

Universal plugs, for self-assembly

FESTO



Product range overview

Function	Version	Type	Connection technology	Connection cross-section [mm ²]	Degree of protection	Bus protocol/ activation	→ Page/ Internet
Plug	Round plug M8						
	3-pin	NECU-S-M8G3-HX	Harax® quick connector	0.1 ... 0.14 0.14 ... 0.34	IP65, IP67	–	3
	4-pin	NECU-S-M8G4-HX	Harax® quick connector	0.14 ... 0.34	IP65, IP67	–	5
	Round plug M12, A-coded						
	3-pin	NECU-S-M12G3-HX	Harax® quick connector	0.14 ... 0.34	IP65, IP67	–	7
	4-pin	NECU-M-S-A12G4	Spring-loaded terminal	0.14 ... 0.5	IP65, IP67	–	9
		NECU-S-M12G4-HX	Harax® quick connector	0.14 ... 0.34 0.34 ... 0.75	IP65, IP67	–	9
		NECU-S-M12G4-...-IS	Screw terminal	0.14 ... 0.5 0.75	IP65, IP67	–	9
	Round plug M12, B-coded						
	5-pin	NECU-M-S-B12G5	Screw terminal	0.14 ... 0.75	IP67	PROFIBUS	14
	Round plug M12, D-coded						
	4-pin	NECU-M-S-D12G4	Screw terminal, can be shielded	0.14 ... 0.75	IP67	Ethernet	9
	Plug connector, square design						
	4-pin	NECU-S-ECG4	Insulation displacement connector	0.14	IP40	–	16
	7-pin	NECU-L3G7-C1	Spring-loaded terminal	0.2 ... 2.5	–	–	18
	8-pin	NECU-L3G8-C1	Spring-loaded terminal	0.2 ... 2.5	–	–	19
		NECU-L3G8-C2	Screw terminal	0.2 ... 2.5	–	–	19
Sub-D plug							
9-pin	NECU-S1W9-C2-APB	IDC terminal	0.08 ... 0.5	IP20	PROFIBUS	21	
Socket	Round plug M12						
	4-pin	FBSD	Screw terminal	0.75	IP67	–	23
	5-pin	NECU-M-B12G5	Screw terminal	0.14 ... 0.75	IP67	–	25
	Round plug 7/8"						
	4-pin	NECU-G78G4	Screw terminal	max. 1.5	IP67	–	27
	5-pin	NECU-G78G5	Screw terminal	max. 1.5	IP67	–	29
	Push-pull connector						
	5-pin	NECU-M-PPG5PP	Spring-loaded terminal	0.75 ... 2.5	IP65, IP67	PROFINET	31
	Sub-D plug						
	9-pin	NECU-S1W9-C2-ACO	Screw terminal, can be shielded	0.14 ... 0.5	IP20	CANopen	33

Datasheet

Plug NECU-S-M8G3

- Plug
- 3-pin
- Can be assembled with any cable lengths



General technical data		NECU-S-M8G3-HX-Q3	NECU-S-M8G3-HX
Type			
Electrical connection		Straight plug, M8x1	
		3-pin	
		Insulation displacement connector	
Operating voltage range	[V DC]	0 ... 32	
	[V AC]	0 ... 32	
Surge resistance	[kV]	0.8	
Current rating at 40 °C	[A]	2	4
Based on standard		EN 61076-2-104	EN 61076-2-104
		EN 61984	EN 61984
Permissible cable diameter	[mm]	2.1 ... 3.5	2.5 ... 5.1
Permissible single-wire diameter	[mm]	≥ 0.05	≥ 0.1
Connection cross-section	[mm ²]	0.1 ... 0.14	0.14 ... 0.34
Permissible core diameter	[mm]	0.6 ... 1	0.9 ... 1.6
Permissible insulating sheath		PP	PP
		PVC	PVC
		–	TPE-E
Contact durability		3	3
Max. tightening torque of locking mechanism	[Nm]	0.3	0.3
Degree of protection		IP65	IP65
		IP67	IP67

Materials	
Housing	PA
	Nickel-plated die-cast zinc
Screw-type lock	Nickel-plated brass
Seals	FPM
	PUR
Pin contact	Gold-plated
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B2-L

Operating and environmental conditions	
Ambient temperature	[°C] –25 ... +85
Corrosion resistance class CRC ¹⁾	1
Pollution degree	3
Certification	c UL us - Recognized (OL)

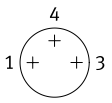
1) More information www.festo.com/x/topic/crc

Plug, M8, 3-pin

Datasheet

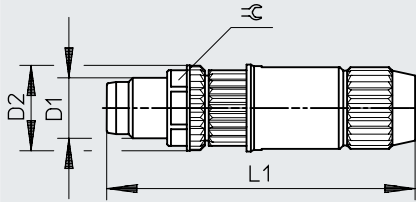
Pin allocation

M8x1

3-pin	Pin	Wire colour
	1	Brown
	3	Blue
	4	Black

Dimensions

Download CAD data → www.festo.com



Type	D1	D2	L1	⊥
NECU-S-M8G	M8x1	11.5	40.8	9

Ordering data

Electrical connection	Connection cross-section [mm ²]	Weight [g]	Part no.	Type
Plug M8x1, 3-pin, straight, insulation displacement connector	0.1 ... 0.14	7.8	564945	NECU-S-M8G3-HX-Q3
	0.14 ... 0.34	7.8	562024	NECU-S-M8G3-HX

Datasheet

Plug NECU-S-M8G4

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



General technical data	
Electrical connection	Straight plug, M8x1, A-coded to EN 61076-2-104
	4-pin
	Insulation displacement connector
Operating voltage range	[V DC] 0 ... 32
	[V AC] 0 ... 32
Surge resistance	[kV] 0.8
Current rating at 40 °C	[A] 4
Based on standard	EN 61076-2-104
	EN 61984
Cable diameter	[mm] 2.5 ... 5.1
Single-wire diameter	[mm] ≥ 0.1
Connection cross-section	[mm ²] 0.14 ... 0.34
Core diameter	[mm] 0.9 ... 1.6
Permissible insulating sheath	PP
	PVC
	TPE-E
Contact durability	3
Degree of protection	IP65
	IP67

Materials	
Housing	PA
	Nickel-plated die-cast zinc
Screw-type lock	Nickel-plated brass
Seals	FPM
	PUR
Pin contact	Gold-plated
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B2-L

Plug, M8, 4-pin

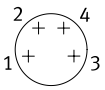
Datasheet

Operating and environmental conditions

Ambient temperature [°C]	-25 ... +85
Corrosion resistance class CRC ¹⁾	1
Pollution degree	3
Certification	cUL us - Recognized (OL)

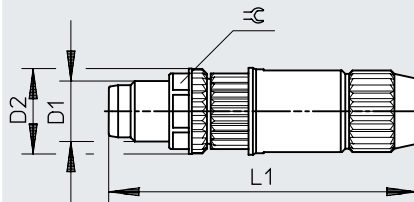
1) More information www.festo.com/x/topic/crc


Pin allocation

M8x1		
4-pin	Pin	Wire colour
	1	-
	2	-
	3	-
	4	-

Dimensions

Download CAD data → www.festo.com



Type	D1	D2	L1	
NECU-S-M8G4-HX	M8x1	11.5	40.8	9

Ordering data

Electrical connection		Connection cross-section [mm ²]	Weight [g]	Part no.	Type
Plug M8x1, 4-pin, straight	Insulation displacement connector	0.14 ... 0.34	7.8	562025	NECU-S-M8G4-HX

