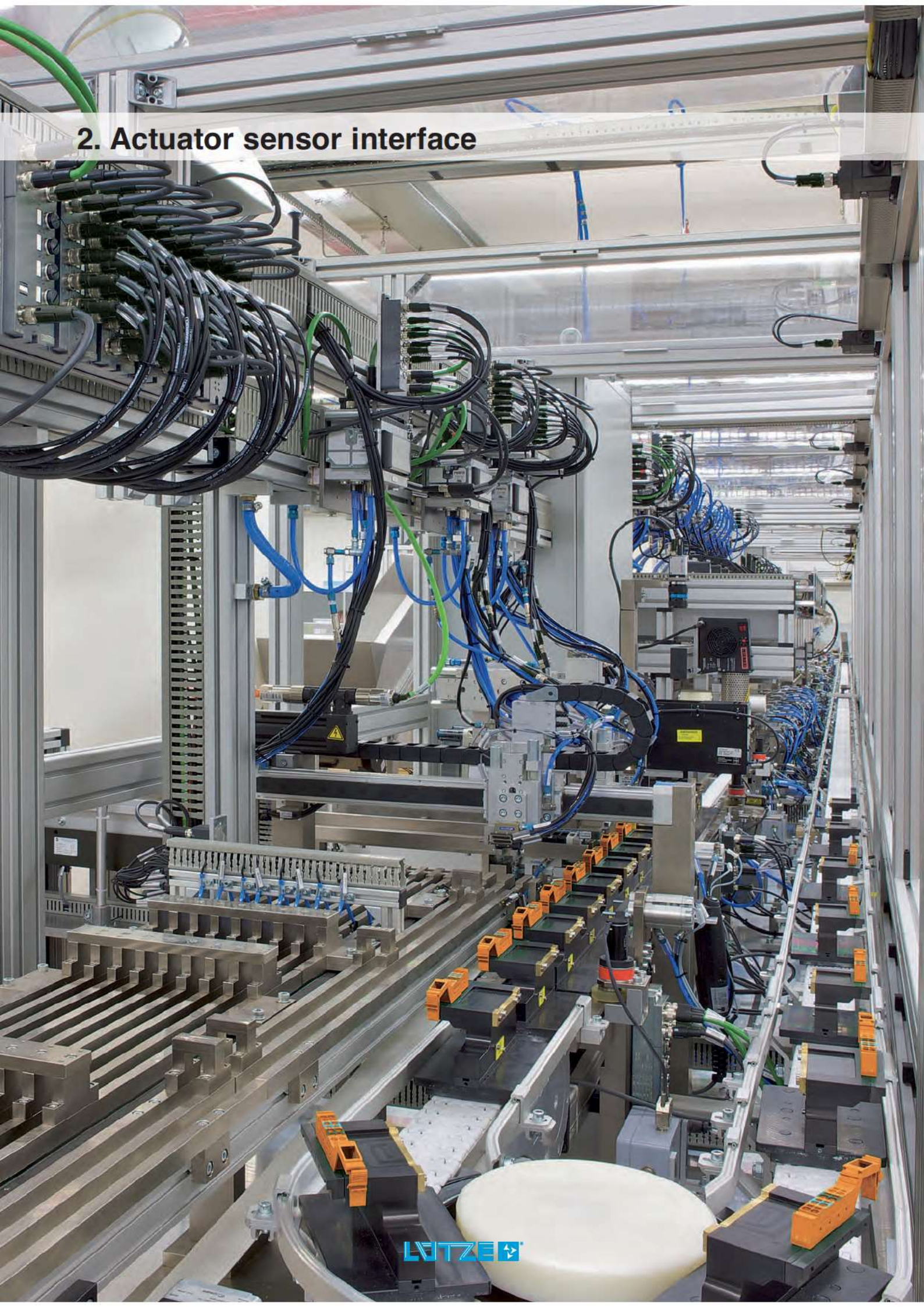


## 2. Actuator sensor interface





## 2. Actuator sensor interface



<b>Actuator sensor cables</b>	
M12, RJ45 - Network cables (PROFINET, Ethernet)	2.3 - 2.5
RJ45 Ethernet Patch cable Cat. 5e / Cat. 6	2.6
M12, RJ45 - Network cables (PROFINET, Ethernet)	2.7 - 2.12
M8 / open End - Cables	2.13 - 2.16
M8 / M8 - Cables	2.17 - 2.18
M12 / open End - Cables	2.19 - 2.30
M12 / M12 - Cables	2.31 - 2.33
M12 - Valve connector	2.34 - 2.35



<b>Connector, field assembly</b>	
M8 - Connector	2.36 - 2.37
M12 - Connector	2.38 - 2.42
M12, M12/M8 - Connector T piece	2.43
M12 - Connector for Field and netsystems, shielded	2.44 - 2.49
RJ45 Connector	2.50 - 2.52
RJ45 Module holder	2.53

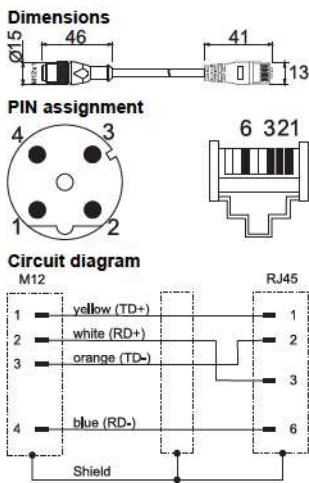


<b>Panel connectors</b>	
M8 and M12 Panel connectors	2.54 - 2.55
USB - Panel connectors	2.56 - 2.57
RJ45 - Panel connectors	2.58
M12 - RJ45 Control cabinet bushing	2.59

