Valve plugs for self-assembly

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Festo core product range

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- ☆ Generally ready for shipping ex works in 5 days Assembled for you at 4 Service Centres worldwide Up to 6 × 10¹² variants per product family



Valve plugs for self-assembly

Product range overview

Function	Design	Туре	Number of pins/wires	→ Page/Internet			
Plug	Electrical connection 1, socket type A						
	To EN 175301-803	MSSD-C	3-pin	4			
		MSSD-N					
		MSSD-C	4-pin	6			
	Electrical connection 1, socket type B						
	To EN 175301-803	MSSD-V	3-pin	8			
	To industry standard, 11 mm	MSSD-F	3-pin	10			
	Electrical connection 1, socket type C						
	To EN 175301-803	MSSD-EB	3-pin	12			
			4-pin	14			
	To industry standard, 9.4 mm	MSSD-E	3-pin	16			
	Electrical connection 1, socket plug pa	tern ZB/ZC					
	-	MSSD-ZBZC	4-pin	18			

Type codes

Standard

Insulation displacement connector

001	Series
MSSD	Plug socket
002	Electrical connection 1, connection technology
С	Type A to EN 175301-803
F	Type B as per industry standard 11 mm
E	Type C as per industry standard 9.4 mm
EB	Type C to EN 175301-803
N	Type A to EN 175301-803
٧	Type B to EN 175301-803
ZBZC	Connection pattern ZB/ZC

003	Electrical connection 1, number of pins/wires	
	Standard	
4P	4-pin	
004	Electrical connection 2, connection technology	

005	Cable connector	
	Standard	
M12	M12	
M14	M14	
M16	M16	
TY	Pg11	

006	Operating voltage range	
	Standard	
24DC	0 30 V DC, 0 24 V AC	
24VDC	0 30 V DC, 0 24 V AC	

007	Version	
	Standard	
SD	Special design	

L	800	EU certification	
ſ		None	
	EX2	II 3GD	

Plug socket MSSD-C MSSD-N

- For valves with D solenoid coil
- For valves with N1 solenoid coil
- For valves with H solenoid coil
- For valve series VZWM-L
- Cable connection with screw terminal



General technical data					
Туре		MSSD-C	MSSD-C-M16	MSSD-N	MSSD-C-TY-24DC
Based on standard		-	-	EN 175301-803	-
Electrical connection 1					
Connection type		Socket	Socket	Socket	-
Cable outlet		Angled	Angled	Angled	-
Design		Rectangular	Rectangular	Rectangular	-
Connection technology		Plug pattern type A to	Plug pattern type A to	Plug pattern type A to	-
		DIN EN 175301-803	DIN EN 175301-803	EN 175301-803	
Number of pins/wires		3	3	3	-
Type of mounting		On solenoid valve with M3	On solenoid valve with M3	On solenoid valve with M3	-
		central screw	central screw	central screw	
Contact durability		-	50	-	-
Electrical connection 2					
Connection technology		-	-	Screw terminal	-
Cable connector		Pg9	M16	M20x1.5	-
Cable diameter	[mm]	68	68	8 10	-
Nominal conductor cross section	[mm ²]	1.5	1.5	1.5	-

Technical data – Electrical components						
Туре		MSSD-C	MSSD-C-M16	MSSD-N	MSSD-C-TY-24DC	
Operating voltage range	[V DC]	-	_	0 24	-	
	[V AC]	-	-	0 250	-	
Current load at 40°C	[A]	-	-	16	_	

Materials					
MSSD-C	MSSD-C-M16	MSSD-N	MSSD-C-TY-24DC		
Polymer	Reinforced PA	Reinforced PA	-		
Black	-	Black	_		
-	-	Steel	-		
_	HNBR	VMQ	-		
RoHS-compliant	RoHS-compliant	RoHS-compliant	_		
-	-	Contains paint-wetting impairment substances	-		
	Polymer Black - -	Polymer Reinforced PA Black - - - - HNBR	Polymer Reinforced PA Reinforced PA Black - Black - - Steel - HNBR VMQ RoHS-compliant RoHS-compliant RoHS-compliant		

Operating and environmental conditions						
Туре	MSSD-C	MSSD-C-M16	MSSD-N	MSSD-C-TY-24DC		
Ambient temperature [°C]	-25 +90	-20 +115	-25 +80	-40 +90		
CE marking (see declaration of conformity)	To EU Low Voltage Directive ¹⁾	-	-	-		
Degree of protection	IP65	IP65	IP65	IP65		
	-	To IEC 60529	_	To IEC 60529		
Note on degree of protection	-	-	In assembled state	_		
Maritime classification ²⁾	See certificate	-	-	-		

¹⁾ For information about the area of use, see the EC declaration of conformity at: www.festo.com/sp -> Certificates.