Datasheet

Plug
NECU-S-M12G3

- Plug
- 3-pin
- Can be assembled with any cable lengths



General technical data	
Electrical connection	Straight plug, M12x1
	3-pin
	Insulation displacement connector
Plug coding	A-coded
Operating voltage range	[V DC] 0 ... 32
	[V AC] 0 ... 32
Surge resistance	[kV] 0.8
Current rating at 40 °C	[A] 4
Based on standard	EN 61076-2-101
	EN 61984
Permissible cable diameter	[mm] 2.9 ... 5.1
Permissible single-wire diameter	[mm] ≥ 0.1
Connection cross-section	[mm ²] 0.14 ... 0.34
Permissible core diameter	[mm] 0.9 ... 1.6
Permissible insulating sheath	PP
	PVC
	TPE-E
Contact durability	3
Max. tightening torque of locking mechanism	[Nm] 0.5
Degree of protection	IP65
	IP67

Materials	
Housing	PA
	Nickel-plated die-cast zinc
Screw-type lock	Nickel-plated die-cast zinc
Seals	FPM
	PUR
Pin contact	Gold-plated
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B2-L

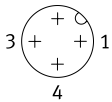
Datasheet

Operating and environmental conditions

Ambient temperature [°C]	-25 ... +85
Corrosion resistance class CRC ¹⁾	1
Pollution degree	3
Certification	cUL us - Recognized (OL)

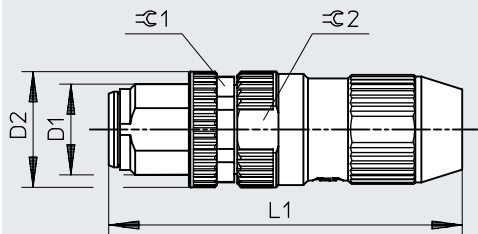
1) More information www.festo.com/x/topic/crc

Pin allocation

M12x1		
3-pin	Pin	Wire colour
	1	Brown
	3	Blue
	4	Black

Dimensions

Download CAD data → www.festo.com



Type	D1	D2	L1	ϕ1	ϕ2
NECU-S-M12G3-HX	M12x1	15.3	46.75	13	14

Ordering data

Electrical connection	Connection cross-section [mm ²]	Weight [g]	Part no.	Type	
Plug M12x1, 3-pin, straight	Insulation displacement connector	0.14 ... 0.34	17.5	562027	NECU-S-M12G3-HX

Datasheet

Plug

NECU-M-S-A12G4

NECU-S-M12G4

NECU-M-S-D12G4

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



General technical data		NECU-M-S-A12G4-IS	NECU-S-M12G4-HX	NECU-S-M12G4-HX-Q7
Type				
Electrical connection		Straight plug, M12x1 4-pin		
		Spring-loaded terminal	Insulation displacement connector	
Plug coding		A-coded	A-coded	
Operating voltage range	[V DC]	0 ... 30	0 ... 32	0 ... 48
	[V AC]	–	0 ... 32	0 ... 48
Surge resistance	[kV]	–	0.8	0.8
Current rating at 40 °C	[A]	4	4	6
Based on standard		EN 61076-2-101	EN 61076-2-101	EN 61076-2-101
		–	EN 61984	EN 61984
Permissible cable diameter	[mm]	4.0 ... 8.0	2.9 ... 5.1	4.7 ... 6.0
Permissible single-wire diameter	[mm]	–	≥ 0.1	≥ 0.1
Connection cross-section	[mm ²]	0.14 ... 0.5	0.14 ... 0.34	0.34 ... 0.75
Permissible core diameter	[mm]	–	0.9 ... 1.6	1.6 ... 2.0
Permissible insulating sheath		–	PP	PVC
		–	PVC	–
		–	TPE-E	–
Contact durability		100	3	3
Max. tightening torque of locking mechanism	[Nm]	0.8	0.5	0.5
Degree of protection		IP65	IP65	IP65
		IP67	IP67	IP67

Materials		NECU-M-S-A12G4-IS	NECU-S-M12G4-HX	NECU-S-M12G4-HX-Q7
Type				
Housing		–	PA	PA
		Nickel-plated die-cast zinc	Nickel-plated die-cast zinc	Nickel-plated die-cast zinc
Screw-type lock		–	Nickel-plated die-cast zinc	Nickel-plated die-cast zinc
Seals		–	FPM	FPM
		–	PUR	PUR
Pin contact		Bronze, gold-plated	Gold-plated	Gold-plated
Note on materials		RoHS-compliant	RoHS-compliant	RoHS-compliant
LABS (PWIS) conformity		VDMA24364-B2-L	VDMA24364-B2-L	VDMA24364-B2-L

Operating and environmental conditions		NECU-M-S-A12G4-IS	NECU-S-M12G4-HX	NECU-S-M12G4-HX-Q7
Type				
Ambient temperature	[°C]	–40 ... +85	–25 ... +85	–25 ... +85
Corrosion resistance class CRC ¹⁾		–	1	1
Pollution degree		3	3	3
Certification		–	c UL us - Recognized (OL)	c UL us - Recognized (OL)

 1) More information www.festo.com/x/topic/crc

Datasheet

General technical data						
Type		NECU-S-M12G4-P1-Q6-IS	NECU-S-M12G4-D-IS	NECU-S-M12G4P1IS	NECU-S-M12G4-P2-IS	NECU-M-S-D12G4-C2-ET
Operating voltage range	[V DC]	0 ... 30				0 ... 250
	[V AC]	–				0 ... 250
Surge resistance	[kV]	2.5				2.5
Current rating at 40 °C	[A]	4				–
Based on standard		EN 61076-2-101				EN 61076-2-101
		EN 61984				EN 61984
Transmission characteristics		–				DIN EN 50173/CAT 5
Permissible cable diameter	[mm]	2.5 ... 2.9	2x 3.0 or 2x 5.0	4.0 ... 6.0	6.0 ... 8.0	6.0 ... 8.0
Connection cross-section	[mm ²]	0.14 ... 0.5	0.75	0.75	0.75	0.14 ... 0.75
Contact durability		50				–
Degree of protection		IP65				–
		IP67				IP67

Technical data – Electrical connection 1						
Type		NECU-S-M12G4-P1-Q6-IS	NECU-S-M12G4-D-IS	NECU-S-M12G4-P1-IS	NECU-S-M12G4-P2-IS	NECU-M-S-D12G4-C2-ET
Electrical connection 1		–				Straight plug, M12x1, 4-pin, D-coded, can be shielded
Function		Field device side				–
Design		Round				–
Connection type		Plug				–
Cable outlet		Straight				–
Connection technology		M12x1, A-coded				–
Number of pins/cores		4				4
Type of mounting		Screw-type lock with 18 mm hex and longitudinal knurl				–

Technical data – Electrical connection 2						
Type		NECU-S-M12G4-P1-Q6-IS	NECU-S-M12G4-D-IS	NECU-S-M12G4-P1-IS	NECU-S-M12G4-P2-IS	NECU-M-S-D12G4-C2-ET
Electrical connection 2		–	–	–	–	Screw terminal, can be shielded
Connection type		Cable	2x cable	Cable	–	–
Connection technology		Screw terminal				–

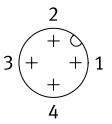
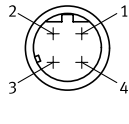
Materials						
Type		NECU-S-M12G4-...-IS				NECU-M-S-D12G4-C2-ET
Housing		PA				Nickel-plated die-cast zinc
Pin contact		Brass				Gold-plated brass
		Coated white bronze				–
Note on materials		RoHS-compliant				RoHS-compliant
LABS (PWIS) conformity		VDMA24364-B2-L				VDMA24364-B2-L

Operating and environmental conditions						
Type		NECU-S-M12G4-...-IS				NECU-M-S-D12G4-C2-ET
Ambient temperature	[°C]	–25 ... +85				–25 ... +85
Corrosion resistance class CRC ¹⁾		–				1
Pollution degree		3				3
CE marking (see declaration of conformity) ²⁾		–				To EU Low Voltage Directive
UKCA marking (see declaration of conformity) ²⁾		–				To UK regulations for electrical equipment

¹⁾ More information: www.festo.com/x/topic/crc

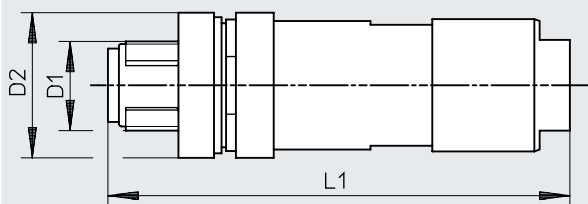
²⁾ More information www.festo.com/catalogue/... → Support/Downloads.

