

Electrical connection technology, for individual connection

FESTO

Product range overview

Accessories for valve terminals
Electrical connector systems

5.1

Overview Cable/plug connector	Valve terminal					→ Page
	Type 14	Type 10	Type 12	Type 32	Type 82	
KM12-M12GSGD-2,5	■	-	-	-	-	4 / 5.1-23
KM12-M12GSGD-5	■	-	-	-	-	4 / 5.1-23
KM12-M12GSWD-1-4	■	-	-	-	-	4 / 5.1-23
KMEB-1-230AC-2,5	■	-	-	-	-	4 / 5.1-17
KMEB-1-230AC-5	■	-	-	-	-	4 / 5.1-17
KMEB-1-24-2,5-LED	■	-	-	-	-	4 / 5.1-17
KMEB-1-24-5-LED	■	-	-	-	-	4 / 5.1-17
KMEB-1-24-10-LED	■	-	-	-	-	4 / 5.1-17
KMEB-2-24-M12-0,5-LED	■	■ ¹⁾	-	-	-	4 / 5.1-17
KMEB-2-24-M12-2,5-LED	■	■ ¹⁾	-	-	-	4 / 5.1-17
KMH-0,5	-	-	-	-	■	4 / 5.1-29
KMH-1	-	-	-	-	■	4 / 5.1-29
KMH-2,5	-	-	-	-	■	4 / 5.1-29
KMH-5	-	-	-	-	■	4 / 5.1-29
KMH-D-0,5	-	-	-	-	■	4 / 5.1-29
KMH-D-1	-	-	-	-	■	4 / 5.1-29
KMH-D-2,5	-	-	-	-	■	4 / 5.1-29
KMH-D-5	-	-	-	-	■	4 / 5.1-29
KMYZ-7-24-2,5-LED-PUR	-	■ ²⁾	■	-	-	4 / 5.1-25
KMYZ-7-24-5-LED-PUR	-	■ ²⁾	■	-	-	4 / 5.1-25
KMYZ-7-24-10-LED-PUR	-	■ ²⁾	■	-	-	4 / 5.1-25
KRP-1-24-2,5	-	■ ³⁾	-	-	-	4 / 5.1-27
KRP-1-24-5	-	■ ³⁾	-	-	-	4 / 5.1-27
MHAP-PI-0,5	-	-	-	-	■	4 / 5.1-31
MHAP-PI-1	-	-	-	-	■	4 / 5.1-31
MHAP-PI-D-0,5	-	-	-	-	■	4 / 5.1-31
MHAP-PI-D-1	-	-	-	-	■	4 / 5.1-31
MSSD-EB	■	-	-	-	-	4 / 5.1-15
MSSD-EB-M12-MONO	■	-	-	-	-	4 / 5.1-15
MSSD-EB-M12-DUO	■	-	-	-	-	4 / 5.1-15
SIM-M12-4WD-5-PU	■	-	-	-	-	4 / 5.1-20
SIM-M12-4GD-5-PU	■	-	-	-	-	4 / 5.1-20
SIM-M12-5GD-2,5-PU	■	-	-	-	-	4 / 5.1-20
SIM-M12-5GD-5-PU	■	-	-	-	-	4 / 5.1-20
SIM-M8-4GD-2,5-PU	-	-	-	■	-	4 / 5.1-20
SIM-M8-4GD-5-PU	-	-	-	■	-	4 / 5.1-20
SIM-M8-4WD-2,5-PU	-	-	-	■	-	4 / 5.1-20
SIM-M8-4WD-5-PU	-	-	-	■	-	4 / 5.1-20
SEA-M12-4WD-PG7	■	-	-	-	-	4 / 5.1-166

1) CPV18 only

2) CPV/CPA10/14 only

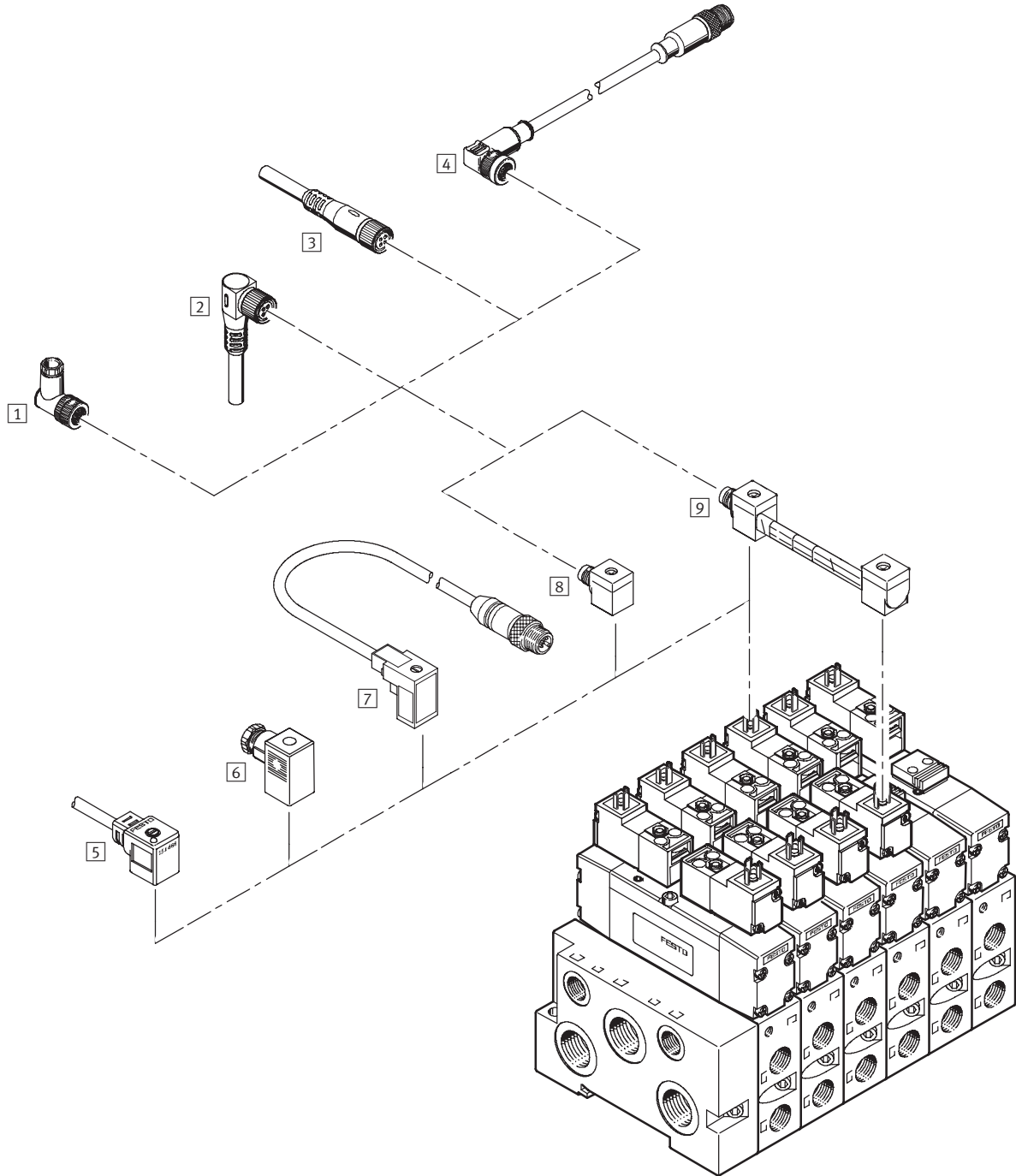
3) CPV10/14 only

Electrical connection technology, for individual connection

Peripherals overview

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Valve terminal type 14 VDMA-ISO 24 563



