

Universal plugs, for self-assembly

**FESTO**



Product range overview

Function	Design	Type	Connection technology	Connection cross section [mm <sup>2</sup> ]	Degree of protection	Bus protocol/control	→ Page/Internet
Plug	<b>Round plug M8</b>						
	3-pin	NECU-S-M8G3-HX	Harax <sup>®</sup> quick connector	0.1 ... 0.14 0.14 ... 0.34	IP65, IP67	–	4
	4-pin	NECU-S-M8G4-HX	Harax <sup>®</sup> quick connector	0.14 ... 0.34	IP65, IP67	–	6
		NECU-S-M8G4-C2	Screw terminal	0.14 ... 0.5	IP67	–	6
	<b>Round plug M12, A-coded</b>						
	3-pin	NECU-S-M12G3-HX	Harax <sup>®</sup> quick connector	0.14 ... 0.34 0.34 ... 0.75	IP65, IP67	–	8
	4-pin	NECU-M-S-A12G4	Spring-loaded terminal	0.14 ... 0.5	IP65, IP67	–	10
		NECU-S-M12G4-HX	Harax <sup>®</sup> quick connector	0.14 ... 0.34 0.34 ... 0.75	IP65, IP67	–	10
		NECU-S-M12G4-...-IS	Screw terminal	0.14 ... 0.5 0.75	IP65, IP67	–	10
	5-pin	FBS-M12-5GS	Screw terminal	0.75	IP67	–	14
	<b>Round plug M12, B-coded</b>						
	5-pin	NECU-M-S-B12G5	Screw terminal	0.14 ... 0.75	IP67	PROFIBUS	14
	<b>Round plug M12, D-coded</b>						
	4-pin	NECU-M-S-D12G4	Screw terminal, can be shielded	0.14 ... 0.75	IP67	Ethernet	10
	<b>Square plug</b>						
	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
	<b>Sub-D plug</b>						
	9-pin	NECU-S1W9-C2-APB	IDC terminal	0.08 ... 0.5	IP20	PROFIBUS	21

## Product range overview

Function	Design	Type	Connection technology	Connection cross section [mm <sup>2</sup> ]	Degree of protection	Bus protocol/ control	→ Page/ Internet
Socket	<b>Round plug M12</b>						
	4-pin	SIE FBSD	Screw terminal	0.25 ... 0.75	IP67	–	23
	5-pin	NECU-M-B12G5 FBSD-GD-9-5POL	Screw terminal	0.14 ... 0.75	IP67	–	25
	<b>Round plug 7/8"</b>						
	4-pin	NECU-G78G4	Screw terminal	Max. 1.5	IP67	–	27
	5-pin	NECU-G78G5	Screw terminal	Max. 1.5	IP67	–	29
	<b>Push-pull plug</b>						
	5-pin	NECU-M-PPG5PP	Spring-loaded terminal	0.75 ... 2.5	IP65, IP67	PROFINET	31
	<b>Sub-D plug</b>						
	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



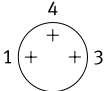
General technical data		NECU-S-M8G3-HX-Q3	NECU-S-M8G3-HX
Type			
Electrical connection		Straight plug, M8x1 3-pin Insulation displacement connector	
Operating voltage range	[V DC]	0 ... 32	
	[V AC]	0 ... 32	
Surge resistance	[kV]	0.8	
Current rating at 40°C	[A]	2	4
Based on standard		EN 61076-2-104	EN 61076-2-104
		EN 61984	EN 61984
Permissible cable ø	[mm]	2.1 ... 3.5	2.5 ... 5.1
Permissible individual wire ø	[mm]	≥ 0.05	≥ 0.1
Connection cross section	[mm <sup>2</sup> ]	0.1 ... 0.14	0.14 ... 0.34
Permissible wire ø	[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 lock	[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
PWIS conformity	VDMA24364-B2-L

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

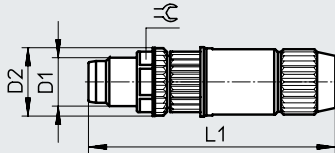
1) Additional information [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

## Datasheet

Pin allocation		
M8x1		
3-pin	Pin	Wire colour
	1	Brown
	3	Blue
	4	Black

### Dimensions

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



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

### Ordering data

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

## Datasheet

**Plug**  
**NECU-S-M8G4**

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



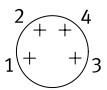
General technical data		NECU-S-M8G4-HX	NECU-S-M8G4-C2
Type			
Electrical connection		Straight plug, M8x1, A-coded to EN 61076-2-104	
		4-pin	
		Insulation displacement connector	Screw terminal
Type of mounting		Screw-type lock with AF9	
Operating voltage range	[V DC]	0 ... 32	0 ... 30
	[V AC]	0 ... 32	0 ... 30
Surge resistance	[kV]	0.8	0.8
Current rating at 40°C	[A]	4	4
Based on standard		EN 61076-2-104	–
		EN 61984	–
Conforms to standard		–	EN 61076-2-104
Transmission characteristics		–	DIN EN 50173/CAT 5
Cable ø	[mm]	2.5 ... 5.1	3.5 ... 5.0
Individual wire ø	[mm]	≥ 0.1	–
Connection cross section	[mm <sup>2</sup> ]	0.14 ... 0.34	0.14 ... 0.5
Wire ø	[mm]	0.9 ... 1.6	–
Permissible insulating sheath		PP	–
		PVC	–
		TPE-E	–
Contact durability		3	100
Degree of protection		IP65	–
		IP67	IP67
Note on degree of protection		–	In assembled state

Materials		NECU-S-M8G4-HX	NECU-S-M8G4-C2
Type			
Housing		PA	PA
		Nickel-plated die-cast zinc	–
Housing colour		–	Black
Screw-type lock		Nickel-plated brass	Nickel-plated brass
Seals		FPM	–
		PUR	–
Pin contact		Gold-plated	Gold-plated brass
Note on materials		RoHS-compliant	RoHS-compliant
PWIS conformity		VDMA24364-B2-L	VDMA24364-B2-L