Datasheet

Pin allocation M12x1, A-coded			M12x1, D-coded		
4-pin	Pin	Wire colour	4-pin	Pin	Wire colour
	1	Brown		1	–
	2	White		2	–
	3	Blue		3	–
	4	Black		4	–

Dimensions – NECU-M-S-A12G4-IS

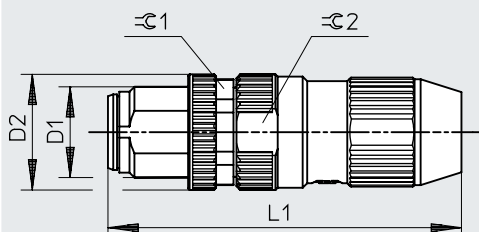
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Type	D1	D2	L1
NECU-M-S-A12G4-IS	M12x1	19.2	61.1

Dimensions – NECU-S-M12G4-HX

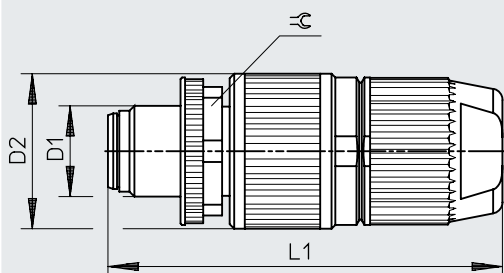
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Type	D1	D2	L1	$\approx \text{G}1$	$\approx \text{G}2$
NECU-S-M12G4-HX	M12x1	15.3	46.75	13	14

Dimensions – NECU-S-M12G4-HX-Q7

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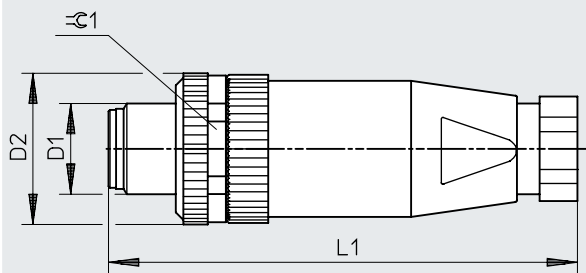


Type	D1	D2	L1	$\approx \text{G}$
NECU-S-M12G4-HX-Q7	M12x1	20.5	52.2	17

Datasheet

Dimensions – NECU-S-M12G4-P1

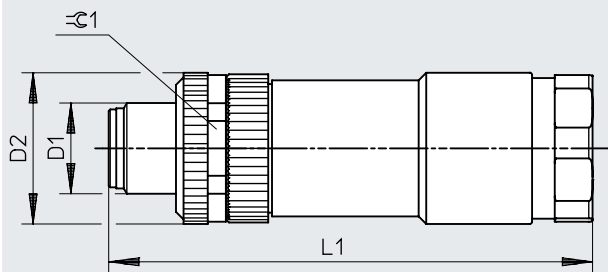
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Type	D1	D2	L1
NECU-S-M12G4-P1	M12x1	20	62

Dimensions – NECU-S-M12G4-D

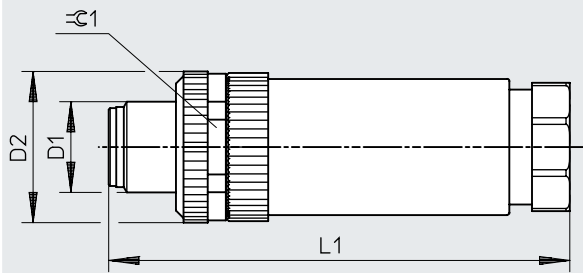
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Type	D1	D2	L1
NECU-S-M12G4-D	M12x1	20	62.6

Dimensions – NECU-S-M12G4-P2

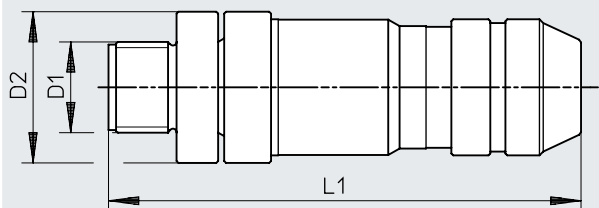
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Type	D1	D2	L1
NECU-S-M12G4-P2	M12x1	20	59.6

Dimensions – NECU-M-S-D12G4-C2-ET

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Type	D1	D2	L1
NECU-M-S-D12G4-C2-ET	M12x1	20	62.5

Datasheet

Ordering data		Electrical connection	Connection cross-section [mm ²]	Weight [g]	Part no.	Type
Plug M12x1, 4-pin, straight, A-coded	Spring-loaded terminal	0.14 ... 0.5	38	575719	NECU-M-S-A12G4-IS	
	Insulation displacement connector	0.14 ... 0.34	17.5	562028	NECU-S-M12G4-HX	
		0.34 ... 0.75	33.3	564947	NECU-S-M12G4-HX-Q7	
	Screw terminal	0.14 ... 0.5	18	570955	NECU-S-M12G4-P1-Q6-IS	
		0.75	24	570956	NECU-S-M12G4-D-IS	
		0.75	17	570953	NECU-S-M12G4-P1-IS	
		0.75	18	570954	NECU-S-M12G4-P2-IS	
Plug M12x1, 4-pin, straight, D-coded	Screw terminal, can be shielded	0.14 ... 0.75	44.3	543109	NECU-M-S-D12G4-C2-ET	

Datasheet

Plug
NECU-M-S-B12G5

- Plug
- 5-pin
- B-coded for PROFIBUS
- Can be assembled with any cable lengths



General technical data	
Electrical connection	Straight plug, M12x1
	5-pin
	Screw terminal
	Can be shielded
Plug coding	B-coded
Operating voltage range	[V DC] 0 ... 60
	[V AC] 0 ... 60
Surge resistance	[kV] 1.5
Current rating at 40 °C	[A] 4
Based on standard	EN 61076-2-101
	EN 61984
Transmission characteristics	DIN EN 50173/CAT 5
Permissible cable diameter	[mm] 6 ... 8
Connection cross-section	[mm ²] 0.14 ... 0.75
Degree of protection	IP67
Materials	
Housing	Nickel-plated die-cast zinc
Pin contact	Gold-plated brass
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B2-L
Operating and environmental conditions	
Ambient temperature	[°C] -25 ... +85
Corrosion resistance class CRC ¹⁾	1
Pollution degree	3
CE marking (see declaration of conformity) ²⁾	To EU Low Voltage Directive

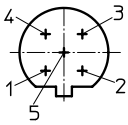
1) More information: www.festo.com/x/topic/crc

2) More information www.festo.com/catalogue/... → Support/Downloads.

