V AC	5 m	8059812	VACF-B-K1-16B-5-EX4-M
			1 m	8059809	VACF-B-K1-3A-1-EX4-M
			5 m	8059810	VACF-B-K1-3A-5-EX4-M

## Type codes

<b>001</b>	<b>Series</b>
<b>VACN</b>	Solenoid coil, series N

<b>002</b>	<b>Solenoid coil type</b>
<b>N</b>	Solenoid coil N for armature tube 9 mm
<b>H1</b>	Solenoid coil H1 for armature tube 14 mm
<b>X</b>	Solenoid coil X for armature tube 14 mm

<b>003</b>	<b>Electrical connection</b>
<b>A1</b>	Connection pattern type A, to EN 175 301
<b>K1</b>	Cable
<b>K11</b>	Cable with insulating conduit connection

<b>004</b>	<b>Nominal operating voltage</b>
<b>1</b>	24 V DC
<b>2A</b>	110 V AC/50-60 Hz
<b>16B</b>	120 V AC/60 Hz and 110V AC/50-60 Hz
<b>3A</b>	230 V AC/50-60 Hz



<b>005</b>	<b>Cable length [m]</b>
<b>0.5</b>	0.5
<b>10</b>	10

<b>006</b>	<b>EU certification</b>
	None
<b>EX4</b>	II 2GD
<b>EX2</b>	II 3GD

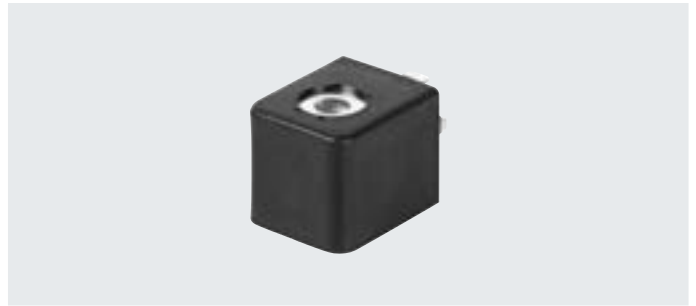
<b>007</b>	<b>Certification</b>
	None
<b>U4</b>	Class1 Div1 to NEC 500

<b>008</b>	<b>Type of ignition protection</b>
	None
<b>A</b>	Intrinsically safe
<b>M</b>	Encapsulation
<b>N</b>	Non-sparking

## Data sheet

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

- Can be changed 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 plug 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**

	24 V DC	110 V AC		230 V AC	
Frequency [Hz]	-	50	60	50	60
Power [W]	0.7	-	-	-	-
Pickup 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**

	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			
Pollution degree	-	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

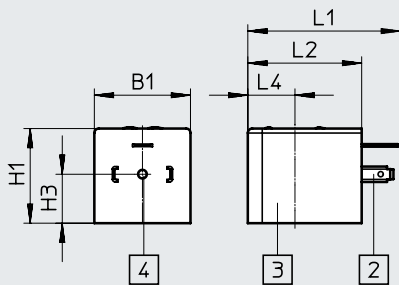
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

2) Additional information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

## Data sheet



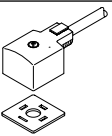
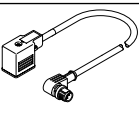

## ★ Core Range

## 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		Description	Part no.	Type
<b>Solenoid coil</b>				
	Without plug socket, plug pattern to EN 175301-803, type A	24 V DC	★ 8029144	VACN-N-A1-1
		110 V AC	8029134	VACN-N-A1-16B
		230 V AC	8029135	VACN-N-A1-3A
<b>Plug socket</b>				
	Operating voltage 230 V DC/VAC	Cable connector Pg9	34583	MSSD-C
		Cable connector M16	539709	MSSD-C-M16
		Operating voltage 24 V DC, Signal status indication with LED	Cable connector Pg11	177617
<b>Connecting cable</b>				
	Operating voltage 24 V DC, Signal status indication 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 230 V DC/VAC	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 2, M12x1, A-coded Operating voltage 24 V DC, Signal status indication 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
	Electrical connection 2, M12x1, A-coded Operating voltage 230 V DC/VAC	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>				
	Operating voltage 24 V DC	19145	MC-LD-12-24DC	
	Operating voltage 230 V DC/VAC	19146	MC-LD-230AC	

## Data sheet



- Non-sparking solenoid coil
- Category "II 3G" and "II 3D"
- Type of ignition protection for gas "Ex nA"
- ATEX certification
- Can be changed 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 plug 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**

		24 V DC			110 V AC		230 V AC	
Frequency [Hz]		–	50	60	50	60	–	–
Power [W]		2.1	–	–	–	–	–	–
Pickup 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

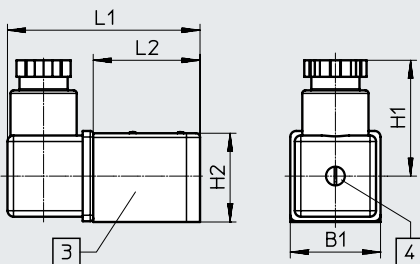
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

2) Additional information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

## Data sheet

ATEX	
ATEX category 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-proof ambient temperature [°C]	$-20 \leq T_a \leq +60$

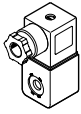
## Dimensions

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

	Description	Operating voltage	Part no.	Type
	With plug socket included in the scope of delivery, plug 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

## Data sheet



- Encapsulated solenoid coil with insulating conduit connection
- Explosion protection certification "Class I", "Class II" and "Class III"
- FM certification
- Can be changed 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			
Operating voltage	24 V DC	110 V AC	230 V AC
Frequency [Hz]	-	60	50
Power [W]	4.6	-	-
Pickup power [VA]	-	10	11.5
Holding power [VA]	-	6.8	8

Operating and environmental conditions			
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 can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

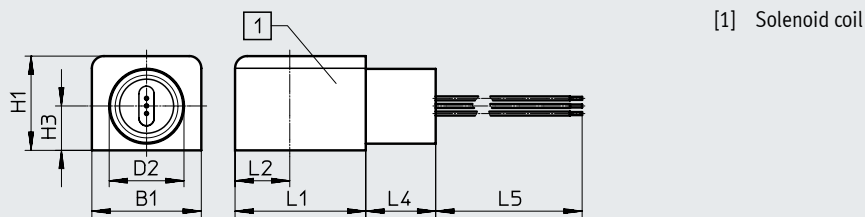
2) Additional information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.



## Data sheet

ATEX		
Type of ignition protection for gas	AEx m II T4 Ex m II T4	
Explosion-proof 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 (CA)
	Class II, Div. 1 (US)	Class II, Div. 1 (CA)
	Class III, Div. 1 (US)	Class III, 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	Operating voltage	Part no.	Type
	Moulded-in cable	24 V DC	8029146	VACN-N-K11-1-0.5-U4-M
		110 V AC	8029145	VACN-N-K11-16B-0.5-U4-M
		230 V AC	8029140	VACN-N-K11-3A-0.5-U4-M

## Data sheet



- Category "II 2G" and "II 2D"
- Type of ignition protection for gas "Ex mb"
- ATEX certification
- Can be changed 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	Steel, polymer
Winding	Copper
Note on materials	RoHS-compliant

Electrical data	
Electrical connection	Cable
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				
Operating voltage [V]	24 DC	110 AC	230 AC	
Frequency [Hz]	-	50/60	50/60	
Power [W]	2.6	-	-	
	[VA]	-	2.4	2.1

Operating and environmental conditions		
Cable length [m]	3	10
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) To EU RoHS Directive	
Maritime classification <sup>2)</sup>	See certificate	
Certificate issuing authority	DNVGL-TAA000011	-

1) Corrosion resistance class CRC 2 to Festo standard FN 940070

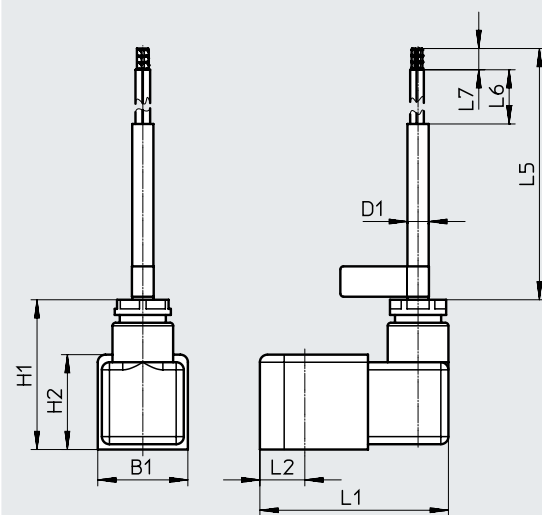
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