## Datasheet

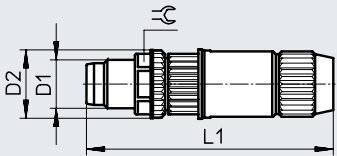
Operating and environmental conditions		
Type	NECU-S-M8G4-HX	NECU-S-M8G4-C2
Ambient temperature [°C]	-25 ... +85	-25 ... +85
Corrosion resistance class CRC <sup>1)</sup>	1	1
Pollution degree	3	3
Certification	c UL us - Recognized (OL)	-

1) Additional information [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

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

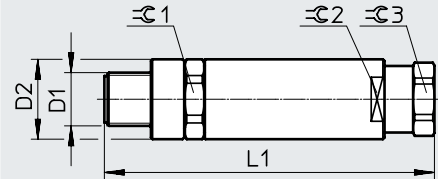
### Dimensions

NECU-S-M8G4-HX



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

NECU-S-M8G4-C2



Type	D1	D2	L1	≅	≅ 1	≅ 2	≅ 3
NECU-S-M8G4-HX	M8x1	11.5	40.8	9	-	-	-
NECU-S-M8G4-C2	M8x1	12	49.6	-	12	11	10

Ordering data					
Electrical connection		Connection cross section [mm <sup>2</sup> ]	Weight [g]	Part no.	Type
Plug M8x1, 4-pin, straight	Insulation displacement connector	0.14 ... 0.34	7.8	<b>562025</b>	<b>NECU-S-M8G4-HX</b>
	Screw terminal	0.14 ... 0.5	9.1	<b>1068198</b>	<b>NECU-S-M8G4-C2</b>

## Datasheet

**Plug**  
**NECU-S-M12G3**

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



General technical data		NECU-S-M12G3-HX	NECU-S-M12G3-HX-Q7
Type		NECU-S-M12G3-HX	NECU-S-M12G3-HX-Q7
Electrical connection		Straight plug, M12x1	
		3-pin	
		Insulation displacement connector	
Plug coding		A-coded	
Operating voltage range	[V DC]	0 ... 32	0 ... 48
	[V AC]	0 ... 32	0 ... 48
Surge resistance	[kV]	0.8	0.8
Current rating at 40°C	[A]	4	6
Based on standard		EN 61076-2-101	EN 61076-2-101
		EN 61984	EN 61984
Permissible cable ø	[mm]	2.9 ... 5.1	4.7 ... 6.0
Permissible individual wire ø	[mm]	≥ 0.1	≥ 0.1
Connection cross section	[mm <sup>2</sup> ]	0.14 ... 0.34	0.34 ... 0.75
Permissible wire ø	[mm]	0.9 ... 1.6	1.6 ... 2.0
Permissible insulating sheath		PP	–
		PVC	PVC
		TPE-E	–
Contact durability		3	3
Max. tightening torque of lock	[Nm]	0.5	0.5
Degree of protection		IP65	IP65
		IP67	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
PWIS conformity	VDMA24364-B2-L



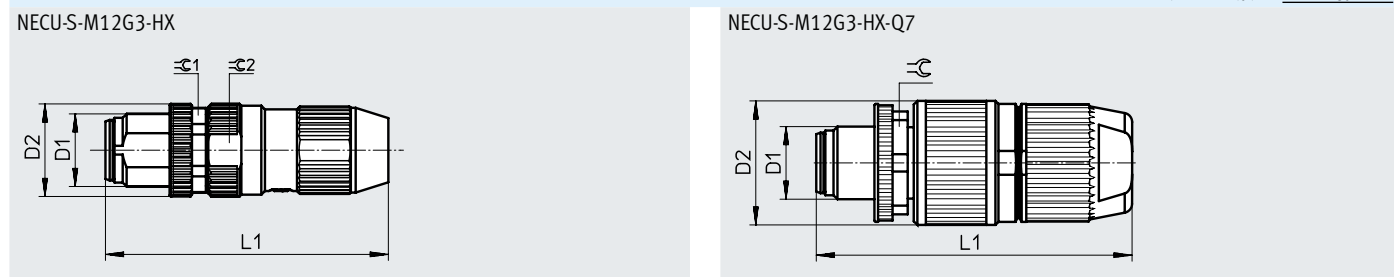
## Datasheet

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

1) Additional information [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

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

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



Type	D1	D2	L1	⌀	⌀1	⌀2
NECU-S-M12G3-HX	M12x1	15.3	46.75	-	13	14
NECU-S-M12G3-HX-Q7	M12x1	20.5	52.2	17	-	-

Ordering data		Connection cross section [mm <sup>2</sup> ]	Weight [g]	Part no.	Type	
Electrical connection	Plug M12x1, 3-pin, straight	Insulation displacement connector	0.14 ... 0.34	17.5	562027	NECU-S-M12G3-HX
			0.34 ... 0.75	32.8	564946	NECU-S-M12G3-HX-Q7

## 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 ø	[mm]	4.0 ... 8.0	2.9 ... 5.1	4.7 ... 6.0
Permissible individual wire ø	[mm]	–	≥ 0.1	≥ 0.1
Connection cross section	[mm <sup>2</sup> ]	0.14 ... 0.5	0.14 ... 0.34	0.34 ... 0.75
Permissible wire ø	[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 lock	[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		Gold-plated bronze	Gold-plated	Gold-plated
Note on materials		RoHS-compliant	RoHS-compliant	RoHS-compliant
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 <sup>1)</sup>		–	1	1
Pollution degree		3	3	3
Certification		–	c UL us - Recognized (OL)	c UL us - Recognized (OL)

1) Additional information [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

## Datasheet

General technical data		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 ø	[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 <sup>2</sup> ]	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		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/wires		4				4
Type of mounting		Screw-type lock with 18 mm hexagon and longitudinal knurl				–

Technical data – Electrical connection 2		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		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
PWIS conformity		VDMA24364-B2-L	VDMA24364-B2-L

