

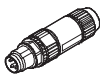















Universal plug connectors, for self-assembly



Universal plug connectors, for self-assembly

Product range overview

FESTO

Version	Type	Connection cross section [mm ²]	Connector type	Electrical connection	Protection class	Bus protocol/activation	→ Page/Internet
Harax® quick connection							
	NECU-S-...-HX	0.14 ... 0.34	Plug	M8x1, 3-pin	IP65, IP67	–	3
				M8x1, 4-pin			
				M12x1, 3-pin, A-coded			
		0.34 ... 0.75		M12x1, 4-pin, A-coded			
				M12x1, 3-pin, A-coded			
				M12x1, 4-pin, A-coded			
Screw terminal							
	NECU-S-M8G4 	0.14 ... 0.5	Plug	M8x1, 4-pin	IP67	–	5
	NECU-...-D12...-C2	0.14 ... 0.75	Plug	M12x1, 4-pin, D-coded	IP65, IP67	Ethernet	6
	NECU-...-S-B12G5 	0.14 ... 0.75	Plug	M12x1, 5-pin, B-coded	IP65, IP67	–	7
	NECU-...-B12G5 	0.14 ... 0.75	Socket	M12x1, 5-pin, B-coded	IP65, IP67	–	8
	NECU-G78...-C2	0.25 ... 2	Socket	G7/8", 4-pin	IP65, IP67, IP68	–	9
				G7/8", 5-pin			
Cable connector							
	NECU-M8G4	0.14 ... 0.5	Socket	M8x1, 4-pin	IP67	–	10
	SIE-GD	0.25 ... 0.75	Socket	M12x1, 4-pin	IP67	–	11
	SIE-WD-TR	0.25 ... 0.75	Socket	M12x1, 4-pin	IP67	–	12
Spring-loaded terminal							
	NECU-...-PPG5 	0.75 ... 2.5	Socket	AIDA push-pull, 5-pin	IP65, IP67	–	13
Insulation displacement connector							
	NECU-S-ECG4 	0.14	Plug	Insulation displacement connector, square design, 4-pin	IP40	–	14

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Universal plug connectors NECU, for self-assembly

Technical data

Plug NECU-S-...-HX

Reconnectable M8 and M12 round plug connectors with Harax® quick connection technology for low-voltage applications.



General technical data							
NECU-S-	M8G3-HX	M8G4-HX	M12G3-HX	M12G4-HX	M12G3-HX-Q7	M12G4-HX-Q7	
Electrical connection	Straight plug / insulation displacement connector						
	M8x1		M12x1		M12x1		
	A-coded		A-coded		A-coded		
	3-pin	4-pin	3-pin	4-pin	3-pin	4-pin	
Operating voltage range	[V DC]	0 ... 32		0 ... 32		0 ... 48	
	[V AC]	0 ... 32		0 ... 32		0 ... 48	
Surge capacity	[kV]	0.8					
Acceptable current load at 40 °C	[A]	4		4		6	
Based on standard	EN 61076-2-104		EN 61076-2-101				
	EN 61984						
Cable diameter	[mm]	2.5 ... 5.1		2.9 ... 5.1		4.7 ... 6.0	
Individual wire diameter	[mm]	≥0.1					
Connection cross section	[mm ²]	0.14 ... 0.34		0.14 ... 0.34		0.34 ... 0.75	
Wire diameter	[mm]	0.9 ... 1.6		0.9 ... 1.6		1.6 ... 2.0	
Wire insulation	PP		PP		-		
	PVC						
	TPE-E		TPE-E		-		
Connection frequency		3					
Max. tightening torque of locking clip	[Nm]	0.3		0.5		0.5	
Protection class	IP65						
	IP67						

Materials	
Housing	PA
	Nickel-plated die-cast zinc
Seals	FPM
	PUR
Pin contact	Gold-plated
Note on materials	Free of copper and PTFE
	RoHS-compliant





Operating and environmental conditions	
Ambient temperature	[°C] -25 ... +85
Corrosion resistance class CRC ¹⁾	1
Degree of contamination	3
Certification	cULus recognized (OL)

1) Corrosion resistance class 1 according to Festo standard 940 070
Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

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Universal plug connectors NECU, for self-assembly