Datasheet

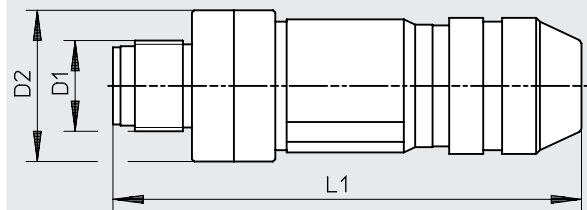
Pin allocation

M12x1

5-pin	Pin	Wire colour
	1	-
	2	-
	3	-
	4	-
	5	-

Dimensions

Download CAD data → www.festo.com



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

Ordering data

Electrical connection		Connection cross-section [mm ²]	Weight [g]	Part no.	Type
Plug M12x1, 5-pin, straight	Screw terminal, can be shielded	B-coded	0.14 ... 0.75	46.1	1066354 NECU-M-S-B12G5-C2-PB

Plug, square, 4-pin

Datasheet

Plug
NECU-S-ECG4

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



General technical data

Electrical connection	Straight plug, square design	
	4-pin	
	Insulation displacement connector	
Operating voltage range	[V DC]	0 ... 30
Surge resistance	[kV]	0.8
Current rating at 40 °C	[A]	3
Permissible single-wire diameter	[mm]	≥ 0.07
Connection cross-section	[mm ²]	0.14
Permissible core diameter	[mm]	0.8 ... 1.0
Permissible insulating sheath	PP	
	PVC	
	TPE-E	
Contact durability	1	
Type of mounting	Snap-in	
Degree of protection	IP40	

Materials

Housing	PBT	
	PC	
Pin contact	Gold-plated	
Note on materials	RoHS-compliant	
LABS (PWIS) conformity	VDMA24364-B1/B2-L	

Operating and environmental conditions

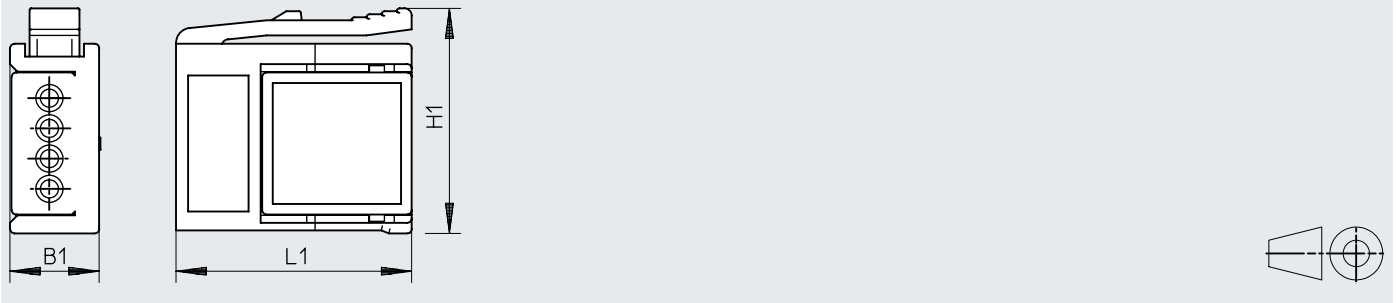
Ambient temperature	[°C]	-20 ... +60
Corrosion resistance class CRC ¹⁾	1	
Pollution degree	2	
Certification	cUL us - Recognized (OL)	

1) More information www.festo.com/x/topic/crc

Datasheet

Dimensions

Download CAD data → www.festo.com



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

Ordering data

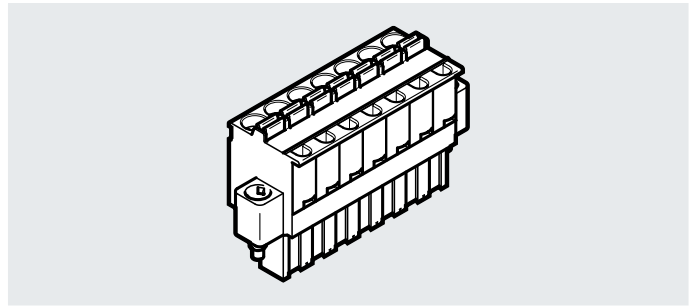
Electrical connection		Connection cross-section [mm ²]	Weight [g]	Part no.	Type
Plug, square design, 4-pin, straight	Insulation displacement connector	0.14	3.6	570922	NECU-S-ECG4-HX-Q3

Plug, terminal strip, 7-pin

Datasheet

Terminal strip NECU-L3G7

- Plug
- 7-pin
- Can be assembled with any cable lengths



General technical data

Electrical connection	Straight plug	
	7-pin	
	Spring-loaded terminal	
Operating voltage range	[V DC]	0 ... 30
Surge resistance	[kV]	4
Current rating at 40 °C	[A]	12
Connection cross-section	[mm ²]	0.2 ... 2.5
Contact durability		100

Materials

Housing	PA
Pin contact	Tin-plated copper alloy
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B2-L

Operating and environmental conditions

Ambient temperature	[°C]	-40 ... +85
Corrosion resistance class CRC ¹⁾		2
Pollution degree		3
Certification		cUL us - Listed (OL)

1) More information www.festo.com/x/topic/crc

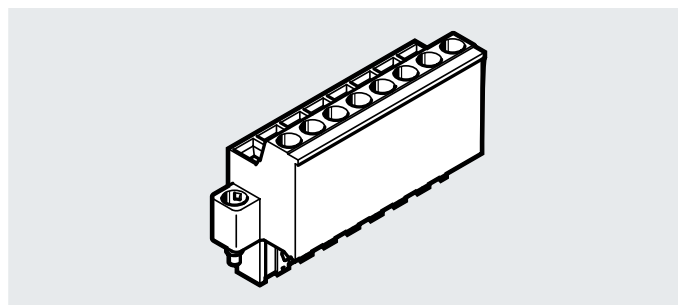
Ordering data

Electrical connection		Housing colour	Weight [g]	Part no.	Type
Plug, 7-pin, straight	Spring-loaded terminal	Black	12.8	576319	NECU-L3G7-C1

Datasheet

Terminal strip NECU-L3G8

- Plug
- 8-pin
- Can be assembled with any cable lengths
- The plugs meet the requirements of IEC 60079-11 with regard to air, leakage paths and isolation distances for the maximum intrinsically safe operating voltage of 30 V DC



General technical data		NECU-L3G8-C1	NECU-L3G8-C2
Type			
Electrical connection		Straight plug	
		8-pin	
		Spring-loaded terminal	Screw terminal
Operating voltage range	[V DC]	0 ... 30	0 ... 30
Surge resistance	[kV]	4	0.8
Current rating at 40 °C	[A]	12	12
Connection cross-section	[mm ²]	0.2 ... 2.5	0.2 ... 2.5
Contact durability		100	100
Max. tightening torque of locking mechanism	[Nm]	–	0.6

Materials	
Housing	PA
Pin contact	Tin-plated copper alloy
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B2-L