<b>Accessories</b>	
M8, M12 Protective cover	2.60

# Actuator sensor interface · Network cables PROFINET

## Male RJ45 straight to female M 12 straight with PVC cable, Cat 5e self-locking screwed connection



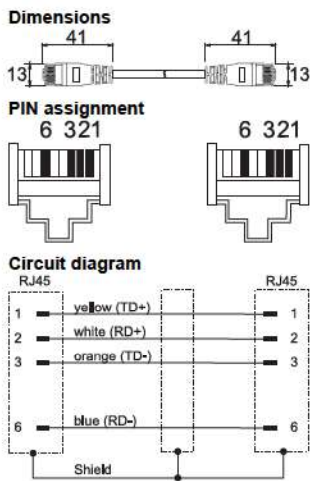
Description	Part-No.	Type	PU
Cable length	0.3 m	192014.0030 S* STG4-RJ45/STG4-M12/PN PVC 0,3M	1
	0.6 m	192014.0060 S* STG4-RJ45/STG4-M12/PN PVC 0,6M	1
	1.0 m	192014.0100 S* STG4-RJ45/STG4-M12/PN PVC 1,0M	1
	1.5 m	192014.0150 S* STG4-RJ45/STG4-M12/PN PVC 1,5M	1
	2.0 m	192014.0200 S* STG4-RJ45/STG4-M12/PN PVC 2,0M	1
	5.0 m	192014.0500 S* STG4-RJ45/STG4-M12/PN PVC 5,0M	1

Technical data						
Rated voltage $U_N$	DC 24 V					
Rated voltage max.	30 V					
Rated current	1.5 A					
Pole number	4					
Cable length (m)	0.3	0.6	1.0	1.5	2.0	5.0
Coding	D					
Shielding	360°					
General						
Form male 1	RJ45					
Form male 2	M 12					
Test voltage	1000 V					
Degree of pollution	-					
Insulation resistance at 20 °C	$\geq 1000 \text{ M}\Omega \times \text{km}$					
Contact resistance	$< 20 \text{ m}\Omega$					
Protection class	IP20					
Housing material	TPU PA					
Color of the housing	black					
Contact material	CuSn, gold-plated					
Thread material	Zinc die-casting, nickel-plated					
Number of conductors/cross-section	$(2 \times 2 \times \text{AWG}22/7)$					
Number of conductors	4					
Conductor color	various					
Jacket material	PVC					
Jacket color	green RAL 6018					
Conductor insulation	TPE-O					
Cable diameter	6.5 mm					
Minimum bending radius fixed	6xD					
Minimum bending radius moving	12xD					
Mounting	Breakaway torque 0.4 Nm					
Temperature range connector	-25 °C ... +85 °C					
Temperature range fixed	-30 °C ... +80 °C					
Temperature range moving	-5 °C ... +70 °C					
Weight (kg/piece)	0.035	0.055	0.083	0.117	0.151	0.340

Accessories	Part-No.	Type	PU
Torque setting tool M 12	490091	DM-SET M12	1

# Actuator sensor interface · Network cables PROFINET

## Male RJ45 straight to female RJ45 straight with PVC cable, Cat 5e 4-pin



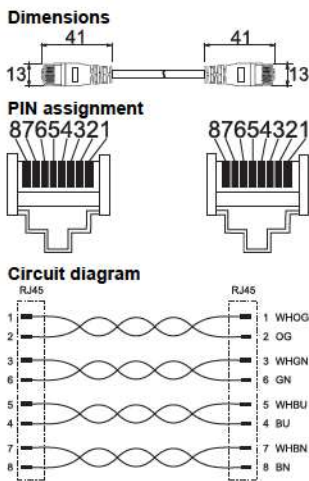
Description	Part-No.	Type	PU
Cable length	0.3 m	192016.0030 S* STG4-RJ45/STG4-RJ45/PN PVC 0,3M	1
	0.6 m	192016.0060 S* STG4-RJ45/STG4-RJ45/PN PVC 0,6M	1
	1.0 m	192016.0100 S* STG4-RJ45/STG4-RJ45/PN PVC 1,0M	1
	1.5 m	192016.0150 S* STG4-RJ45/STG4-RJ45/PN PVC 1,5M	1
	2.0 m	192016.0200 S* STG4-RJ45/STG4-RJ45/PN PVC 2,0M	1
	5.0 m	192016.0500 S* STG4-RJ45/STG4-RJ45/PN PVC 5,0M	1

Technical data						
Rated voltage $U_N$	DC 50 V					
Rated voltage max.	- V					
Rated current	1.5 A					
Pole number	4					
Cable length (m)	0.3	0.6	1.0	1.5	2.0	5.0
Coding	-					
Shielding	360°					
General						
Form male 1	RJ45 male straight					
Form male 2	RJ45 male straight					
Test voltage	1000 V					
Degree of pollution	-					
Insulation resistance at 20 °C	$\geq 1000 \text{ M}\Omega \times \text{km}$					
Contact resistance	$< 20 \text{ m}\Omega$					
Protection class	IP20					
Housing material	PA					
Color of the housing	black					
Contact material	CuSn, gold-plated					
Thread material	-					
Number of conductors/cross-section	$(2 \times 2 \times \text{AWG} 22/7)$					
Number of conductors	4					
Conductor color	various					
Jacket material	PVC					
Jacket color	green RAL 6018					
Conductor insulation	TPE-O					
Cable diameter	6.5 mm					
Minimum bending radius fixed	6xD					
Minimum bending radius moving	12xD					
Mounting	-					
Temperature range connector	-25 °C ... +85 °C					
Temperature range fixed	-30 °C ... +80 °C					
Temperature range moving	-5 °C ... +70 °C					
Weight (kg/piece)	0.035	0.055	0.083	0.117	0.151	0.340