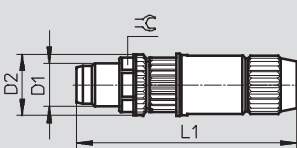
Technical data

Plug symbols					
M8x1			M12x1		
3-pin	Pin	Wire colour	4-pin	Pin	Wire colour
	1	Brown		1	Brown
	3	Blue		2	White
	4	Black		3	Blue
				4	Black
	1	Brown		1	Brown
	3	Blue		2	White
	4	Black		3	Blue
				4	Black

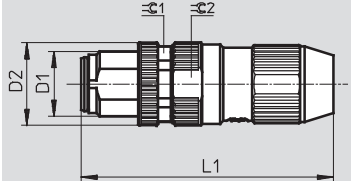
Compatibility matrix						
NECU-S-	M8G3-HX	M8G4-HX	M12G3-HX	M12G4-HX	M12G3-HX-Q7	M12G4-HX-Q7
Sensors						
NEBU/SIM	■	■	■	■	-	-
SM...-8/M	■	■	■	■	-	-
SM...-10/M	-	-	-	-	-	-
SM...-10	-	-	-	-	-	-
Valves						
KME-1	-	-	-	-	■	■
KMEB-3	-	-	-	-	■	■
KMEB-1	-	-	-	-	■	■
KMC-1	-	-	-	-	■	■
KMF-1	-	-	-	-	■	■
KMV-1	-	-	-	-	■	■
KMYZ-2/3/7/9	■	■	■	■	-	-
NEBV-M8W4L	■	■	■	■	-	-
NEBV-M8G4L	■	■	■	■	-	-
NEBV-H1G2	■	■	■	■	■	■
KMEB-2	-	-	-	-	■	■

Dimensions

NECU-S-M8G...-HX

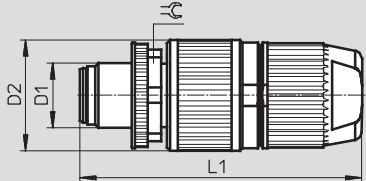


NECU-S-M12G...-HX



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NECU-S-M12G...-HX-Q7



Type	D1	D2	L1	\varnothing	$\varnothing 1$	$\varnothing 2$
NECU-S-M8G...-HX	M8x1	11.5	40.8	9	-	-
NECU-S-M12G...-HX	M12x1	15.3	46.75	-	13	14
NECU-S-M12G...-HX-Q7	M12x1	20.5	52.2	17	-	-

Ordering data					
Connection cross section [mm ²]	Electrical connection	Weight [g]	Part No.	Type	
0,14 ... 0,34	Plug M8x1, 3-pin, straight, insulation displacement connector	7.8	562024	NECU-S-M8G3-HX	
	Plug M8x1, 4-pin, straight, insulation displacement connector	7.8	562025	NECU-S-M8G4-HX	
	Plug M12x1, A-coded, 3-pin, straight, insulation displacement connector	17.5	562027	NECU-S-M12G3-HX	
	Plug M12x1, A-coded, 4-pin, straight, insulation displacement connector	17.5	562028	NECU-S-M12G4-HX	
0,34 ... 0,75	Plug M12x1, A-coded, 3-pin, straight, insulation displacement connector	32.8	564946	NECU-S-M12G3-HX-Q7	
	Plug M12x1, A-coded, 4-pin, straight, insulation displacement connector	33.3	564947	NECU-S-M12G4-HX-Q7	

Universal plug connectors NECU, for self-assembly

Technical data

Plug NECU-S-M8G4

- Plug
- 4-pin
- Can be assembled with any cable length

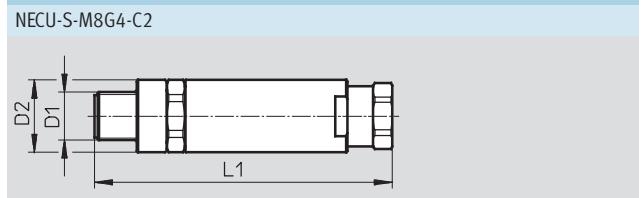


General technical data		
Electrical connection	Plug M8x1, 4-pin, straight, screw terminal	
Plug coding	Coded via contact arrangement	
Operating voltage range	[V DC]	0 ... 30
	[V AC]	0 ... 30
Surge capacity	[kV]	0.8
Acceptable current load	[A]	4
Based on standard		EN 61076-2-101
		EN 61984
Transmission characteristics		DIN EN 50173 / CAT 5
Permissible cable Ø	[mm]	3.5 ... 5.0
Connection cross section	[mm ²]	0.14 ... 0.5
Type of mounting		Via knurled nut
Protection class		IP67