Accessories for valve terminals
Electrical connector systems

5.1

Electrical connection technology, for individual connection

Peripherals overview

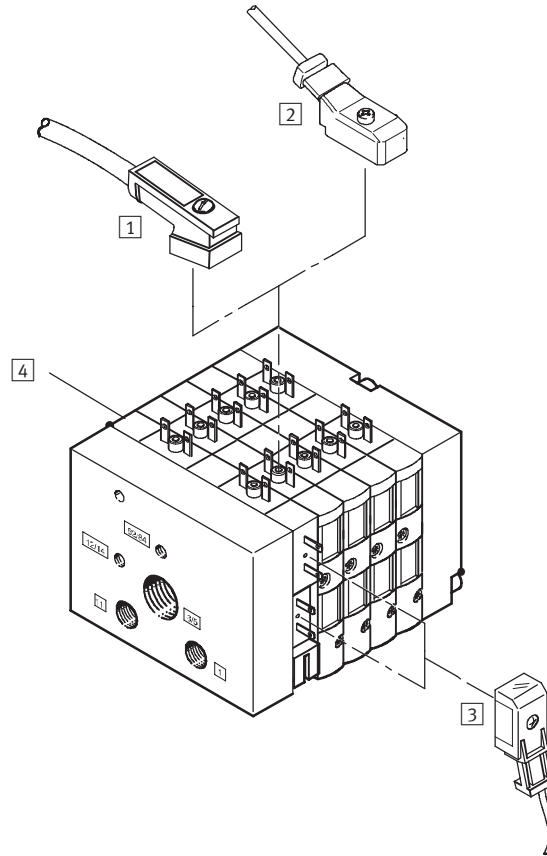
Accessories			
	Brief description	→ Page	
1	SEA-M12-4WD-PG7	Plug socket, angled	4 / 5.1-166
2	SIM-M12- ... WD-5-PU	Plug socket, angled, with cable	4 / 5.1-20
3	SIM-M12-... GD-5-PU	Plug socket, straight, with cable	4 / 5.1-20
4	KM12-M12-GSWD-1-4	Connecting cable, straight plug, angled socket	4 / 5.1-23
5	KMEB-1-24-2,5-LED	Plug socket, angled, with cable	4 / 5.1-17
6	MSSD-EB	Plug socket	4 / 5.1-15
7	KMEB-2-24-M12- ... -LED	Plug socket with cable	4 / 5.1-17
8	MSSD-EB-M12-MONO	Plug socket	4 / 5.1-15
9	MSSD-EB-M12-DUO	Plug socket	4 / 5.1-15


Electrical connection technology, for individual connection

Peripherals overview

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Valve terminal type CPV



Accessories		Brief description	→ Page
1	KMEB-2-24-M12- ... -LED	Plug socket with cable	4 / 5.1-17
2	KMYZ-7-24- ... -LED-PUR	Plug socket with cable	4 / 5.1-25
3	KRP-1-24-...	Connecting cable for relay plate	4 / 5.1-27
4	CPV10-RP2	Relay plate -  - Note Only possible with CPV10/14. Used only with MP, FB, AS-interface, CPV Direct	4 / 2.1-1 4 / 2.1-1 4 / 2.1-1 4 / 2.1-1

Electrical connection technology, for individual connection

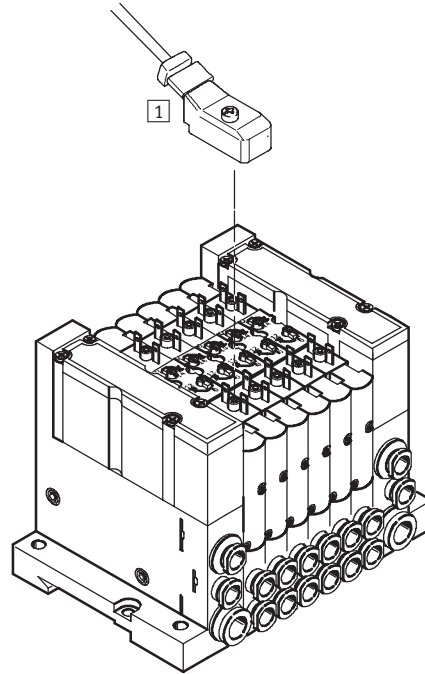
Peripherals overview

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Accessories for valve terminals
Electrical connector systems