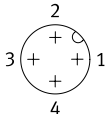
Operating and environmental conditions		NECU-S-M12G4-...-IS	NECU-M-S-D12G4-C2-ET
Ambient temperature	[°C]	–25 ... +85	–25 ... +85
Corrosion resistance class CRC <sup>1)</sup>		–	1
Pollution degree		3	3
CE marking (see declaration of conformity) <sup>2)</sup>		–	To EU Low Voltage Directive
UKCA marking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

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

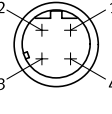
## Datasheet

### Pin allocation

M12x1, A-coded

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

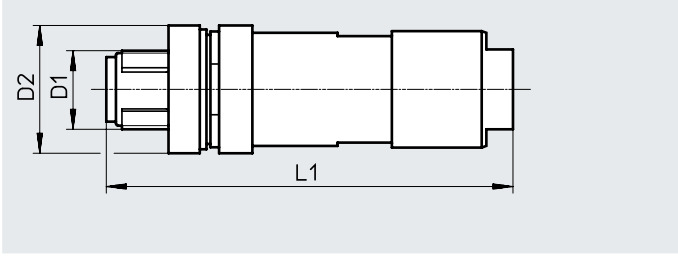
M12x1, D-coded

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

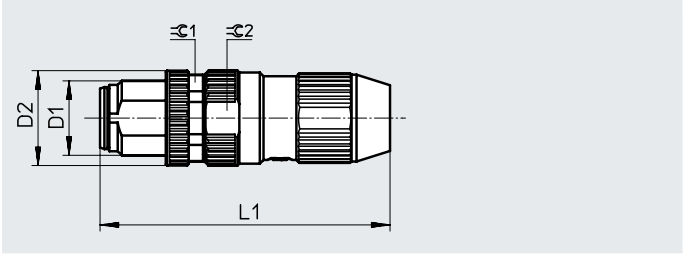
### Dimensions

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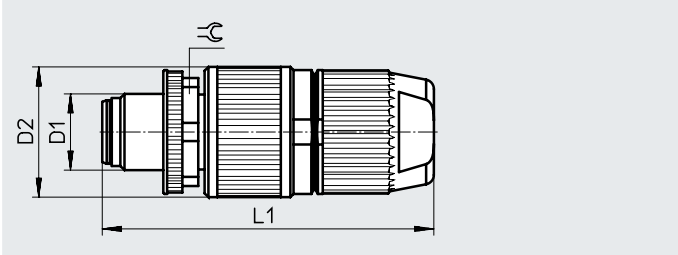
NECU-M-S-A12G4-IS



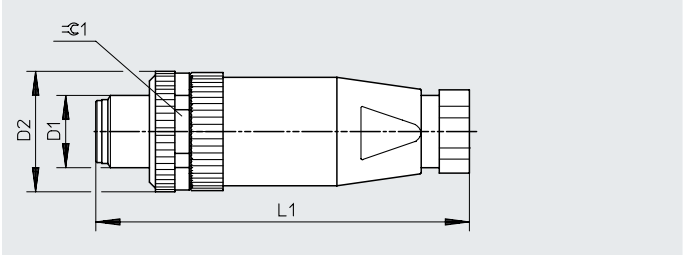
NECU-S-M12G4-HX



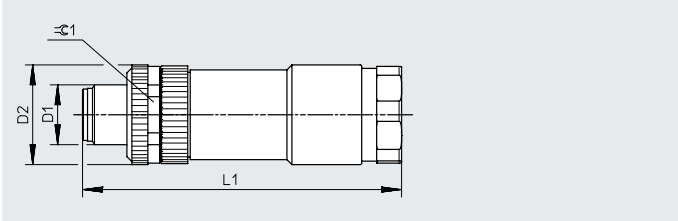
NECU-S-M12G4-HX-Q7



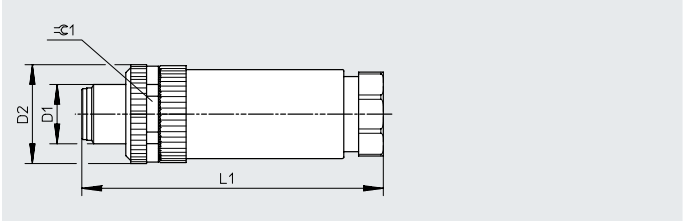
NECU-S-M12G4-P1



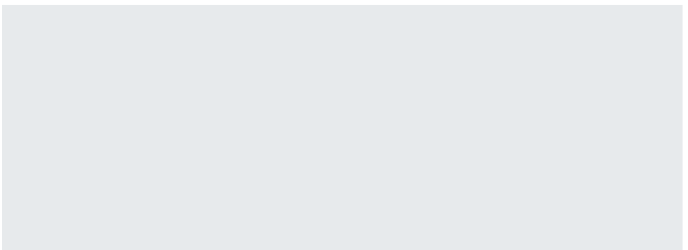
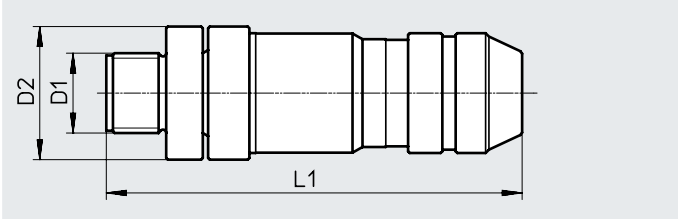
NECU-S-M12G4-D



NECU-S-M12G4-P2



NECU-M-S-D12G4-C2-ET



Type	D1	D2	L1	≅	≅1	≅2
NECU-M-S-A12G4-IS	M12x1	19.2	61.1	-	-	-
NECU-S-M12G4-HX	M12x1	15.3	46.75	-	13	14
NECU-S-M12G4-HX-Q7	M12x1	20.5	52.2	17	-	-
NECU-S-M12G4-P1	M12x1	20	62	-	-	-
NECU-S-M12G4-D	M12x1	20	62.6	-	-	-
NECU-S-M12G4-P2	M12x1	20	59.6	-	-	-
NECU-M-S-D12G4-C2-ET	M12x1	20	62.5	-	-	-

