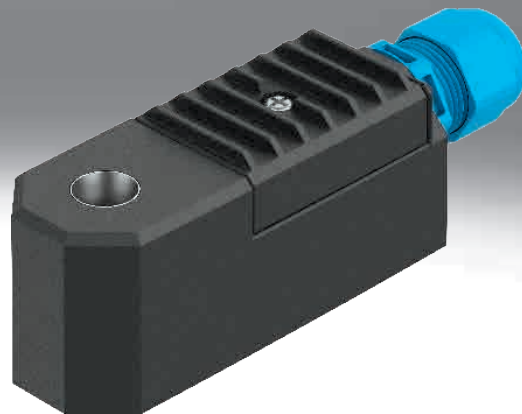


# Solenoid coils



Festo Core Range  
Solves the majority of your automation tasks

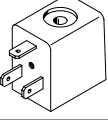
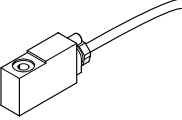
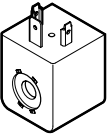
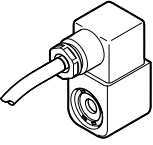
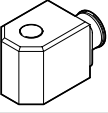
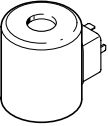
With the Festo Core Range, we have selected the most important products and functions from our broad product catalogue, and added the quickest delivery.


Worldwide: Quickest delivery – wherever, whenever  
Simply good: Expected high Festo quality  
Fast: Easy and fast to select

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



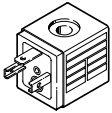
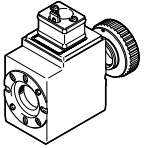
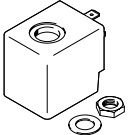
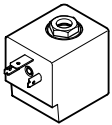
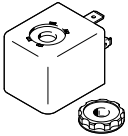
Product range overview


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</b>												
	MSF...EX	■	■	■	■	■	■	-	-	-	-	8
	VACF...EX4-M	■	■	■	■	■	-	-	-	-	-	17
<b>N solenoid coil</b>												
	VACN-N VACN-N-R	-	-	-	-	-	-	-	-	■	-	19
<b>N solenoid coil for potentially explosive atmospheres</b>												
	VACN...-EX2-N	-	-	-	-	-	-	-	-	■	-	24
	VACN...-U4-M	-	-	-	-	-	-	-	-	-	-	26
	VACN...-EX4-M	-	-	-	-	-	-	-	-	-	-	28
	VACN...-EX4-A	-	-	-	-	-	-	-	-	-	-	30
<b>C solenoid coil</b>												
	VACC-S13	-	-	-	-	-	-	■	■	-	-	32
	VACC-S18	-	-	-	-	-	-	■	-	-	-	40

 **Note**

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

## Product range overview

Design	Type	For valve series						→ Page/ Internet
		MN1H	JMN1H	JMN1DH	VZWM-L	VUVS	VZWE	
<b>N1 solenoid coil</b>								
	MSN1	■	■	■	-	-	-	56
<b>S solenoid coil</b>								
	VACS	-	-	-	-	■	-	58
<b>H solenoid coil</b>								
	MH-2	-	-	-	■	-	-	63
<b>H1 solenoid coil</b>								
	VACN-H1	-	-	-	-	-	■	65
<b>D solenoid coil</b>								
	MD-2	-	-	-	■	-	-	68



 **Note**

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

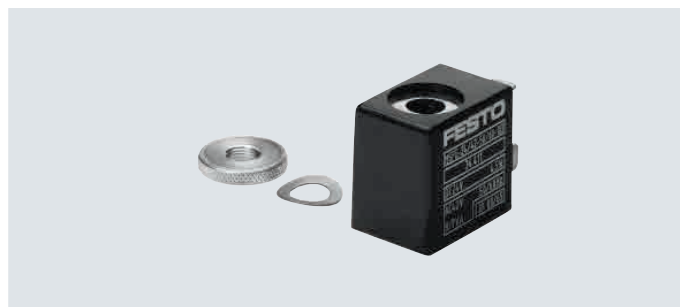
## Selection aid

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	-	-	-	-	■	-	-	-	

## Datasheet

-  Voltage  
12 ... 42 V DC  
24 ... 240 V AC
-  Temperature range  
-5 ... +40 °C

- In accordance with VDE regulation 0580, insulation class F
- Can be replaced without interrupting the pneumatic circuit
- Low power consumption and temperature rise



### General technical data

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

### Materials

Solenoid coil	Thermoset, 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>		
UKCA marking (see declaration of conformity) <sup>2)</sup>	–						To UK regulations for electrical equipment		

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.

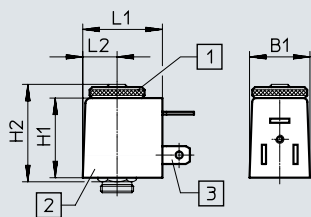
If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.

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

Datasheet

Dimensions

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



- [1] Retaining nut
- [2] Solenoid coil  
(can be rotated 360° on the ar-  
mature 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-...					


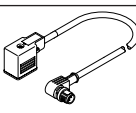
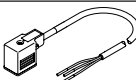

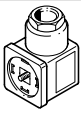
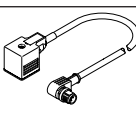
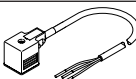

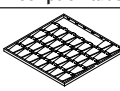
Ordering data

Description	LABS (PWIS) conformity	Operating voltage	Part no.	Type
<b>Solenoid coil, plug to industry standard, type B</b>				
Without plug socket	VDMA24364-C1-L	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	VDMA24364-C1-L	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	VDMA24364-C1-L	24 V DC, 42 V AC	34412	MSFG-24/42-50/60-DS-OD
	VDMA24364-B2-L	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	VDMA24364-C1-L	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) More information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

## Datasheet

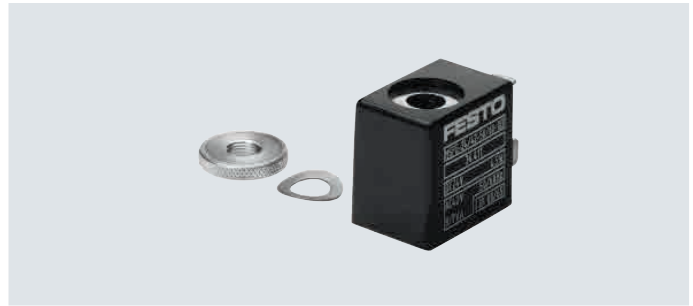
## ★ Core Range

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 fitting Pg9	–	★ 34431	MSSD-F
			Cable fitting M16	–	59710	MSSD-F-M16
		Insulation displacement technology	Cable fitting 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 • Protective circuit	0.6	3679778	NEBV-B2W3F-P-K-0.6-N-LE3
		230 AC/DC	–	0.6	3579468	NEBV-B2W3-K-0.6-N-LE3
	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
				10	193458	KMF-1-24DC-10-LED
230 V AC	–	Signal status indication	2.5	30936	KMF-1-230AC-2.5	
			5	30938	KMF-1-230AC-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 fitting Pg9	–	34583	MSSD-C
			Cable fitting M16	–	539709	MSSD-C-M16
		Insulation displacement technology	Cable fitting 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 • Protective circuit	0.6	3679776	NEBV-A1W3F-P-K-0.6-N-LE3
		230 AC/DC	–	0.6	3579466	NEBV-A1W3-K-0.6-N-LE3
	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
				10	193459	KMC-1-24DC-10-LED
230 V AC	–	Signal status indication	2.5	30932	KMC-1-230AC-2.5	
			5	30934	KMC-1-230AC-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	

## Datasheet



- In accordance with the ATEX Directive
- In accordance with VDE regulation 0580, insulation class F
- Plug connection
- Can be replaced without interrupting the pneumatic circuit
- Manifold assembly permissible (minimum 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, thermoset
Winding	Copper
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B2-L

**Electrical data**

Electrical connection	3-pin
	Plug pins with plug pattern to Festo standard for MSSD-F
Max. tightening torque of 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.