5.1

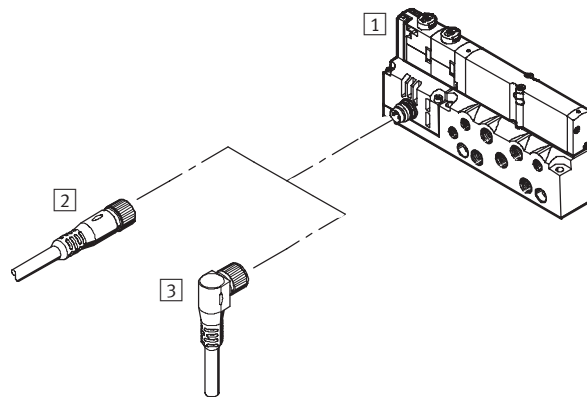
Valve terminal type 12 CPA



Accessories

	Brief description	→ Page
1	KMYZ-7-24- ... -LED-PUR	4 / 5.1-25

Valve terminal type 32 MPA



Accessories

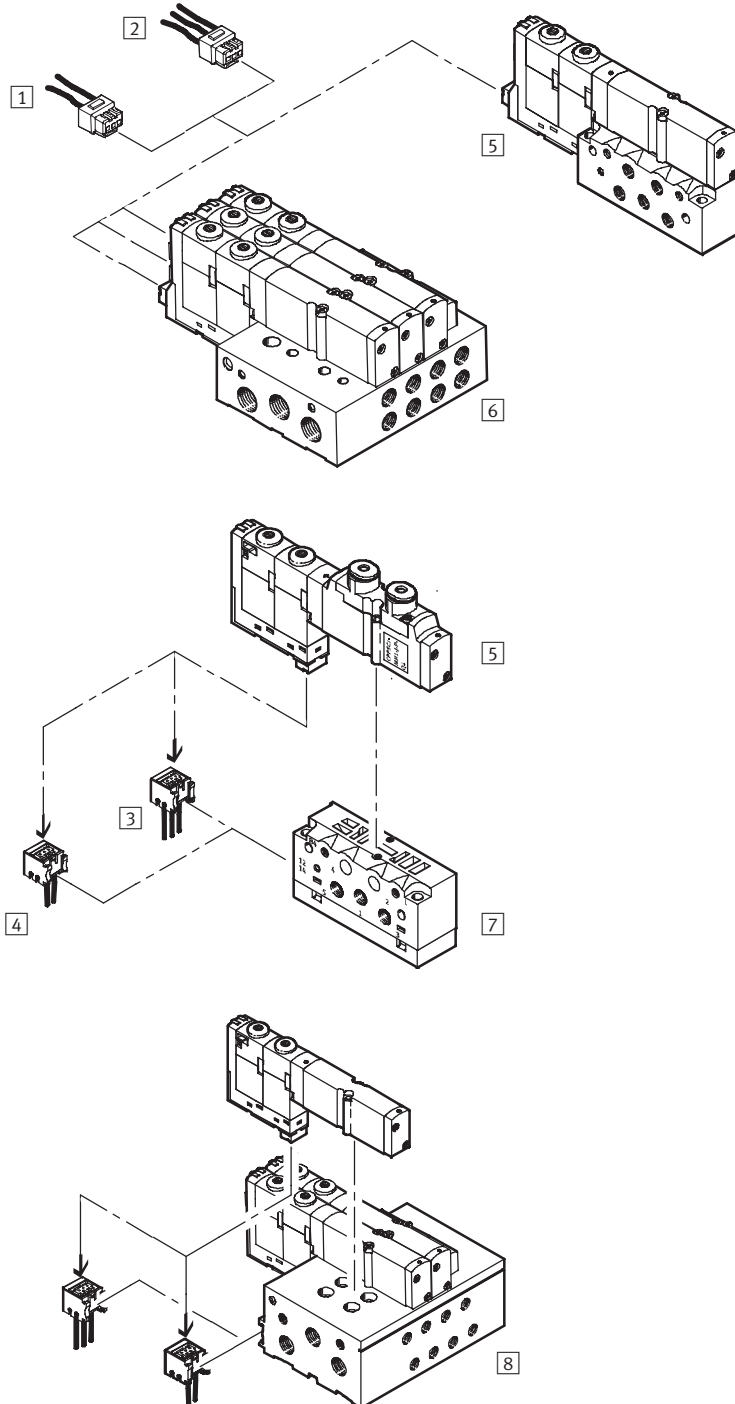
	Brief description	→ Page
1	VMPA-M1H-...-M7-PI	Volume 2
2	SIM-M8- ... -GD- ...-PU	4 / 5.1-20
3	SIM-M8- ... -WD- ...-PU	4 / 5.1-20

Electrical connection technology, for individual connection

Peripherals overview

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Valve terminal type 82 CPA-SC



Electrical connection technology, for individual connection

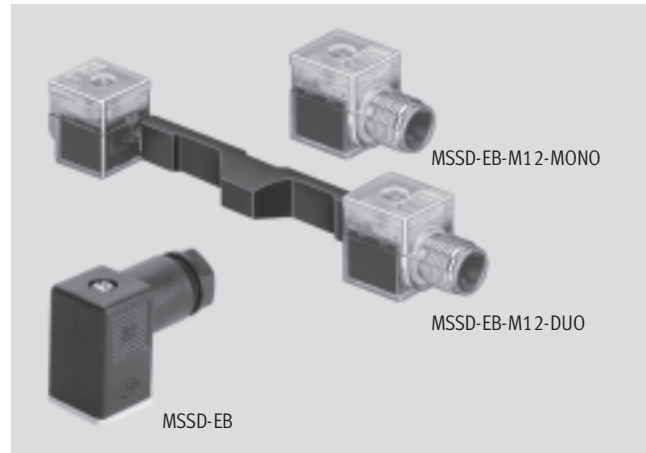
Peripherals overview

Accessories		
	Brief description	→ Page
1	KMH-...	Plug socket with cable, 1 coil 4 / 5.1-29
2	KMH-D-...	Plug socket with cable, 2 coils 4 / 5.1-29
3	MHAP-PI-...	Plug base, 1 coil 4 / 5.1-31
4	MHAP-PI-D-...	Plug base, 2 coils 4 / 5.1-31
5	CPASC-HC individual valve	Solenoid valve 4 / 3.1-27
6	CPASC-HC valve terminal	Solenoid valve 4 / 3.1-27
7	CPASC-PI individual valve	Solenoid valve 4 / 3.1-27
8	CPASC-PI valve terminal	Solenoid valve 4 / 3.1-27

Electrical connection technology, for individual connection

Technical data – MSSD-EB

- Plug socket for connecting individual valves (for valve terminal type 14)
- Can be fabricated with any cable lengths or M12 push-in connector for pre-assembled cable
- 2-pin plug socket
- MSSD-EB-M12: with LED



General technical data			
Type	MSSD-EB	MSSD-EB-M12	MSSD-EB-M12-MONO/MSSD-EB-M12-DUO
Type of mounting	M2.5 central screw	M2.5 central screw	M2.5 central screw
Mounting position	Any	Any	Any
Operating voltage range	[V]	250 AC	–
	[V]	300 DC	300 DC
Current-carrying capacity	[A]	6	2x0.12
Cable gland fitting	Pg7	M12	–
Cable diameter [mm]	7.5	4 ... 6	–
Max. wire cross section [mm ²]	0.75	1.5	–
Protection class to EN 60 529	IP65 (assembled)	IP65 (assembled)	IP65 (assembled)
Material of housing	Polyamide	Polyamide	Polyamide
Material of contacts	Brass	Brass, nickel-plated	Brass
Material	–	–	Polyvinyl chloride
Ambient temperature [°C]	–45 ... +90	–40 ... +125	–10 ... +50

Ordering data					
	Signal status display LED	Electrical connection	Product weight [g]	Type	Part No.
	–	Angled socket, 3-pin	11	MSSD-EB	151 687
				MSSD-EB-M12	539 712
	■	Angled socket, 2-pin; straight plug, 2-pin, M12	22	MSSD-EB-M12-MONO	188 024
	■	2 angled sockets, 2-pin; straight plug, 3-pin, M12	36	MSSD-EB-M12-DUO	188 025