## Datasheet

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

## Datasheet

**Plug**  
**NECU-M-S-B12G5**  
**FBS-M12-5GS**

- Plug
- 5-pin
- B-coded for PROFIBUS
- A-coded for DeviceNet and CANopen
- Can be assembled with any cable lengths



General technical data			
Type	NECU-M-S-B12G5		FBS-M12-5GS
Electrical connection	Straight plug, M12x1		
	5-pin		
	Screw terminal		
	Can be screened		
Plug coding	B-coded		A-coded
Operating voltage range	[V DC]	0 ... 60	0 ... 60
	[V AC]	0 ... 60	0 ... 60
Surge resistance	[kV]	1.5	1.5
Current rating at 40°C	[A]	4	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 Ø	[mm]	6 ... 8	6 ... 8
Connection cross section	[mm <sup>2</sup> ]	0.14 ... 0.75	0.75
Cable connector	–		Pg9
Degree of protection	IP67		IP67

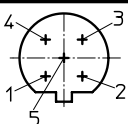
Materials			
Type	NECU-M-S-B12G5		FBS-M12-5GS
Housing	Nickel-plated die-cast zinc		Reinforced PA
Housing colour	–		Black
Pin contact	Gold-plated brass		Nickel-plated and gold-plated brass
Union nut	–		Nickel-plated die-cast zinc
Note on materials	RoHS-compliant		RoHS-compliant
PWIS conformity	VDMA24364-B2-L		VDMA24364-B2-L

Operating and environmental conditions			
Type	NECU-M-S-B12G5		FBS-M12-5GS
Ambient temperature	[°C]	–25 ... +85	–40 ... +85
Corrosion resistance class CRC <sup>1)</sup>	1		1
Pollution degree	3		3
CE marking (see declaration of conformity) <sup>2)</sup>	To EU Low Voltage Directive		To EU Low Voltage Directive
UKCA marking (see declaration of conformity) <sup>2)</sup>	–		To UK regulations for electrical equipment

1) Additional information [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

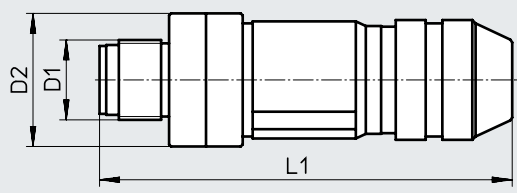
2) Additional information [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

## Datasheet

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

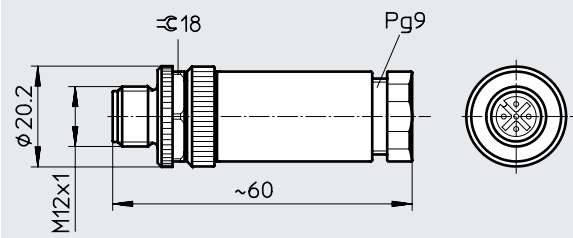
### Dimensions

NECU-M-S-B12G5



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FBS-M12-5GS



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

Ordering data						
Electrical connection			Connection cross section [mm <sup>2</sup> ]	Weight [g]	Part no.	Type
Plug M12x1, 5-pin, straight	Screw terminal, can be shielded	B-coded	0.14 ... 0.75	46.1	<b>1066354</b>	<b>NECU-M-S-B12G5-C2-PB</b>
	Screw terminal	A-coded	0.75	23.5	<b>175380</b>	<b>FBS-M12-5GS-PG9</b>

## Datasheet

**Plug**  
**NECU-S-ECG4**

- Plug
- 4-pin
- Insulation displacement connector
- 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 individual wire ø	[mm]	≥ 0.07
Connection cross section	[mm <sup>2</sup> ]	0.14
Permissible wire ø	[mm]	0.8 ... 1.0
Permissible insulating sheath	PP	
	PVC	
	TPE-E	
Contact durability	1	
Type of mounting	Latching	
Degree of protection	IP40	

### Materials

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

### Operating and environmental conditions

Ambient temperature	[°C]	-20 ... +60
Corrosion resistance class CRC <sup>1)</sup>	1	
Pollution degree	2	
Certification	c UL us - Recognized (OL)	

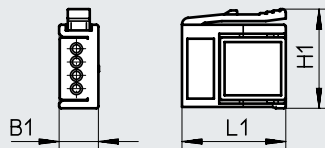
1) Additional information [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)



## Datasheet

### Dimensions

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

### Ordering data

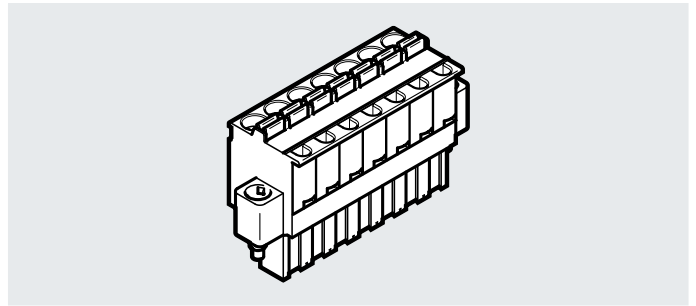
Electrical connection	Connection cross section [mm <sup>2</sup> ]	Weight [g]	Part no.	Type
Straight plug, square design, 4-pin	0.14	3.6	<b>570922</b>	<b>NECU-S-ECG4-HX-Q3</b>

# 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 <sup>2</sup> ]	0.2 ... 2.5
Contact durability		100

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

Operating and environmental conditions	
Ambient temperature	[°C] -40 ... +85
Corrosion resistance class CRC <sup>1)</sup>	2
Pollution degree	3
Certification	cUL us listed (OL)

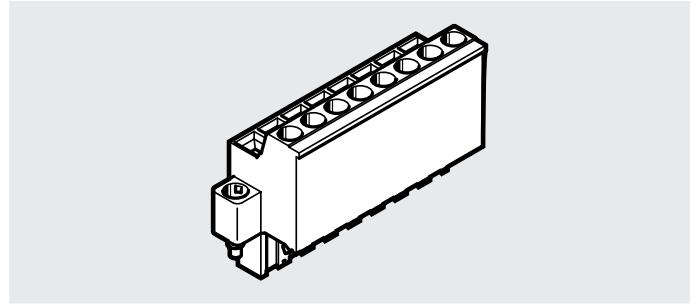
1) Additional information [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