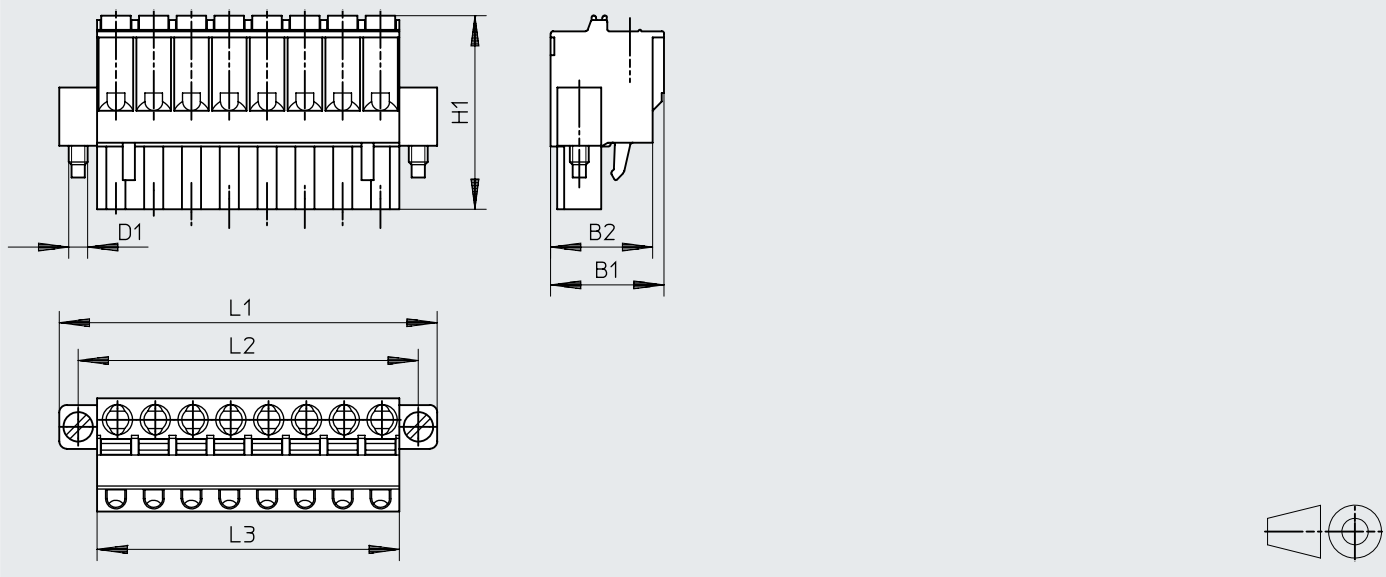
Operating and environmental conditions	
Ambient temperature	[°C] –40 ... +85
Corrosion resistance class CRC ¹⁾	2
Pollution degree	3

1) More information www.festo.com/x/topic/crc

Datasheet

Dimensions – NECU-L3G8-C1

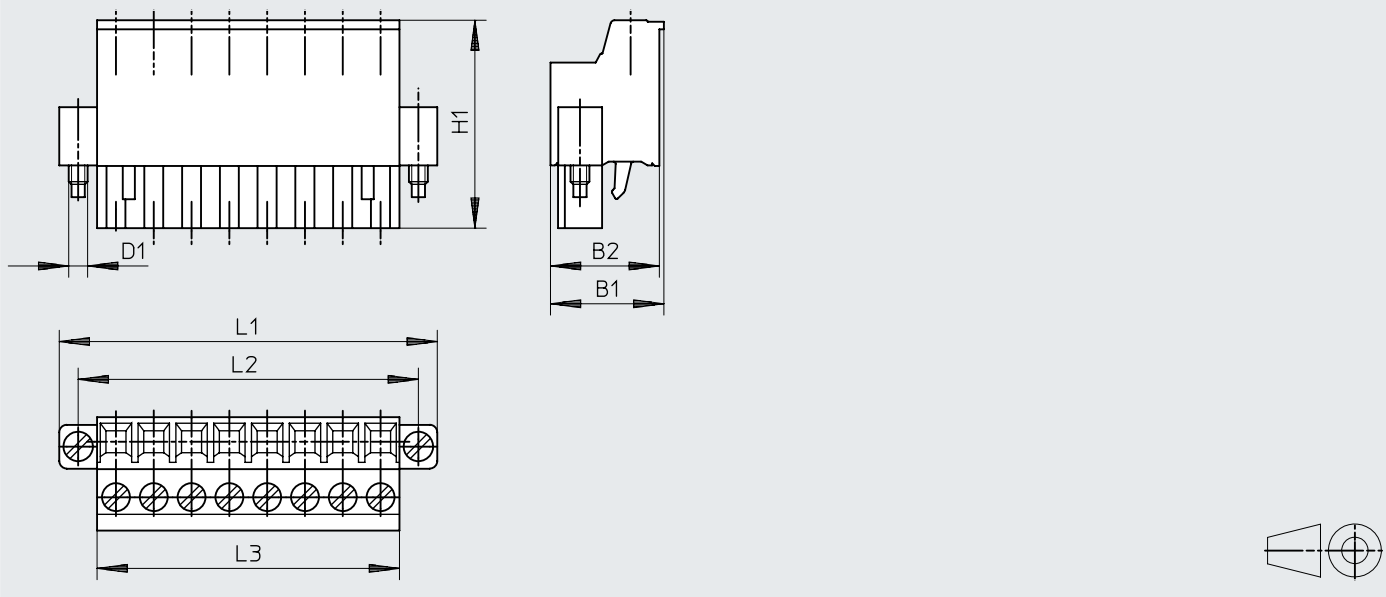
Download CAD data → www.festo.com



Type	B1	B2	D1	H1	L1	L2	L3
NECU-L3G8-C1	15	13.5	M2.5	25.6	50	45	40

Dimensions – NECU-L3G8-C2

Download CAD data → www.festo.com



Type	B1	B2	D1	H1	L1	L2	L3
NECU-L3G8-C2	15	14.4	M2.5	27.5	50	45	40

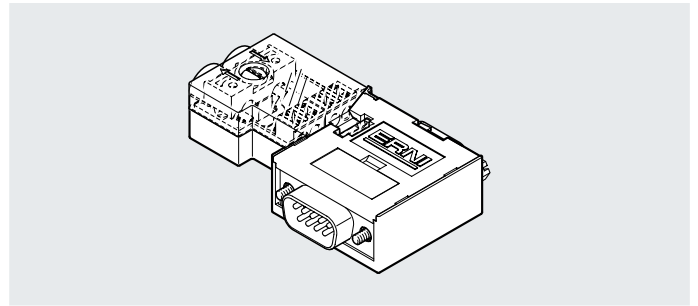
Ordering data

Electrical connection		Housing colour	Product weight [g]	Part no.	Type
Plug, 8-pin, straight	Spring-loaded terminal	Black	36	565712	NECU-L3G8-C1
		Blue	33	565711	NECU-L3G8-C1-IS
	Screw terminal	Black	56	565710	NECU-L3G8-C2
		Blue	55.5	565709	NECU-L3G8-C2-IS

Datasheet

Plug NECU-S1W9

- Plug
- 9-pin
- Can be assembled with any cable lengths
- Plug for PROFIBUS with terminating resistor and programming interface



General technical data

Electrical connection	Sub-D plug
	9-pin
	IDC terminal
Programming interface	Sub-D socket
	9-pin
Baud rate	[Mbps] 12
Permissible cable diameter	[mm] 8
Connection cross-section	[mm ²] 0.08 ... 0.5
Type of mounting	4-40 UNC-2B
Degree of protection	IP20

Materials

Housing	Reinforced PC
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B2-L

Operating and environmental conditions

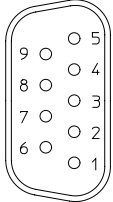
Ambient temperature	[°C] -20 ... +70
Corrosion resistance class CRC ¹⁾	1
Relative humidity	[%] 75 at 25 °C

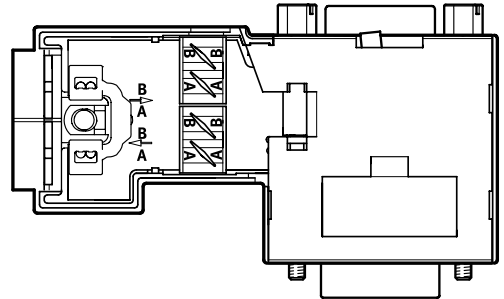
1) More information www.festo.com/x/topic/crc