# Actuator sensor interface · Network cables Ethernet

## Male RJ45 straight to female RJ45 straight with PVC cable, Cat 5e 8-pin



Description	Part-No.	Type	PU
Cable length	0.3 m	192018.0030 S* STG8-RJ45/STG8-RJ45/ET PVC 0,3M	1
	0.6 m	192018.0060 S* STG8-RJ45/STG8-RJ45/ET PVC 0,6M	1
	1.0 m	192018.0100 S* STG8-RJ45/STG8-RJ45/ET PVC 1,0M	1
	1.5 m	192018.0150 S* STG8-RJ45/STG8-RJ45/ET PVC 1,5M	1
	2.0 m	192018.0200 S* STG8-RJ45/STG8-RJ45/ET PVC 2,0M	1
	5.0 m	192018.0500 S* STG8-RJ45/STG8-RJ45/ET PVC 5,0M	1

Technical data						
Rated voltage $U_N$	DC 50 V					
Rated voltage max.	- V					
Rated current	1.5 A					
Pole number	8					
Cable length (m)	0.3	0.6	1.0	1.5	2.0	5.0
Coding	-					
Shielding	360°					
General						
Form male 1	RJ45 male straight					
Form male 2	RJ45 male straight					
Test voltage	1000 V					
Degree of pollution	-					
Insulation resistance at 20 °C	$\geq 1000 \text{ M}\Omega \times \text{km}$					
Contact resistance	$< 20 \text{ m}\Omega$					
Protection class	IP20					
Housing material	PA					
Color of the housing	black					
Contact material	CuSn, gold-plated					
Thread material	-					
Number of conductors/cross-section	$(4 \times 2 \times \text{AWG}26/7)$					
Number of conductors	8					
Conductor color	various					
Jacket material	PVC					
Jacket color	green RAL 6018					
Conductor insulation	TPE-O					
Cable diameter	6.3 mm					
Minimum bending radius fixed	6xD					
Minimum bending radius moving	12xD					
Mounting	-					
Temperature range connector	-25 °C ... +85 °C					
Temperature range fixed	-30 °C ... +70 °C					
Temperature range moving	-5 °C ... +70 °C					
Weight (kg/piece)	0.032	0.049	0.071	0.098	0.126	0.279

# Actuator sensor interface · Patch cable, shielded

## Patch cable Cat.5e/Cat.6



### Application

- Ethernet network wiring

### Properties

- Straight connector
- Assignment according to EIA/TIA 568B
- Moulded sleeve with length imprint (not for cable carrier suitable and industrial design)
- Various colors available (not for cable carrier suitable and industrial design)
- **Cat.5e PVC:**  
PVC (4x2xAWG26/7) SF/UTP  
assignment according to TIA/EIA 568B  
flame-retardant IEC 60332-1  
extruded anti-kink sleeve with catch protection
- **Cat.5e cable carrier suitable PUR:**  
PUR yellow (4x2xAWG26/19) S/UTP  
prefabricated RJ45 male  
Oil resistance in accordance with EN60811-2-1  
Alternating bending stress test (with load) in accordance with VDE 0472 T603
- **Cat.6 LSZH:**  
(4x2xAWG27/7) S/FTP  
flame-retardant IEC 60332-1  
halogen-free IEC 60754-2  
silicone free  
extruded anti-kink sleeve with catch protection
- **Cat.6 industrial design PUR:**  
PUR red (4x2xAWG27/7) S/FTP  
Pre-fabricated RJ45 male  
Resistant to mineral oil, ASTM oil and UV radiation,  
highly abrasion-resistant  
flame-retardant IEC60332-1  
halogen-free IEC 60754  
low-smoke IEC61034  
UV-resistant IEC60068-2-5  
ozone resistant EN60811-2-1  
suitable for outdoor areas, not for laying directly in earth

### Technical data

Connector	Shielded RJ45, 3µ–50µ AU
Wiring	according to EIA/TIA 568B 1:1 or crossover
Compatibility	Fully plug compatible to IEC 60603-7
Note	Standard lengths: 0.5 m / 1.0 m / 2.0 m / 3.0 m / 5.0 m / 10.0 m

Part-No.	Number of conductors/ cross-section	Jacket color	Sleeve color	Wiring	Cable length m
<b>Cat.5e PVC</b>					
192000.0100	S* (4x2xAWG26)	grey	grey	1:1	1
192022.0100	S* (4x2xAWG26)	blue	blue	1:1	1
192030.0100	S* (4x2xAWG26)	green	green	1:1	1
192010.0100	S* (4x2xAWG26)	grey/UL cable	grey	1:1	1
<b>Cat.5e PVC</b>					
192050.0100	S* (4x2xAWG26/19)	grey	red	Crossover	1
<b>Cat.5E C-track compatible PUR</b>					
192300.0100	S* (4x2xAWG27)	yellow	yellow	1:1	1
<b>Cat.6 LSZH</b>					
192100.0100	S* (4x2xAWG27)	grey	grey	1:1	1
192112.0100	S* (4x2xAWG27)	yellow	yellow	1:1	1
192130.0100	S* (4x2xAWG27)	green	green	1:1	1
<b>Cat.6 industrial version PUR</b>					
192201.0100	S* (4x2xAWG27/7)	red	black	1:1	1

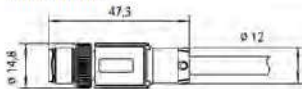


# Actuator sensor interface · Network cables PROFINET

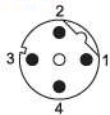
Male M12 straight with PUR cable, shielded 360°, open end  
self-locking screwed connection  
c-track compatible, halogen free



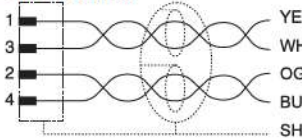
### Dimensions



### PIN assignment



### Circuit diagram



Description	Part-No.	Type	PU
Cable length	2.0 m	475300.0200 S* STG4-M12/PN 2M-PUR	1
	5.0 m	475300.0500 S* STG4-M12/PN 5M-PUR	1
	10.0 m	475300.1000 S* STG4-M12/PN 10M-PUR	1