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

## 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 separation 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 <sup>2</sup> ]	0.2 ... 2.5	0.2 ... 2.5
Contact durability		100	100
Max. tightening torque of lock	[Nm]	–	0.6

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

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

1) Additional information [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

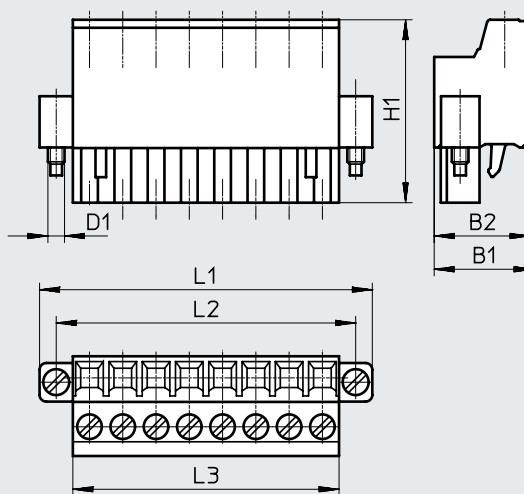
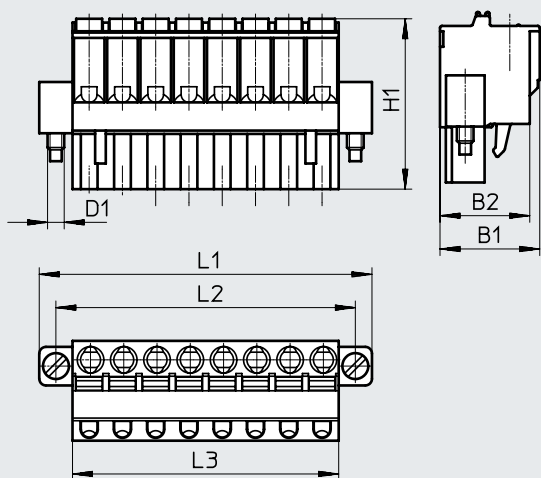
## Datasheet

### Dimensions

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

NECU-L3G8-C1

NECU-L3G8-C2



Type	B1	B2	D1	H1	L1	L2	L3
NECU-L3G8-C1	15	13.5	M2.5	25.6	50	45	40
NECU-L3G8-C2	15	14.4	M2.5	27.5	50	45	40

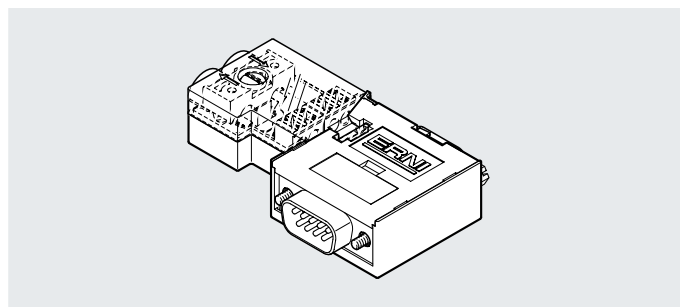
### Ordering data

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 ø [mm]	8
Connection cross section [mm <sup>2</sup> ]	0.08 ... 0.5
Type of mounting	4-40 UNC-2B
Degree of protection	IP20

#### Materials

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

#### Operating and environmental conditions

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

1) Additional information [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

# Plug, Sub-D, 9-pin

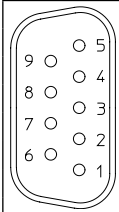
## Datasheet

### Pin allocation

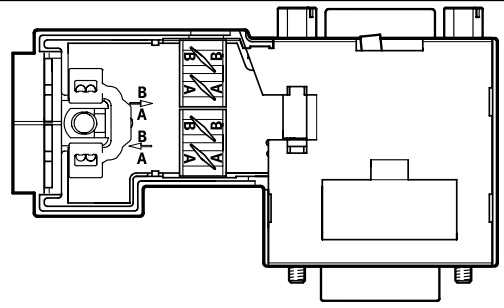
Sub-D

9-pin	Pin	Wire colour	Signal	Terminal
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### Sub-D plug

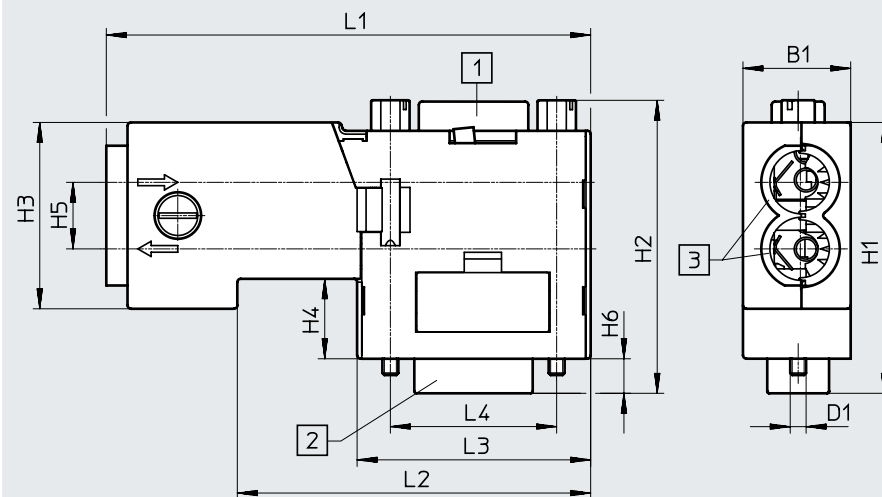


1	-	-	-	-
2	-	-	-	-
3	Red	RxD/TxD-P	B	
4	-	-	-	-
5	-	GND		
6	-	VP (supply voltage)		
7	-	-	-	-
8	Green	RxD/TxD-N	A	
9	-	-	-	-
Housing	-	-	-	-



### Dimensions

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



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
Plug, Sub-D, 9-pin	IDC terminal	0.08 ... 0.5	574589	NECU-S1W9-C2-APB