Electrical connection technology, for individual connection

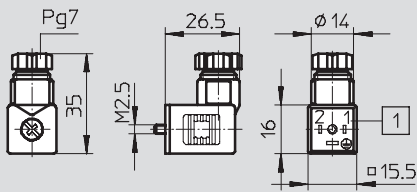
Technical data – MSSD-EB



Dimensions

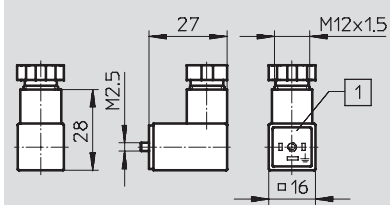
Download CAD data → www.festo.com/en/engineering

MSSD-EB



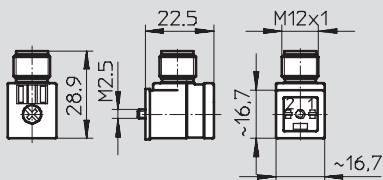
1 Insert rotatable in steps of 90°

MSSD-EB-M12

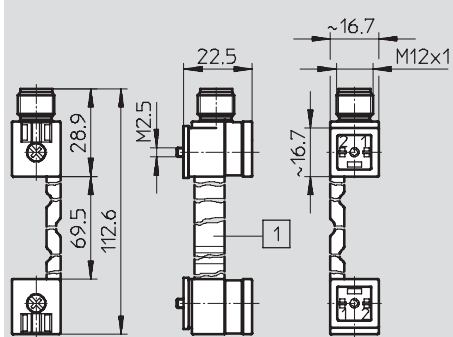


1 Insert rotatable in steps of 90°

MSSD-EB-M12-MONO



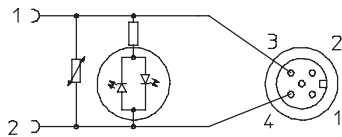
MSSD-EB-M12-DUO



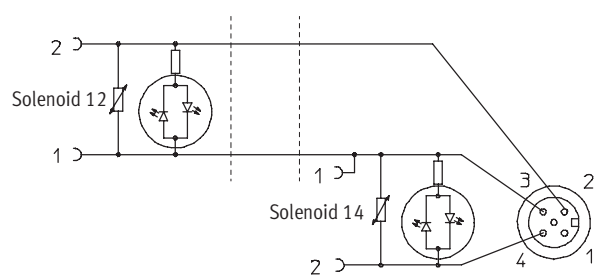
1 Cover is attached subsequently

Circuit diagram

MSSD-EB-M12-MONO



MSSD-EB-M12-DUO

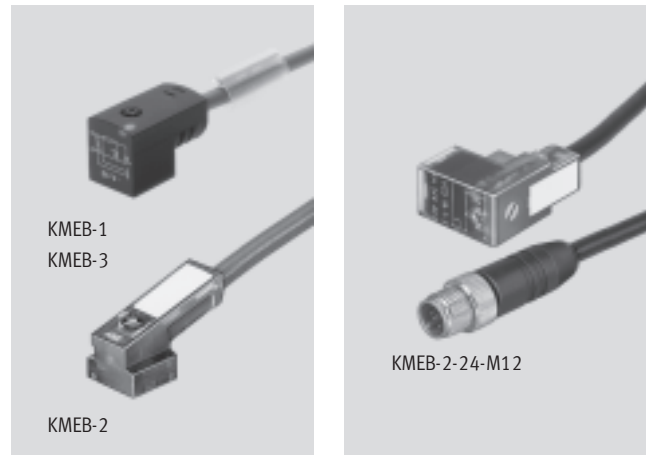


Electrical connection technology, for individual connection

Technical data – KMEB



- Plug socket with cable for connecting individual valves
- Pre-assembled
- Cable lengths: 2.5 m, 5 m and 10 m
- 3-pin plug socket
- 24 V DC: with LEDs and protective circuit
- Not suitable for chain link trunking



General technical data				
Type	KMEB-1-...	KMEB-2-...	KMEB-2-24-M12-...	KMEB-3-...
Electrical connection	Angled socket, 3-pin	Angled socket, 3-pin	Angled socket, 3-pin; straight plug, 5-pin, M12	Angled socket, 2-pin
Type of mounting	M2.5 central screw	M2.5 central screw	M2.5 central screw; threaded connector M12	M2.5 central screw
Mounting position	Any	Any	Any	Any
Constructional design [mm ²]	3x0.5	3x0.75	3x0.5	2x0.75
Cable diameter [mm]	5.2	6.2	5	5.2
Protection class to EN 60 529	IP65 (assembled)	IP65 (assembled)	IP65 (assembled)	IP65 (assembled)
Material of housing	Polyamide	Polymer	Polyurethane	Polycarbonate
Material of contacts	Silver-plated bronze	Tin-plated bronze	Tin-plated brass Silver-plated brass	Silver-plated bronze
Material of cable sheath	Polyvinyl chloride	Polyurethane	Polyurethane	Polyvinyl chloride
Ambient temperature [°C]	-20 ... +80	-20 ... +80	-5 ... +50	-20 ... +80

Ordering data						
	Signal status display LED	Operating voltage [V]	Product weight [g]	Cable length [m]	Type	Part No.
	■	24 DC	125	2.5	KMEB-1-24-2,5-LED	151 688
	■	24 DC	230	5	KMEB-1-24-5-LED	151 689
	■	24 DC	460	10	KMEB-1-24-10-LED	193 457
	-	230 AC	125	2.5	KMEB-1-230AC-2,5	151 690
	-	230 AC	230	5	KMEB-1-230-5	151 691
	■	24 DC	200	2.5	KMEB-2-24-2,5-LED	174 844
	■	24 DC	400	5	KMEB-2-24-5-LED	174 845
	-	230 AC	200	2.5	KMEB-2-230AC-2,5	174 846
	-	230 AC	400	5	KMEB-2-230-5	174 847
	■	24 DC	54	0.5	KMEB-2-24-M12-0,5-LED	177 677
	■	24 DC	215	2.5	KMEB-2-24-M12-2,5-LED	177 679
	■	24 DC	120	2.5	KMEB-3-24-2,5-LED	547 268
	■	24 DC	230	5	KMEB-3-24-5-LED	547 269
	-	24 DC	120	2.5	KMEB-3-24-2,5	547 270
	-	24 DC	230	5	KMEB-3-24-5	547 271