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

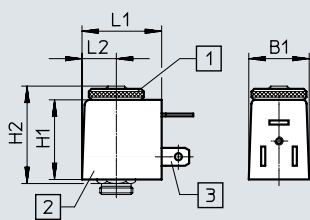


## Datasheet

<b>ATEX</b>	
ATEX category for gas	II 3G
Type of (ignition) protection for gas	Ex nA IICT4X Gc
ATEX category for dust	II 3D
Type of (ignition) protection for dust	Ex tc IIICT130°C X Dc IP65
Ex ambient temperature [°C]	-5 ≤ Ta ≤ +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)



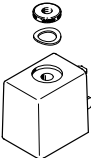
- [1] Retaining nut  
(tightening torque 0.4 Nm)
- [2] Solenoid coil
- [3] Plug pins for plug sockets  
MSSD-F

**Note**

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

001	Series
VACF	Solenoid coil VACF
002	Solenoid coil type
B	Solenoid coil, size 22/8
A	Solenoid coil size 30/8
003	Electrical connection
A1	Plug pattern type A, to EN 175301-803
B2	Connection pattern type B, industry standard
C1	Plug pattern type C, to EN 175301-803
K1	Cable
R1	Individual connector M8, 4-pin
R3	Single plug M12 A-coded, according to EN 61076-2-101
R4	Single plug M12 A-coded, pin assignment according to DESINA
R8	Individual connector M8, 3-pin
004	Nominal operating voltage
1	24 V DC
1A	24 V AC/50-60 Hz
3A	230 V AC/50-60 Hz
3W	230 V AC/240 V AC/50-60 Hz
5	12 V DC
7	48 V DC
7A	48 V AC/50-60 Hz
16B	120 V AC/60 Hz and 110V AC/50-60 Hz

005	Display
	None
L	LED
006	Cable length [m]
	Without
1	1 m
5	5 m
10	10 m
20	20 m
007	EU certification
	None
EX4	II 2GD
008	Type of ignition protection
	None
M	Encapsulation

## Datasheet

-  Voltage  
12 ... 48 V DC  
24 ... 240 V AC
-  Temperature range  
-20 ... +50 °C

- In accordance with VDE regulation 0580, insulation class H
- Can be replaced without interrupting the pneumatic circuit

**General technical data**

Conforms to	IEC 61010-1
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
LABS (PWIS) conformity	VDMA24364-B1/B2-L

**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
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	
UKCA marking (see declaration of conformity) <sup>2)</sup>	–					To UK regulations for electrical equipment	
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]	

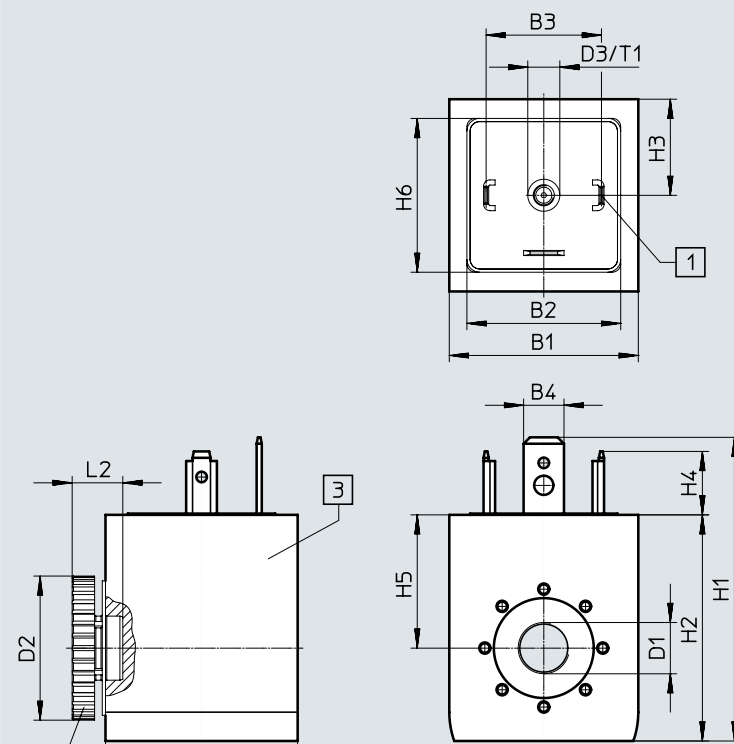
1) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)2) More information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

Datasheet

★ 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 degree of protection IP67		12.6 g	8034611	VAMC-B10-A-B-S8

## Datasheet

-  Voltage  
12 ... 48 V DC  
24 ... 240 V AC
-  Temperature range  
-10 ... +50 °C

- In accordance with VDE regulation 0580, insulation class H
- Can be replaced without interrupting the pneumatic circuit



### General technical data

Conforms to	IEC 61010-1
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
LABS (PWIS) conformity	VDMA24364-B1/B2-L

### 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	
UKCA marking (see declaration of conformity) <sup>2)</sup>	-					To UK regulations for electrical equipment	
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]	

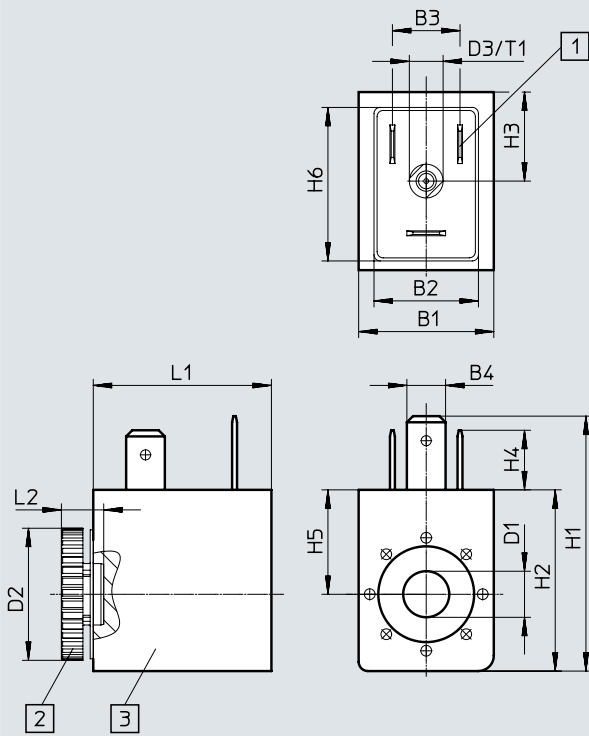
1) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

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

Datasheet

Dimensions

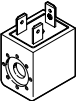

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- [1] Plug pattern to industry standard, type B
- [2] Knurled nut (seal set for solenoid coil)
- [3] Solenoid coil  
(can be rotated in increments of 45° on the armature tube, can be pushed on in any direction)

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	41.7	29.7	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 degree of protection IP67	10 g	8034609	VAMC-B10-B-B-S8	

## Datasheet

-  Voltage  
12 ... 48 V DC  
24 ... 240 V AC
-  Temperature range  
-10 ... +50 °C

- In accordance with VDE regulation 0580, insulation class H
- Can be replaced without interrupting the pneumatic circuit



### General technical data

Conforms to	IEC 61010-1
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
LABS (PWIS) conformity	VDMA24364-B1/B2-L

### 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>	
UKCA marking (see declaration of conformity) <sup>2)</sup>	-					To UK regulations for electrical equipment	
Certification	c UL us - Recognized (OL)					c UL us - Recognized (OL)	

1) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

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.

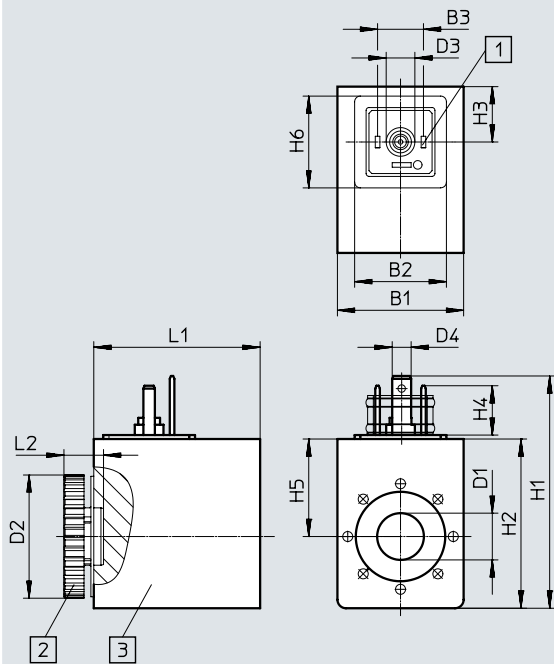
If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.

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

Datasheet

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

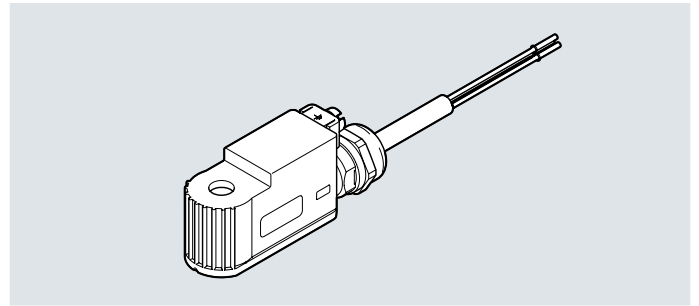
Description	Operating voltage	Product weight	Part no.	Type
<b>Solenoid coil</b>				
Without plug socket, plug pattern to EN 175301-803, type C	12 V DC	54.1 g	8030810	VACF-B-C1-5
	24 V DC	52.4 g	8030811	VACF-B-C1-1
	48 V DC	54.3 g	8030812	VACF-B-C1-7
	24 V AC	54 g	8030813	VACF-B-C1-1A
	48 V AC	53.5 g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



## Datasheet

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

- In accordance with the ATEX Directive
- Can be replaced without interrupting the pneumatic circuit



### General technical data

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

### Materials

Solenoid coil	Aluminium, epoxy resin, copper, steel
Winding	Copper
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-C1-L

### Electrical data

Electrical connection	Cable with open end, 3-core
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
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
UKCA marking (see declaration of conformity) <sup>2)</sup>	To UK explosion regulations To UK RoHS regulations

1) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

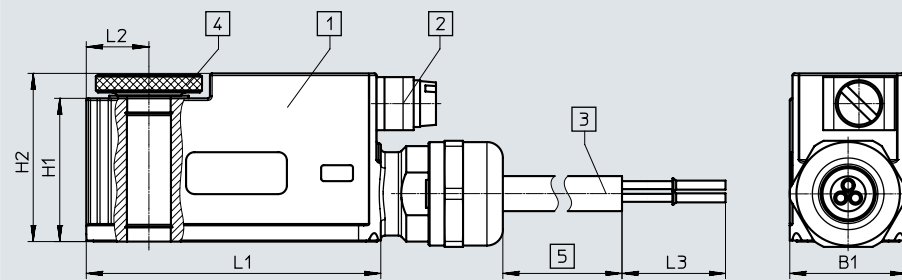
2) More information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