2) Additional information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

## Data sheet

ATEX		
Cable length [m]	3	10
ATEX category gas	II 2G	II 2G
Type of ignition protection for gas	Ex mb IIC T6 Gb	Ex mb IIC T6 Gb
ATEX category for dust	II 2D	II 2D
Type of ignition protection for dust	Ex mb tb IIIC T80°C Db	Ex mb tb IIIC T80°C Db
Explosion-proof ambient temperature [°C]	$-20 \leq Ta \leq +50$	$-20 \leq Ta \leq +50$
Explosion protection certification outside the EU	-	EPL Gb (IEC-EX)
	EPL Db (IEC-EX)	EPL Db (IEC-EX)
	EPL Gb (BR)	-
	EPL Db (BR)	-
Certificate issuing authority	IECEx PTB 15.0016X	IECEx PTB 15.0016X
	PTB 14 ATEX 2027 X	PTB 14 ATEX 2027 X

## Dimensions

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Type	B1	D1	H1	H2	L1	L2	L5	L6	L7
VACN-N-K1-1-EX4-M	29.7	7	49.3	31.3	67	14.8	3000	43	7
VACN-N-K1-1-10-EX4-M	29.7	7	49.3	31.3	67	14.8	10000	43	7
VACN-N-K1-16B-EX4-M	29.7	7	49.3	31.3	67	14.8	3000	43	7
VACN-N-K1-3A-EX4-M	29.7	7	49.3	31.3	67	14.8	3000	43	7

## Ordering data

	Description	Operating voltage	Cable length	Product weight	Part no.	Type
	With plug socket, with cable	24 V DC	3 m	353 g	<b>8029143</b>	<b>VACN-N-K1-1-EX4-M</b>
			10 m	762 g	<b>8141606</b>	<b>VACN-N-K1-1-10-EX4-M</b>
		110 V AC	3 m	353 g	<b>8029142</b>	<b>VACN-N-K1-16B-EX4-M</b>
			230 V AC	3 m	353 g	<b>8029141</b>

## Data sheet



- Intrinsically safe solenoid coil
- Category "II 2G" and "II 2D"
- Type of ignition protection for gas "Ex ia"
- ATEX certification
- Can be changed 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, plug 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**

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

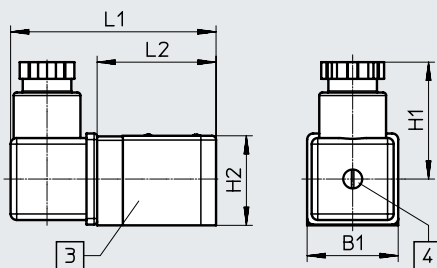
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

2) Additional information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

## Data sheet

ATEX	
ATEX category 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-proof ambient temperature	[°C] T4, T130°C: -40°C ≤ Ta ≤ +85°C
	[°C] T6, T80°C: -40°C ≤ Ta ≤ +50°C
Explosion protection certification outside the EU	EPL Gb (IEC-EX)
	EPL Db (IEC-EX)
	EPL Gb (IN)
	EPL Db (IN)
	EPL Db (CN)
	EPL Ga (BR)
Certificate issuing authority	DNV 15.0188
	IECEX PTB 15.0013
	PTB 09 ATEX 2043
	GYJ21.1326X

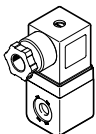
## Dimensions

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

	Description	Operating voltage	Part no.	Type
	Intrinsically safe solenoid coil with plug socket included in the scope of delivery, plug pattern to EN 175301-803, type A	24 V DC	<b>8029139</b>	<b>VACN-N-A1-1-EX4-A</b>

## Type codes

<b>001</b>	<b>Series</b>	
<b>VACC</b>	Solenoid valve, series C	

<b>002</b>	<b>Solenoid coil type</b>	
<b>S13</b>	Solenoid coil, shaft 13 mm	
<b>S18</b>	Solenoid valve, shaft 18 mm	

<b>003</b>	<b>Power consumption</b>	
<b>11</b>	1.1 W	
<b>18</b>	1.8 W	
<b>25</b>	2.5 W	
<b>35</b>	3.5 W	
<b>70</b>	7 W	
<b>120</b>	12 W	

<b>004</b>	<b>Electrical connection</b>	
<b>A1</b>	Connection pattern type A, to EN 175 301	
<b>K4</b>	Cable connector metric	
<b>K5</b>	Cable connector NPT	

<b>005</b>	<b>Nominal operating voltage</b>	
<b>1</b>	24 V DC	
<b>1A</b>	24 V AC/50-60 Hz	
<b>1U</b>	24 V DC and AC	
<b>2A</b>	110 V AC/50-60 Hz	
<b>2U</b>	110 V DC and AC	
<b>3</b>	230 V DC	
<b>3A</b>	230 V AC/50-60 Hz	
<b>3U</b>	230 V DC and AC	
<b>7</b>	48 V DC	
<b>7U</b>	48 V DC and AC	
<b>16</b>	120 V DC	
<b>16U</b>	120 V DC and AC	
<b>27</b>	60 V DC	
<b>27U</b>	60 V DC and AC	



<b>006</b>	<b>Circuitry</b>	
	None	
<b>F</b>	Fuse	

<b>007</b>	<b>EU certification</b>	
	None	
<b>EX4</b>	II 2GD	

<b>008</b>	<b>Certification</b>	
	None	
<b>U2</b>	cULus, hazardous environment, USA and Canada (NEC 500)	
<b>NE4</b>	NEPSI, II 2GD	
<b>NM4</b>	INMETRO, II 2GD	

<b>009</b>	<b>Type of ignition protection</b>	
	None	
<b>A</b>	Intrinsically safe	
<b>D</b>	Flameproof encapsulation	
<b>ME</b>	Encapsulation, enhanced security	

## Data sheet

-  -	Voltage	Nominal power
	24 V DC	2 watt at 24 V DC
	24 V AC/DC	
	110 V AC/DC	
	230 V AC/DC	
-  -	Temperature range	
	-20 ... +60°C	

**General technical data**

Type of mounting	Via knurled nut
Actuation type	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 plug 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**

Operating voltage	24 V DC	24 V AC/DC		110 V AC/DC		230 V AC/DC	
Frequency [Hz]	-	50/60	-	50/60	-	50/60	-
Power [W]	1.8	-	1.8	-	1.8	-	1.8
	[VA]	-	1.8	-	1.8	-	1.8

**Operating and environmental conditions**

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

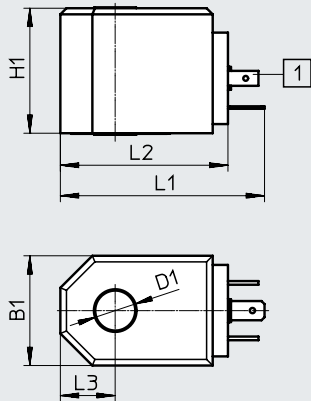
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

2) Additional information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

Data sheet

Dimensions

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[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

	Description	Operating voltage	Part no.	Type
	Plug type A, to EN 175301-803	24 V DC	562889	VACC-S13-18-A1-1
		24 V AC/DC	562890	VACC-S13-18-A1-1U
		110 V AC/DC	562891	VACC-S13-18-A1-2U
		230 V AC/DC	562892	VACC-S13-18-A1-3U



## Data sheet

Voltage  
14 ... 32 V DC

Nominal power  
0.22 ... 1.1 watt

- Intrinsically safe solenoid coil
- Type of ignition protection for gas "Ex ia"



### General technical data

Actuation type	Electrical
Mounting position	Any
Switching position indication	No
Product weight [g]	330

### Materials

Note on materials	Contains paint-wetting impairment substances
	RoHS-compliant

### Electrical data

Electrical connection	Terminal box, cable entry thread M20x1.5
Permissible voltage fluctuations [%]	-15 ... 10
Duty cycle [%]	100
Maximum input power, P <sub>i</sub> [W]	1.2
Maximum input voltage, U <sub>i</sub> [V]	32
Maximum input current, I <sub>i</sub> [A]	0.2
Required current consumption, I <sub>min</sub> [mA]	16
Degree of protection to EN 60529	IP65
Insulation class	H

### Characteristic coil data

Operating voltage [V DC]	14 ... 32
Power [W]	0.22 ... 1.1
Effective internal capacitance, C <sub>i</sub>	Negligibly low
Effective internal inductance, L <sub>i</sub>	Negligibly low

### Operating and environmental conditions

Type	VACC-S13-11-K4-1-EX4A	VACC-S13-11-K4-1-NE4A	VACC-S13-11-K4-1-NM4A
CE marking (see declaration of conformity) <sup>2)</sup>	To EU EMC Directive <sup>1)</sup>	-	-
	To EU Explosion Protection Directive (ATEX)	-	-

1) For information about the area of use, see the EC declaration of conformity at: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.