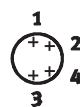
Materials	
Pin contact	Gold-plated brass
Union nut	Nickel-plated brass
Note on materials	RoHS-compliant

Operating and environmental conditions		
Ambient temperature	[°C]	-25 ... +85
Degree of contamination		3

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Pin allocation



Type	D1	D2	L1
NECU-S-M8G4-C2	M8	12	49.6

Ordering data		
Electrical connection	Part No.	Type
Plug M8x1, 4-pin, straight	1068198	NECU-S-M8G4-C2

Universal plug connectors NECU, for self-assembly



Technical data

Plug NECU-...-D12...-C2

- Plug for power supply
- 4-pin
- Can be assembled with any cable lengths
- With screw terminal



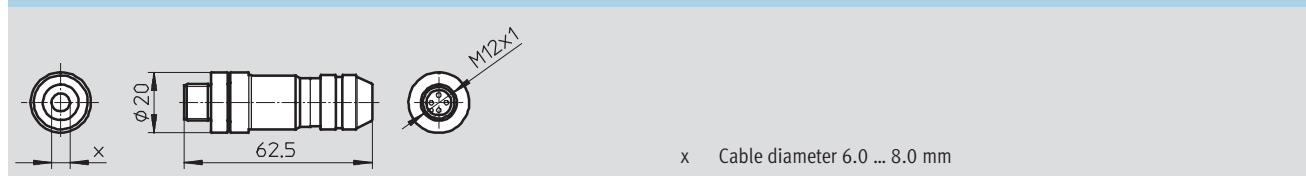
General technical data	
Electrical connection	Plug M12x1, round plug connector, 4-pin, straight, suitable for self-assembly, screw terminal, can be screened
Plug coding	D, for Ethernet
Operating voltage range	[V DC] 0 ... 250
	[V AC] 0 ... 250
Surge capacity	[kV] 2.5
Acceptable current load	[A] 4
Based on standard	EN 61076-2-101
	EN 61984
Transmission characteristics	DIN EN 50173 / CAT 5
Permissible cable Ø	[mm] 6.0 ... 8.0
Connection cross section	[mm ²] 0.14 ... 0.75
Protection class	IP65/IP67

Materials	
Housing	Nickel-plated die-cast zinc
Pin contact	Gold-plated brass
Note on materials	Free of copper and PTFE
	RoHS-compliant

Operating and environmental conditions	
Ambient temperature	[°C] -40 ... +85
Corrosion resistance class CRC ¹⁾	1
Degree of contamination	3
CE mark (see declaration of conformity)	To EU Low Voltage Directive

1) Corrosion resistance class 1 according to Festo standard 940 070
Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

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Ordering data			
Electrical connection	Weight [g]	Part No.	Type
Plug M12x1, round plug connector, 4-pin, straight, suitable for self-assembly, screw terminal, can be screened	47	543109	NECU-M-S-D12G4-C2-ET

Universal plug connectors NECU, for self-assembly

Technical data

Plug NECU-S-B12G5

- Plug
- 5-pin
- Can be assembled with any cable length

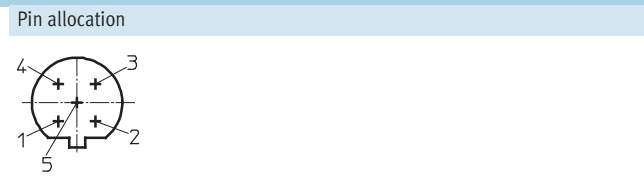
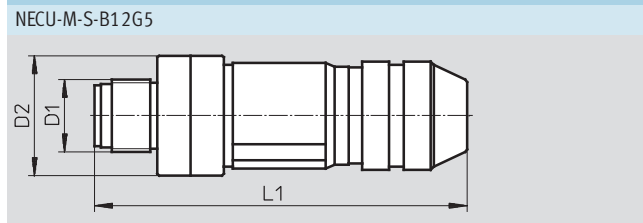