### Technical data

Rated voltage $U_N$	AC/DC 24 V		
Rated voltage max.	30 V		
Rated current	4 A		
Pole number	4		
Cable length (m)	2.0	5.0	10.0
Status indication	-		
Current Consumption	- mA		
Coding	D		
Shielding	360°		
<b>General</b>			
Form male 1	M 12 male straight		
Nominal insulation voltage	250 V		
Test voltage	1500 V		
Degree of pollution	3		
Insulation resistance at 20 °C	≥ 1000 MΩxkm		
Contact resistance	< 5 mΩ		
Famability according to UL 94	V0		
Protection class	IP65/67		
Housing material	TPU		
Contact material	CuSn, gold-plated		
Thread material	Zinc die-casting, nickel-plated		
Material sealing ring	-		
Number of conductors/cross-section	1 x 4 x AWG 22/7		
Jacket material	PUR		
Jacket color	green RAL 6018		
Conductor insulation	PO		
Cable diameter	6.5 mm		
Bending radius	10 x D		
Storage temperature range	-40 °C ... +90 °C		
Temperature range connector	-25 °C ... +90 °C		
Temperature range fixed	-40 °C ... +70 °C		
Temperature range moving	-40 °C ... +70 °C		
Mechanical service life	-		
Weight (kg/piece)	0.140	0.330	0.640
Approvals	-		

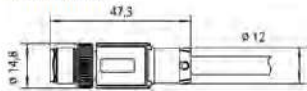
Accessories	Part-No.	Type	PU
Torque setting tool M 12	490091	DM-SET M12	1

# Actuator sensor interface · Network cables PROFINET

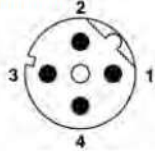
Male M12 straight on male M12 straight with PUR cable, shielded 360°  
self-locking screwed connection  
c-track compatible, halogen free



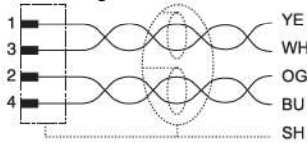
### Dimensions



### PIN assignment



### Circuit diagram



Description	Part-No.	Type	PU
Cable length	0.3 m	475400.0030 S* STG4-M12/STG4-M12/PN 0,3M PUR	1
	0.6 m	475400.0060 S* STG4-M12/STG4-M12/PN 0,6M PUR	1
	1.0 m	475400.0100 S* STG4-M12/STG4-M12/PN 1,0M PUR	1
	1.5 m	475400.0150 S* STG4-M12/STG4-M12/PN 1,5M PUR	1
	2.0 m	475400.0200 S* STG4-M12/STG4-M12/PN 2,0M PUR	1
	5.0 m	475400.0500 S* STG4-M12/STG4-M12/PN 5,0M PUR	1

### Technical data

Rated voltage $U_N$	AC/DC 24 V					
Rated voltage max.	30 V					
Rated current	4 A					
Pole number	4					
Cable length (m)	0.3	0.6	1.0	1.5	2.0	5.0
Status indication	-					
Current Consumption	- mA					
Coding	D					
Shielding	360°					

### General

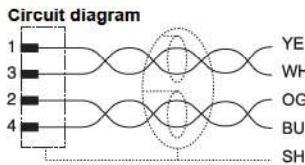
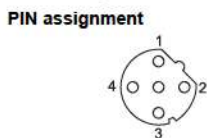
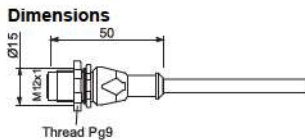
Form male 1	M 12 male straight					
Form male 2	M 12 male straight					
Nominal insulation voltage	250 V					
Test voltage	1500 V					
Degree of pollution	3					
Insulation resistance at 20 °C	$\geq 1000 \text{ M}\Omega \times \text{km}$					
Contact resistance	$< 5 \text{ m}\Omega$					
Flamability according to UL 94	V0					
Protection class	IP65/67					
Housing material	TPU					
Contact material	CuSn, gold-plated					
Thread material	Zinc die-casting, nickel-plated					
Material sealing ring	-					
Number of conductors/cross-section	1 x 4 x AWG 22/7					
Jacket material	PUR					
Jacket color	green RAL 6018					
Conductor insulation	PP					
Cable diameter	6.5 mm					
Bending radius	10 x D					
Storage temperature range	-30 °C ... +90 °C					
Temperature range connector	-25 °C ... +90 °C					
Temperature range fixed	-40 °C ... +80 °C					
Temperature range moving	-30 °C ... +70 °C					
Mechanical service life	-					
Weight (kg/piece)	0.060	0.070	0.090	0.110	0.150	0.325
Approvals	-					

Accessories	Part-No.	Type	PU
Torque setting tool M 12	490091	DM-SET M12	1



# Actuator sensor interface · Network cables PROFINET

M12 panel connectors using PG9 thread for rear panel installation, open end  
 Female - D coded (Ethernet Cat. 5e)  
 shielded



Description	Part-No.	Type	PU
Cable length	2.0 m	475500.0200 S* KUGE4-M12/PN 2M PUR	1
	5.0 m	475500.0500 S* KUGE4-M12/PN 5M PUR	1
	10.0 m	475500.1000 S* KUGE4-M12/PN 10M PUR	1

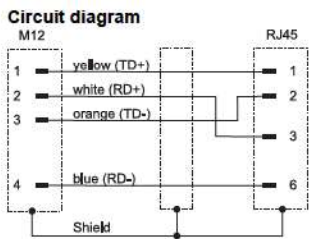
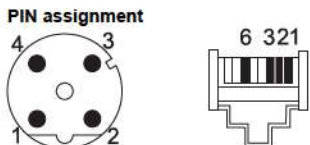
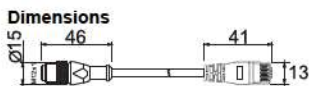
**Technical data**