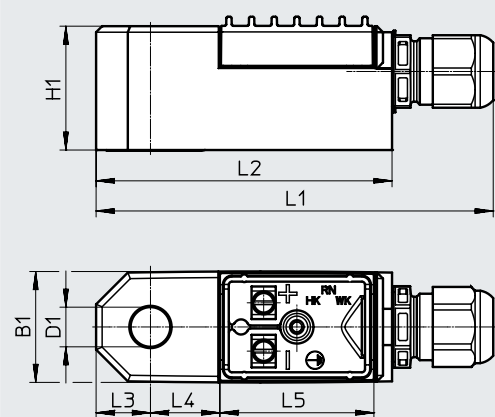
2) Additional information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

Data sheet

ATEX Type	VACC-S13-11-K4-1-EX4A	VACC-S13-11-K4-1-NE4A	VACC-S13-11-K4-1-NM4A
ATEX category gas	II 2G	-	-
Type of ignition protection for gas	Ex ia IIC T6, T5 Gb	Ex ia IIC T5/T6 Gb	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 IP65 Db	Ex iaD 21 T95/T80	Ex ia IIIC T80°C, T95°C IP65 Db
Explosion-proof ambient temperature	T5, T95°C: -30°C ≤ Ta ≤ +65°C	T5, T95°C: -30°C ≤ Ta ≤ +65°C	T5, T95°C: -30°C ≤ Ta ≤ +65°C
	T6, T80°C: -30°C ≤ Ta ≤ +50°C	T6, T80°C: -30°C ≤ Ta ≤ +50°C	T6, T80°C: -30°C ≤ Ta ≤ +50°C
Explosion protection certification outside the EU	EPL Db (IEC Ex)	-	-
	EPL Gb (IECEX)	-	-
Certificate issuing authority	BVS15 ATEXE030X	GYJ20.1094X	DNV 17.0043X
	IECEX BVS 15.0020X	-	-

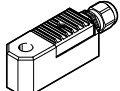
Dimensions

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



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

Ordering data

Description	Certification	Part no.	Type
 Terminal box, cable entry thread M20x1.5	To EU Explosion Protection Directive (ATEX)	<b>8109401</b>	<b>VACC-S13-11-K4-1-EX4A</b>
	NEPSI	<b>8114135</b>	<b>VACC-S13-11-K4-1-NE4A</b>
	INMETRO	<b>8114078</b>	<b>VACC-S13-11-K4-1-NM4A</b>

## Data sheet

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

- Encapsulated solenoid coil with enhanced safety
- Type of ignition protection for gas "Ex e mb"

Nominal power  
 1.8 watt

**General technical data**

Actuation type	Electrical
Mounting position	Any
Switching position indication	No
Product weight [g]	330

**Materials**

Note on materials	Contains paint-wetting impairment substances
	RoHS-compliant

**Electrical data**

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

**Characteristic coil data**

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]	50/60	-	50/60	-	50/60	-	50/60	-	50/60
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**

Type	VACC-S13-18-K4-...-EX4A	VACC-S13-18-K4-...-NE4ME	VACC-S13-18-K4-...-NM4ME
CE marking (see declaration of conformity) <sup>1)</sup>	To EU Explosion Protection Directive (ATEX)	-	-

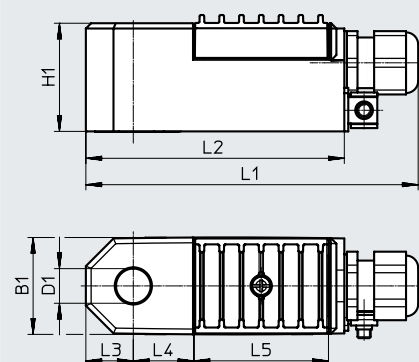
1) Additional information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

Data sheet

ATEX Type	VACC-S13-18-K4-...-EX4ME	VACC-S13-18-K4-...-NE4ME	VACC-S13-18-K4-...-NM4ME
ATEX category gas	II 2G	-	-
Type of ignition protection for gas	Ex eb mb IIC T6, T5, T4 Gb	Ex e mb IIC T4/T5/T6 Gb	Ex eb mb IIC T6, T5, T4 Gb
ATEX category for dust	II 2D	-	-
Type of ignition protection for dust	Ex tb IIIC T85°C, T95°C, T130°C Db	Ex tD A21 IP65 T130°C/T95°C/T85°C	Ex tb IIIC T85°C, T95°C, T130°C Db
Explosion-proof ambient temperature [°C]	T4, T130°C: -30°C ≤ Ta ≤ +60°C	T4, T130°C: -30°C ≤ Ta ≤ +60°C	T4, T130°C: -30°C ≤ Ta ≤ +60°C
	T5, T95°C: -30°C ≤ Ta ≤ +60°C	T5, T95°C: -30°C ≤ Ta ≤ +60°C	T5, T95°C: -30°C ≤ Ta ≤ +60°C
	T6, T85°C: -30°C ≤ Ta ≤ +50°C	T6, T85°C: -30°C ≤ Ta ≤ +50°C	T6, T85°C: -30°C ≤ Ta ≤ +50°C
Explosion protection certification outside the EU	EPL Db (IEC Ex)	-	-
	EPL Gb (IECEX)	-	-
Certificate issuing authority	BVS 15ATEXE029X	GYJ17.1235X	INMETRO DNV 17.0042X
	IECEX BVS 15.0075X	-	-

Dimensions

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




Type	B1	D1	H1	L1	L2	L3	L4	L5
VACC-S13-18-K4	37	13.1	41	126	98	18	23	51


Ordering data

	Description	Certification	Operating voltage	Internal fuse protection	Part no.	Type
	Terminal box, cable entry thread M20x1.5	To EU Explosion Protection Directive (ATEX)	24 V AC/DC	-	★ 8109396	VACC-S13-18-K4-1U-EX4ME
				Fuse	★ 8109399	VACC-S13-18-K4-1UF-EX4ME
			60 V AC/DC	-	★ 8109400	VACC-S13-18-K4-27U-EX4ME
				-	★ 8109397	VACC-S13-18-K4-2U-EX4ME
			230 V AC/DC	-	★ 8109398	VACC-S13-18-K4-3U-EX4ME
				-	-	-
		NEPSI	24 V AC/DC	-	8118329	VACC-S13-18-K4-1U-NE4ME
				Fuse	8118332	VACC-S13-18-K4-1UF-NE4ME
			60 V AC/DC	-	8118333	VACC-S13-18-K4-27U-NE4ME
				-	8118330	VACC-S13-18-K4-2U-NE4ME
			230 V AC/DC	-	8118331	VACC-S13-18-K4-3U-NE4ME
				-	-	-
INMETRO	24 V AC/DC	-	8118324	VACC-S13-18-K4-1U-NM4ME		
		Fuse	8118327	VACC-S13-18-K4-1UF-NM4ME		
	60 V AC/DC	-	8118328	VACC-S13-18-K4-27U-NM4ME		
		-	8118325	VACC-S13-18-K4-2U-NM4ME		
230 V AC/DC	-	8118326	VACC-S13-18-K4-3U-NM4ME			

## Data sheet

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

Nominal power  
3.6 watt at 24 V DC

-  Temperature range  
-20 ... +60°C

**General technical data**

Operating voltage	24 V DC	24 V AC	110 V AC	230 V AC
Type of mounting	Via knurled nut			
Actuation type	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 plug 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**

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**

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

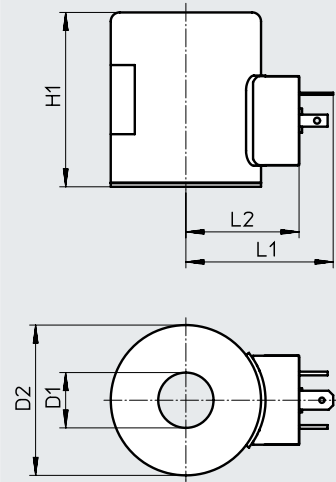
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

2) Additional information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

Data sheet


Dimensions

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





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	Operating voltage	Part no.	Type
	Plug type A, to EN 175301-803	24 V DC	562906	VACC-S1-35-A1-1
		24 V AC	562907	VACC-S18-35-A1-1A
		110 V AC	562908	VACC-S18-35-A1-2A
		230 V AC	562909	VACC-S18-35-A1-3A

## Data sheet

-  -	Voltage	Nominal power
	24 V DC	12 watt at 24 V DC
	24 V AC	
	110 V AC	
	230 V AC	
-  -	Temperature range	
	-20 ... +60°C	

**General technical data**

Type of mounting	Via knurled nut
Actuation type	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 plug 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**

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**

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

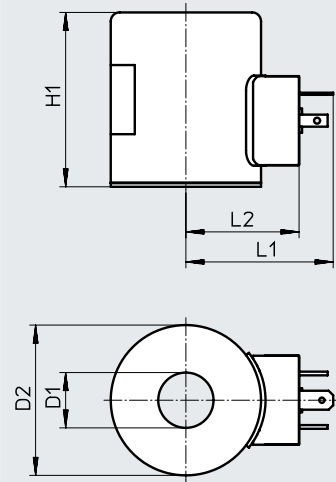
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