Datasheet

ATEX	
ATEX category for gas	II 2G
Type of (ignition) protection for gas	Ex mb IIC T5 Gb
ATEX category for dust	II 2D
Type of (ignition) protection for dust	Ex mb IIIC T95°C Db
Ex ambient temperature [°C]	-30 ≤ Ta ≤ +40
Explosion protection certification outside the EU	EPL Db (BR)
	EPL Db (CN)
	EPL Db (GB)
	EPL Db (IEC Ex)
	EPL Gb (BR)
	EPL Gb (CN)
	EPL Gb (GB)
Certificate-issuing authority	CML22UKEX5255X
	DNV17.0013X
	GYJ17.1077X
	IBExU 16 ATEX1146X
	IECEX IBE16.0024X

Dimensions

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- [1] Solenoid coil
- [2] Equipotential bonding connection 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-core	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	VACF-B-K1-16B-1-EX4-M
			5 m	8059812	VACF-B-K1-16B-5-EX4-M
		230 V AC	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	

## Datasheet

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

- Can be replaced without interrupting the pneumatic circuit

**General technical data**

Type of mounting	Via knurled nut
Mounting position	Any (can be rotated 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
LABS (PWIS) conformity	VDMA24364-B2-L

**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**

Operating voltage	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**

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	
Pollution degree	–	3	
CE marking (see declaration of conformity) <sup>2)</sup>	–	To EU Low Voltage Directive	
UKCA marking (see declaration of conformity) <sup>2)</sup>	–	To UK regulations for electrical equipment	
Maritime classification <sup>2)</sup>	See certificate		
Certificate-issuing authority	DNV TAA000011]		

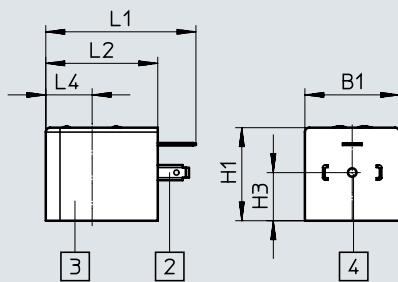
1) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

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

## Datasheet



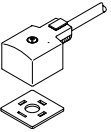
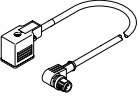

## ★ Core Range

## Dimensions



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

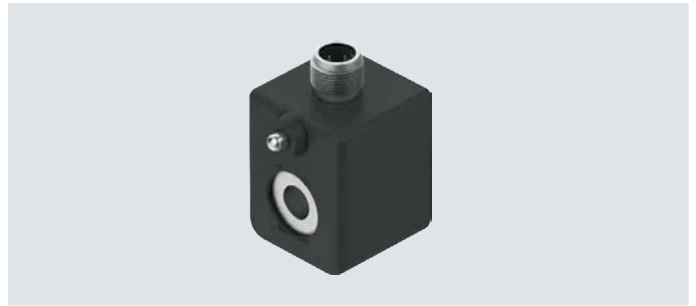
Type	B1	H1	H3	L1	L2	L4
VACN-N-A1-...	30	29,5	15,3	47,6	35,5	14,7

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/V AC	Cable fitting Pg9	34583	MSSD-C
		Cable fitting M16	539709	MSSD-C-M16
		Operating voltage 24 V DC, signal status indication with LED	Cable fitting 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/V AC	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/V AC	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/V AC	19146	MC-LD-230AC	

## Datasheet

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

- Can be replaced without interrupting the pneumatic circuit

**General technical data**

Actuation type	Electrical
Type of mounting	Via knurled nut
Mounting position	Any
Signal status indication	LED
Product weight [g]	100

**Materials**

Housing	Polymer
Solenoid coil	Thermoset, copper, steel
Winding	Copper
Note on materials	RoHS-compliant

**Electrical data**

Conforms to	ISO 20401	DESINA
Electrical connection 1, connection technology	M12x1, A-coded to EN 61076-2-101	
Electrical connection 1, connection type	Plug	
Electrical connection 1, number of pins/wires	2	4
Electrical connection 1, type of mounting	Screw-type lock	
Characteristic coil data	24 V DC: 2.7 W	
Permissible voltage fluctuations [%]	-10 / +10	
Duty cycle [%]	100	
Insulation class	F	
Enamelled wire insulation class	H	
Pollution degree	3	

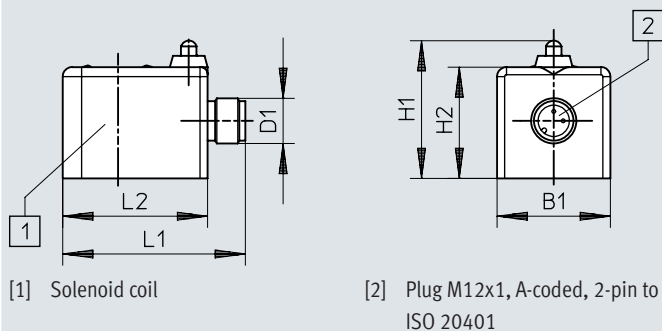
**Operating and environmental conditions**

Operating voltage	24 V DC
Ambient temperature [°C]	-20 ... +60
Corrosion resistance class CRC <sup>1)</sup>	2
Degree of protection	IP65
LABS (PWIS) conformity	VDMA24364-B2-L

1) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

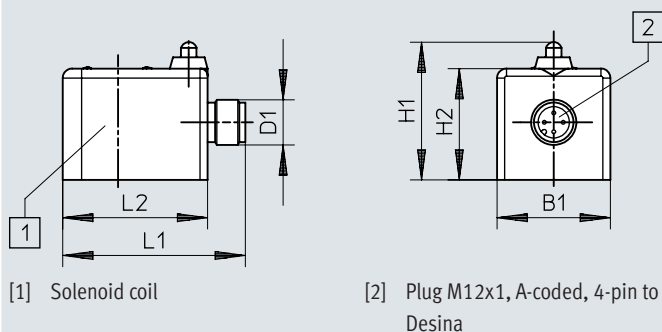
## Datasheet

## Dimensions – 2-pin

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Type	B1	D1	H1	H2	L1	L2
VACN-N-R3-1	30	M12x1	36.5	29.5	48.4	38.4

## Dimensions – 4-pin

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

Type	B1	D1	H1	H2	L1	L2
VACN-N-R4-1	30	M12x1	34.4	29.5	48.4	38.4

## Ordering data

	Electrical connection	Number of pins/wires	Conforms to	Part no.	Type
	Plug M12x1, A-coded	2	ISO 20401	<b>8104526</b>	<b>VACN-N-R3-1</b>
		4	DESINA	<b>8104527</b>	<b>VACN-N-R4-1</b>

## Datasheet



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

**General technical data**

Type of mounting	Via knurled nut
Mounting position	Any (can be rotated in increments of 45° on the armature tube)
Product weight [g]	95

**Materials**

Housing	Steel, polymer
Winding	Copper
Pin contacts	Brass
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B2-L

**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)
UKCA marking (see declaration of conformity) <sup>2)</sup>	To UK explosion regulations
Maritime classification <sup>2)</sup>	See certificate
Certificate-issuing authority	DNV TAA000011]

1) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

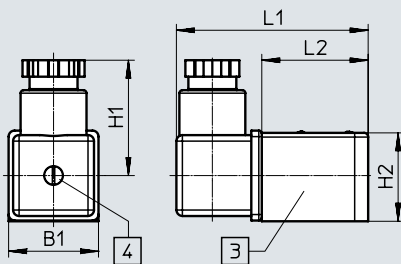
2) More information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.



## Datasheet

ATEX	
ATEX category for gas	II 3G
Type of (ignition) protection for gas	Ex nA IICT5/T4 X Gc
ATEX category for dust	II 3D
Type of (ignition) protection for dust	Ex tc IIICT95°C/T105°CX Dc
Ex ambient temperature [°C]	-20 ≤ Ta ≤ +60
Explosion protection certification outside the EU	EPL Dc (GB)
	EPL Gc (GB)

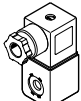
## Dimensions

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

- [3] Solenoid coil  
 [4] Retaining 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

## Datasheet



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



## General technical data

Type of mounting	Via knurled nut
Mounting position	Any (can be rotated in increments of 45° on the armature tube)
Product weight [g]	207

## Materials

Housing	Steel, polymer
Winding	Copper
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364 zone III

## 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	
Maritime classification <sup>2)</sup>	See certificate		
Certificate-issuing authority	DNV TAA000011]		

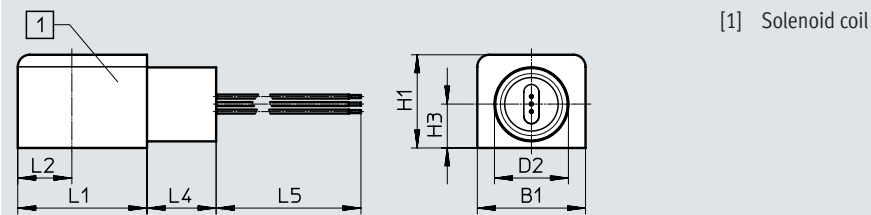
1) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