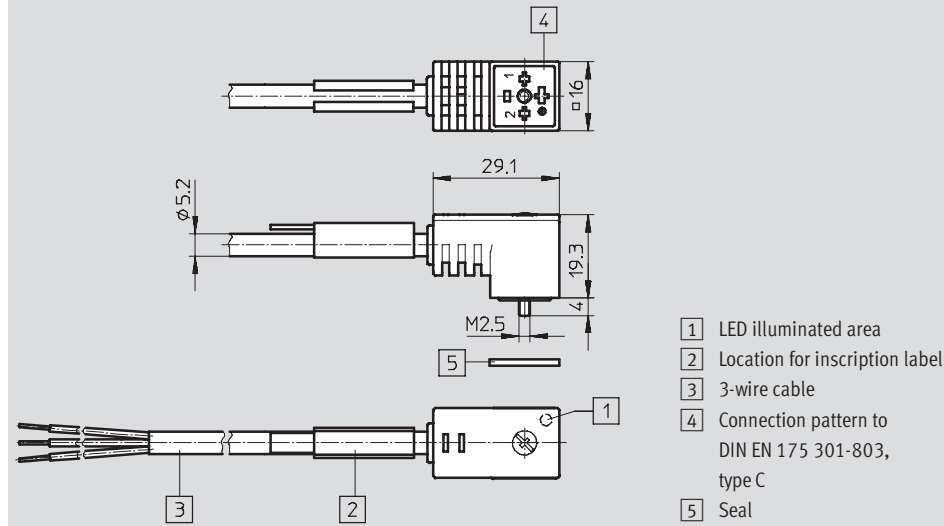
Electrical connection technology, for individual connection

Technical data – KMEB

Dimensions

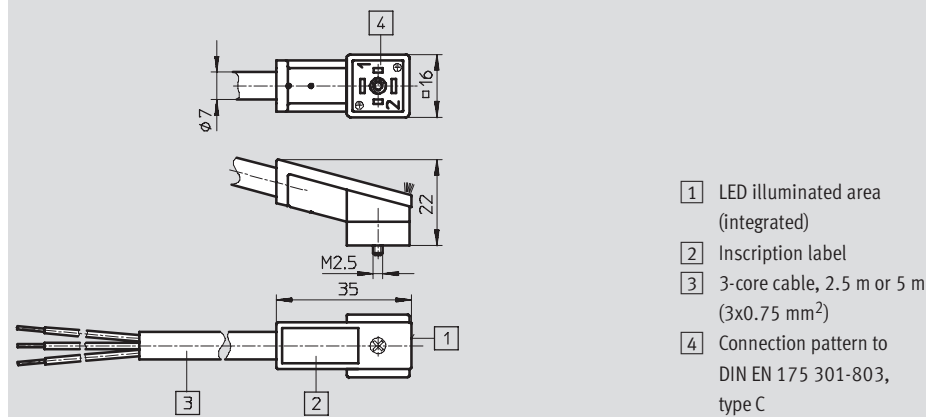
Download CAD data → www.festo.com/en/engineering

KMEB-1-...



- 1 LED illuminated area
- 2 Location for inscription label
- 3 3-wire cable
- 4 Connection pattern to DIN EN 175 301-803, type C
- 5 Seal

KMEB-2-...



- 1 LED illuminated area (integrated)
- 2 Inscription label
- 3 3-core cable, 2.5 m or 5 m (3x0.75 mm²)
- 4 Connection pattern to DIN EN 175 301-803, type C

Electrical connection technology, for individual connection

Technical data – KMEB

Dimensions Download CAD data → www.festo.com/en/engineering

KMEB-2-24-M12-...

1 3-core cable, 0.5 m or 2.5 m (3x0.5 mm²)

KMEB-3-...

- 1 LED illuminated area
- 2 Location for inscription label
- 3 2-wire cable
- 4 Connection pattern to DIN EN 175 301-803, type C
- 5 Seal

Circuit diagram

With integrated signal status display

The 24 V DC version is reverse polarity protected and has a protective circuit for peak voltages of up to 100 V DC, as well as an operating status indicator with yellow LED.
(KMEB-...: there is no port gn/ge).

KMEB-2-24-M12-...

Without integrated signal status display

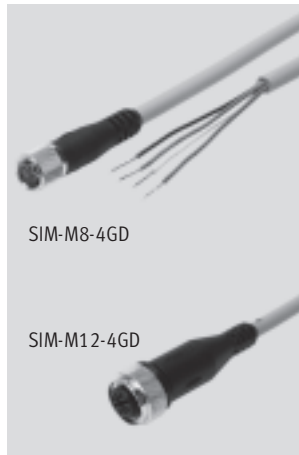
KMEB-...:
 – There is no port gn/ge
 – Operating voltage 24 V DC

Electrical connection technology, for individual connection

Technical data – SIM



- Plug socket with cable for connecting individual valves or sensors (signal generators)
- Pre-assembled
- Cable lengths of 2.5 m or 5 m
- 4-pin or 5-pin plug socket
- Not suitable for chain link trunking



General technical data		
Type	SIM-...	
Type of mounting	Union nut	
Mounting position	Any	
Operating voltage range	[V]	45 AC
	[V]	70 DC
Protection class to EN 60 529	IP65/IP67 (assembled)	
Material of housing	Polyurethane	
Material of contacts	Nickel-plated/gold-plated bronze	
Material of union nut	Nickel-plated/chrome-plated brass	
Material of cable sheath	Polyurethane	
Ambient temperature	[°C]	-40 ... +70
Ambient temperature of flexible cable installation	[°C]	-5 ... +70