2) Additional information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

Data sheet


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	Operating voltage	Part no.	Type
	Plug type A, to EN 175301-803	24 V DC	8040580	VACC-S18-120-A1-1
		24 V AC	8040890	VACC-S18-120-A1-1A
		110 V AC	8040582	VACC-S18-120-A1-2A
		230 V AC	8040584	VACC-18-120-A1-3A



## Data sheet

Voltage  
230 V AC

Temperature range  
-50 ... +90°C

Nominal power  
3 watt at 230 V AC

- Solenoid coil with flame-proof enclosure
- ATEX category: "II 2G" and "II 2D"
- Type of ignition protection for gas "Ex d"



## General technical data

Type of mounting	Via knurled nut
Actuation type	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

Operating voltage [V AC]		230
Frequency [Hz]		50/60
Power [VA]		1.8

## ATEX

ATEX category 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-proof 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

## Data sheet

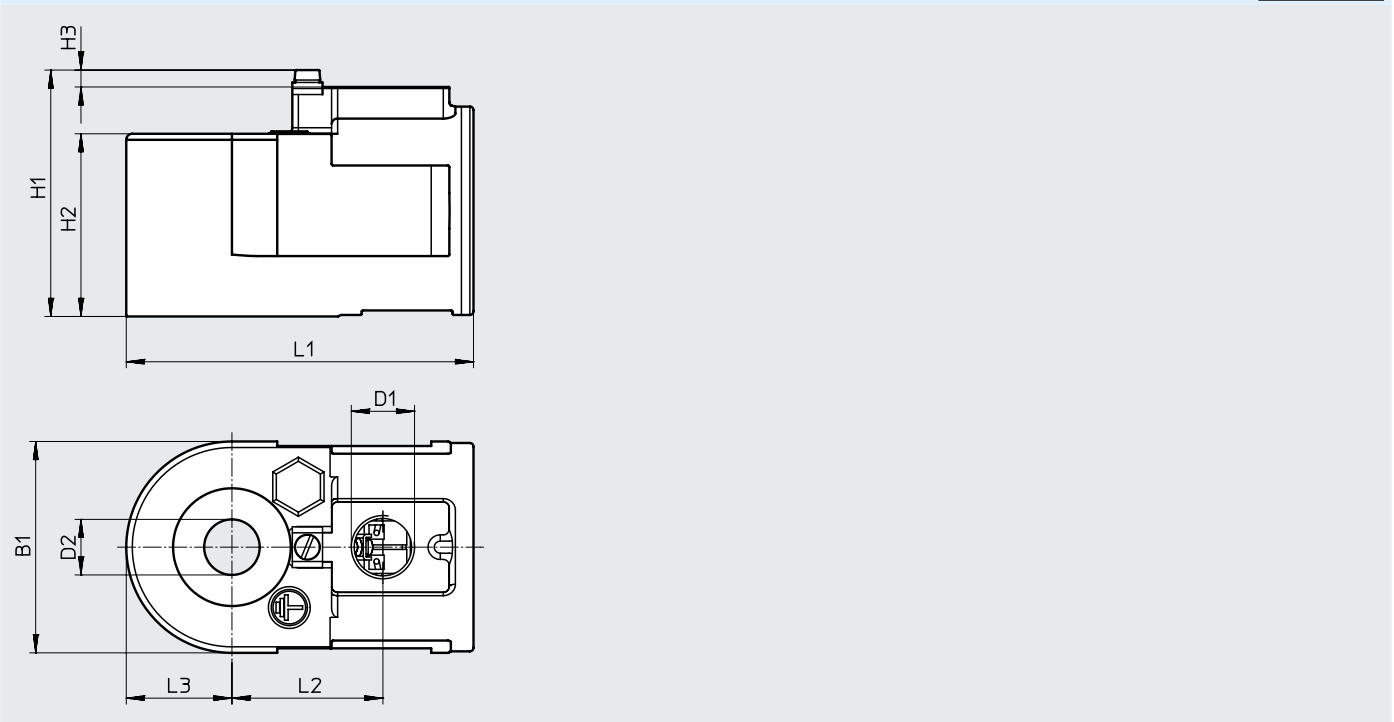
### Operating and environmental conditions

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, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.
- 2) Additional information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

### Dimensions

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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 connector metric, M20x1.5	3504741	VACC-S18-18-K4-3A-EX4D
	Terminal box, cable connector NPT, 1/2 NPT	3546734	VACC-S18-18-K5-3A-EX4D

## Data sheet

## Voltage

24 V AC/DC  
110 V AC/DC  
230 V AC/DC

## Temperature range

-20 ... +60°C

## Nominal power

2.5 W at 24 V DC

- Solenoid coil with flame-proof enclosure
- ATEX category: "II 2G" and "II 2D"
- Type of ignition protection for gas "Ex d"
- Explosion protection certification outside the EU EPL Db and EPL Gb



General technical data	
Type of mounting	Via knurled nut
Actuation type	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				
Operating voltage		24 V AC/DC	110 V AC/DC	230 V AC/DC
Frequency [Hz]		50/60	50/60	50/60
Power	[W]	2.5	2.5	2.5
	[VA]	2.5	2.5	2.5

ATEX	
ATEX category 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-proof 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

## Data sheet

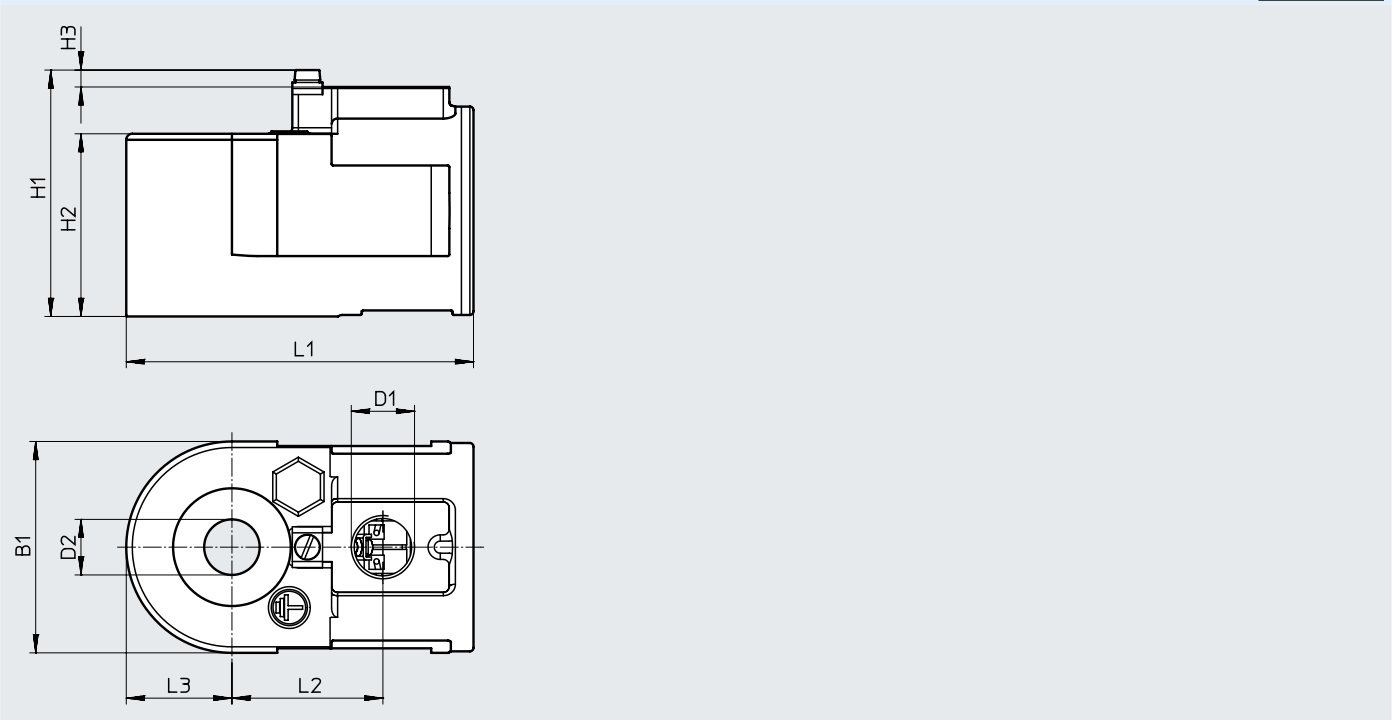
### Operating and environmental conditions

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, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.
- 2) Additional information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

### Dimensions

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Type	B1	D1	D2 ∅	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	Operating voltage	Part no.	Type
	Terminal box, cable entry thread metric, M20x1.5	24 V AC/DC	562903	VACC-S18-25-K4-1U-EX4D
		110 V AC/DC	562904	VACC-S18-25-K4-2U-EX4D
		230 V AC/DC	562905	VACC-S18-25-K4-3U-EX4D
	Terminal box, cable entry thread NPT, 1/2 NPT	24 V AC/DC	562900	VACC-S18-25-K5-1U-EX4D
		110 V AC/DC	562901	VACC-S18-25-K5-2U-EX4D
		230 V AC/DC	562902	VACC-S18-25-K5-3U-EX4D