Rated voltage $U_N$	AC/DC 24 V		
Rated voltage max.	30 V		
Rated current	4 A		
Pole number	4		
Cable length (m)	2.0	5.0	10.0
Status indication	-		
Current Consumption	- mA		
Coding	D		
Shielding	360°		
<b>General</b>			
Form male 1	M 12 female		
Nominal insulation voltage	250 V		
Test voltage	1500 V		
Degree of pollution	3		
Insulation resistance at 20 °C	≥ 1000 MΩ×km		
Contact resistance	< 5 mΩ		
Famability according to UL 94	-		
Protection class	IP65/67		
Housing material	TPU		
Contact material	CuSn, gold-plated		
Thread material	Zinc die-casting, nickel-plated		
Material sealing ring	-		
Number of conductors/cross-section	1×4×AWG22/7		
Jacket material	PUR		
Jacket color	green RAL 6018		
Conductor insulation	PP		
Cable diameter	6.5 mm		
Bending radius	10 × D		
Storage temperature range	-40 °C ... +90 °C		
Temperature range connector	-25 °C ... +90 °C		
Temperature range fixed	-40 °C ... +80 °C		
Temperature range moving	-30 °C ... +70 °C		
Mechanical service life	-		
Weight (kg/piece)	0.140	0.330	0.640
Approvals	-		

Accessories	Part-No.	Type	PU
Torque setting tool M 12	490091	DM-SET M12	1

# Actuator sensor interface · Network cables PROFINET

Male RJ45 straight to female M12 straight with PUR cable, Cat 5e  
self-locking screwed connection  
c-track compatible, halogen free



Description	Part-No.	Type	PU
Cable length	0.3 m	192013.0030 S*	STG4-RJ45/STG4-M12/PN PUR 0,3M 1
	0.6 m	192013.0060 S*	STG4-RJ45/STG4-M12/PN PUR 0,6M 1
	1.0 m	192013.0100 S*	STG4-RJ45/STG4-M12/PN PUR 1,0M 1
	1.5 m	192013.0150 S*	STG4-RJ45/STG4-M12/PN PUR 1,5M 1
	2.0 m	192013.0200 S*	STG4-RJ45/STG4-M12/PN PUR 2,0M 1
	5.0 m	192013.0500 S*	STG4-RJ45/STG4-M12/PN PUR 5,0M 1

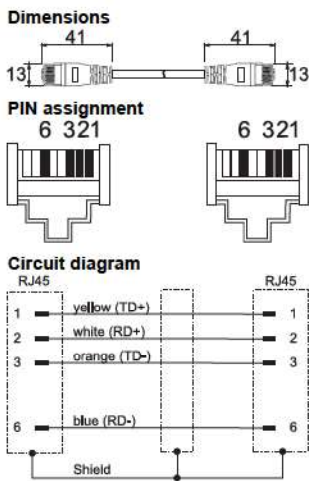
Technical data						
Rated voltage $U_N$	DC 24 V					
Rated voltage max.	30 V					
Rated current	1.5 A					
Pole number	4					
Cable length (m)	0.3	0.6	1.0	1.5	2.0	5.0
Coding	D					
Shielding	360°					
General						
Form male 1	RJ45 male straight					
Form male 2	M 12 male straight					
Test voltage	1000 V					
Degree of pollution	-					
Insulation resistance at 20 °C	≥ 1000 MΩ×km					
Contact resistance	< 20 mΩ					
Protection class	IP20					
Housing material	TPU PA					
Color of the housing	black					
Contact material	CuSn, gold-plated					
Thread material	Zinc die-casting, nickel-plated					
Number of conductors/cross-section	(2×2×AWG22/7)					
Number of conductors	4					
Conductor color	various					
Jacket material	PUR					
Jacket color	green RAL 6018					
Conductor insulation	TPE-O					
Cable diameter	6.5 mm					
Minimum bending radius fixed	6×D					
Minimum bending radius moving	12×D					
Mounting	Breakaway torque 0.4 Nm					
Temperature range connector	-25 °C ... +85 °C					
Temperature range fixed	-40 °C ... +80 °C					
Temperature range moving	-30 °C ... +70 °C					
Weight (kg/piece)	0.035	0.054	0.080	0.113	0.145	0.340

Accessories	Part-No.	Type	PU
Torque setting tool M 12	490091	DM-SET M12	1



# Actuator sensor interface · Network cables PROFINET

Male RJ45 straight to female RJ45 straight with PUR cable, Cat 5e  
c-track compatible, halogen free

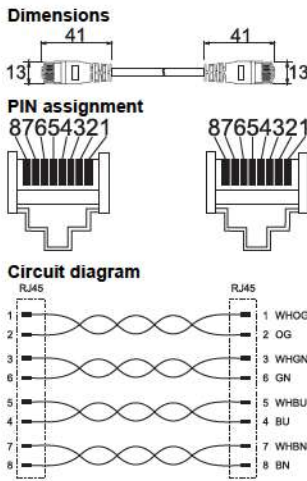


Description	Part-No.	Type	PU
Cable length	0.3 m	192015.0030 S* STG4-RJ45/STG4-RJ45/PN PUR 0,3M	1
	0.6 m	192015.0060 S* STG4-RJ45/STG4-RJ45/PN PUR 0,6M	1
	1.0 m	192015.0100 S* STG4-RJ45/STG4-RJ45/PN PUR 1,0M	1
	1.5 m	192015.0150 S* STG4-RJ45/STG4-RJ45/PN PUR 1,5M	1
	2.0 m	192015.0200 S* STG4-RJ45/STG4-RJ45/PN PUR 2,0M	1
	5.0 m	192015.0500 S* STG8-RJ45/STG8-RJ45/PN 5,0M PUR	1