Sub-D plug, 9-pin

Datasheet

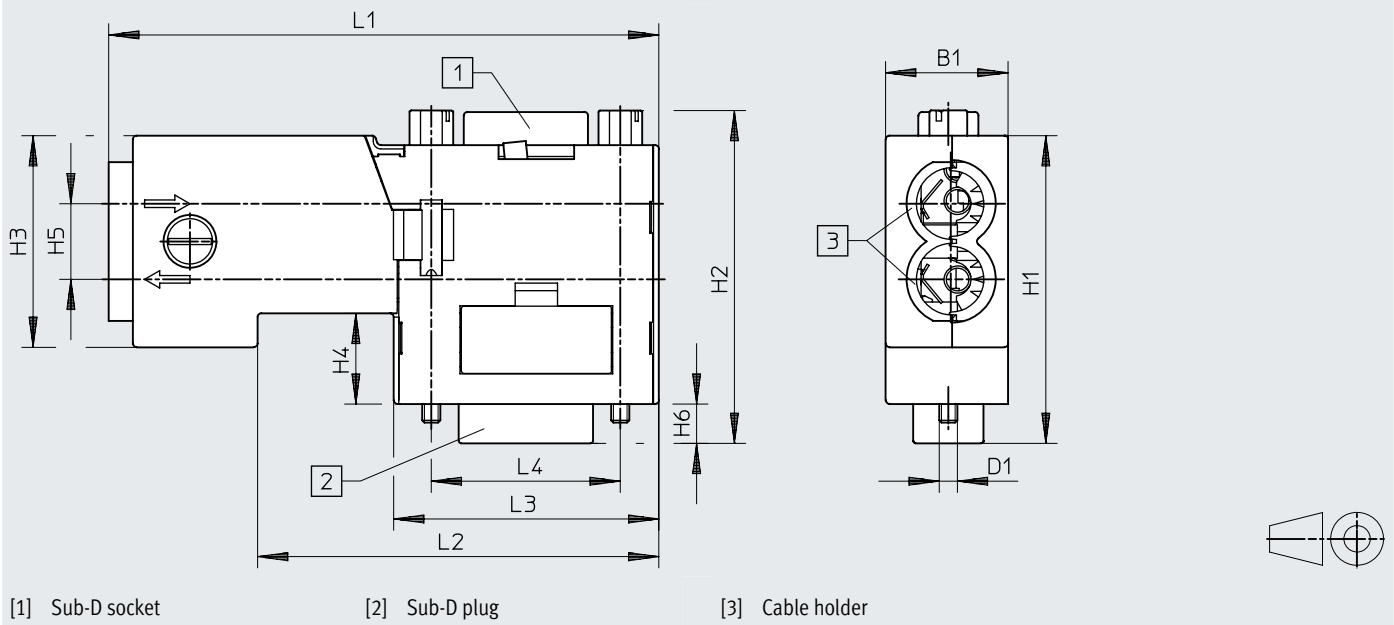
Pin allocation

Sub-D				
9-pin	Pin	Wire colour	Signal	Terminal
Sub-D plug				
	1	–	–	–
	2	–	–	–
	3	Red	RxD/TxD-P	B
	4	–	–	–
	5	–	GND	–
	6	–	VP (supply voltage)	–
	7	–	–	–
	8	Green	RxD/TxD-N	A
	9	–	–	–
	Housing	–	–	–



Dimensions

Download CAD data → www.festo.com



[1] Sub-D socket

[2] Sub-D plug

[3] Cable holder

Type	B1	D1	H1	H2	H3	H4	H5	H6	L1	L2	L3	L4
NECU-S1W9-C2-APB	16.2	4-40UNC	40.7	44.2	28	12	10	5.2	72.8	53.1	35.1	25

Ordering data

Electrical connection	Connection cross-section [mm]	Weight [g]	Part no.	Type
Sub-D plug, 9-pin	IDC terminal	0.08 ... 0.5	574589	NECU-S1W9-C2-APB

Datasheet

Socket FBSD-GD

- Socket
- 4-pin
- Can be assembled with any cable lengths



General technical data

Electrical connection	Straight socket, M12x1	
	4-pin	
	Type A	
	Screw terminal	
Type of mounting	With union nut	
Operating voltage range	[V DC]	0 ... 250
	[V AC]	0 ... 250
Surge resistance	[kV]	2.5
Current rating at 40 °C	[A]	4
Based on standard	EN 61076-2-101	
	EN 61984	
Permissible cable diameter	[mm]	10 ... 12
Connection cross-section	[mm ²]	0.75
Cable fitting	Pg13.5	
Degree of protection	IP67	

Materials

Housing	Reinforced PA	
Housing colour	Black	
Pin contact	Bronze	
	Coated white bronze	
Union nut	Nickel-plated die-cast zinc	
Note on materials	RoHS-compliant	
LABS (PWIS) conformity	VDMA24364-B2-L	

Operating and environmental conditions

Ambient temperature	[°C]	-40 ... +85
Corrosion resistance class CRC ¹⁾	1	
Pollution degree	3	
CE marking (see declaration of conformity) ²⁾	To EU Low Voltage Directive	
UKCA marking (see declaration of conformity) ²⁾	To UK regulations for electrical equipment	

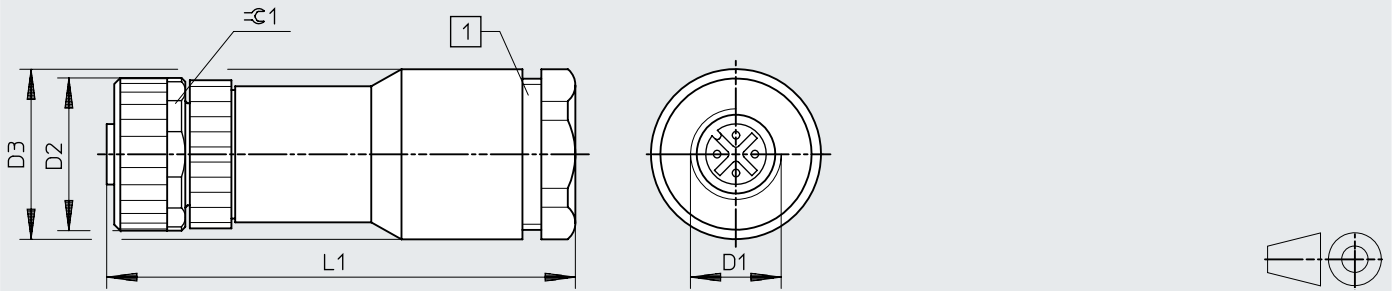
1) More information: www.festo.com/x/topic/crc

2) More information www.festo.com/catalogue/... → Support/Downloads.

Datasheet

Dimensions

Download CAD data → www.festo.com



[1] Pg13.5

Type	D1	D2	D3	L1	⌀C1
FBSD-GD-13.5	M12x1	20.2	22.5	62	18

Ordering data

Electrical connection	Permissible cable diameter [mm]	Weight [g]	Part no.	Type
Socket M12x1, 4-pin	Straight 10 ... 12	40	18496	FBSD-GD-13.5

Datasheet

Socket NECU-M-B12G5

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



General technical data	
Electrical connection	Straight socket, M12x1
	5-pin
	Screw terminal, can be shielded
Plug coding	B-coded
Operating voltage range	[V DC] 0 ... 125
	[V AC] 0 ... 125
Surge resistance	[kV] 1.25
Current rating at 40 °C	[A] 4
Based on standard	EN 61076-2-101
	EN 61984
Transmission characteristics	DIN EN 50173/CAT 5
Permissible cable diameter	[mm] 6 ... 8
Connection cross-section	[mm ²] 0.14 ... 0.75
Degree of protection	IP67

Materials	
Housing	Nickel-plated die-cast zinc
Pin contact	Gold-plated brass
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B2-L

Operating and environmental conditions	
Type	NECU-M-B12G5
Ambient temperature	[°C] -25 ... +85
Corrosion resistance class CRC ¹⁾	1
Pollution degree	3
CE marking (see declaration of conformity) ²⁾	To EU Low Voltage Directive

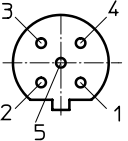
1) More information: www.festo.com/x/topic/crc

2) More information www.festo.com/catalogue/... → Support/Downloads.