## Data sheet

## Voltage

24 V AC/DC

48 V AC/DC

110 V AC/DC

120 V AC/DC

230 V AC/DC

- Solenoid coil with flame-proof enclosure
- ATEX category: "II 2G" and "II 2D"
- Type of ignition protection for gas "Ex d"
- Explosion protection certification outside the EU EPL Db and EPL Gb



## Temperature range

-20 ... +90°C

## Nominal power

7 W at 24 V DC

General technical data	
Type of mounting	Via knurled nut
Actuation type	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	
Operating voltage	24 V AC/DC   48 V AC/DC   110 V AC/DC   120 V AC/DC   230 V AC/DC
Frequency [Hz]	50/60   50/60   50/60   50/60   50/60
Power [W]	7   7   7   7   7
[VA]	7   7   7   7   7
ATEX	
ATEX category 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-proof 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 GY17.1236X BVS15ATEXE135 IECExBVS.15.0116 PESO P396315 INMETRO DNV 17.0040X KGS 16-GA4BO-0897X KGS 16-GA4BO-0896X

## Data sheet

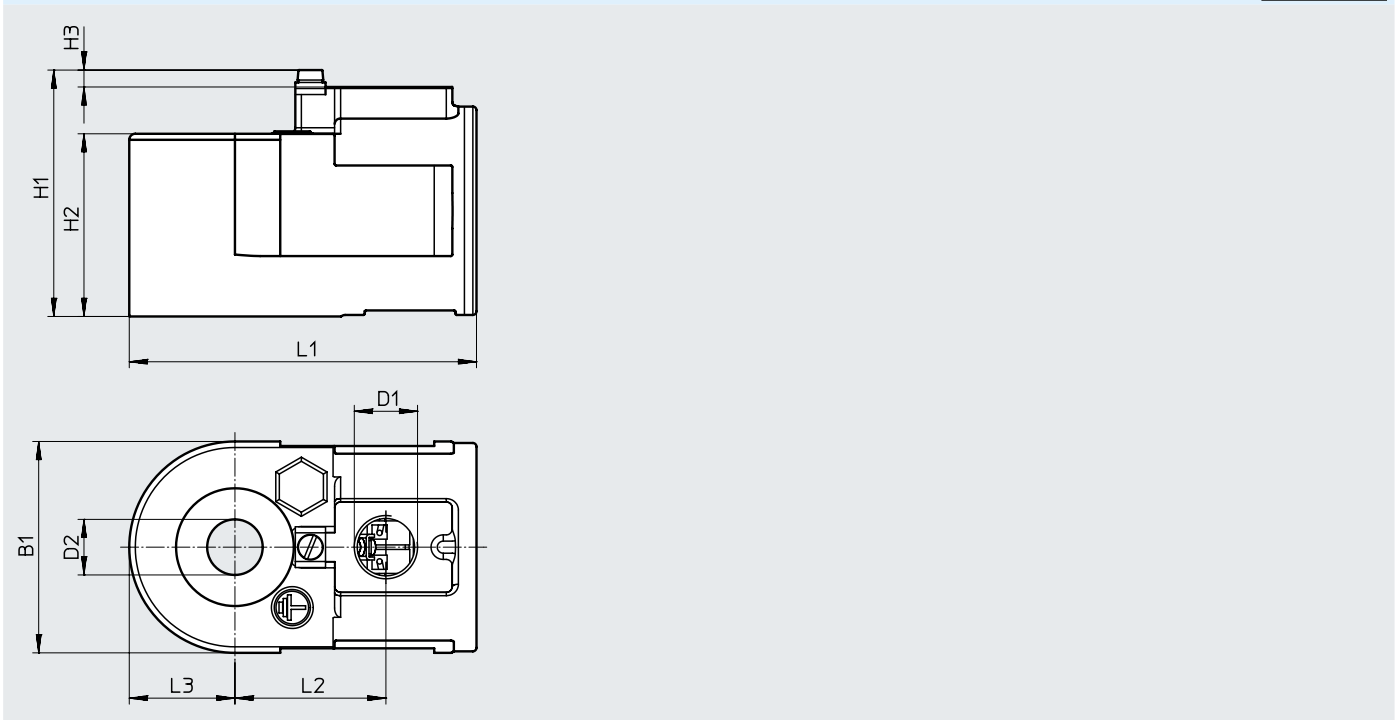
### Operating and environmental conditions

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, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.
- 2) Additional information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.


### Dimensions

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Type	B1	D1	D2 ∅	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	Operating voltage	Part no.	Type
	Terminal box, cable connector metric, M20x1.5	24 V AC/DC	3504563	VACC-S18-70-K4-1U-EX4D
		48 V AC/DC	3504574	VACC-S18-70-K4-7U-EX4D
		120 V AC/DC	3504609	VACC-S18-70-K4-16U-EX4D
		230 V AC/DC	3504639	VACC-S18-70-K4-3U-EX4D
	Terminal box, cable connector NPT, 1/2 NPT	24 V AC/DC	3546549	VACC-S18-70-K5-1U-EX4D
		48 V AC/DC	3546588	VACC-S18-70-K5-7U-EX4D
		110 V AC/DC	3546625	VACC-S18-70-K5-2U-EX4D
		230 V AC/DC	3546662	VACC-S18-70-K5-3U-EX4D

## Data sheet

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

- Encapsulated solenoid coil with enhanced safety

Nominal power  
3.5 watt



General technical data	
Actuation type	Electrical
Mounting position	Any
Switching position indication	No
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 M20x1.5
Permissible voltage fluctuations [%]	-15 ... 10
Duty cycle [%]	100
Degree of protection to EN 60529	IP66
Insulation class	H

Characteristic coil data		24 V AC/DC		24 V AC/DC With fuse		110 V AC/DC		230 V AC/DC	
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	-

Operating and environmental conditions			
Type	VACC-S18-35-K4-...-EX4A	VACC-S18-35-K4-...-NE4ME	VACC-S18-35-K4-...-NM4ME
CE marking (see declaration of conformity) <sup>1)</sup>	To EU Explosion Protection Directive (ATEX)	-	-

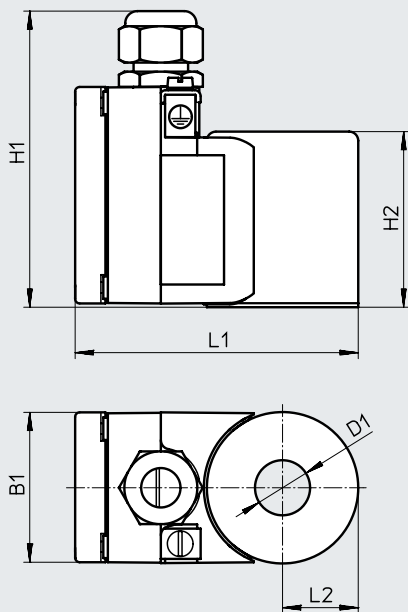
1) Additional information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

ATEX			
Type	VACC-S18-35-K4-...-EX4A	VACC-S18-35-K4-...-NE4ME	VACC-S18-35-K4-...-NM4ME
ATEX category gas	II 2G	-	-
Type of ignition protection for gas	Ex eb mb IIC T6, T5 Gb	Ex e mb IIC T5/T6 Gb	Ex eb mb IIC T6, T5 Gb
ATEX category for dust	II 2D	-	-
Type of ignition protection for dust	Ex tb IIIC T80°C, T95°C Db	Ex tD A21 IP66 T95°C/T80°C	Ex tb IIIC T80°C, T95°C Db
Explosion-proof ambient temperature [°C]	T5, T95°C: -25°C ≤ Ta ≤ +60°C T6, T80°C: -25°C ≤ Ta ≤ +50°C	T5, T95°C: -25°C ≤ Ta ≤ +60°C T6, T80°C: -25°C ≤ Ta ≤ +50°C	T5, T95°C: -25°C ≤ Ta ≤ +60°C T6, T80°C: -25°C ≤ Ta ≤ +50°C
Explosion protection certification outside the EU	EPL Db (IEC Ex) EPL Gb (IECEX)	- -	- -
Certificate issuing authority	BVS 16ATEXE036X IECEX BVS16.0028X	GY 17.1237X -	INMETRO DNV 19.0135X -