Technical data						
Rated voltage $U_N$	DC 50 V					
Rated voltage max.	- V					
Rated current	1.5 A					
Pole number	4					
Cable length (m)	0.3	0.6	1.0	1.5	2.0	5.0
Coding	-					
Shielding	360°					
General						
Form male 1	RJ45 male straight					
Form male 2	RJ45 male straight					
Test voltage	1000 V					
Degree of pollution	-					
Insulation resistance at 20 °C	$\geq 1000 \text{ M}\Omega \times \text{km}$					
Contact resistance	$< 20 \text{ m}\Omega$					
Protection class	IP20					
Housing material	PA					
Color of the housing	black					
Contact material	CuSn, gold-plated					
Thread material	-					
Number of conductors/cross-section	$(2 \times 2 \times \text{AWG} 22/7)$					
Number of conductors	4					
Conductor color	various					
Jacket material	PUR					
Jacket color	green RAL 6018					
Conductor insulation	TPE-O					
Cable diameter	6.5 mm					
Minimum bending radius fixed	6xD					
Minimum bending radius moving	12xD					
Mounting	-					
Temperature range connector	-25 °C ... +85 °C					
Temperature range fixed	-30 °C ... +80 °C					
Temperature range moving	-30 °C ... +70 °C					
Weight (kg/piece)	0.035	0.054	0.080	0.113	0.145	0.340

# Actuator sensor interface · Network cables Ethernet

## Male RJ45 straight to female RJ45 straight with PUR cable, Cat5e c-track compatible, halogen free



Description	Part-No.	Type	PU
Cable length	0.3 m	192017.0030 S* STG8-RJ45/STG8-RJ45/ET PUR 0,3M	1
	0.6 m	192017.0060 S* STG8-RJ45/STG8-RJ45/ET PUR 0,6M	1
	1.0 m	192017.0100 S* STG8-RJ45/STG8-RJ45/ET PUR 1,0M	1
	1.5 m	192017.0150 S* STG8-RJ45/STG8-RJ45/ET PUR 1,5M	1
	2.0 m	192017.0200 S* STG8-RJ45/STG8-RJ45/ET PUR 2,0M	1
	5.0 m	192017.0500 S* STG8-RJ45/STG8-RJ45/ET PUR 5,0M	1

Technical data							
Rated voltage $U_N$	DC 50 V						
Rated voltage max.	- V						
Rated current	1.5 A						
Pole number	8						
Cable length (m)	0.3	0.6	1.0	1.5	2.0	5.0	
Coding	-						
Shielding	360°						
General							
Form male 1	RJ45 male straight						
Form male 2	RJ45 male straight						
Test voltage	1000 V						
Degree of pollution	-						
Insulation resistance at 20 °C	≥ 1000 MΩ×km						
Contact resistance	< 20 mΩ						
Protection class	IP20						
Housing material	PA						
Color of the housing	black						
Contact material	CuSn, gold-plated						
Thread material	-						
Number of conductors/cross-section	(4×2×AWG26/19)						
Number of conductors	8						
Conductor color	various						
Jacket material	PUR						
Jacket color	green RAL 6018						
Conductor insulation	TPE-O						
Cable diameter	6.7 mm						
Minimum bending radius fixed	6×D						
Minimum bending radius moving	12×D						
Mounting	-						
Temperature range connector	-25 °C ... +85 °C						
Temperature range fixed	-40 °C ... +80 °C						
Temperature range moving	-30 °C ... +70 °C						
Weight (kg/piece)	0.031	0.046	0.066	0.092	0.118	0.431	

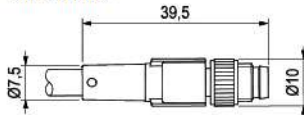


# Actuator sensor interface · M8 – cables

Male M8 straight with PUR cable, open end  
self-locking screwed connection  
c-track compatible, halogen free



### Dimensions



### PIN assignment

486020, 486050, 486100

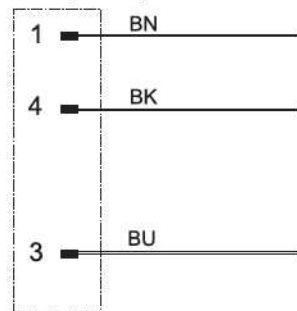


447020, 447050, 447100

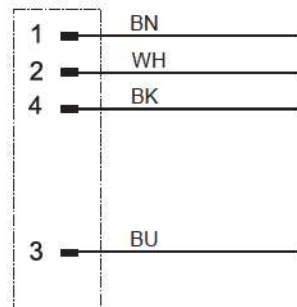


### Circuit diagram

486020, 486050, 486100



447020, 447050, 447100



Description	Part-No.	Type	PU
<b>3-pole</b>			
Cable length	2.0 m	486020 S*	STG3-M8 2M PUR 1
	5.0 m	486050 S*	STG3-M8 5M PUR 1
	10.0 m	486100 S*	STG3-M8 10M PUR 1
<b>4-pole</b>			
Cable length	2.0 m	447020 S*	STG4-M8 2M PUR 1
	5.0 m	447050 S*	STG4-M8 5M PUR 1
	10.0 m	447100 S*	STG4-M8 10M PUR 1