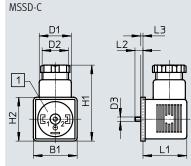
If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.

Dimensions

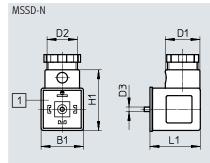
Pin allocation







[1] Insert can be repositioned by 90°



[1] Plug pattern type A to EN 175301-803

Туре	B1	D1	D2	D3	H1	H2	L1	L2	L3
		Ø	Ø	Ø					
MSSD-C	28	22	PG9	М3	52	28	26.5	5.5	1.5
MSSD-C-M16	27	22	M16x 1.5	M3	52	27	27	5.5	1.5
MSSD-C-TY-24DC	30	22	PG11	M3	52	30	30	5.5	1.5
MSSD-N	27.9	22.8	M20x1.5	М3	40	_	33.2	-	-

Ordering data					
Description	Signal status	Nominal conductor cross	Weight	Part no.	Туре
	indication	section			
		[mm ²]	[g]		
Socket, plug pattern type A to EN 175301-803, 3-pin, angled	_	6 8	22	34583	MSSD-C
Socket, plug pattern type A to EN 175301-803, 3-pin, angled	_	6 8	22 38	34583 539709	MSSD-C MSSD-C-M16
Socket, plug pattern type A to EN 175301-803, 3-pin, angled	-	8 10			

Festo core product range

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Generally ready for shipping ex works in 24 hours

Generally ready for shipping ex works in 5 days

²⁾ Additional information is available at www.festo.com/sp → Certificates.

Plug socket MSSD-C

- For valves with D and N1 solenoid coils
- Cable connection using screw terminal or insulation displacement technology



Special features of insulation displacement technology (MSSD-C-S-M16)

With these plug sockets, the cable is no longer connected using individual clamping screws.

Instead, the flying leads are pressed into the patented insulation displacement contact when the screw is tightened.

- Strip the cable sheath
- Push it in
- Screw it in tightly
- Finished

General technical data			
Туре		MSSD-C-4P	MSSD-C-S-M16
Electrical connection 1			
Connection type		Socket	Socket
Cable outlet		Angled	Angled
Design		Rectangular	Rectangular
Connection technology		Plug pattern type A to DIN EN 175301-803	Plug pattern type A to DIN EN 175301-803
Number of pins/wires		3	4
Type of mounting		On solenoid valve with M3 central screw	On solenoid valve with M3 central screw
Contact durability		-	10
Electrical connection 2			
Connection technology		Screw terminal	Insulation displacement connector
Cable connector		Pg9	-
Cable diameter	[mm]	6 8	5.5 8
Nominal conductor cross section	[mm ²]	≤ 1.5	0.5 1

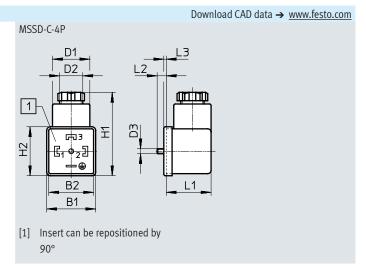
Materials		
Туре	MSSD-C-4P	MSSD-C-S-M16
Housing	Polymer	PA
Housing colour	Black	Black
Note on materials	RoHS-compliant	RoHS-compliant

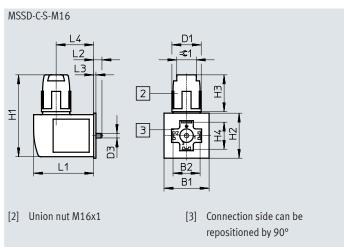
Operating and environmental	conditions		
Туре		MSSD-C-4P	MSSD-C-S-M16
Ambient temperature	[°C]	-25 +90	-20 +90
Degree of protection		IP65	IP67
		-	To IEC 60529

Dimensions

Pin allocation







Туре	B1	B2	D1 Ø	D2 Ø	D3 Ø	H1	H2	Н3	H4	L1	L2	L3	L4	= ©1
MSSD-C-4P	29.5	27	23.8	Pg9	M3	49	29.5	42	-	27	5.5	1.5	-	-
MSSD-C-S-M16	30	18	19.5	-	М3	54.5	30	24.5	18	40	5.5	1.5	25	13