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

## Datasheet

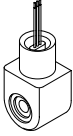
ATEX		
Type of (ignition) protection for gas	AEx m II T4 Ex m II T4	
Ex ambient temperature [°C]	-20 ≤ Ta ≤ +60	
Explosion protection certification outside the EU	EPL Gb (US)	
	Class I, Div. 1 (US)	Class I, Div. 1 (CA)
	-	Class I, Div. 2 (CA)
	Class II, Div. 1 (US)	Class II, Div. 1 (CA)
	Class III, Div. 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
		24 V DC	8029146	VACN-N-K11-1-0.5-U4-M
	Moulded-in cable	110 V AC	8029145	VACN-N-K11-16B-0.5-U4-M
		230 V AC	8029140	VACN-N-K11-3A-0.5-U4-M

## Datasheet



- Category "II 2G" and "II 2D"
- Type of (ignition) protection for gas "Ex mb"
- ATEX certification
- Can be replaced without interrupting the pneumatic circuit

**General technical data**

Type of mounting	Via knurled nut
Mounting position	Any (can be rotated in increments of 45° on the armature tube)

**Materials**

Housing	Steel, polymer
Winding	Copper
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B2-L

**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	
UKCA marking (see declaration of conformity) <sup>2)</sup>	To UK explosion regulations To UK RoHS regulations	
Maritime classification <sup>2)</sup>	See certificate	
Certificate-issuing authority	DNV TAA000011)	-

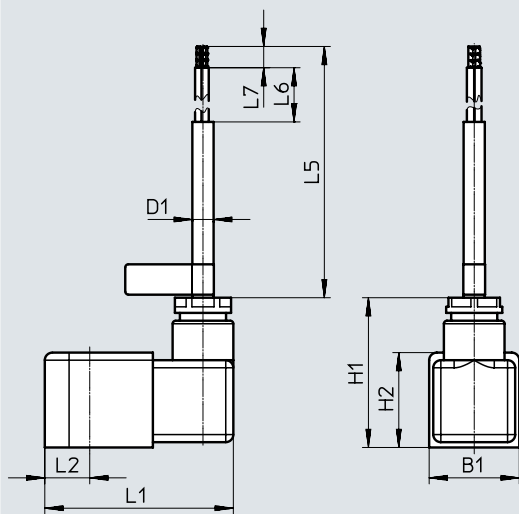
1) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

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

## Datasheet

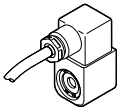
<b>ATEX</b>		
Cable length [m]	3	10
ATEX category for gas	II 2G	II 2G
Type of (ignition) protection for gas	Ex mb IIC T6 Gb	Ex mb IIC T6 Gb
ATEX category for dust	II 2D	II 2D
Type of (ignition) protection for dust	Ex mb tb IIIC T80°C Db	Ex mb tb IIIC T80°C Db
Ex ambient temperature [°C]	$-20 \leq Ta \leq +50$	$-20 \leq Ta \leq +50$
Explosion protection certification outside the EU	EPL Db (BR)	EPL Db (GB)
	EPL Db (CN)	EPL Db (IEC Ex)
	EPL Db (GB)	EPL Gb (GB)
	EPL Db (IEC Ex)	EPL Gb (IECEx)
	EPL Gb (BR)	-
	EPL Gb (CN)	-
	EPL Gb (GB)	-
Certificate-issuing authority	CCC 2021322307003994	IECEX PTB 15.0016X
	DNV 15.0189X	PTB 14 ATEX 2027 X
	GYJ21.1327X	-
	IECEX PTB 15.0016X	-
	PTB 14 ATEX 2027 X	-

## Dimensions

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

Type	B1	D1	H1	H2	L1	L2	L5	L6	L7
VACN-N-K1-1-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	8029143	VACN-N-K1-1-EX4-M
			10 m	762 g	8141606	VACN-N-K1-1-10-EX4-M
		110 V AC	3 m	353 g	8029142	VACN-N-K1-16B-EX4-M
			230 V AC	3 m	353 g	8029141

## Datasheet



- Intrinsically safe solenoid coil
- Category "II 2G" and "II 2D"
- Type of (ignition) protection for gas "Ex ia"
- ATEX certification
- Can be replaced without interrupting the pneumatic circuit


**General technical data**

Type of mounting	Via knurled nut
Mounting position	Any (can be rotated in increments of 45° on the armature tube)
Product weight [g]	114

**Materials**

Housing	Steel, polymer
Winding	Copper
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B2-L

**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)
UKCA marking (see declaration of conformity) <sup>2)</sup>	To UK explosion regulations
Maritime classification <sup>2)</sup>	See certificate
Certificate-issuing authority	DNV TAA000011]

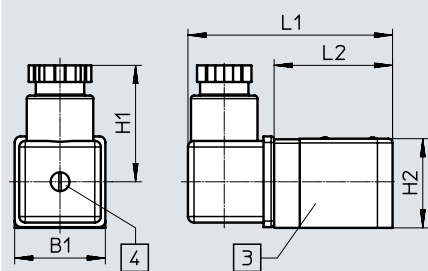
1) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

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

## Datasheet

ATEX	
ATEX category for gas	II 2G
Type of (ignition) protection for gas	Ex ia IIC T6, T4 Ga
ATEX category for dust	II 2D
Type of (ignition) protection for dust	Ex tb IIIC T80°C, T130°C Db IP65
Ex 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 Db (BR)
	EPL Db (CN)
	EPL Db (GB)
	EPL Db (IEC Ex)
	EPL Gb (BR)
	EPL Gb (CN)
	EPL Gb (GB)
EPL Gb (IECEx)	
Certificate-issuing authority	CCC 2021322307003993
	DNV 15.0188
	GYJ21.1326X
	IECEX PTB 15.0013
	PTB 09 ATEX 2043

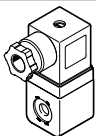
## Dimensions

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

- [3] Solenoid coil  
[4] Retaining 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	



## Datasheet

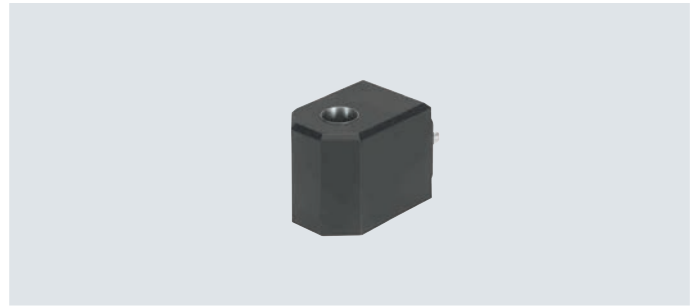


Voltage  
 24 V DC  
 24 V AC/DC  
 110 V AC/DC  
 230 V AC/DC

Nominal power  
 2 W at 24 V 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	RoHS-compliant
LABS (PWIS) conformity	VDMA24364 zone III

## 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	
UKCA marking (see declaration of conformity)	–		To UK regulations for electrical equipment	

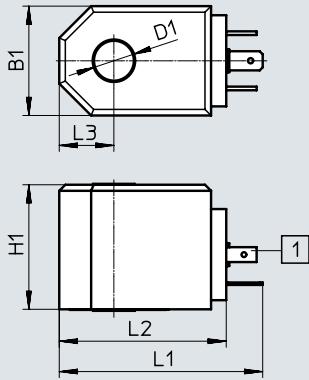
1) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

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

Datasheet

Dimensions


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



[1] Plug pattern type A, to EN175301-803

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

Ordering data

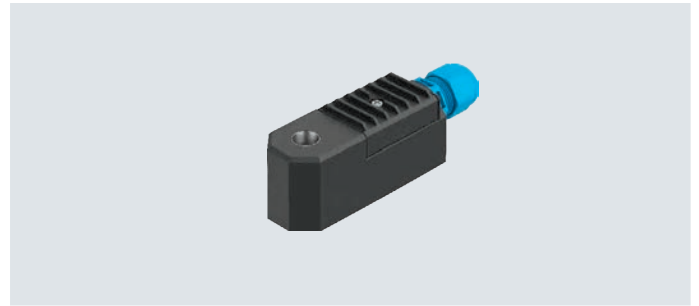
	Description	Operating voltage	Part no.	Type
	Plug type A, to EN 175301-803	24 V DC	<b>562889</b>	<b>VACC-S13-18-A1-1</b>
		24 V AC/DC	<b>562890</b>	<b>VACC-S13-18-A1-1U</b>
		110 V AC/DC	<b>562891</b>	<b>VACC-S13-18-A1-2U</b>
		230 V AC/DC	<b>562892</b>	<b>VACC-S13-18-A1-3U</b>

## Datasheet

Voltage  
14 ... 32 V DC

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

Nominal power  
0.22 ... 1.1 watt



### General technical data

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

### Materials

Type	VACC-S13-11-K4-1-EX4A	VACC-S13-11-K4-1-NE4A	VACC-S13-11-K4-1-NM4A	VACC-S13-11-K4-1-KS4A
Solenoid coil	–	–	–	PA, UP
Note on materials	RoHS-compliant			
LABS (PWIS) conformity	VDMA24364 zone III			

### Electrical data

Type	VACC-S13-11-K4-1-EX4A	VACC-S13-11-K4-1-NE4A	VACC-S13-11-K4-1-NM4A	VACC-S13-11-K4-1-KS4A
Electrical connection	Terminal box, cable entry thread M20x1.5			
Permissible voltage fluctuations [%]	–15 ... 10			
Duty cycle [%]	100			
Maximum input power, Pi [W]	1.2			
Maximum input voltage, Ui [V]	32			
Maximum input current, Ii [A]	0.2			
Required current consumption, Imin [mA]	16			
Degree of protection to EN 60529	IP65	IP65	IP65	IP64
Insulation class	H	H	H	H

### Characteristic coil data

Operating voltage [V DC]	14 ... 32
Power [W]	0.22 ... 1.1
Effective internal capacitance, Ci	Negligibly low
Effective internal inductance, Li	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	VACC-S13-11-K4-1-KS4A
Corrosion resistance class CRC <sup>1)</sup>	–	–	–	4
CE marking (see declaration of conformity) <sup>3)</sup>	To EU EMC Directive <sup>2)</sup>	–	–	To EU EMC Directive <sup>2)</sup>
	To EU Explosion Protection Directive (ATEX)	–	–	To EU Explosion Protection Directive (ATEX)
UKCA marking (see declaration of conformity) <sup>3)</sup>	To UK EMC regulations	–	–	–
	To UK explosion regulations	–	–	–

1) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

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.