Socket, M12, 5-pin

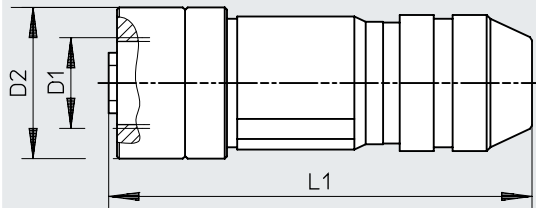
Datasheet

Pin allocation

M12x1		
5-pin	Pin	Wire colour
	1	-
	2	-
	3	-
	4	-
	5	-

Dimensions

Download CAD data → www.festo.com



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

Ordering data

Electrical connection		Connection cross-section [mm ²]	Weight [g]	Part no.	Type
Socket M12x1, 5-pin, straight	Screw terminal	B-coded	0.14 ... 0.75	48.7	1067905 NECU-M-B12G5-C2-PB

Datasheet

Socket NECU-G78G4

- Socket
- 4-pin
- Can be assembled with any cable lengths



General technical data		
Electrical connection		Straight socket, 7/8"
		4-pin
		Screw terminal
Plug coding		ODVA AutoSIG
Operating voltage range	[V DC]	0 ... 250
	[V AC]	0 ... 250
Surge resistance	[kV]	2.5
Current rating at 40 °C	[A]	10
Based on standard		EN 61984
Permissible cable diameter	[mm]	6 ... 12
Connection cross-section	[mm ²]	Max. 1.5
Degree of protection		IP67

Materials	
Housing	PA
Housing colour	Black
Seals	FPM
	NBR
Pin contact	Gold-plated copper alloy
Union nut	Nickel-plated die-cast zinc
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B2-L

Operating and environmental conditions		
Ambient temperature	[°C]	-25 ... +80
Corrosion resistance class CRC ¹⁾		1
Pollution degree		3
CE marking (see declaration of conformity) ²⁾		To EU Low Voltage Directive
UKCA marking (see declaration of conformity) ²⁾		To UK regulations for electrical equipment
Certification		c CSA us (OL)

1) More information: www.festo.com/x/topic/crc

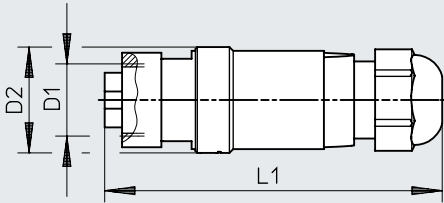
2) More information www.festo.com/catalogue/... → Support/Downloads.

Socket, 7/8", 4-pin

Datasheet

Dimensions

Download CAD data → www.festo.com



Type	D1	D2	L1
NECU-G78G4-C2	7/8"	28	89

Ordering data

Electrical connection	Connection cross-section [mm ²]	Weight [g]	Part no.	Type
Socket 7/8", 4-pin, straight	Screw terminal	Max. 1.5	543108	NECU-G78G4-C2

Datasheet

Socket NECU-G78G5

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



General technical data	
Electrical connection	Straight socket, 7/8"
	5-pin
	Screw terminal
Plug coding	NFPA/T3.5.29 R1-2003
Operating voltage range	[V DC] 0 ... 250
	[V AC] 0 ... 250
Surge resistance	[kV] 2.5
Current rating at 40 °C	[A] 8
Based on standard	EN 61984
Permissible cable diameter	[mm] 6 ... 12
Connection cross-section	[mm ²] Max. 1.5
Degree of protection	IP67

Materials	
Housing	PA
Housing colour	Black
Seals	FPM
	NBR
Pin contact	Gold-plated copper alloy
Union nut	Nickel-plated die-cast zinc
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B2-L

Operating and environmental conditions	
Ambient temperature	[°C] -25 ... +80
Corrosion resistance class CRC ¹⁾	1
Pollution degree	3
CE marking (see declaration of conformity) ²⁾	To EU Low Voltage Directive
UKCA marking (see declaration of conformity) ²⁾	To UK regulations for electrical equipment
Certification	c CSA us (OL)

1) More information: www.festo.com/x/topic/crc

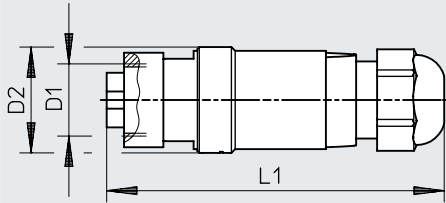
2) More information www.festo.com/catalogue/... → Support/Downloads.

Socket, 7/8", 5-pin

Datasheet

Dimensions

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Type	D1	D2	L1
NECU-G78G5-C2	7/8"	28	89

Ordering data

Electrical connection	Connection cross-section [mm ²]	Weight [g]	Part no.	Type
Socket 7/8", 5-pin, straight	Max. 1.5	50	543107	NECU-G78G5-C2

Datasheet

Power supply socket NECU-M-PPG5PP

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



General technical data	
Protocol	PROFINET
Additional functions	Meets AIDA requirements
Electrical connection	Straight socket, plug pattern PP, coding on pin 2 and 5
	Push-pull with locking mechanism against unintentional pulling
	5-pin
	Spring-loaded terminal
Cable outlet	Straight
Operating voltage range [V DC]	0 ... 24
Surge resistance [kV]	4
Current rating at 40 °C [A]	16
Cable diameter [mm]	9 ... 13
Nominal conductor cross-section	[mm ²] 0.75 ... 2.5
	[AWG] 18 ... 13
Cable fitting	Pg13.5 with hex spanner size 22
Contact durability	100
Degree of protection	IP65
	IP67
Note on degree of protection	In mounted state
Product weight [g]	109

Materials	
Housing	Nickel-plated die-cast zinc
Housing colour	Silver
Seals	NBR
	TPE-V
Pin contact	Nickel-plated and gold-plated copper alloy
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B2-L

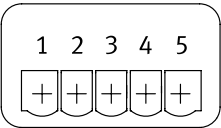
Operating and environmental conditions	
Ambient temperature [°C]	-40 ... +85
Storage temperature [°C]	-40 ... +85
Corrosion resistance class CRC ¹⁾	1
Pollution degree	3
Certification	c UL us - Recognized (OL)
Certificate-issuing authority	UL E328433
Fire-tested	UL94 V-0

1) More information www.festo.com/x/topic/crc

Datasheet

Pin allocation

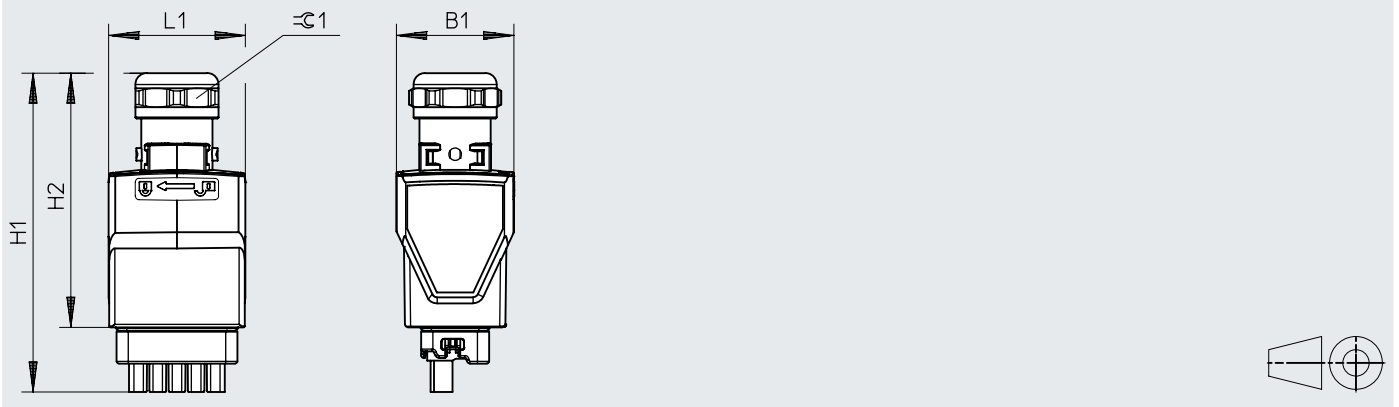
Push-pull

5-pin	Pin	Wire colour ¹⁾ in accordance with PROFINET colour coding	Function
	1	BN	24 V DC supply voltage for electronics and sensors
	2	BU	0 V electronics and sensors
	3	BK	24 V DC load voltage supply for valves and outputs
	4	WH	0 V valves and outputs
	5	GY	FE functional earth