## Datasheet

- Socket**  
**SIE-GD**  
**FBSD-GD**  
**SIE-WD-TR**  
**FBSD-WD**
- Socket
  - 4-pin
  - Can be assembled with any cable lengths



General technical data		SIE-GD	FBSD-GD-9	FBSD-GD-13.5	SIE-WD-TR	FBSD-WD-9
Type		Straight socket, M12x1			Angled socket, M12x1	
Electrical connection		4-pin			4-pin	
		–	Type A	–	Type A	
		Screw terminal	Screw terminal		Screw terminal	
Plug coding		A	–	A	–	
Type of mounting		With union nut	With union nut	–	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 ø	[mm]	4 ... 6	8 ... 9.5	10 ... 12	4 ... 6	6 ... 8
Connection cross section	[mm <sup>2</sup> ]	0.25 ... 0.75	0.75	0.75	0.25 ... 0.75	0.75
Cable connector		–	Pg9	Pg13.5	–	Pg9
Degree of protection		IP67				

Materials		SIE-GD	SIE-WD-TR	FBSD
Housing		PA	PA	Reinforced PA
Housing colour		Black	Transparent	Black
Seals		CR	CR	–
Pin contact		Brass	Brass	Bronze
		Coated white bronze	Coated white bronze	Coated white bronze
Union nut		PA	PA	Nickel-plated die-cast zinc
Note on materials		RoHS-compliant	RoHS-compliant	RoHS-compliant
PWIS conformity		VDMA24364-B2-L	VDMA24364-B2-L	VDMA24364-B2-L

Operating and environmental conditions		SIE	FBSD
Ambient temperature	[°C]	–25 ... +85	–40 ... +85
Corrosion resistance class CRC <sup>1)</sup>		4	1
Pollution degree		3	3
CE marking (see declaration of conformity) <sup>2)</sup>		To EU Low Voltage Directive	To EU Low Voltage Directive
UKCA marking (see declaration of conformity) <sup>2)</sup>		To UK regulations for electrical equipment	To UK regulations for electrical equipment

1) Additional information [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

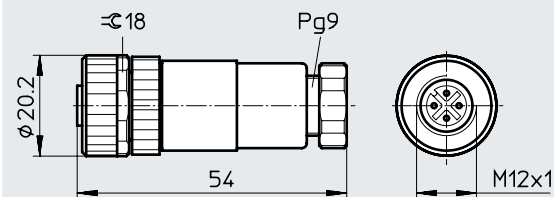
2) Additional information [www.festo.com/catalogue/...](http://www.festo.com/catalogue/...) → Support/Downloads.

Datasheet

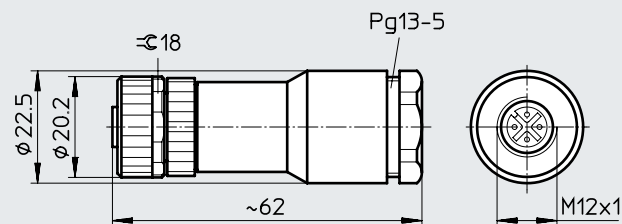
Dimensions

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

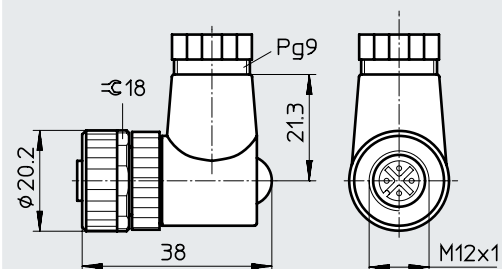
FBSD-GD-9



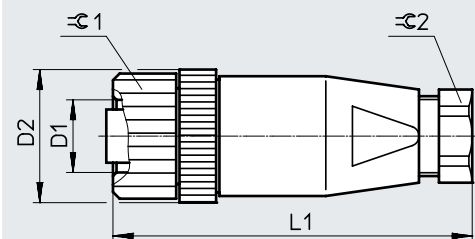
FBSD-GD-13.5



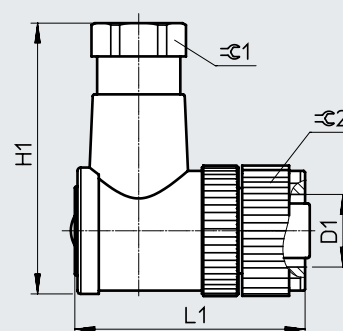
FBSD-WD-9



SIE-GD



SIE-WD-TR



Type	D1	D2	H1	L1	∅1	∅2
SIE-GD	M12x1	20	-	58	18	13
SIE-WD-TR	M12x1	-	38	35	13	18

Ordering data

Electrical connection		Permissible cable diameter [mm]	Weight [g]	Part no.	Type
Socket M12x1, 4-pin	Straight	4 ... 6	13	18494	SIE-GD
		8 ... 9.5	29	18495	FBSD-GD-9
		10 ... 12	40	18496	FBSD-GD-13.5
	Angled	4 ... 6	13	12956	SIE-WD-TR
		6 ... 8	30	18525	FBSD-WD-9



## Datasheet

Socket  
NECU-M-B12G5  
FBSD-GD-9-5POL

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



General technical data		NECU-M-B12G5	FBSD-GD-9-5POL
Type		NECU-M-B12G5	FBSD-GD-9-5POL
Electrical connection		Straight socket, M12x1	
		5-pin	
		Screw terminal, can be shielded	Screwed terminal
Plug coding		B-coded	A-coded
Operating voltage range	[V DC]	0 ... 125	0 ... 60
	[V AC]	0 ... 125	0 ... 60
Surge resistance	[kV]	1.25	1.5
Current rating at 40°C	[A]	4	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 Ø	[mm]	6 ... 8	6 ... 8
Connection cross section	[mm <sup>2</sup> ]	0.14 ... 0.75	0.75
Cable connector		–	Pg9
Degree of protection		IP67	IP67