Data sheet

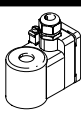
Dimensions

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



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

Ordering data

	Description	Certification	Operating voltage	Internal fuse protection	Part no.	Type
	Terminal box, cable entry thread M20x1.5	To EU Explosion Protection Directive (ATEX)	24 V AC/DC	-	<b>8109389</b>	VACC-S18-35-K4-1U-EX4ME
				Fuse	<b>8109388</b>	VACC-S18-35-K4-1UF-EX4ME
			110 V AC/DC	-	<b>8109387</b>	VACC-S18-35-K4-2U-EX4ME
				-	<b>8109386</b>	VACC-S18-35-K4-3U-EX4ME
			230 V AC/DC	-	<b>8118257</b>	VACC-S18-35-K4-1U-NE4ME
				Fuse	<b>8118256</b>	VACC-S18-35-K4-1UF-NE4ME
		NEPSI	24 V AC/DC	-	<b>8118255</b>	VACC-S18-35-K4-2U-NE4ME
				-	<b>8118254</b>	VACC-S18-35-K4-3U-NE4ME
			110 V AC/DC	-	<b>8118182</b>	VACC-S18-35-K4-1U-NM4ME
				Fuse	<b>8118179</b>	VACC-S18-35-K4-1UF-NM4ME
			230 V AC/DC	-	<b>8118174</b>	VACC-S18-35-K4-2U-NM4ME
				-	<b>8118180</b>	VACC-S18-35-K4-3U-NM4ME
INMETRO	24 V AC/DC	-	<b>8118174</b>	VACC-S18-35-K4-2U-NM4ME		
		-	<b>8118180</b>	VACC-S18-35-K4-3U-NM4ME		
	110 V AC/DC	-	<b>8118174</b>	VACC-S18-35-K4-2U-NM4ME		
		Fuse	<b>8118179</b>	VACC-S18-35-K4-1UF-NM4ME		
	230 V AC/DC	-	<b>8118174</b>	VACC-S18-35-K4-2U-NM4ME		
		-	<b>8118180</b>	VACC-S18-35-K4-3U-NM4ME		



## Data sheet

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

- Encapsulated solenoid coil with enhanced safety

Nominal power  
 12.0 watt



General technical data	
Actuation type	Electrical
Mounting position	Any
Switching position indication	No
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 M20x1.5
Permissible voltage fluctuations [%]	-15 ... 10
Duty cycle [%]	100
Degree of protection to EN 60529	IP66
Insulation class	H

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

Operating and environmental conditions			
Type	VACC-S18-120-K4-...-EX4A	VACC-S18-120-K4-...-NE4ME	VACC-S18-120-K4-...-NM4ME
CE marking (see declaration of conformity) <sup>1)</sup>	To EU Explosion Protection Directive (ATEX)	-	-

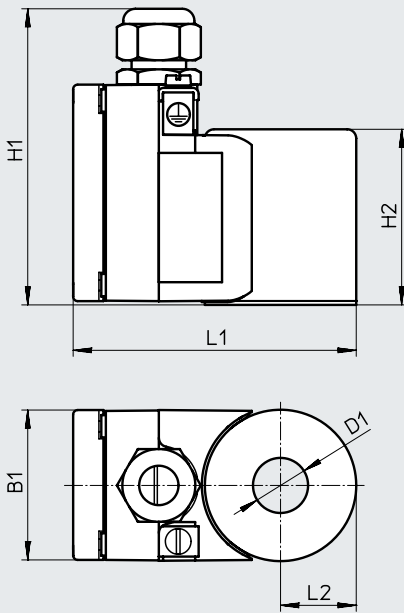
1) Additional information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

ATEX			
Type	VACC-S18-120-K4-...-EX4A	VACC-S18-120-K4-...-NE4ME	VACC-S18-120-K4-...-NM4ME
ATEX category gas	II 2G	-	-
Type of ignition protection for gas	Ex eb mb IIC T4 Gb	Ex e mb IIC T4 Gb	Ex eb mb IIC T4 Gb
ATEX category for dust	II 2D	-	-
Type of ignition protection for dust	Ex tb IIIC T120°C Db	Ex tD A21 IP66 T120°C	Ex tb IIIC T120°C Db
Explosion-proof ambient temperature [°C]	T4, T120°C: -25°C ≤ Ta ≤ +40°C	T4, T120°C: -25°C ≤ Ta ≤ +40°C	T4, T120°C: -25°C ≤ Ta ≤ +40°C
Explosion protection certification outside the EU	EPL Db (IEC Ex) EPL Gb (IECEx)	- -	- -
Certificate issuing authority	BVS 16ATEXE036X IECEx BVS16.0028X	GYJ17.1237X -	INMETRO DNV 19.0135X -

Data sheet

Dimensions

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



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

Ordering data

	Description	Certification	Operating voltage	Internal fuse protection	Part no.	Type
	Terminal box, cable entry thread M20x1.5	To EU Explosion Protection Directive (ATEX)	24 V AC/DC	-	8109395	VACC-S18-120-K4-1U-EX4ME
				Fuse	8109394	VACC-S18-120-K4-1UF-EX4ME
			48 V DC	-	8109390	VACC-S18-120-K4-7-EX4ME
			60 V DC	-	8109393	VACC-S18-120-K4-27-EX4ME
			110 V AC/DC	-	8109392	VACC-S18-120-K4-2U-EX4ME
			230 V AC/DC	-	8109391	VACC-S18-120-K4-3U-EX4ME
		NEPSI	24 V AC/DC	-	8118263	VACC-S18-120-K4-1U-NE4ME
				Fuse	8118262	VACC-S18-120-K4-1UF-NE4ME
			48 V DC	-	8118258	VACC-S18-120-K4-7-NE4ME
			60 V DC	-	8118261	VACC-S18-120-K4-27-NE4ME
			110 V AC/DC	-	8118260	VACC-S18-120-K4-2U-NE4ME
			230 V AC/DC	-	8118259	VACC-S18-120-K4-3U-NE4ME
		INMETRO	24 V AC/DC	Fuse	8118181	VACC-S18-120-K4-1U-NM4ME
				-	8118177	VACC-S18-120-K4-1UF-NM4ME
			48 V DC	-	8118175	VACC-S18-120-K4-7-NM4ME
60 V DC	-		8118176	VACC-S18-120-K4-27-NM4ME		
110 V AC/DC	-		8118178	VACC-S18-120-K4-2U-NM4ME		
230 V AC/DC	-		8118173	VACC-S18-120-K4-3U-NM4ME		

## Data sheet

Voltage  
24 V DC  
48 V DC  
125 V DC  
220 V DC

- Solenoid coil with flame-proof enclosure
- Class I, Div. 2 (CA)
- Class I, Div. 2 (US)

Nominal power  
7.0 W at 24 V DC



General technical data	
Type of mounting	Via knurled nut
Actuation type	Electrical
Mounting position	Any
Switching position indication	No
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 NPT1/2
Permissible voltage fluctuations [%]	-15 ... 10
Duty cycle [%]	100
Degree of protection to EN 60529	IP65
Insulation class	H

Characteristic coil data				
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				
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, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

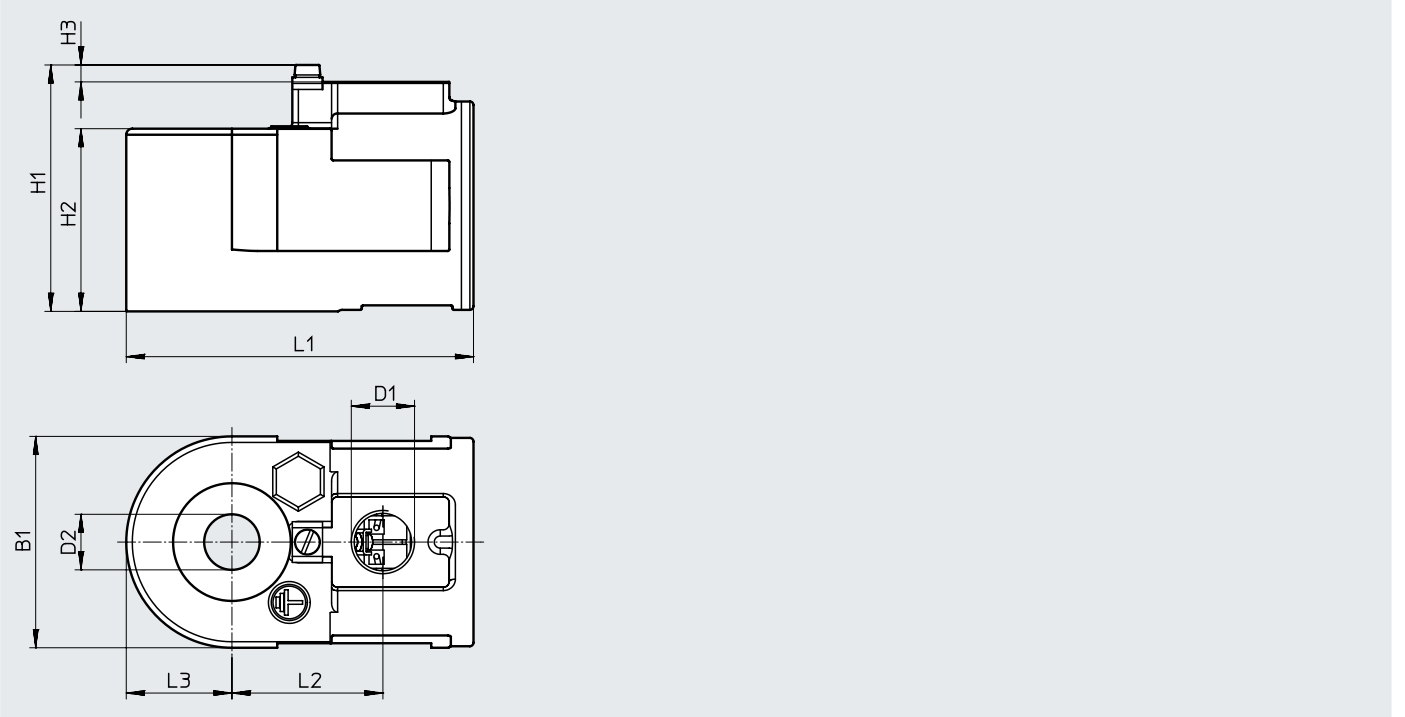
2) Additional information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