Ordering data				
Description	Cable connection	Weight	Part no.	Туре
		[g]		
Socket, plug pattern type A to DIN EN 175301-803, 4-pin, angled	Screw terminal	22	171157	MSSD-C-4P
Socket, plug pattern type A to DIN EN 175301-803, 4-pin, angled	Screw terminal Insulation displacement	38	171157 192748	MSSD-C-4P MSSD-C-S-M16

Plug socket MSSD-V

- For valve with V solenoid coil
- Cable connection with screw terminal



General technical data			
Туре		MSSD-V-M16	MSSD-V
Electrical connection 1			
Connection type		Socket	Socket
Cable outlet		Angled	Angled
Design		Rectangular	Rectangular
Connection technology		Plug pattern type B to DIN EN 175301-803	Plug pattern type B to DIN EN 175301-803
Number of pins/wires		3	3
Type of mounting		On solenoid valve with M3 central screw	On solenoid valve with M3 central screw
Contact durability		50	-
Electrical connection 2			
Connection technology		Screw terminal	Screw terminal
Cable connector		M16x1.5	Pg9
Cable diameter	[mm]	68	68
Nominal conductor cross section	[mm ²]	0.75	Max. 1.5

Materials		
Туре	MSSD-V-M16	MSSD-V
Housing	Reinforced PA	Polymer
Housing colour	-	Black
Seals	HNBR	-

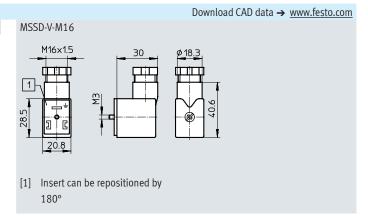
Operating and environmental conditions						
Туре	MSSD-V-M16	MSSD-V				
Ambient temperature [°C]	−20 +115	−25 +90				
CE marking (see declaration of conformity) ¹⁾	-	To EU Low Voltage Directive				
Degree of protection	IP65	IP65				
	To IEC 60529	-				

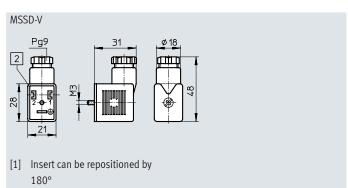
¹⁾ Additional information is available at www.festo.com/sp \rightarrow Certificates.

Dimensions

Pin allocation







Ordering data					
Description	Cable connection	Nominal conductor cross section	Weight	Part no.	Туре
		[mm ²]	[g]		
Socket, plug pattern type B to DIN EN 175301-803, 3-pin,	Screw terminal	Max. 0.75	35 g	539713	MSSD-V-M16
angled		Max. 1.5	18 g	33295	MSSD-V

Plug socket MSSD-F

- For valves with F solenoid coils
- Cable connection using screw terminal or insulation displacement technology



General technical data				
Туре		MSSD-F-M16	MSSD-F	MSSD-F-S-M16
Electrical connection 1				
Connection type		Socket	Socket	Socket
Cable outlet	,	Angled	Angled	Angled
Design		Rectangular	Rectangular	Rectangular
Connection technology		Plug pattern type B to industry standard	Plug pattern type B to industry standard	Plug pattern type B to industry standard
		11 mm	11 mm	11 mm
Number of pins/wires		3	3	3
Type of mounting		On solenoid valve with M3 central screw	On solenoid valve with M3 central screw	On solenoid valve with M3 central screw
Note on cable outlet	,	Can be repositioned by 180°	-	-
Contact durability		50	-	10
Protective earth connection		Present	-	-
Electrical connection 2				
Connection technology		Screw terminal	Screw terminal	Insulation displacement connector
Cable connector		M16x1.5	Pg9	M16x1.5
Cable diameter	[mm]	68	6 8	5.5 8
Nominal conductor cross section	[mm ²]	Max. 0.75	Max. 1.5	0.5 1

Technical data – Electrical components					
Туре		MSSD-F-M16	MSSD-F	MSSD-F-S-M16	
Operating voltage range	[V DC]	0 250	-	-	
	[V AC]	0 250	-	-	
Surge resistance	[kV]	2	-	-	
Current load at 40°C	[A]	6	-	-	

Materials			
Туре	MSSD-F-M16	MSSD-F	MSSD-F-S-M16
Housing	Reinforced PA	Polymer	PA
Housing colour	Black	Black	Black
Seals	HNBR	-	-
Note on materials	RoHS-compliant	-	-