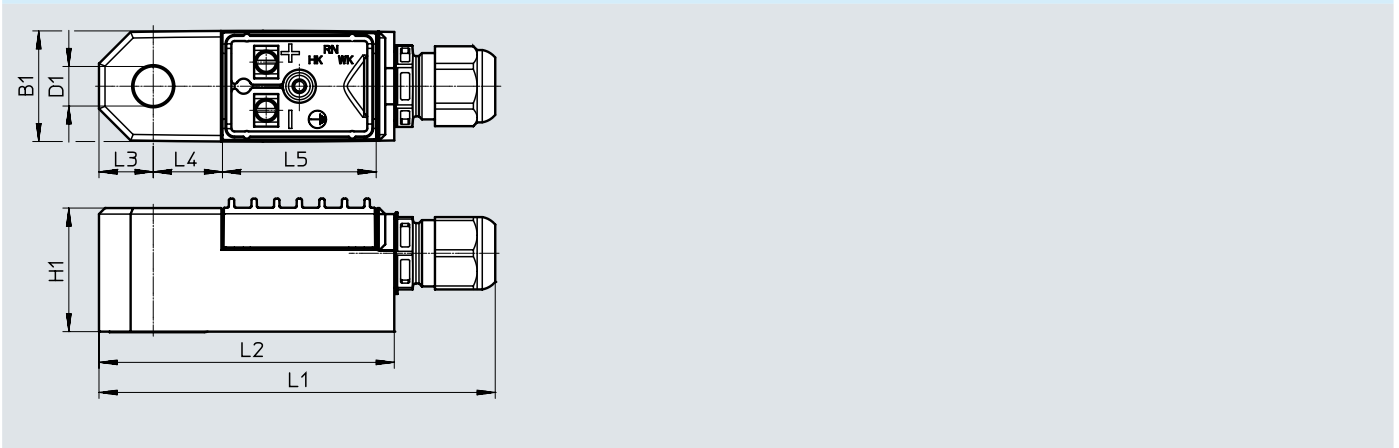
3) More information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

Datasheet

ATEX	VACC-S13-11-K4-1-EX4A	VACC-S13-11-K4-1-NE4A	VACC-S13-11-K4-1-NM4A	VACC-S13-11-K4-1-KS4A
Type	II 2G	–	–	II 2G
ATEX category for gas	II 2G	–	–	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	Ex ia IIC T5, T6
ATEX category for dust	II 2D	–	–	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	Ex iaD 21 T80/T95°C
EX ambient temperature	T5, T95°C: –30°C ≤ Ta ≤ +65°C T6, T80°C: –30°C ≤ Ta ≤ +50°C			
Explosion protection certification outside the EU	EPL Db (GB)	EPL Db (CN)	EPL Db (BR)	EPL Db (KR)
	EPL Db (IEC Ex)	EPL Gb (CN)	EPL Gb (BR)	EPL Gb (KR)
	EPL Gb (GB)	–	–	–
	EPL Gb (IECEX)	–	–	–
Certificate-issuing authority	BVS15 ATEXE030X	GJY20.1094X	DNV 17.0043X	21-AV4B0-0280X
	IECEX BVS 15.0020X	–	–	22-AV4B0-0052X

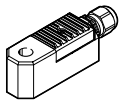
Dimensions

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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>
		KCC	<b>8114136</b>	<b>VACC-S13-11-K4-1-KS4A</b>

## Datasheet

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

Nominal power  
1.8 watt

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



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

Materials	
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364 zone III

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		24 V AC/DC		24 V AC/DC With fuse		60 V AC/DC		110 V AC/DC		230 V AC/DC	
Operating voltage											
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		VACC-S13-18-K4-...-EX4ME	VACC-S13-18-K4-...-NE4ME	VACC-S13-18-K4-...-NM4ME	VACC-S13-18-K4-...-KS4ME
Type					
CE marking (see declaration of conformity) <sup>1)</sup>	To EU Explosion Protection Directive (ATEX)	-	-	-	-
UKCA marking (see declaration of conformity) <sup>1)</sup>	To UK explosion regulations	-	-	-	-

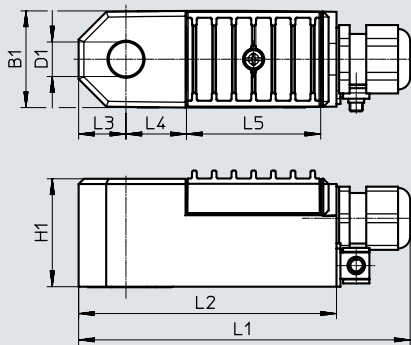
1) More information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

Datasheet

ATEX		VACC-S13-18-K4-...-EX4ME	VACC-S13-18-K4-...-NE4ME	VACC-S13-18-K4-...-NM4ME	VACC-S13-18-K4-...-KS4ME
Type					
ATEX category for 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	Ex e mb IIC T4, T5, T6
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	Ex tD A21 IP65 T85/T95/T130°C
EX ambient temperature [°C]		T4, T130°C: –30°C ≤ Ta ≤ +60°C			
		T5, T95°C: –30°C ≤ Ta ≤ +60°C			
		T6, T85°C: –30°C ≤ Ta ≤ +50°C			
Explosion protection certification outside the EU		EPL Db (GB)	EPL Db (CN)	EPL Db (BR)	EPL Db (KR)
		EPL Db (IEC Ex)	EPL Gb (CN)	EPL Gb (BR)	EPL Gb (KR)
		EPL Gb (GB)	–	–	–
		EPL Gb (IECEx)	–	–	–
Certificate-issuing authority		BVS 15ATEXE029X	GYJ17.1235X	INMETRO DNV 17.0042X	21-AV4B0-0279X
		IECEx BVS 15.0075X	–	–	22-AV4B0-0051X

Dimensions

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

## Datasheet

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
			110 V AC/DC	–	★ 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
			110 V AC/DC	–	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
			110 V AC/DC	–	8118325	VACC-S13-18-K4-2U-NM4ME
			230 V AC/DC	–	8118326	VACC-S13-18-K4-3U-NM4ME
		KCC	24 V AC/DC	–	8156759	VACC-S13-18-K4-1U-KS4ME
				Fuse	8156762	VACC-S13-18-K4-1UF-KS4ME
			60 V AC/DC	–	8156763	VACC-S13-18-K4-27U-KS4ME
			110 V AC/DC	–	8156760	VACC-S13-18-K4-2U-KS4ME
			230 V AC/DC	–	8156761	VACC-S13-18-K4-3U-KS4ME

## Datasheet

-  -	Voltage	Nominal power 3.6 W at 24 V DC
	24 V DC	
	24 V AC	
	110 V AC	
	230 V AC	
-  -	Temperature range	
	-20 ... +60°C	



General technical data		24 V DC	24 V AC	110 V AC	230 V AC
Operating voltage					
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	RoHS-compliant
LABS (PWIS) conformity	VDMA24364 zone III

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		24 V DC	24 V AC	110 V AC	230 V AC
Operating voltage					
Frequency	[Hz]	-	50/60	50/60	50/60
Power	[W]	3.5	-	-	-
	[VA]	-	3.5	3.5	3.5

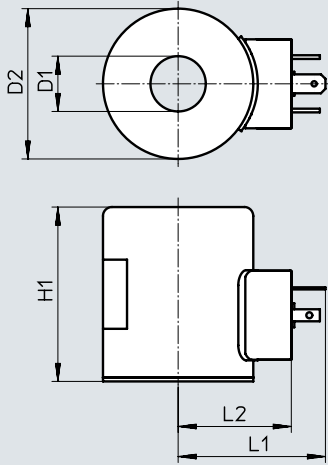
Operating and environmental conditions		24 V DC	24 V AC	110 V AC	230 V AC
Operating voltage					
Ambient temperature	[°C]	-20 ... 60		-20 ... 60	
Corrosion resistance class CRC <sup>1)</sup>		4		4	
CE marking (see declaration of conformity) <sup>2)</sup>		-		To EU Low Voltage Directive	
UKCA marking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

1) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)2) More information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.