Materials		NECU-M-B12G5	FBSD-GD-9-5POL
Type		NECU-M-B12G5	FBSD-GD-9-5POL
Housing		Nickel-plated die-cast zinc	Reinforced PA
Housing colour		–	Black
Pin contact		Gold-plated brass	Nickel-plated and gold-plated bronze
Union nut		–	Nickel-plated die-cast zinc
Note on materials		RoHS-compliant	RoHS-compliant
PWIS conformity		VDMA24364-B2-L	VDMA24364-B2-L

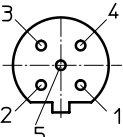
Operating and environmental conditions		NECU-M-B12G5	FBSD-GD-9-5POL
Type		NECU-M-B12G5	FBSD-GD-9-5POL
Ambient temperature	[°C]	–25 ... +85	–40 ... +85
Corrosion resistance class CRC <sup>1)</sup>		1	1
Pollution degree		3	3
CE marking (see declaration of conformity) <sup>2)</sup>		To EU Low Voltage Directive	To EU Low Voltage Directive
UKCA marking (see declaration of conformity) <sup>2)</sup>		–	To UK regulations for electrical equipment

1) Additional information [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

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

## Datasheet

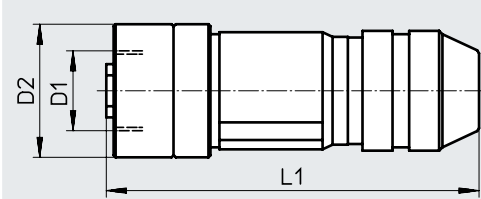
### Pin allocation

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

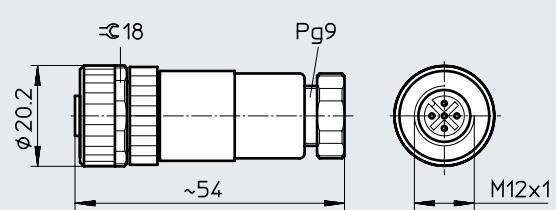
### Dimensions

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NECU-M-B12G5



FBSD-GD-9-5POL



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

### Ordering data

Electrical connection		Connection cross section [mm <sup>2</sup> ]	Weight [g]	Part no.	Type	
Socket M12x1, 5-pin, straight	Screw terminal	B-coded	0.14 ... 0.75	48.7	<b>1067905</b>	<b>NECU-M-B12G5-C2-PB</b>
		A-coded	0.75	33	<b>18324</b>	<b>FBSD-GD-9-5POL</b>

## 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 Ø	[mm]	6 ... 12
Connection cross section	[mm <sup>2</sup> ]	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	
PWIS conformity	VDMA24364-B2-L	

#### Operating and environmental conditions

Ambient temperature	[°C]	-25 ... +80
Corrosion resistance class CRC <sup>1)</sup>	1	
Pollution degree	3	
CE marking (see declaration of conformity)	To EU Low Voltage Directive	
Certification	c CSA us (OL)	

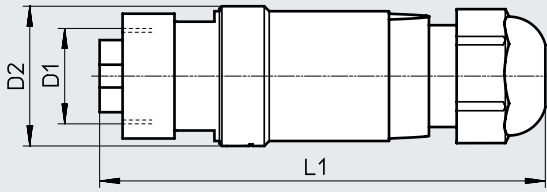
1) Additional information [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

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Datasheet

Dimensions

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



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

Ordering data

Electrical connection	Connection cross section [mm <sup>2</sup> ]	Weight [g]	Part no.	Type
Socket 7/8", 4-pin, straight	Max. 1.5	58.7	<b>543108</b>	<b>NECU-G78G4-C2</b>

## 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 Ø	[mm]	6 ... 12
Connection cross section	[mm <sup>2</sup> ]	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	
PWIS conformity	VDMA24364-B2-L	

#### Operating and environmental conditions

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

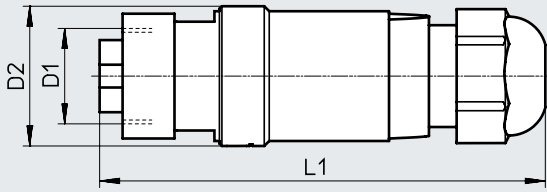
1) Additional information [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

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

Datasheet

Dimensions

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



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

Ordering data

Electrical connection	Connection cross section [mm <sup>2</sup> ]	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		Fulfils requirements according to AIDA
Electrical connection		Straight socket, connection pattern PP, coding on pin 2 and 5
		Push-pull with interlock 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 ø	[mm]	9 ... 13
Nominal conductor cross section	[mm <sup>2</sup> ]	0.75 ... 2.5
	[AWG]	18 ... 13
Cable connector		Pg13.5 with hex spanner size 22
Contact durability		100
Degree of protection		IP65
		IP67
Note on degree of protection		In assembled 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
PWIS conformity		VDMA24364-B2-L

#### Operating and environmental conditions

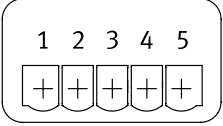
Ambient temperature	[°C]	-40 ... +85
Storage temperature	[°C]	-40 ... +85
Corrosion resistance class CRC <sup>1)</sup>		1
Pollution degree		3
Certification		c UL us - Recognized (OL)
Certificate issuing authority		UL E328433
Fire-tested		UL94 V-0