Technical data	3-pole			4-pole		
Rated voltage $U_N$	AC/DC 24 V					
Rated voltage max.	30 V					
Rated current	4 A					
Pole number	3			4		
Cable length (m)	2.0	5.0	10.0	2.0	5.0	10.0
Status indication	-					
Current Consumption	- mA					
Coding	-					
Shielding	-					
<b>General</b>						
Form male 1	M 8 male straight					
Nominal insulation voltage	100 V					
Test voltage	1500 V					
Degree of pollution	3					
Insulation resistance at 20 °C	≥ 1000 MΩ×km					
Contact resistance	< 5 mΩ					
Flamability according to UL 94	V0					
Protection class	IP65/67/68					
Housing material	TPU					
Contact material	CuSn, gold-plated					
Thread material	Zinc die-casting, nickel-plated					
Material sealing ring	-					
Number of conductors/cross-section	3 × 0.25 mm <sup>2</sup> (32 × 0.1)			4 × 0.25 mm <sup>2</sup> (32 × 0.1)		
Jacket material	PUR					
Jacket color	black					
Conductor insulation	PP					
Cable diameter	3.6 mm			3.9 mm		
Bending radius	10 × D					
Storage temperature range	-30 °C ... +90 °C					
Temperature range connector	-25 °C ... +90 °C					
Temperature range fixed	-40 °C ... +80 °C					
Temperature range moving	-25 °C ... +80 °C					
Mechanical service life	-					
Weight (kg/piece)	0.500	0.140	0.270	0.070	0.160	0.320
Approvals	cULus (E224249)					

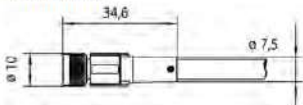
Accessories	Part-No.	Type	PU
Torque setting tool M 8	490090	DM-SET M8	1

# Actuator sensor interface · M8 – cables

Female M8 straight with PUR cable, open end  
self-locking screwed connection  
c-track compatible, halogen free



### Dimensions



### PIN assignment

481020, 481050, 481100

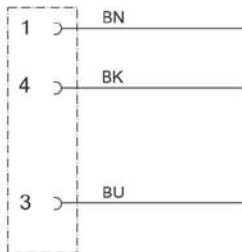


415020, 415050, 415100

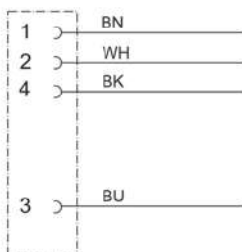


### Circuit diagram

481020, 481050, 481100



415020, 415050, 415100



Description	Part-No.	Type	PU	
<b>3-pole</b>				
Cable length	2.0 m	481020 S*	KUG3-M8 2M PUR	1
	5.0 m	481050 S*	KUG3-M8 5M PUR	1
	10.0 m	481100 S*	KUG3-M8 10M PUR	1
<b>4-pole</b>				
Cable length	2.0 m	415020 S*	KUG4-M8 2,0M PUR	1
	5.0 m	415050 S*	KUG4-M8 5,0M PUR	1
	10.0 m	415100 S*	KUG4-M8 10,0M PUR	1

Technical data	3-pole			4-pole		
Rated voltage $U_N$	AC/DC 24 V					
Rated voltage max.	30 V					
Rated current	4 A					
Pole number	3			4		
Cable length (m)	2.0	5.0	10.0	2.0	5.0	10.0
Status indication	-					
Current Consumption	- mA					
Coding	-					
Shielding	-					
<b>General</b>						
Form male 1	M 8 female straight					
Nominal insulation voltage	100 V					
Test voltage	1500 V					
Degree of pollution	3					
Insulation resistance at 20 °C	≥ 1000 MΩ×km					
Contact resistance	< 5 mΩ					
Flamability according to UL 94	V0					
Protection class	IP65/67/68					
Housing material	TPU					
Contact material	CuSn, gold-plated		CuSn silver-plated		CuSn, gold-plated	
Thread material	Zinc die-casting, nickel-plated					
Material sealing ring	NBR					
Number of conductors/cross-section	3 × 0.25 mm <sup>2</sup> (32 × 0.1)			4 × 0.25 mm <sup>2</sup> (32 × 0.1)		
Jacket material	PUR					
Jacket color	black					
Conductor insulation	PP					
Cable diameter	3.6 mm			3.9 mm		
Bending radius	10 × D					
Storage temperature range	-30 °C ... +90 °C					
Temperature range connector	-25 °C ... +90 °C					
Temperature range fixed	-40 °C ... +80 °C					
Temperature range moving	-25 °C ... +80 °C					
Mechanical service life	-					
Weight (kg/piece)	0.050	0.140	0.270	0.070	0.160	0.320
Approvals	cULus (E224249)					

Accessories	Part-No.	Type	PU
Torque setting tool M 8	490090	DM-SET M8	1

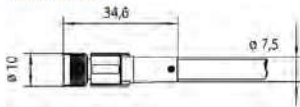


# Actuator sensor interface · M8 – cables

Female M8 straight with PUR cable, shielded 360°, open end self-locking screwed connection  
c-track compatible, halogen free



### Dimensions



### PIN assignment

458302, 458305, 458310

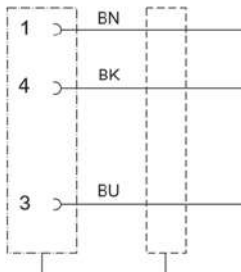


458402, 458405, 458410

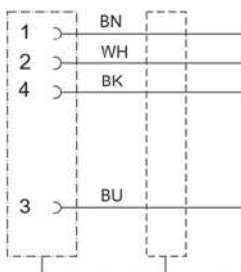


### Circuit diagram

458302, 458305, 458310



458402, 458405, 458410

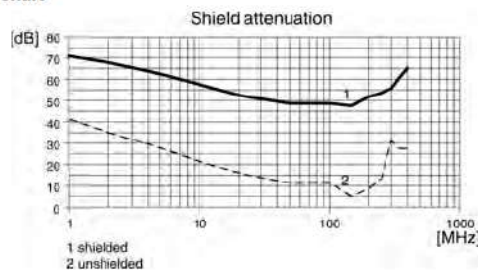


Description	Part-No.	Type	PU	
<b>3-pole</b>				
Cable length	2.0 m	458302 S*	KUG3-M8(C) 2M PUR	1
	5.0 m	458305 S*	KUG3-M8(C) 5M PUR	1
	10.0 m	458310 S*	KUG3-M8(C) 10M PUR	1
<b>4-pole</b>				
Cable length	2.0 m	458402 S*	KUG4-M8(C) 2,0M PUR	1
	5.0 m	458405 S*	KUG4-M8(C) 5,0M PUR	1
	10.0 m	458410 S*	KUG4-M8(C) 10M PUR	1