General technical data		
Electrical connection	Plug M12x1, 5-pin, straight, screw terminal	
Plug coding	B, for Profibus	
Operating voltage range	[V DC]	0 ... 60
	[V AC]	0 ... 60
Surge capacity	[kV]	1.5
Acceptable current load	[A]	4
Based on standard		EN 61076-2-101
		EN 61984
Transmission characteristics	DIN EN 50173 / CAT 5	
Permissible cable Ø	[mm]	6 ... 8
Connection cross section	[mm ²]	0.14 ... 0.75
Protection class		IP65/IP67

Materials	
Housing	Nickel-plated die-cast zinc
Pin contact	Gold-plated brass
Note on materials	RoHS-compliant

Operating and environmental conditions		
Ambient temperature	[°C]	-25 ... +85
Degree of contamination		3
CE mark (see declaration of conformity)		To EU Low Voltage Directive

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Type	D1	D2	L1
NECU-M-S-B12G5	M12	20	62.5

Ordering data		
Electrical connection	Part No.	Type
Plug M12x1, 5-pin, straight	1066354	NECU-M-S-B12G5-C2-PB

Universal plug connectors NECU, for self-assembly

Technical data

Socket NECU-B12G5

- Socket
- 5-pin
- Can be assembled with any cable length

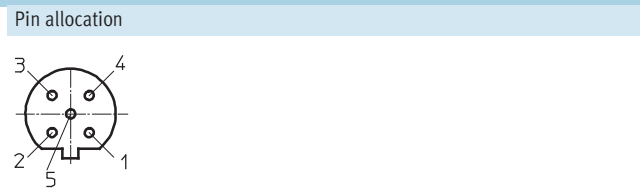
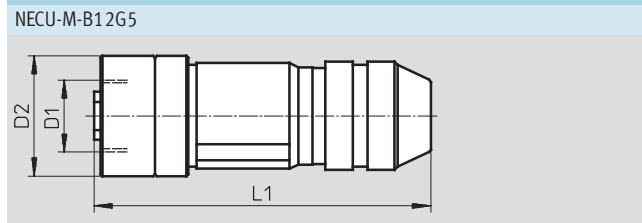


General technical data	
Electrical connection	Socket M12x1, 5-pin, straight, screw terminal
Plug coding	B, for Profibus
Operating voltage range	[V DC] 0 ... 60
	[V AC] 0 ... 60
Surge capacity	[kV] 1.5
Acceptable current load	[A] 4
Based on standard	EN 61076-2-101
	EN 61984
Transmission characteristics	DIN EN 50173 / CAT 5
Permissible cable Ø	[mm] 6 ... 8
Connection cross section	[mm ²] 0.14 ... 0.75
Protection class	IP65/IP67

Materials	
Housing	Nickel-plated die-cast zinc
Pin contact	Gold-plated brass
Note on materials	RoHS-compliant

Operating and environmental conditions	
Ambient temperature	[°C] -25 ... +85
Degree of contamination	3
CE mark (see declaration of conformity)	To EU Low Voltage Directive

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Type	D1	D2	L1
NECU-M-B12G5	M12	20	56

Ordering data		
Electrical connection	Part No.	Type
Socket M12x1, 5-pin, straight	1067905	NECU-M-B12G5-C2-PB

Universal plug connectors NECU, for self-assembly

Technical data

**Power supply socket
NECU-G78...-C2**

- Power supply socket for fieldbus connection
- 4-pin and 5-pin
- Can be assembled with any cable lengths
- With screw terminal
- Wire cross section of up to 2 mm²



General technical data		NECU-G78G4-C2	NECU-G78G5-C2
Type		NECU-G78G4-C2	NECU-G78G5-C2
Electrical connection		Socket 7/8", round plug connector, 4-pin, straight, suitable for self-assembly, screw terminal	Socket 7/8", round plug connector, 5-pin, straight, suitable for self-assembly, screw terminal
Plug coding		ODVA AutoSIG	NFPA/T3.5.29 R1-2003
Operating voltage range	[V DC]	0 ... 250	
	[V AC]	0 ... 250	
Surge capacity	[kV]	2.5	
Acceptable current load	[A]	8	10
Based on standard		EN 61984	
Permissible cable Ø	[mm]	5.0 ... 12.0	
Connection cross section	[mm ²]	0.25 ... 2.0	
Protection class		IP65/IP67/IP68	

Materials	
Housing	PA (colour: black)
Seals	NBR
Pin contact	Gold-plated copper base alloy
Union nut	Nickel-plated brass
Note on materials	Free of copper and PTFE
	RoHS-compliant