1) Additional information [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

## Datasheet

### Pin allocation

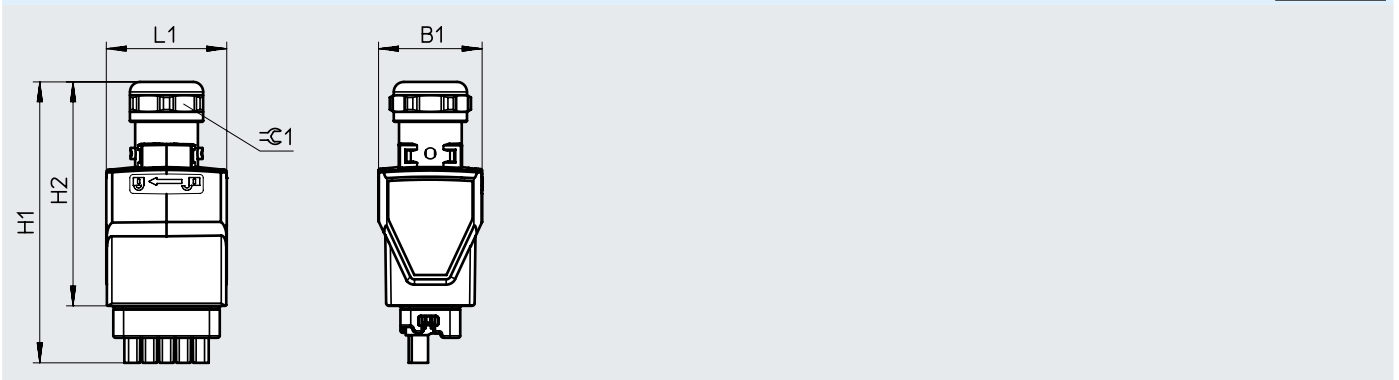
Push-pull

5-pin	Pin	Wire colour <sup>1)</sup> according to 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) To IEC 757

### Dimensions

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




Type	B1	H1	H2	L1	⊕1
NECU-M-PPG5PP-C1-PN	31.1	84.4	67.3	36.2	22

### Ordering data

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

### Ordering data – Accessories

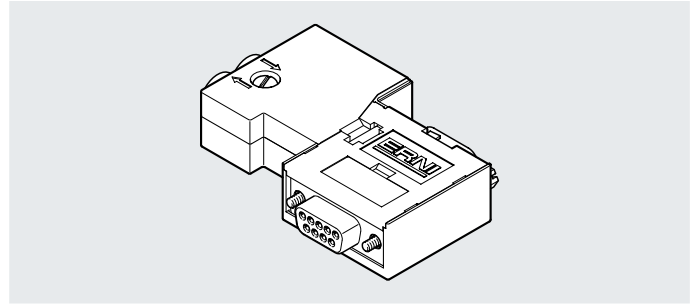
		Pack size	Part no.	Type
	Cable seal For adapting to cable diameter 6.5 ... 9.5 mm	11x20 mm 5	<b>8079860</b>	<b>NEAU-KD-P4-A1-P5</b>



## 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 ø	[mm]	8
Connection cross section	[mm <sup>2</sup> ]	0.14 ... 0.5
Type of mounting	4-40 UNC-2B	
Degree of protection	IP20	

#### Materials

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

#### Operating and environmental conditions

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

1) Additional information [www.festo.com/x/topic/kbk](http://www.festo.com/x/topic/kbk)

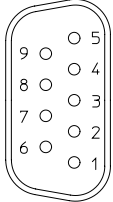
Datasheet

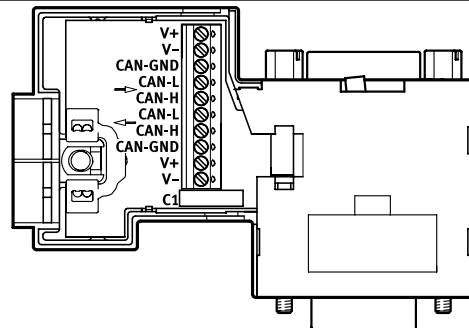
Pin allocation

Sub-D

9-pin	Pin	Wire colour	Signal	Terminal
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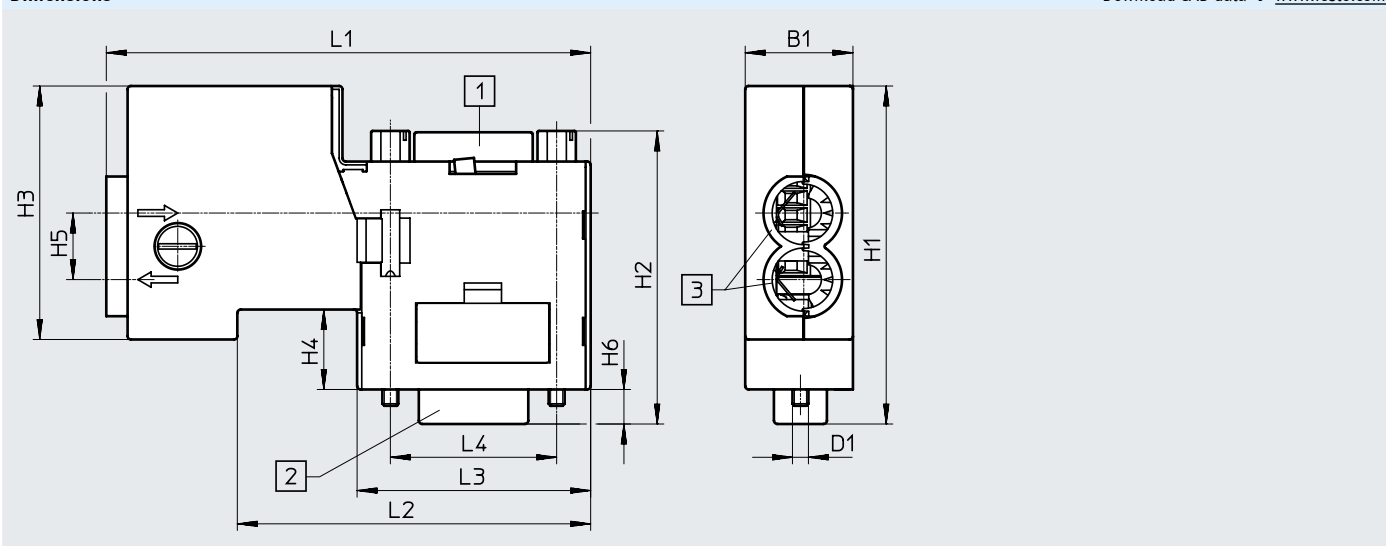
Sub-D plug

	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](http://www.festo.com)



Type	B1	D1	H1	H2	H3	H4	H5	H6	L1	L2	L3	L4
NECU-S1W9-C2-ACO	16.2	4-4UNC	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	
Socket, Sub-D, 9-pin	Screw terminal, can be shielded	0.14 ... 0.5	59	574588	NECU-S1W9-C2-ACO