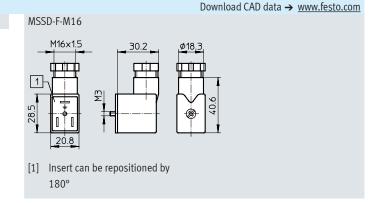
Operating and environmental conditions					
Туре	MSSD-F-M16	MSSD-F	MSSD-F-S-M16		
Ambient temperature [°C]	-20 +115	−25 +90	−25 +90		
Corrosion resistance class CRC ¹⁾	1	_	_		
Pollution degree	3	_	_		
CE marking (see declaration of conformity) ²⁾	-	To EU Low Voltage Directive	_		
Degree of protection	IP65	IP65	IP67		
Note on degree of protection	In assembled state	In assembled state	In assembled state		

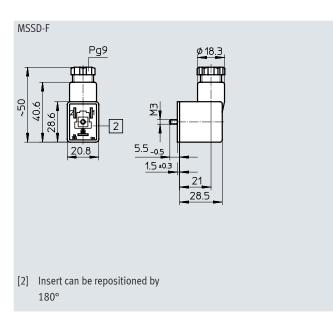
- 1) Corrosion resistance class CRC 1 to Festo standard FN 940070
- Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind coverings, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).
- 2) Additional information is available at www.festo.com/sp → Certificates.

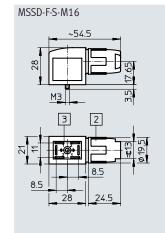
Dimensions

Pin allocation









- [2] Union nut M16x1
- [3] Connection side can be repositioned by 90°

With these plug sockets, instead of the cable being connected using individual clamping screws, the flying leads are pressed into the patented insulation displacement contact when the screw is tightened:

- Strip the cable sheath
- Push it in
- Screw it in tightly
- Finished

Ordering data					
Description	Cable connection	Nominal conductor cross	Weight	Part no.	Type
		section			
		[mm ²]	[g]		
Socket, plug pattern type B, to industry standard, 11 mm,	Screw terminal	Max. 0.75	35	539710	MSSD-F-M16
Socket, plug pattern type B, to industry standard, 11 mm, 3-pin, angled	Screw terminal	Max. 0.75 Max. 1.5	35 17	539710 ★ 34431	MSSD-F-M16 MSSD-F
	Screw terminal Insulation displace-				

Festo core product range

Generally ready for shipping ex works in 24 hours

Generally ready for shipping ex works in 5 days

Plug socket MSSD-EB

For valves with EB and N2 solenoid
coils



General technical data				
Туре		MSSD-EB-M12-24VDC-SD-EX	MSSD-EB	MSSD-EB-M12
Electrical connection 1				
Connection type		Socket	Socket	Socket
Cable outlet		Angled	Angled	Angled
Design		Rectangular	Rectangular	Rectangular
Connection technology		Plug pattern type C, to DIN EN 175301-803	Plug pattern type C, to DIN EN 175301-803	Plug pattern type C, to DIN EN 175301-803
Number of pins/wires		3	3	3
Type of mounting		On solenoid valve with M2.5 central screw	On solenoid valve with M2.5 central screw	On solenoid valve with M2.5 central screw
Note on cable outlet		Can be repositioned by 180°	-	-
Contact durability	-		-	50
Electrical connection 2	,			
Connection technology		Screw terminal	Screw terminal	Insulation displacement connector
Cable connector		M12	Pg7	M12
Cable diameter	[mm]	4 6	68	4 6
Nominal conductor cross section	[mm ²]	0.25 0.5	≤ 0.75	1.5

Technical data – Electrical components					
Туре		MSSD-EB-M12-24VDC-SD-EX	MSSD-EB	MSSD-EB-M12	
Nominal operating voltage	[V DC]	-	300	-	
	[V AC]	-	250	-	
Operating voltage range	[V DC]	0 30	-	-	
	[V AC]	0 24	-	-	
Surge resistance	[kV]	0.8	4	-	
Current load at 40°C	[A]	6	6	-	

Materials			
Туре	MSSD-EB-M12-24VDC-SD-EX	MSSD-EB	MSSD-EB-M12
Housing	Reinforced PA	Polymer	Reinforced PA
Housing colour	-	Black	-
Seals	HNBR	NBR	HNBR
Note on materials	RoHS-compliant	-	-