## Datasheet

## Dimensions



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

## Ordering data

	Description	Operating voltage	Part no.	Type
	Plug type A, to EN 175301-803	24 V DC	562906	VACC-S18-35-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

## Datasheet

-  -	Voltage	Nominal power
	24 V DC	12 W 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	RoHS-compliant
LABS (PWIS) conformity	VDMA24364 zone III

**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

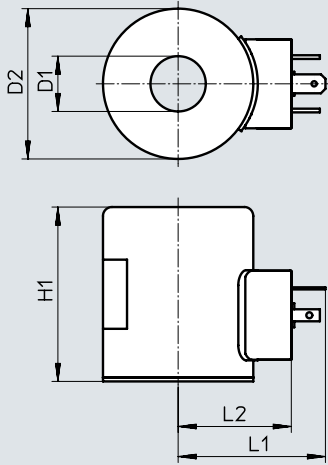
**Operating and environmental conditions**

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	
UKCA marking (see declaration of conformity)	-		To UK regulations for electrical equipment	

1) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)2) More information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.


## Datasheet

## Dimensions

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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

## Datasheet

Voltage  
230 V AC

Temperature range  
-50 ... +90 °C

Nominal power  
3 watt at 230 V AC

- Solenoid coil with flameproof 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	RoHS-compliant
LABS (PWIS) conformity	VDMA24364 zone III

### 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 for gas		II 2G
Type of (ignition) protection for gas		Ex d IIC T6, T5, T4 Gb
ATEX category for dust		II 2D
Type of (ignition) protection for dust		Ex tb IIIC T80 °C, T95 °C, T130 °C Db
EX 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 (IEC Ex)
		EPL Gb (IECEX)
Certificate-issuing authority		BVS15ATEXE135
		IECEXBVS.15.0116

## Datasheet

### Operating and environmental conditions

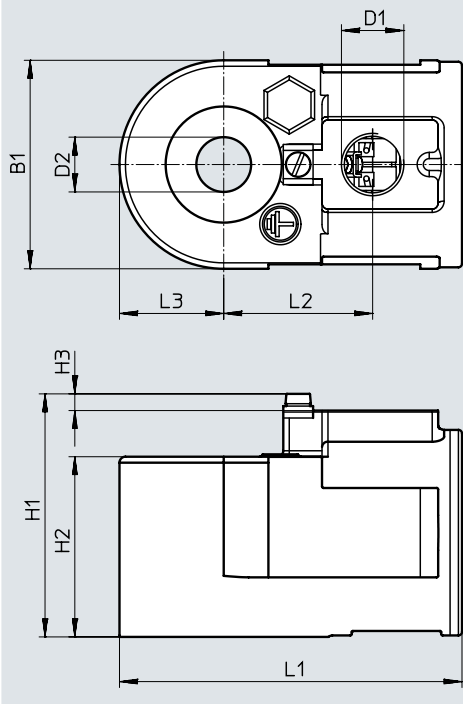
Corrosion resistance class CRC <sup>1)</sup>	4
CE marking (see declaration of conformity) <sup>2)</sup>	To EU Explosion Protection Directive (ATEX)
	To EU RoHS Directive

1) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

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

## Datasheet

Voltage	<ul style="list-style-type: none"> <li>• Solenoid coil with flameproof enclosure</li> </ul>
24 V AC/DC	<ul style="list-style-type: none"> <li>• ATEX category: "II 2G" and "II 2D"</li> </ul>
110 V AC/DC	<ul style="list-style-type: none"> <li>• Type of (ignition) protection for gas "Ex d"</li> </ul>
230 V AC/DC	<ul style="list-style-type: none"> <li>• Explosion protection certification outside the EU EPL Db and EPL Gb</li> </ul>
Temperature range	
-20 ... +60°C	
Nominal power	
2.5 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	RoHS-compliant
LABS (PWIS) conformity	VDMA24364 zone III

### 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
	[VA]	2.5	2.5

### ATEX

ATEX category for gas	II 2G
Type of (ignition) protection for gas	Ex d IIC T6, T5, T4 Gb
ATEX category for dust	II 2D
Type of (ignition) protection for dust	Ex tb IIIC T80 °C, T95 °C, T130 °C Db
EX 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 (IEC Ex)
	EPL Gb (IECEX)
Certificate-issuing authority	BVS15ATEXE135
	IECEXBVS.15.0116

## Datasheet

### Operating and environmental conditions

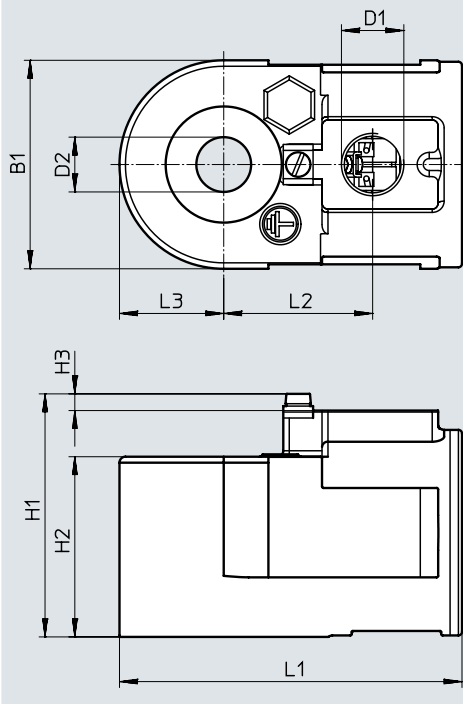
Corrosion resistance class CRC <sup>1)</sup>	4
CE marking (see declaration of conformity) <sup>2)</sup>	To EU Explosion Protection Directive (ATEX) To EU RoHS Directive

1) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

2) More 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

## Datasheet

### Voltage

24 V AC/DC  
48 V AC/DC  
110 V AC/DC  
120 V AC/DC  
230 V AC/DC

- Solenoid coil with flameproof 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	RoHS-compliant
LABS (PWIS) conformity	VDMA24364 zone III

#### 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 for gas	II 2G
Type of (ignition) protection for gas	Ex d IIC T6, T5, T4 Gb
ATEX category for dust	II 2D
Type of (ignition) protection for dust	Ex tb IIIC T80 °C, T95 °C, T130 °C Db
EX 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 (IEC Ex)
	EPL Gb (IEC Ex)
Certificate-issuing authority	BVS15ATEXE135
	IECExBVS.15.0116



## Datasheet

### Operating and environmental conditions

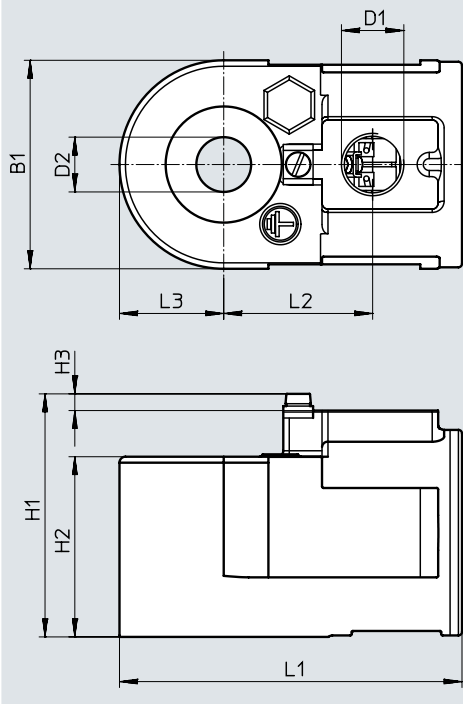
Corrosion resistance class CRC <sup>1)</sup>	4
CE marking (see declaration of conformity) <sup>2)</sup>	To EU Explosion Protection Directive (ATEX) To EU RoHS Directive

1) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

2) More 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 fitting, 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 fitting 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

## Datasheet

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

Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364 zone III

## 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

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-...-EX4ME	VACC-S18-35-K4-...-NE4ME	VACC-S18-35-K4-...-NM4ME	VACC-S18-35-K4-...-KS4ME
CE marking (see declaration of conformity) <sup>1)</sup>	To EU Explosion Protection Directive (ATEX)	–	–	–
UKCA marking (see declaration of conformity) <sup>1)</sup>	To UK explosion regulations	–	–	–

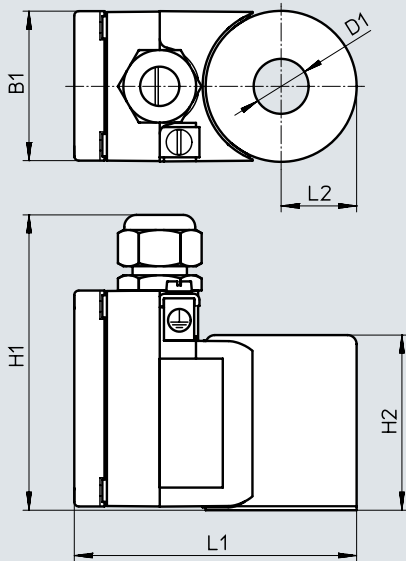
1) More information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

## ATEX

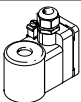
Type	VACC-S18-35-K4-...-EX4ME	VACC-S18-35-K4-...-NE4ME	VACC-S18-35-K4-...-NM4ME	VACC-S18-35-K4-...-KS4ME
ATEX category for gas	II 2G	–	–	–
Type of (ignition) protection for gas	Ex eb mb IIC T6, T5 Gb	Ex e mb IIC T5/T6 Gb	Ex eb mb IIC T6, T5 Gb	Ex e mb IIC T5, T6
ATEX category for dust	II 2D	–	–	–
Type 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	Ex tD A21 IP66 T85/T95°C
EX ambient temperature [°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 (GB)	EPL Db (CN)	EPL Db (BR)	EPL Db (KR)
	EPL Db (IEC Ex)	EPL Gb (CN)	EPL Gb (BR)	EPL Gb (KR)
	EPL Gb (GB)	–	–	–
	EPL Gb (IECEx)	–	–	–
Certificate-issuing authority	BVS 16ATEXE036X	GYJ17.1237X	INMETRO DNV 19.0135X	22-AV4B0-0256X
	IECEx BVS16.0028X	–	–	22-AV4B0-0257X