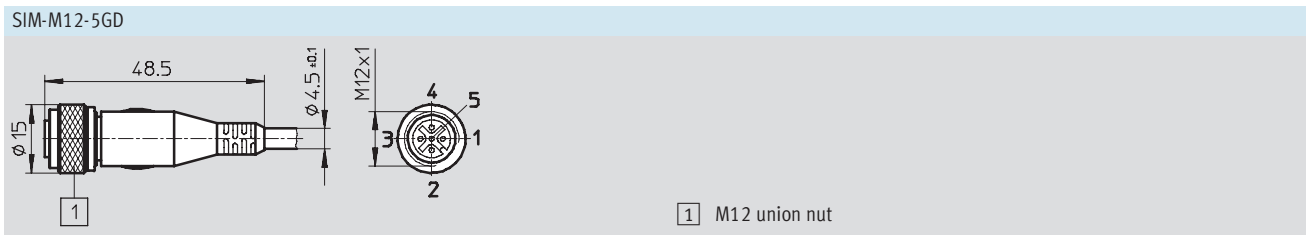
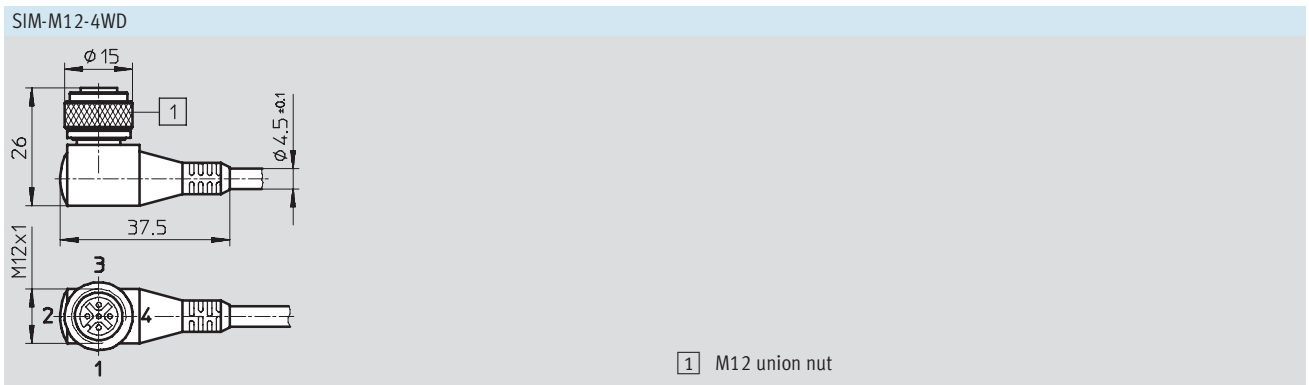
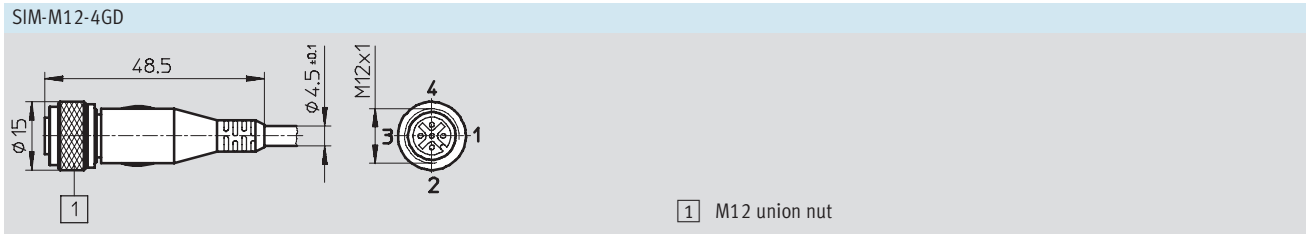
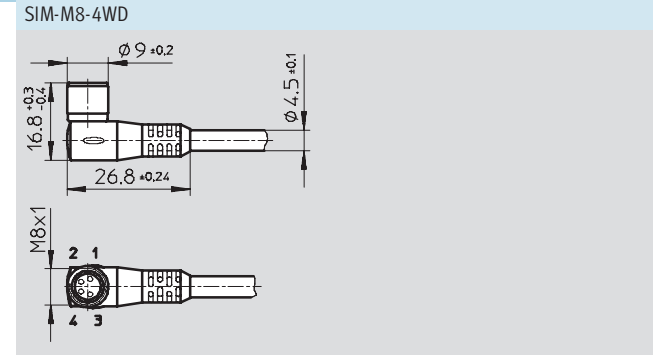
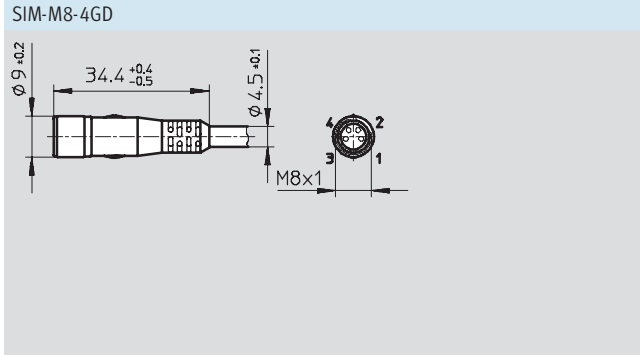
Ordering data								
	Electrical connection	Current-carrying capacity [A]	Constructional design [mm ²]	Cable diameter [mm]	Product weight [g]	Cable length [m]	Type	Part No.
	Straight socket, 4-pin, M8	2.8	4x0.25	4.5	86	2.5	SIM-M8-4GD-2,5-PU	158 960
	Straight socket, 4-pin, M8	2.8	4x0.25	4.5	159	5	SIM-M8-4GD-5-PU	158 961
	Angled socket, 4-pin, M8	2.8	4x0.25	4.5	85	2.5	SIM-M8-4WD-2,5-PU	158 962
	Angled socket, 4-pin, M8	2.8	4x0.25	4.5	154	5	SIM-M8-4WD-5-PU	158 963
	Straight socket, 4-pin, M12	2.8	4x0.25	4.5	158	5	SIM-M12-4GD-5-PU	164 259
	Angled socket, 4-pin, M12	2.8	4x0.25	4.5	162	5	SIM-M12-4WD-5-PU	164 258
	Straight socket, 5-pin, M12	4	5x0.25	5	96	2.5	SIM-M12-5GD-2,5-PU	175 715
	Straight socket, 5-pin, M12	4	5x0.25	5	191	5	SIM-M12-5GD-5-PU	175 716

Electrical connection technology, for individual connection

Technical data – SIM

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Dimensions Download CAD data → www.festo.com/en/engineering




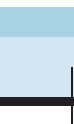
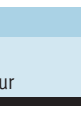
Accessories for valve terminals
Electrical connector systems

5.1

Electrical connection technology, for individual connection

Technical data – SIM



Wiring allocation (socket view)		
SIM-M8, 4-pin		
	Pin	Core colour
	1	Brown
	2	White
	3	Blue
4	Black	
SIM-M12, 4-pin		
	Pin	Core colour
	1	Brown
	2	White
	3	Blue
4	Black	
SIM-M12, 5-pin		
	Pin	Core colour
	1	Brown
	2	White
	3	Blue
	4	Black
5	Grey	

Electrical connection technology, for individual connection

Technical data – KM12-M12

- Plug socket with cable for connecting individual valves or sensors (generators)
- Pre-assembled at both ends
- Cable lengths 1 m, 2.5 m or 5 m
- 4-pin plug socket
- Not suitable for chain link trunking



General technical data		
Type	KM12-M12-...	
Type of mounting	M12 union nut/threaded connector	
Mounting position	Any	
Operating voltage range	[V]	Max. 60 AC
	[V]	Max. 75 DC
Protection class to EN 60 529	IP67 (assembled)	
Material of housing	Polyurethane	
Material of contacts	Gold-plated brass	
Material of union nut	Nickel-plated brass	
Material of cable sheath	Polyurethane	
Ambient temperature	[°C]	-30 ... +70
Ambient temperature of flexible cable installation	[°C]	-5 ... +70

Ordering data							
	Electrical connection	Current-carrying capacity [A]	Constructional design [mm ²]	Product weight [g]	Cable length [m]	Type	Part No.
	Straight plug, 4-pin – angled socket, 4-pin	3.8	4x0.34	66	1	KM12-M12-GSWD-1-4	185 499
	Straight plug, 4-pin – straight socket, 4-pin	3.8	4x0.25	103	2.5	KM12-M12-GSGD-2,5	18 684
	Straight plug, 4-pin – straight socket, 4-pin	2.8	4x0.25	173	5	KM12-M12-GSGD-5	18 686