Operating and environmental conditions	
Ambient temperature	[°C] -40 ... +80
Corrosion resistance class CRC ¹⁾	1
Degree of contamination	3
CE mark (see declaration of conformity)	To EU Low Voltage Directive
Certification	CSA C/US (OL)

1) Corrosion resistance class 1 according to Festo standard 940 070
Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

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x Cable diameter 5.0 ... 12.0 mm

Ordering data			
Electrical connection	Weight [g]	Part No.	Type
Socket 7/8", round plug connector, 4-pin, straight, suitable for self-assembly, screw terminal	49	543108	NECU-G78G4-C2
Socket 7/8", round plug connector, 5-pin, straight, suitable for self-assembly, screw terminal	51	543107	NECU-G78G5-C2

Universal plug connectors NECU, for self-assembly

Technical data

Cable socket NECU-M8G4

- Socket for power supply
- 4-pin
- Can be assembled with any cable lengths
- With cable connector PG7



General technical data		
Electrical connection		Socket M8x1, 4-pin, straight
Operating voltage range	[V DC]	0 ... 30
	[V AC]	0 ... 30
Surge capacity	[kV]	0.8
Acceptable current load	[A]	3
Based on standard		EN 61984
Permissible cable Ø	[mm]	3.5 ... 5.0
Connection cross section	[mm ²]	0.14 ... 0.5
Connection frequency		500
Type of mounting		Via knurled nut
Mounting position		Any
Max. tightening torque of plug	[Nm]	0.3
Protection class		IP67

Materials	
Housing	PBT (colour: black)
	Nickel-plated die-cast zinc
Pin contact	Gold-plated brass
Union nut	Nickel-plated brass
Note on materials	RoHS-compliant

Operating and environmental conditions		
Ambient temperature	[°C]	-40 ... +80
Storage temperature	[°C]	-40 ... +80
Corrosion resistance class CRC ¹⁾		2
Degree of contamination		3

1) Corrosion resistance class 2 according to Festo standard 940 070
 Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

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x Cable diameter 3.5 ... 5.0 mm

Ordering data			
Electrical connection	Weight [g]	Part No.	Type
Socket M8x1, 4-pin, straight	9.5	544392	NECU-M8G4

Universal plug connectors SIE, for self-assembly

Technical data

Sensor socket SIE-GD

- Reconnectable for low-voltage applications
- 4-pin
- Can be assembled with any cable lengths
- With cable connector PG7



General technical data		
Electrical connection		Straight socket M12x1, 4-pin
Operating voltage range	[V DC]	0 ... 250
	[V AC]	0 ... 250
Surge capacity	[kV]	2.5
Acceptable current load at 40 °C	[A]	4
Conforms to		EN 61076-2-101
		EN 61984
Permissible cable Ø	[mm]	4 ... 6
Connection cross section	[mm ²]	0.25 ... 0.75
Connection frequency		50
Type of mounting		Via knurled nut
Max. tightening torque	[Nm]	0.5
Protection class		IP67

Materials	
Housing	PA
Union nut	PA
Note on materials	RoHS-compliant

Operating and environmental conditions	
Ambient temperature	[°C] -25 ... +85
Corrosion resistance class CRC ¹⁾	4
Degree of contamination	3
CE mark (see declaration of conformity)	To EU Low Voltage Directive

1) Corrosion resistance class 4 according to Festo standard 940 070
 Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

Dimensions

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Ordering data		
Electrical connection	Part No.	Type
Straight socket M12x1, 4-pin	18494	SIE-GD

Universal plug connectors SIE, for self-assembly

Technical data

Angled socket SIE-WD-TR

- Reconnectable for low-voltage applications
- 4-pin
- Can be assembled with any cable lengths



General technical data		
Electrical connection	Angled socket M12x1, 4-pin	
Operating voltage range	[V DC]	0 ... 250
	[V AC]	0 ... 250
Surge capacity	[kV]	2.5
Acceptable current load at 40 °C	[A]	4
Conforms to	EN 61076-2-101	
	EN 61984	
Permissible cable Ø	[mm]	4 ... 6
Connection cross section	[mm ²]	0.25 ... 0.75
Connection frequency	50	
Type of mounting	Via knurled nut	
Max. tightening torque	[Nm]	0.5
Protection class	IP67	