## Datasheet

## 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>8109386</b>	VACC-S18-35-K4-3U-EX4ME
				–	<b>8109386</b>	VACC-S18-35-K4-3U-EX4ME
		–		<b>8109386</b>	VACC-S18-35-K4-3U-EX4ME	
		NEPSI	24 V AC/DC	–	<b>8118257</b>	VACC-S18-35-K4-1U-NE4ME
				Fuse	<b>8118256</b>	VACC-S18-35-K4-1UF-NE4ME
			110 V AC/DC	–	<b>8118255</b>	VACC-S18-35-K4-2U-NE4ME
				–	<b>8118254</b>	VACC-S18-35-K4-3U-NE4ME
			230 V AC/DC	–	<b>8118254</b>	VACC-S18-35-K4-3U-NE4ME
				–	<b>8118254</b>	VACC-S18-35-K4-3U-NE4ME
		INMETRO	24 V AC/DC	–	<b>8118182</b>	VACC-S18-35-K4-1U-NM4ME
Fuse	<b>8118179</b>			VACC-S18-35-K4-1UF-NM4ME		
110 V AC/DC	–		<b>8118174</b>	VACC-S18-35-K4-2U-NM4ME		
	–		<b>8118180</b>	VACC-S18-35-K4-3U-NM4ME		
230 V AC/DC	–		<b>8118180</b>	VACC-S18-35-K4-3U-NM4ME		
	–		<b>8118180</b>	VACC-S18-35-K4-3U-NM4ME		
KCC	24 V AC/DC	–	<b>8118317</b>	VACC-S18-35-K4-1U-KS4ME		
		Fuse	<b>8118316</b>	VACC-S18-35-K4-1UF-KS4ME		
	110 V AC/DC	–	<b>8118315</b>	VACC-S18-35-K4-2U-KS4ME		
		–	<b>8118314</b>	VACC-S18-35-K4-3U-KS4ME		
	230 V AC/DC	–	<b>8118314</b>	VACC-S18-35-K4-3U-KS4ME		
		–	<b>8118314</b>	VACC-S18-35-K4-3U-KS4ME		

## Datasheet

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	
Note on materials	RoHS-compliant
LABS (PWS) conformity	VDMA24364 zone III

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	
Operating voltage											
Frequency [Hz]		50/60	-	50/60	-	-	-	50/60	-	50/60	-
Power [W]		-	12	-	12	12	12	-	12	-	12
	[VA]	12	-	12	-	-	-	12	-	12	-

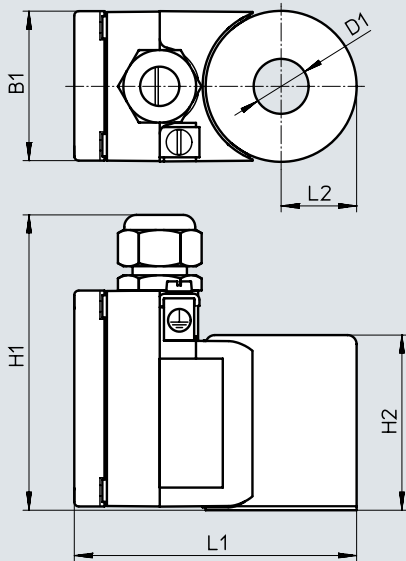
Operating and environmental conditions		VACC-S18-120-K4-...-EX4ME	VACC-S18-120-K4-...-NE4ME	VACC-S18-120-K4-...-NM4ME	VACC-S18-120-K4-...-KS4ME
Type					
CE marking (see declaration of conformity) <sup>1)</sup>	To EU Explosion Protection Directive (ATEX)	-	-	-	-
UKCA marking (see declaration of conformity) <sup>1)</sup>	To UK explosion regulations	-	-	-	-

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

ATEX		VACC-S18-120-K4-...-EX4ME	VACC-S18-120-K4-...-NE4ME	VACC-S18-120-K4-...-NM4ME	VACC-S18-120-K4-...-KS4ME	
Type						
ATEX category for 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	Ex e mb IIC T4	
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	Ex tD A21 IP66 T120°C	
EX ambient temperature [°C]		T4, T120°C: -25°C ≤ Ta ≤ +40°C				
Explosion protection certification outside the EU	EPL Db (GB)	EPL Db (GB)	EPL Db (CN)	EPL Db (BR)	EPL Db (KR)	
	EPL Db (IEC Ex)	EPL Db (IEC Ex)	EPL Gb (CN)	EPL Gb (BR)	EPL Gb (KR)	
	EPL Gb (GB)	-	-	-	-	
	EPL Gb (IECEX)	-	-	-	-	
Certificate-issuing authority	BVS 16ATEXE036X	GYJ17.1237X	INMETRO DNV 19.0135X	22-AV4BO-0256X		
	IECEX BVS16.0028X	-	-	22-AV4BO-0257X		

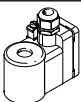
## Datasheet

## 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	–	8118181	VACC-S18-120-K4-1U-NM4ME	
				Fuse	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		
		KCC	24 V AC/DC	–	8118323	VACC-S18-120-K4-1U-KS4ME	
				Fuse	8118322	VACC-S18-120-K4-1UF-KS4ME	
48 V DC	–		8118318	VACC-S18-120-K4-7-KS4ME			
60 V DC	–		8118321	VACC-S18-120-K4-27-KS4ME			
110 V AC/DC	–		8118320	VACC-S18-120-K4-2U-KS4ME			
230 V AC/DC	–	8118319	VACC-S18-120-K4-3U-KS4ME				

## Datasheet

Voltage	<ul style="list-style-type: none"> <li>• Solenoid coil with flame-proof enclosure</li> </ul>
24 V DC	
48 V DC	<ul style="list-style-type: none"> <li>• Class I, Div. 2 (CA)</li> </ul>
125 V DC	<ul style="list-style-type: none"> <li>• Class I, Div. 2 (US)</li> </ul>
220 V DC	

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	RoHS-compliant
LABS (PWIS) conformity	VDMA24364 zone III

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	

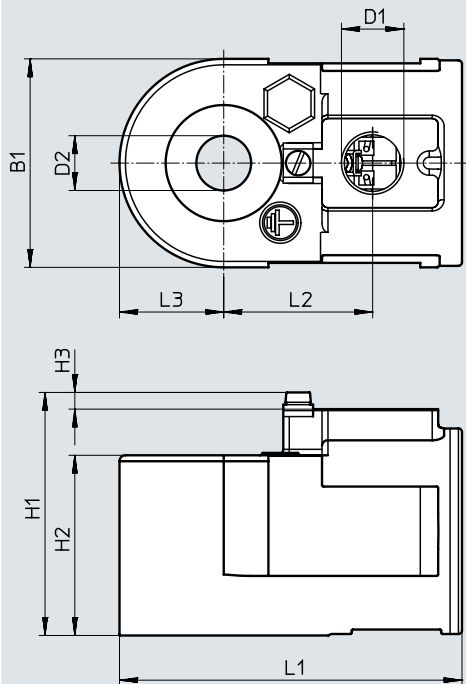
1) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

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

ATEX	
EX 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)


## Datasheet

## 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

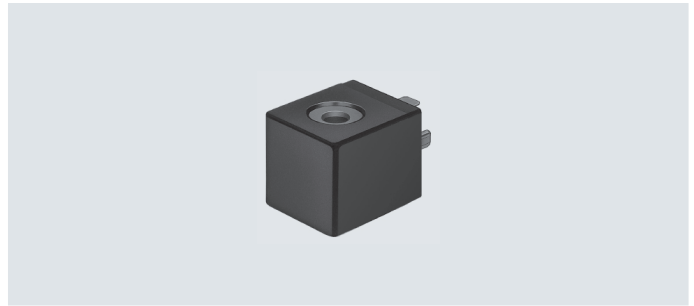
## Ordering data

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

## Datasheet

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

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



### 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
LABS (PWIS) conformity	VDMA24364-C1-L

### 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
Frequency [Hz]	–	–	50	60	50	60

### Operating and environmental conditions

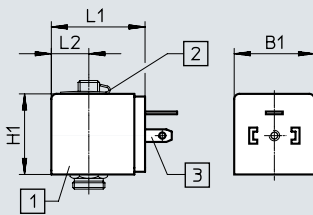
Operating voltage	12 V DC	24 V DC	24 V AC	110 V AC	120 V AC	230 V AC
Ambient temperature [°C]	-10 ... +50	-10 ... +50	-10 ... +50	-10 ... +50		
Temperature of medium [°C]	-10 ... +50	-10 ... +50	-10 ... +50	-10 ... +50		
CE marking (see declaration of conformity) <sup>1)</sup>	–	–	–	To EU Low Voltage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

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



## Datasheet

## Dimensions




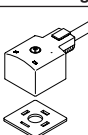


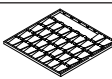
Download CAD data → [www.festo.com](http://www.festo.com)