ATEX	
Explosion-proof ambient temperature	T4A, 120°C: -25°C ≤ Ta ≤ +80°C
Explosion protection certification outside the EU	Class I, Div. 2 (CA) Class I, Div. 2 (US)

Data sheet


Dimensions

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





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

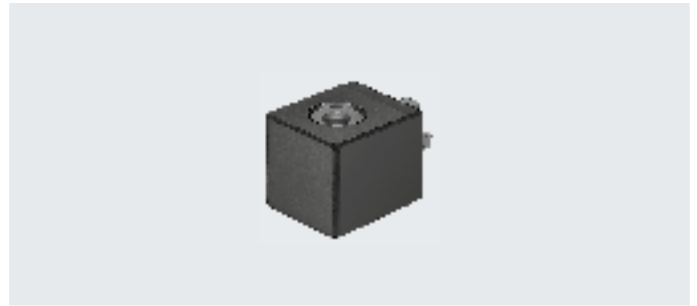
Ordering data

	Description	Operating voltage	Part no.	Type
		Terminal box, cable entry thread 1/2 NPT	24 V DC	<b>3546816</b>
		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

## Data sheet

-  Voltage  
12 V DC  
24 V DC  
24 ... 230 V AC
-  Temperature range  
-10 ... +50°C

- Can be changed without interrupting the pneumatic circuit
- Plug 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 plug 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	-	-	-	-
Pickup power, 50 Hz [VA]	-	-	7.5	5	7.5	5
Holding power, 50 Hz [VA]	-	-	5	3.7	5	3.7
Power factor cos(phi)	-	-	0.7	0.7	0.7	0.7
Frequency [Hz]	-	-	50	60	50	60

**Operating and environmental conditions**

Operating voltage	12 V DC	24 V DC	24 V AC	110 V AC	120 V AC	230 V AC
Ambient temperature [°C]	-10 ... +50	-10 ... +50	-10 ... +50	-10 ... +50		
Temperature of medium [°C]	-10 ... +50	-10 ... +50	-10 ... +50	-10 ... +50		
CE marking (see declaration of conformity) <sup>1)</sup>	-	-	-	To EU Low Voltage Directive		
Certification	-	c UL us - Recognized (OL)	-	-		
Maritime classification <sup>1)</sup>	-	-	-	See certificate		

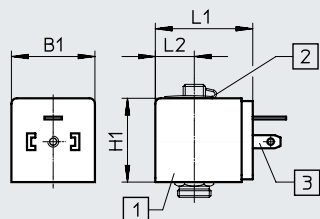
1) Additional information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

# Solenoid coils MSN1

## Data sheet

### Dimensions

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- [1] Solenoid coil  
(can be rotated 360° on the armature tube)
- [2] Safety clip
- [3] Plug pins with plug pattern to EN 175301-803, type A

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

### Ordering data

Description		Part no.	Type
<b>Solenoid coil</b>			
	Without plug socket, plug pattern to EN 175301-803, type A	24 V DC	<b>123060</b> MSN1G-24DC-OD
		12 V DC, 24 V AC	<b>170152</b> MSN1W-24AC/12DC
		110 V AC, 120 V AC	<b>123061</b> MSN1W-110AC-OD
		230 V AC	<b>123062</b> MSN1W-230AC-OD
<b>Plug socket</b>			
	Cable connection using locking screws	<b>34583</b>	MSSD-C
	Cable connection using insulation displacement technology	<b>192748</b>	MSSD-C-S-M16
<b>Connecting cable</b>			
	Operating voltage 24 V DC, Signal status indication 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 up to 240 V	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 indication 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 up to 240 V	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
Cable length 0.6 m	<b>3579462</b> NEBV-A1W3-K-0.6-N-M12W3		
<b>Illuminating seal</b>			
	Operating voltage 12 ... 24 V DC	<b>19145</b>	MC-LD-12-24DC
	Operating voltage 230 V DC/V AC	<b>19146</b>	MC-LD-230AC
<b>Inscription label</b>			
	Scope of delivery: 35 labels in frames	<b>33362</b>	KMC/F/V-BZ-35X

## Type codes

001	Series
<b>VACS</b>	Solenoid coil, series S

002	Solenoid coil type
<b>C</b>	Solenoid coil size 18/8



003	Electrical connection
<b>C1</b>	Connection pattern type C, to EN 175 301
<b>R3</b>	Individual connector M12

004	Nominal operating voltage
<b>1</b>	24 V DC
<b>1A</b>	24 V AC/50-60 Hz
<b>3W</b>	230 V AC/240 V AC/50-60 Hz
<b>5</b>	12 V DC
<b>7</b>	48 V DC
<b>7A</b>	48 V AC/50-60 Hz
<b>16B</b>	120 V AC/60 Hz and 110V AC/50-60 Hz

005	Circuitry
<b>R</b>	Holding current reduction with integrated protective circuit

006	Display
<b>L</b>	LED

Data sheet

-  Voltage  
12 ... 48 V DC  
24 ... 240 V AC
-  Temperature range  
-10 ... +50°C
- In accordance with VDE regulation 0580, insulation class H
- Plug pattern to EN 175301-803, type C
- Can be changed 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 plug 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	-	-	-	-
Pickup 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		
Pollution degree		-					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 can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

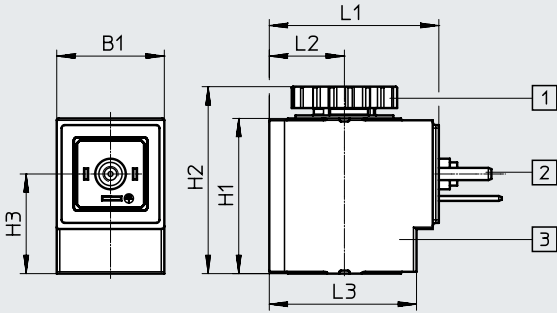
2) Additional information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.



Data sheet

Dimensions



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- [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	Operating voltage	Product weight	Part no.	Type
<b>Solenoid coil</b>				
 Without plug socket, plug pattern to EN 175301-803, type C	12 V DC	36.1 g	8025331	VACS-C-C1-5
	24 V DC	35.2 g	8025330	VACS-C-C1-1
	48 V DC	37.1 g	8025336	VACS-C-C1-7
	24 V AC	35.8 g	8025335	VACS-C-C1-1A
	48 V AC	35.6 g	8025337	VACS-C-C1-7A
	110/120 V AC	34.8 g	8025334	VACS-C-C1-16B
	230/240 V AC	34.6 g	8025338	VACS-C-C1-3W
<b>Seal set</b>				
 To achieve protection to IP67	6 g	2643771	VAMC-B10-C-B-S8	

## Data sheet

-  Voltage  
24 V DC
-  Temperature range  
-10 ... +50°C
- In accordance with VDE regulation 0580, insulation class H
- Plug M12, A-coded to EN 61076-2-101
- Can be changed 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)
Signal status indication	LED

**Materials**

Housing	PA, steel
Winding	Copper
Solenoid coil	Copper, steel, thermoplastic
Note on materials	RoHS-compliant

**Electrical data**

Electrical connection	M12x1, A-coded to EN 61076-2-101
Permissible voltage fluctuations [%]	-10 / +10
Duty cycle [%]	100
Degree of protection to EN 60529	IP65
Enamelled wire insulation class	H
Maximum cable length [m]	30

**Characteristic coil data**

Operating voltage	24 V DC	
Power	High-current phase [W]	2.6
	Low-current phase [W]	0.36
Nominal pickup current per solenoid coil [mA]	108 up to 80 ms	
Nominal current with current reduction [mA]	15 after 80 ms	
Maximum switching frequency [Hz]	5	
Surge resistance [kV]	-	