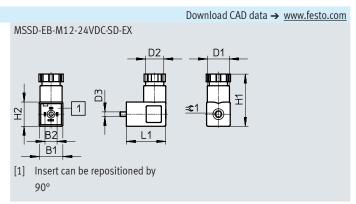
Operating and environmental conditions					
Туре	MSSD-EB-M12-24VDC-SD-EX	MSSD-EB	MSSD-EB-M12		
Ambient temperature [°C]	−25 +125	-45 +90	-40 +125		
Pollution degree	3	3	-		
CE marking (see declaration of conformity) ¹⁾	-	To EU Low Voltage Directive	-		
Degree of protection	IP65	IP65	IP65		
	To IEC 60529	To IEC 60529	To IEC 60529		

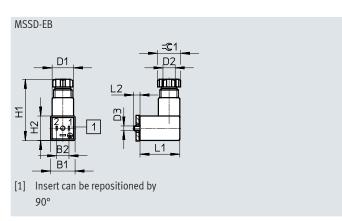
¹⁾ Additional information is available at www.festo.com/sp → Certificates.

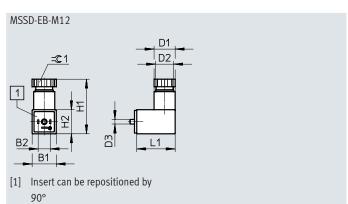
Dimensions

Pin allocation









Туре	B1	B2	D1 Ø	D2 Ø	D3 Ø	H1	H2	L1	L2	=© 1
MSSD-EB-M12-24VDC-SD-EX	15.6	8	14.6	M12x 1.5	2.5	34.5	16	26	-	T8
MSSD-EB	15.5	8	15	Pg7	2.5	40	15.5	26	4.1	13
MSSD-EB-M12	15.5	8	15	M12x 1.5	M2.5	33	15.5	25.5	-	13

Ordering data					
Description	Cable connection	Nominal conductor cross section	Weight	Part no.	Туре
		[mm ²]	[g]		
Socket, plug pattern type C to DIN EN 175301-803, 3-pin,	Screw terminal	0.25 0.5	-	570367	MSSD-EB-M12-24VDC-SD-EX
angled		≤ 0.75	11 g	★ 151687	MSSD-EB
		1.5	11 g	539712	MSSD-EB-M12

Festo core product range

Generally ready for shipping ex works in 24 hours

☆ Generally ready for shipping ex works in 5 days

Plug socket MSSD-EB

For valves with EB and N2 solenoid
coils



General technical data				
Electrical connection 1				
Connection type		Socket		
Cable outlet		Angled		
Design		Rectangular		
Connection technology		Plug pattern type C		
Number of pins/wires		4		
Type of mounting		On solenoid valve with M2.5 central screw		
Contact durability 10		10		
Electrical connection 2				
Connection technology		Insulation displacement connector		
Cable diameter	[mm]	46		

Materials	
Housing	Reinforced PA
Housing colour	Black

Operating and environmental conditions				
Ambient temperature	[°C]	-25 +90		
Degree of protection		IP67		
		To IEC 60529		

Download CAD data → www.festo.com

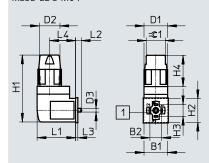
Data sheet

Dimensions

Pin allocation



MSSD-EB-S-M14



[1] Insert can be repositioned by 90°

With these plug sockets, instead of the cable being connected using individual clamping screws, the flying leads are pressed into the patented insulation displacement contact when the screw is tightened.

- Strip the cable sheath
- Push it in
- Screw it in tightly
- Finished

Туре	B1	B2	D1 Ø	D2	D3 Ø	H1	H2	Н3	H4	L1	L2	L3	L4	=© 1
MSSD-EB-S-M14	16	8	16	M14x1	2.5	45	16	8	21.2	26	4	1.5	17.6	13

Ordering data					
Description	Cable connection	Nominal conductor cross	Weight	Part no.	Туре
		section			
		[mm ²]	[g]		
Socket, plug pattern type C to DIN EN 175301-803, 4-pin,	Insulation displace-	0.25 0.5	17	192745	MSSD-EB-S-M14
angled	ment connector				

Plug socket MSSD-E

• For valves with E solenoid coils



General technical data					
Туре		MSSD-E	MSSD-E-M12		
Electrical connection 1					
Connection type	-	Socket	Socket		
Cable outlet	-	Angled	Angled		
Design	-	Rectangular	Rectangular		
Connection technology		Plug pattern type C to industry standard, 9.4 mm	Plug pattern type C to industry standard, 9.4 mm		
Number of pins/wires		3	3		
Type of mounting		On solenoid valve with M3 central screw	On solenoid valve with M3 central screw		
Contact durability		-	50		
Electrical connection 2	,				
Connection technology		Screw terminal	Screw terminal		
Cable connector		Pg7	M12		
Cable diameter	[mm]	68	46		
Nominal conductor cross section	[mm ²]	0.75	0.75		