- [1] Solenoid coil  
(can be rotated 360° on the armature tube)
- [2] Safety clip

- [3] Plug pins with 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 clamping 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
		Cable length 10 m	<b>193459</b> KMC-1-24-10-LED
	Operating voltage up to 240 V	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 0.3 m	<b>3679771</b> NEBV-A1W3F-P-K-0.3-N-M12W3
		Cable length 0.6 m	<b>3679772</b> NEBV-A1W3F-P-K-0.6-N-M12W3
	Electrical connection 2, M12x1, A-coded Operating voltage up to 240 V	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
VACS	Solenoid coil VACS
002	Solenoid coil type
C	Solenoid coil width of 18 mm for armature tube of 8 mm
003	Electrical connection
C1	Plug pattern type C, to EN 175301-803
R1	Individual connector M8, 4-pin
R3	Single plug M12 A-coded, according to EN 61076-2-101
R4	Single plug M12 A-coded, pin assignment according to DESINA
R8	Individual connector M8, 3-pin

004	Nominal operating voltage
1	24 V DC
1A	24 V AC/50-60 Hz
3W	230 V AC/240 V AC/50-60 Hz
5	12 V DC
7	48 V DC
7A	48 V AC/50-60 Hz
16B	120 V AC/60 Hz and 110V AC/50-60 Hz
005	Circuitry
	None
R	Holding current reduction with integrated protective circuit
006	Display
	None
L	LED

## Datasheet

-  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 replaced without interrupting the pneumatic circuit



### General technical data

Conforms to	IEC 61010-1
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
LABS (PWIS) conformity	VDMA24364-B1/B2-L

### 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	
UKCA marking (see declaration of conformity) <sup>2)</sup>	–					To UK regulations for electrical equipment	
Certification	c UL us - Recognized (OL)					c UL us - Recognized (OL)	

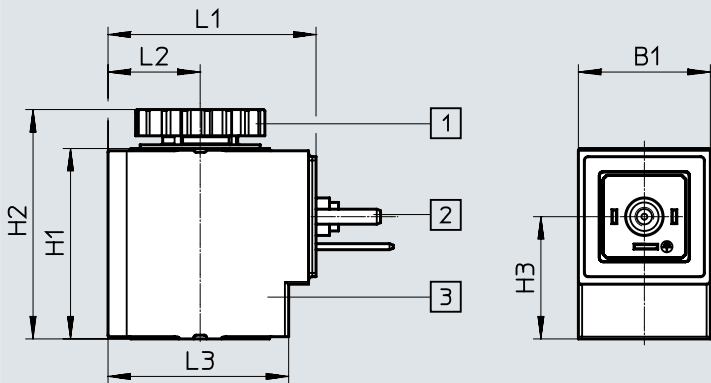
1) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

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

Datasheet

Dimensions

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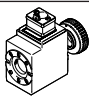

[1] Knurled nut (seal set for solenoid coil)

[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	D1 ∅	D2 ∅	H1	H2	L1	L2	L6
VACS-C-C1-...	18.4	8.2	17.2	38.3	28	25.4	6.8	17.4

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 degree of protection IP67	6 g	2643771	VAMC-B10-C-B-S8	

## Datasheet

-  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 replaced without interrupting the pneumatic circuit



### General technical data

Type of mounting	Via knurled nut
Mounting position	Any (can be rotated in increments of 45° on the armature tube)
Signal status indication	LED

### Materials

Housing	PA, steel
Winding	Copper
Solenoid coil	Copper, steel, thermoplastic
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B1/B2-L

### 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 pick-up 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	

### 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

1) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

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.

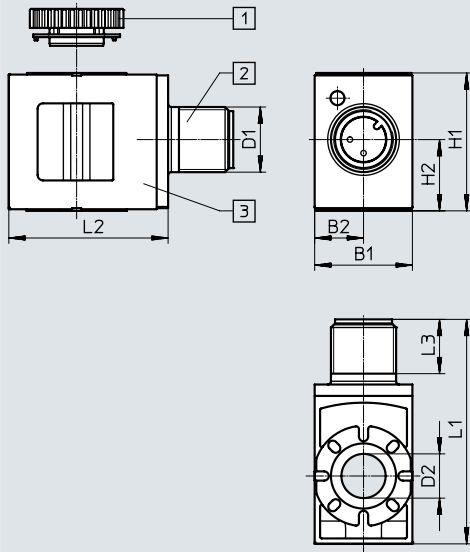
If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.

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

Datasheet

Dimensions

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


- [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
<b>Solenoid coil</b>				
	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>

## Datasheet

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

- Can be replaced 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	Thermoset, copper, steel
Winding	Copper
LABS (PWIS) conformity	VDMA24364 zone III

### Electrical data

Electrical connection	To DIN EN 175301-803
Min. pickup time [ms]	12
Permissible voltage fluctuations [%]	-10 / +10
Duty cycle [%]	100
Degree of protection to EN 60529	IP65
Note on degree of protection	IP00 without connector socket

### Characteristic coil data

Operating voltage	24 V DC	110 V AC	230 V AC
Power [W]	7.9	-	-
[VA]	-	14	14
Power factor cos(phi)	-	0.7	0.7
Frequency [Hz]	-	50/60	50/60
Permissible frequency fluctuations [%]	-10 / +10	-10 / +10	-10 / +10

### Operating and environmental conditions

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

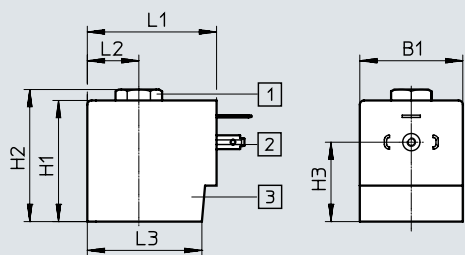
1) More information: [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

## Datasheet

### ★ Core Range

#### Dimensions

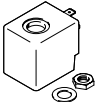

Download CAD data → [www.festo.com](http://www.festo.com)



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

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

#### Ordering data

Description	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	

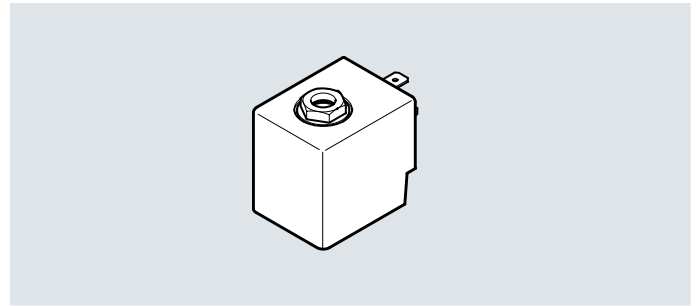
<b>007</b>	<b>Certification</b>	
	None	
<b>U4</b>	Class1 Div1 to NEC 500	

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

## Datasheet

-  - Voltage  
24 V DC  
110, 230 V AC

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



### General technical data

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

Solenoid coil	Copper
	Steel
	Thermoplastic
Winding	Copper
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364 zone III

### 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 mounted state

### Characteristic coil data

Operating voltage	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	-	-
	-	-	-
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

## Datasheet

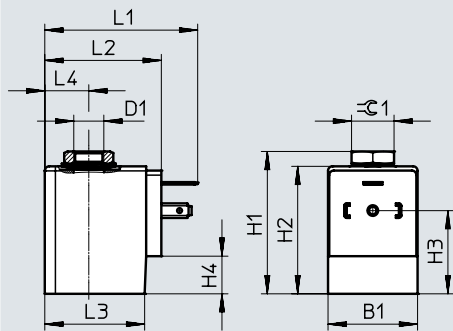
Operating and environmental conditions			
Operating voltage	24 V DC	110 V AC	230 V AC
Ambient temperature [°C]	-20 ... +50		
Restricted ambient temperature and temperature of medium	-20 ... +60°C (with limited duty cycle)		
Corrosion resistance class CRC <sup>1)</sup>	4		
Pollution degree	-	3	
CE marking (see declaration of conformity) <sup>2)</sup>	-	To EU Low Voltage Directive	
UKCA marking (see declaration of conformity) <sup>2)</sup>	-	To UK regulations for electrical equipment	

1) More information: [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

2) More 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	∅ 1
VACN-H1-A1-...	35.8	G1/8	45.9	42.1	27.6	12.5	57	45	39.8	17.9	Size 14

## Ordering data

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

## Datasheet

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

- Can be replaced 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	Thermoset, copper, steel
Winding	Copper
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B2-L

### 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

### 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

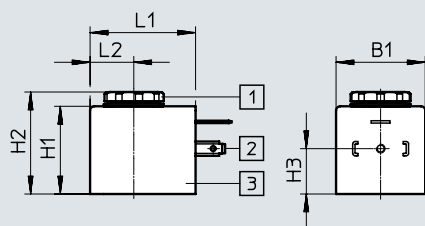
Operating voltage	24 V DC	110 V AC	230 V AC
Ambient temperature [°C]	-20 ... 50	-20 ... 50	-
CE marking (see declaration of conformity) <sup>1)</sup>	-	To EU Low Voltage Directive	-
UKCA marking (see declaration of conformity) <sup>1)</sup>	-	To UK regulations for electrical equipment	-

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

## Datasheet

## ★ Core Range

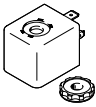

## Dimensions

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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	Actuation type	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
	Electrical	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

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