1) According to IEC 757

Dimensions

Download CAD data → www.festo.com




Type	B1	H1	H2	L1	r1
NECU-M-PPG5PP-C1-PN	31.1	84.4	67.3	36.2	22

Ordering data

Electrical connection	Connection cross-section [mm ²]	Part no.	Type
Push-pull socket, 5-pin, straight	Spring-loaded terminal 0.75 ... 2.5	5195383	NECU-M-PPG5PP-C1-PN

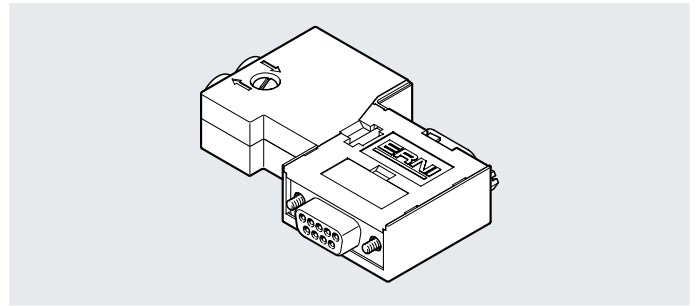
Ordering data – Accessories

		Pack size	Part no.	Type
	Cable seal For adapting to cable diameter 6.5 ... 9.5 mm	11x20 mm 5	8079860	NEAU-KD-P4-A1-P5

Datasheet

Socket NECU-S1W9

- Socket
- 9-pin
- Can be assembled with any cable lengths
- Socket for CANopen with terminating resistor and programming interface



General technical data	
Electrical connection	Sub-D socket
	9-pin
	Screw terminal, can be shielded
Programming interface	Sub-D plug
	9-pin
Baud rate	[Mbps] 1
Permissible cable diameter	[mm] 8
Connection cross-section	[mm ²] 0.14 ... 0.5
Type of mounting	4-40 UNC-2B
Degree of protection	IP20

Materials	
Housing	Reinforced PC
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B2-L

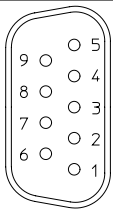
Operating and environmental conditions	
Ambient temperature	[°C] -20 ... +70
Corrosion resistance class CRC ¹⁾	1
Relative humidity	[%] 75 at 25 °C

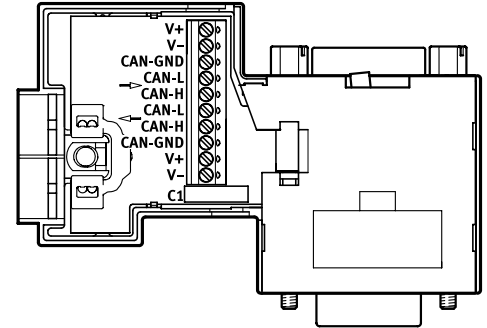
1) More information www.festo.com/x/topic/crc

Sub-D socket, 9-pin

Datasheet

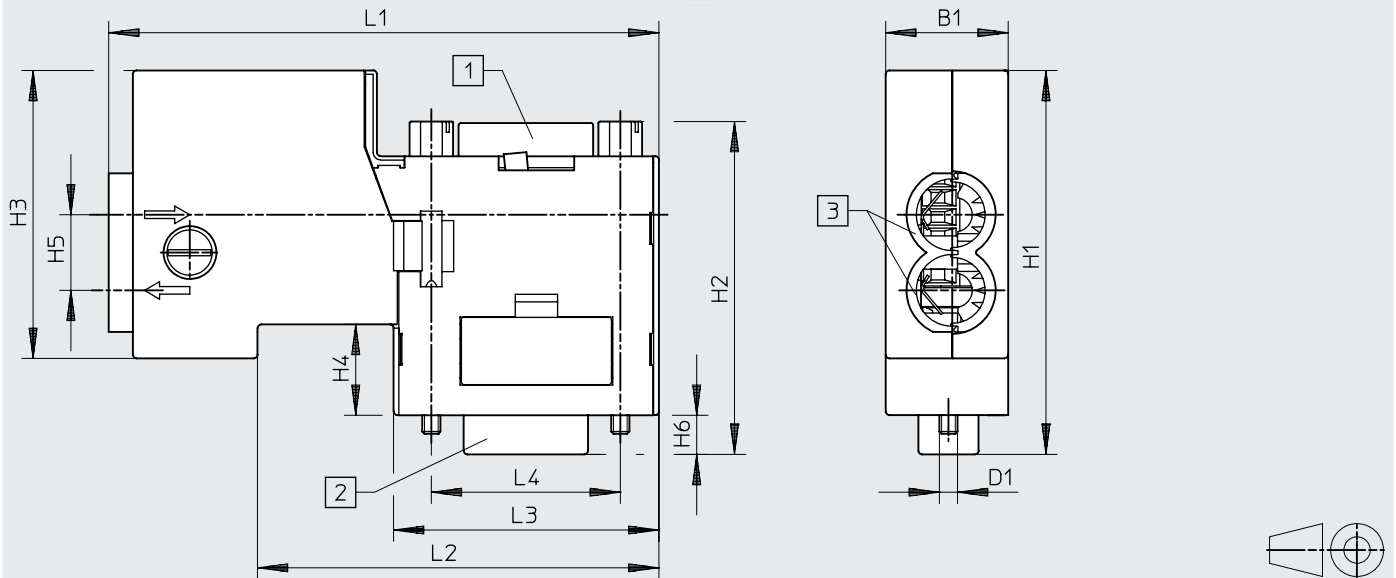
Pin allocation

Sub-D				
9-pin	Pin	Wire colour	Signal	Terminal
Sub-D plug				
	1	–	–	–
	2	White	Received/transmitted data low	C-L
	3	Shielding	0 V CAN interface	GND
	4	–	–	–
	5	–	–	–
	6	Optional	Optional shielded connection	V–
	7	Brown	Received/transmitted data high	C-H
	8	–	–	–
	9	Optional	24 V DC supply CAN interface	V+
Housing	–	–	–	–



Dimensions

Download CAD data → www.festo.com



[1] Sub-D plug

[2] Sub-D socket

[3] Cable holder

Type	B1	D1	H1	H2	H3	H4	H5	H6	L1	L2	L3	L4
NECU-S1W9-C2-ACO	16.2	4-40UNC	50.8	43.8	38.1	12	10	5.2	72.8	53.1	35.1	25

Ordering data

Electrical connection	Connection cross-section [mm]	Weight [g]	Part no.	Type
Sub-D socket, 9-pin	Screw terminal, can be shielded	0.14 ... 0.5	59	574588 NECU-S1W9-C2-ACO