Materials	
Housing	PA
Union nut	PA
Note on materials	RoHS-compliant

Operating and environmental conditions	
Ambient temperature	[°C] -25 ... +85
Corrosion resistance class CRC ¹⁾	4
Degree of contamination	3
CE mark (see declaration of conformity)	To EU Low Voltage Directive

1) Corrosion resistance class 4 according to Festo standard 940 070
 Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

Dimensions

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1 Contact set can be repositioned by 4x90°

2 Cable Ø

Ordering data			
	Electrical connection	Part No.	Type
Angled socket	Angled socket M12x1, 4-pin	12956	SIE-WD-TR

Universal plug connectors NECU, for self-assembly

FESTO

Technical data

Socket NECU-PPG5

- Power supply socket
- 5-pin
- Can be assembled with any cable length



General technical data	
Electrical connection	Socket AIDA push-pull, 5-pin, straight, spring-loaded terminal
Plug coding	Black insulator
Operating voltage range [V DC]	0 ... 24
Surge capacity [kV]	2.5
Acceptable current load [A]	16
Based on standard	EN 61984
Permissible cable Ø [mm]	9 ... 13
Connection cross section [mm ²]	0.75 ... 2.5
Protection class	IP65/IP67

Materials	
Housing	Nickel-plated die-cast zinc
Housing colour	Silver
Seals	NBR, TPE
Pin contact	Nickel-plated and gold-plated copper based alloy
Note on materials	RoHS-compliant

Operating and environmental conditions	
Ambient temperature [°C]	-40 ... +100
Degree of contamination	3
Fire protection classification to UL 94	V-0

Ordering data		
Electrical connection	Part No.	Type
Socket AIDA push-pull, 5-pin, straight	563059	NECU-M-PPG5-C1

Universal plug connectors NECU, for self-assembly

Technical data

Plug NECU-S-ECG4

- Plug
- Insulation displacement connector
- 4-pin
- Can be assembled with any cable lengths



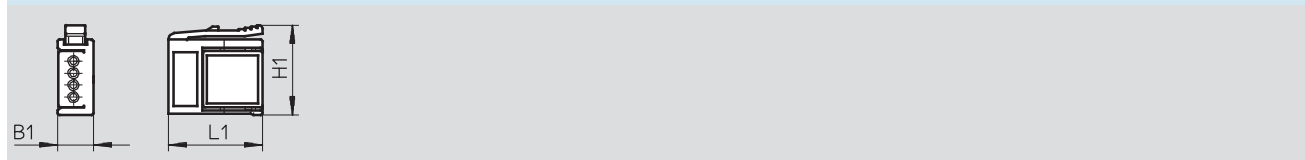
General technical data		
Electrical connection		Straight plug/insulation displacement connector, 4-pin, square design
Operating voltage range	[V DC]	0 ... 30
Surge capacity	[kV]	0.8
Acceptable current load at 40 °C	[A]	3
Individual wire diameter	[mm]	≥ 0.07
Connection cross section	[mm ²]	0.14
Wire diameter	[mm]	0.8 ... 1
Wire insulation		PP, PVC, TPE-E
Connection frequency		1
Type of mounting		Engaging
Protection class		IP40

Materials	
Housing	PC, PBT
Pin contacts	Bronze
Note on materials	RoHS-compliant

Operating and environmental conditions	
Ambient temperature	[°C] -20 ... +60
Corrosion resistance class CRC ¹⁾	1
Degree of contamination	2
Certification	cULus recognized (OL)

1) Corrosion resistance class 1 according to Festo standard 940 070
 Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

Dimensions Download CAD data → www.festo.com



Type	B1	H1	L1
NECU-S-ECG4	5.9	14.9	15.6

Ordering data		
Electrical connection	Part No.	Type
Straight plug/insulation displacement connector, 4-pin, square design	570922	NECU-S-ECG4-HX-Q3

Universal plug connectors SIE, for self-assembly

Accessories

FESTO

Operational status indicator

SIE-LP-LED-GR

Indicates the ready status of a proximity sensor SIE connected via the angled socket SIE-WD-TR by illuminating a green LED



Ordering data			
Operating voltage range [V DC]	Ambient temperature [°C]	Part No.	Type
10 ... 30	-25 ... +70	12957	SIE-LP-LED-GR