Technical data — Electrical co	Technical data – Electrical components			
Operating voltage range	[V DC]	0300		
	[V AC]	0 250		
Current load at 40°C	[A]	6		

Materials		
Туре	MSSD-E	MSSD-E-M12
Housing	Reinforced PA	Reinforced PA
Housing colour	Black	Black
Seals	NBR	HNBR
Note on materials	-	RoHS-compliant

Operating and environmental conditions					
Туре	MSSD-E	MSSD-E-M12			
Ambient temperature [°C]	−25 +90	-20 +115			
Corrosion resistance class CRC ¹⁾	-	1			
Pollution degree	3	3			
Degree of protection	IP65	IP65			
Note on degree of protection	In assembled state	In assembled state			

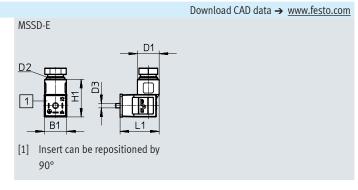
¹⁾ Corrosion resistance class CRC 1 to Festo standard FN 940070

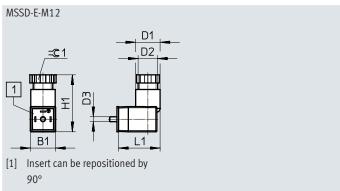
Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind coverings, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Dimensions

Pin allocation







Туре	B1	D1 Ø	D2	D3	H1	L1	=© 1
MSSD-E	15.5	14	Pg7	M3	24.5	25	-
MSSD-E-M12	15.5	15	M12x 1.5	M3	33	25.5	13

Ordering data					
Description	Cable connection	Cable diameter	Weight	Part no.	Туре
		[mm]	[g]		
Socket, plug pattern type C, to industry standard, 9.4 mm,	Screw terminal	6 8	8	14098	MSSD-E
3-pin, angled		4 6	11	539711	MSSD-E-M12

Plug socket MSSD-ZBZC

For valves with ZB and ZC solenoid



General technical data	
Electrical connection 1	
Connection type	Socket
Cable outlet	Angled
Design	Rectangular
Connection technology	Plug pattern ZB/ZC
Number of pins/wires	4
Type of mounting	On solenoid valve via self-tapping screw
Electrical connection 2	
Connection technology	Insulation displacement connector
Nominal conductor cross section [mm ²]	0.22 0.34

Technical data – Electrical con	Technical data – Electrical components					
Nominal operating voltage	[V DC]	24				
Operating voltage range	[V DC]	336				

Materials	
Housing	PA PA
Note on materials	RoHS-compliant

Operating and environmental conditions					
Ambient temperature	[°C]	-10 +50			
Corrosion resistance class CRC ¹⁾		1			
Degree of protection		IP50			
Note on degree of protection		In assembled state			
Maritime classification ²⁾		See certificate			

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

Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind coverings, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

²⁾ Additional information is available at www.festo.com/sp → Certificates.

Dimensions

Pin allocation



Download CAD data \rightarrow www.festo.com

- [1] Retaining screw
- [2] Inscription label IBS-6x10
- [4] Plug pattern for
- ZB solenoid coil
- [5] Plug pattern for
- ZC solenoid coil

Ordering data					
Description	Cable connection	Nominal conductor cross	Weight	Part no.	Туре
		section			
		[mm ²]	[g]		
Socket, connection pattern ZB/ZC, 4-pin, angled	Insulation displace-	0.22 0.34	11	185521	MSSD-ZBZC
	ment connector				

Festo - Your Partner in Automation





1 Festo Inc.

5300 Explorer Drive Mississauga, ON L4W 5G4 Canada

Festo Customer Interaction Center

Tel: 1877 463 3786 Fax: 1877 393 3786



2 Festo Pneumatic

Av. Ceylán 3, Col. Tequesquináhuac 54020 Tlalnepantla, Estado de México

Multinational Contact Center

01 800 337 8669



3 Festo Corporation

1377 Motor Parkway Suite 310 Islandia, NY 11749



Regional Service Center

7777 Columbia Road Mason, OH 45040

Festo Customer Interaction Center

1 800 993 3786 1 800 963 3786 customer.service.us@festo.com

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