Electrical connection technology, for individual connection

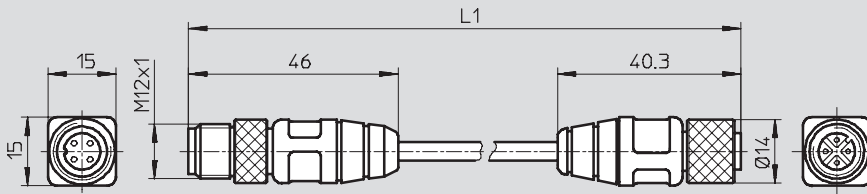
Technical data – KM12-M12



Dimensions

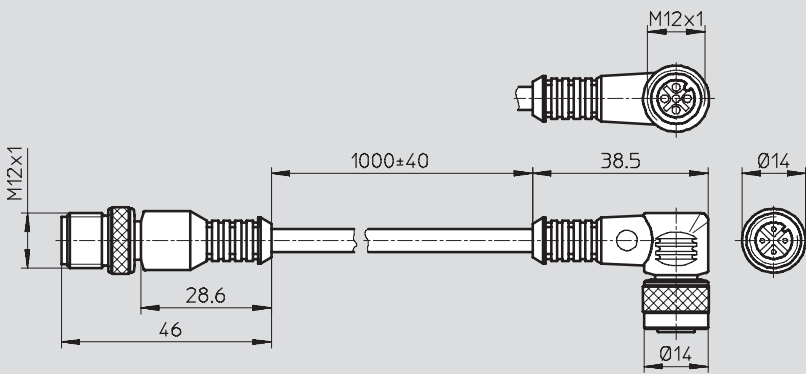
Download CAD data → www.festo.com/en/engineering

KM12-M12-GSGD-...



L1 Length according to type
(5 m or 10 m)

KM12-M12-GSWD-...



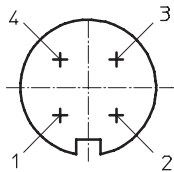
Wiring allocation (plug/socket view)

KM12-M12

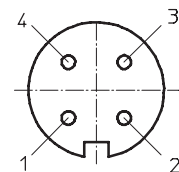
View – plug

Wiring allocation

View – socket



+ (24 V)	1	Brown	C1
- (0 V)	3	Blue	C3
x (Signal)	4	Black	C4
x+1 (Signal x+1)	2	White	C2



Electrical connection technology, for individual connection

Technical data – KMYZ-7

- Plug socket with cable for connecting individual valves CPV/CPA10/14
- Pre-assembled
- Cable lengths: 2.5 m, 5 m and 10 m
- 2-pin plug socket
- With LEDs and protective circuit
- With integrated reduction of holding current
- Reverse polarity protected
- Not suitable for chain link trunking



General technical data		KMYZ-7-...
Type		KMYZ-7-...
Electrical connection		Angled socket, 2-pin
Type of mounting		Self-tapping central screw KB 18x7
Mounting position		Any
Operating voltage range	[V]	20 ... 26 DC
Current-carrying capacity	[A]	1
Cable diameter	[mm]	3.4
Protection class to EN 60 529		IP65 (assembled)
Material of housing		Polyamide
Material of contacts		Bronze
Material of cable sheath		Polyurethane
Ambient temperature	[°C]	-10 ... +50

Ordering data						
	Signal status display LED	Constructional design [mm ²]	Product weight [g]	Cable length [m]	Type	Part No.
	■	2x0.25	43	2.5	KMYZ-7-24-2,5-LED-PUR	193 683
	■	2x0.25	82	5	KMYZ-7-24-5-LED-PUR	193 685
	■	2x0.25	155	10	KMYZ-7-24-10-LED-PUR	196 070

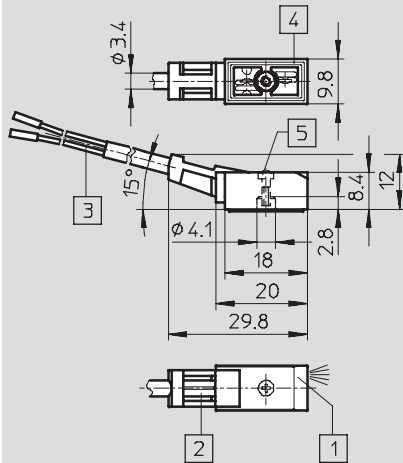
Electrical connection technology, for individual connection

Technical data – KMYZ-7

Dimensions

Download CAD data → www.festo.com/en/engineering

KMYZ-7-...



- 1 LED illuminated area
- 2 Location for identification plate
- 3 2-core cable 2.5 m, 5 m or 10 m (2x0.25 mm²)
- 4 Connection pattern for MZC
- 5 Mounting screw

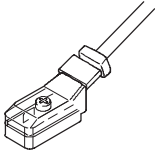
Electrical connection technology, for individual connection

Technical data – KRP

- Plug socket with cable for connecting relay plates, (valve terminal CPV10 and CPV14)
- Pre-assembled
- Cable lengths: 2.5 m and 5 m
- 2-pin plug socket
- Not suitable for chain link trunking



General technical data		KRP-...
Type		KRP-...
Electrical connection		Angled socket, 2-pin
Type of mounting		Self-tapping central screw KB 18x9
Mounting position		Any
Operating voltage range	[V]	20 ... 26 DC
Current-carrying capacity	[A]	1
Cable diameter	[mm]	3.5
Protection class to EN 60 529		IP65 (assembled)
Material of housing		Polyurethane
Material of contacts		Bronze
Material of cable sheath		Polyvinyl chloride
Ambient temperature	[°C]	-10 ... +50

Ordering data					
	Constructional design	Product weight	Cable length	Type	Part No.
	[mm ²]	[g]	[m]		
	2x0.25	49	2.5	KRP-1-24-2,5	165 612
	2x0.25	94	5	KRP-1-24-5	165 613

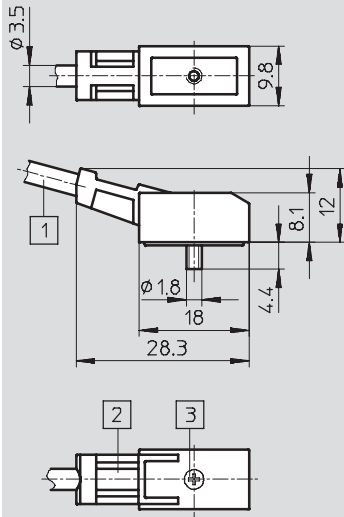
Electrical connection technology, for individual connection

Technical data – KRP

Dimensions

Download CAD data → www.festo.com/en/engineering

KRP-...