**Operating and environmental conditions**

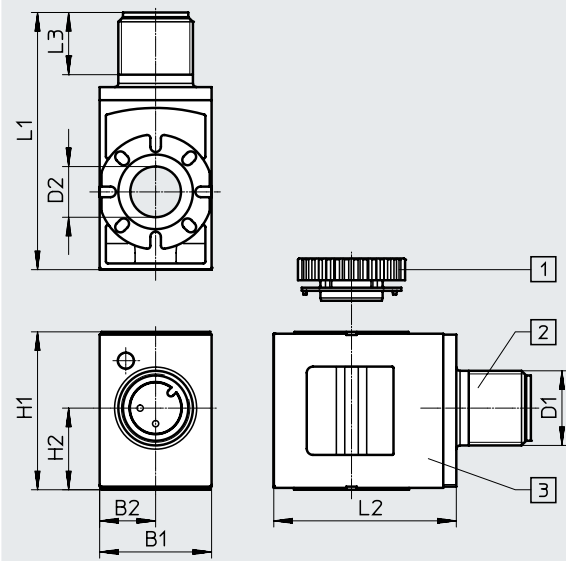
Ambient temperature [°C]	-10 ... +60
Corrosion resistance class CRC <sup>1)</sup>	2
CE marking (see declaration of conformity) <sup>3)</sup>	To EU EMC Directive <sup>2)</sup>
Certification	RCM
Pollution degree	-

- 1) Corrosion resistance class CRC 2 to Festo standard FN 940070  
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.
- 2) For information about the area of use, see the EC declaration of conformity at: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.  
If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.
- 3) Additional information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

Data sheet

Dimensions

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




- [1] Nut
- [2] Plug, M12x1, A-coded to EN 61076-2-101

- [3] Solenoid coil  
(can be rotated in increments of 45° on the armature tube, push on in any direction)



Type	B1	B2	D1	D2	H1	H2	L1	L2	L3
VACS-C-R3-...	18	9	M12x1	8.2	25.4	13.1	41.4	29.4	10

Ordering data

Description		Operating voltage	Part no.	Type
 Without socket, straight plug M12x1, 4-pin, A-coded to EN 61076-2-101		24 V DC	<b>8135822</b>	<b>VACS-C-R3-1RL</b>

## Solenoid coils MH-2

### Data sheet

-  Voltage  
24 V DC  
110, 230 V AC
-  Temperature range  
-20 ... +50°C

- Can be changed without interrupting the pneumatic circuit
- Plug pattern to EN 175301-803, type A



#### General technical data

Type of mounting	With 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 plug 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

		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

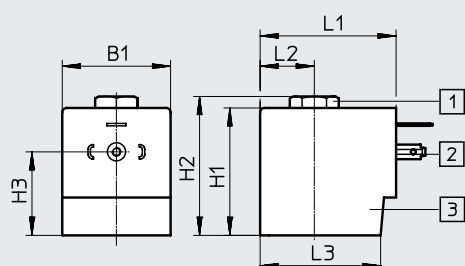
		24 V DC	110 V AC	230 V AC
Operating voltage		24 V DC	110 V AC	230 V AC
Ambient temperature [°C]		-20 ... 50	-20 ... 50	
CE marking (see declaration of conformity) <sup>1)</sup>		–	To EU Low Voltage Directive	

1) Additional information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

## Data sheet

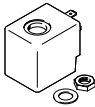

## ★ Core Range

## Dimensions

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- [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	Operating voltage	Part no.	Type
<b>Solenoid coil</b>					
	Without plug socket, plug pattern to EN 175301-803, type A		24 V DC	549906	MH-2-24VDC-PA
			110 V AC	549907	MH-2-110VAC-PA
			230 V AC	549908	MH-2-230VAC-PA
<b>Plug socket</b>					
	3-pin, square design, plug pattern to EN 175301-803, type A			★ 550067	MSSD-N

## Type codes

<b>001</b>	<b>Series</b>	
<b>VACN</b>	Solenoid coil, series N	

<b>002</b>	<b>Solenoid coil type</b>	
<b>N</b>	Solenoid coil N for armature tube 9 mm	
<b>H1</b>	Solenoid coil H1 for armature tube 14 mm	
<b>X</b>	Solenoid coil X for armature tube 14 mm	

<b>003</b>	<b>Electrical connection</b>	
<b>A1</b>	Connection pattern type A, to EN 175 301	
<b>K1</b>	Cable	
<b>K11</b>	Cable with insulating conduit connection	

<b>004</b>	<b>Nominal operating voltage</b>	
<b>1</b>	24 V DC	
<b>2A</b>	110 V AC/50-60 Hz	
<b>16B</b>	120 V AC/60 Hz and 110V AC/50-60 Hz	
<b>3A</b>	230 V AC/50-60 Hz	


<b>005</b>	<b>Cable length [m]</b>	
<b>0.5</b>	0.5	
<b>10</b>	10	

<b>006</b>	<b>EU certification</b>	
	None	
<b>EX4</b>	II 2GD	
<b>EX2</b>	II 3GD	

<b>007</b>	<b>Certification</b>	
	None	
<b>U4</b>	Class1 Div1 to NEC 500	

<b>008</b>	<b>Type of ignition protection</b>	
	None	
<b>A</b>	Intrinsically safe	
<b>M</b>	Encapsulation	
<b>N</b>	Non-sparking	

## Data sheet

-  - Voltage  
24 V DC  
110, 230 V AC

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



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

Materials	
Type	VACN-H1
Solenoid coil	Copper
	Steel
	Thermoplastic
Winding	Copper
Note on materials	Contains paint-wetting impairment substances
	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		
		24 V DC	110 V AC	230 V AC
Frequency [Hz]		-	50/60	50/60
Permissible frequency fluctuations [%]		-10 / +10	-10 / +10	-10 / +10
Power	[W]	11.9	-	-
	[VA]	-	-	-
Pickup power [VA]		-	36	36
Holding power [VA]		-	18.5	18.9
Power factor cos(phi)		0.7	0.7	0.7
Surge resistance [kV]		-	2.5	4
Min. pickup time [ms]		12	12	12

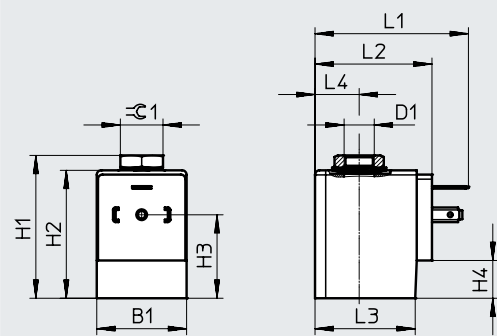
Data sheet

Operating and environmental conditions		VACN-H1		
		24 V DC	110 V AC	230 V AC
Ambient temperature	[°C]	-20 ... +50		
Restricted ambient and media temperature		-20 ... +60°C (with limited duty cycle)		
Corrosion resistance class CRC <sup>1)</sup>		4		
Pollution degree		-	3	
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, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.
- 2) Additional information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.


Dimensions

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

Ordering data

Description		Operating voltage	Part no.	Type
 Solenoid coil Without plug socket, plug pattern to EN 175301-803, type A		24 V DC	8022877	VACN-H1-A1-1
			8049752	VACN-X-A1-1
		110 V AC	8022878	VACN-H1-A1-2A
			8049753	VACN-X-A1-2A
		230 V AC	8022879	VACN-H1-A1-3A
			8049754	VACN-X-A1-3A



## Data sheet

-  Voltage  
24 V DC  
110, 230 V AC
-  Temperature range  
-20 ... +50°C

- Can be changed without interrupting the pneumatic circuit
- Plug 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 plug 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	-	-
Pickup power, 50 Hz [VA]	-	14.5	14.5
Holding power, 50 Hz [VA]	-	10.5	10.5
Power factor cos(phi)	-	0.7	0.7
Frequency [Hz]	-	50/60	50/60
Permissible frequency fluctuations [%]	-	-10 / +10	-10 / +10

**Operating and environmental conditions**

Operating voltage	24 V DC	110 V AC	230 V AC
Ambient temperature [°C]	-20 ... 50	-20 ... 50	-20 ... 50
CE marking (see declaration of conformity) <sup>1)</sup>	-	To EU Low Voltage Directive	

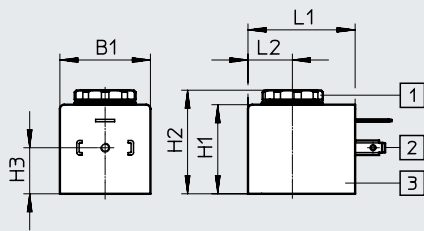
1) Additional information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

Data sheet

★ Core Range

Dimensions

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- [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	Operating voltage	Part no.	Type
<b>Solenoid coil</b>				
	Without plug socket, plug pattern to EN 175301-803, type A	24 V DC	★ 549903	MD-2-24VDC-PA
		110 V AC	549904	MD-2-110VAC-PA
		230 V AC	549905	MD-2-230VAC-PA
<b>Plug socket</b>				
	3-pin, square design, plug pattern to EN 175301-803, type A		★ 550067	MSSD-N