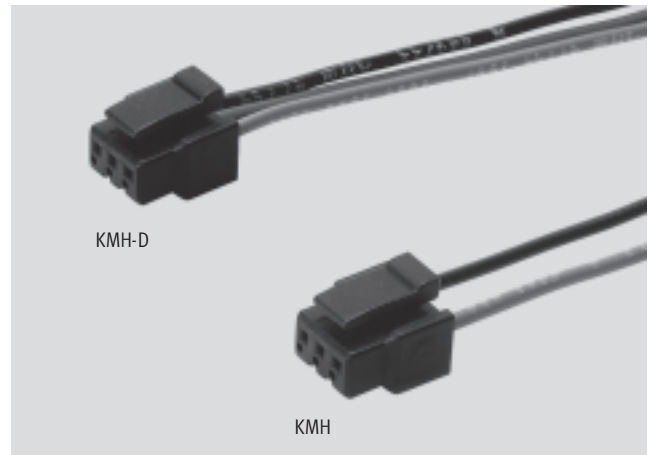


- 1 2-core cable 2.5 m or 5 m (2x0.25 mm²)
- 2 Location for identification plate
- 3 Mounting screw

Electrical connection technology, for individual connection

Technical data – KMH

- Plug socket with cable for the horizontal connection of individual valves (type CPA-SC1)
- Pre-assembled
- Cable lengths 0.5 m, 1 m, 2.5 m or 5 m
- 3-pin plug socket
- Not suitable for chain link trunking
- KMH-D for 2 coils



General technical data		
Type	KMH...	
Electrical connection	3-pin plug socket	
Type of mounting	Clip	
Mounting position	Any	
Operating voltage	[V]	60 DC
Current-carrying capacity	[A]	3
Cable diameter	[mm]	1.3
Protection class to EN 60 529	IP40	
Material of housing	Polyacetal	
Material of contacts	Tin-plated bronze	
Material of cable sheath	Polyvinyl chloride	
Ambient temperature	[°C]	-40 ... +105

Ordering data					
	Constructional design [mm ²]	Product weight [g]	Cable length (L1) [m]	Type	Part No.
	2x0.14	4	0.5	KMH-0,5	197 263
	2x0.14	7	1	KMH-1	197 264
	2x0.14	17	2.5	KMH-2,5	527 400
	2x0.14	31	5	KMH-5	527 401
	3x0.14	6	0.5	KMH-D-0,5	527 396
	3x0.14	11	1	KMH-D-1	527 397
	3x0.14	24	2.5	KMH-D-2,5	527 398
	3x0.14	46	5	KMH-D-5	527 399

Electrical connection technology, for individual connection

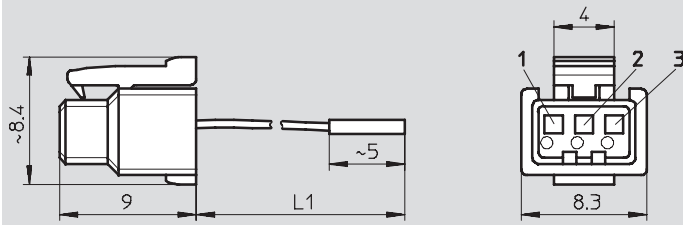


Technical data – KMH

Dimensions

Download CAD data → www.festo.com/en/engineering

Type KMH...

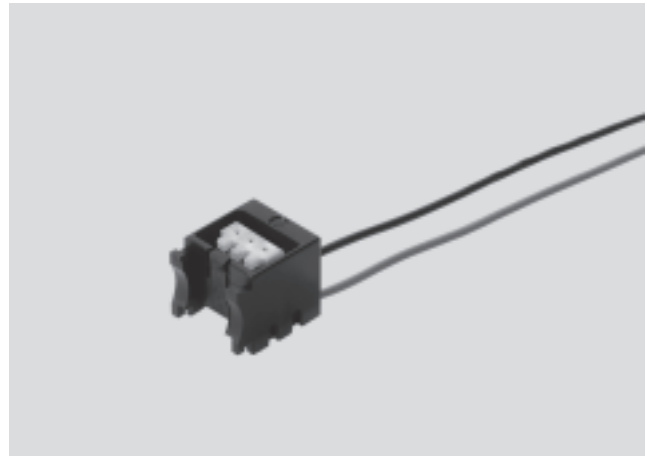


- 1 Pin 1, core colour black
- 2 Pin 2, core colour blue
- 3 Pin 3, core colour red
- L1 Length according to type
(0.5 m, 1 m, 2.5 m or 5 m)

Electrical connection technology, for individual connection

Technical data – MHAP-PI

- Plug base with cable for connecting individual valves (type CPA-SC1, plug-in)
- Pre-assembled
- Cable lengths 0.5 m or 1 m
- 3-pin plug socket
- Not suitable for chain link trunking



General technical data		
Type		MHAP-PI-...
Electrical connection		3-pin plug socket
Type of mounting		Clip
Mounting position		Any
Operating voltage	[V]	60 DC
Current-carrying capacity	[A]	3
Cable diameter	[mm]	1
Protection class to EN 60 529		IP40
Material of housing		Polyamide
Material of contacts		Tin-plated copper
Ambient temperature	[°C]	-20 ... +80
Storage temperature	[°C]	-20 ... +50

Ordering data					
	Constructional design [mm ²]	Product weight [g]	Cable length (L1) [m]	Type	Part No.
	3x0.14	5	0.5	MHAP-PI-D-0,5	529 116
	3x0.14	8	1	MHAP-PI-D-1	527 395
	2x0.14	4	0.5	MHAP-PI	197 260
	2x0.14	6	1	MHAP-PI-1	532 182

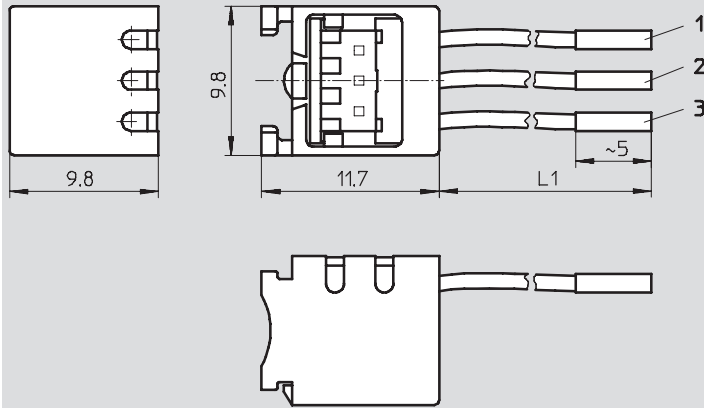
Electrical connection technology, for individual connection

Technical data – MHAP-PI

Dimensions

Download CAD data → www.festo.com/en/engineering

Type MHAP-PI-...



- 1 Pin 1, core colour black
- 2 Pin 2, core colour blue
- 3 Pin 3, core colour red
- L1 Length according to type (0.5 m or 1 m)