Technical data	3-pole			4-pole		
Rated voltage $U_N$	AC/DC 24 V					
Rated voltage max.	30 V					
Rated current	4 A					
Pole number	3			4		
Cable length (m)	2.0	5.0	10.0	2.0	5.0	10.0
Status indication	-					
Current Consumption	- mA					
Coding	-					
Shielding	360°					
<b>General</b>						
Form male 1	M 8 female straight					
Nominal insulation voltage	100 V					
Test voltage	1500 V					
Degree of pollution	3					
Insulation resistance at 20 °C	≥ 1000 MΩ×km					
Contact resistance	< 5 mΩ					
Flamability according to UL 94	V0					
Protection class	IP65/67					
Housing material	TPU					
Contact material	CuSn, gold-plated					
Thread material	Zinc die-casting, nickel-plated					
Material sealing ring	NBR					
Number of conductors/cross-section	3 × 0.25 mm <sup>2</sup> (32 × 0.1)			4 × 0.25 mm <sup>2</sup> (32 × 0.1)		
Jacket material	PUR					
Jacket color	black					
Conductor insulation	PP					
Cable diameter	4.3 mm			4.7 mm		
Bending radius	10 × D					
Storage temperature range	-30 °C ... +90 °C					
Temperature range connector	-25 °C ... +90 °C					
Temperature range fixed	-40 °C ... +80 °C					
Temperature range moving	-25 °C ... +80 °C					
Mechanical service life	-					
Weight (kg/piece)	0.080	0.190	0.380	0.090	0.210	0.420
Approvals	cULus (E224249)					

Accessories	Part-No.	Type	PU
Torque setting tool M 8	490090	DM-SET M8	1

### Action chart



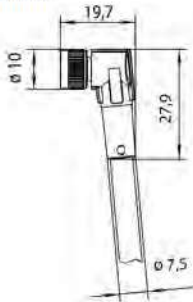
\* S Article from stock  
A Available with a lead time  
R Available on request

# Actuator sensor interface · M8 – cables

Female M8 angled with PUR cable, open end  
self-locking screwed connection  
c-track compatible, halogen free



### Dimensions



### PIN assignment

474020, 474050, 474100

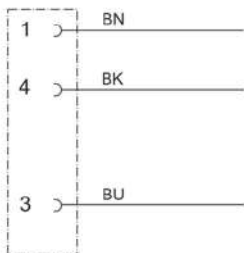


416020, 416050, 416100

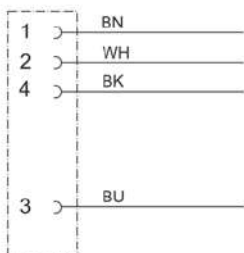


### Circuit diagram

474020, 474050, 474100



416020, 416050, 416100



Description	Part-No.	Type	PU
<b>3-pole</b>			
Cable length	2.0 m	474020 S*	KUW3-M8 2M PUR 1
	5.0 m	474050 S*	KUW3-M8 5M PUR 1
	10.0 m	474100 S*	KUW3-M8 10M PUR 1
<b>4-pole</b>			
Cable length	2.0 m	416020 S*	KUW4-M8 2,0M PUR 1
	5.0 m	416050 S*	KUW4-M8 5,0M PUR 1
	10.0 m	416100 S*	KUW4-M8 10,0M PUR 1

Technical data	3-pole			4-pole		
Rated voltage $U_N$	AC/DC 24 V					
Rated voltage max.	30 V					
Rated current	4 A					
Pole number	3			4		
Cable length (m)	2.0	5.0	10.0	2.0	5.0	10.0
Status indication	-					
Current Consumption	- mA					
Coding	-					
Shielding	-					
<b>General</b>						
Form male 1	M 8 female angle connector					
Nominal insulation voltage	100 V					
Test voltage	1500 V					
Degree of pollution	3					
Insulation resistance at 20 °C	$\geq 1000 \text{ M}\Omega \times \text{km}$					
Contact resistance	$< 5 \text{ m}\Omega$					
Flamability according to UL 94	V0					
Protection class	IP65/67/68					
Housing material	TPU					
Contact material	CuSn, gold-plated					
Thread material	Zinc die-casting, nickel-plated					
Material sealing ring	NBR					
Number of conductors/cross-section	$3 \times 0.25 \text{ mm}^2 (32 \times 0.1)$			$4 \times 0.25 \text{ mm}^2 (32 \times 0.1)$		
Jacket material	PUR					
Jacket color	black					
Conductor insulation	PP					
Cable diameter	3.6 mm			3.9 mm		
Bending radius	$10 \times D$					
Storage temperature range	$-30 \text{ }^\circ\text{C} \dots +90 \text{ }^\circ\text{C}$					
Temperature range connector	$-25 \text{ }^\circ\text{C} \dots +90 \text{ }^\circ\text{C}$					
Temperature range fixed	$-40 \text{ }^\circ\text{C} \dots +80 \text{ }^\circ\text{C}$					
Temperature range moving	$-25 \text{ }^\circ\text{C} \dots +80 \text{ }^\circ\text{C}$					
Mechanical service life	-					
Weight (kg/piece)	0.054	0.135	0.263	0.063	0.160	0.309
Approvals	cULus (E224249)					

Accessories	Part-No.	Type	PU
Torque setting tool M 8	490090	DM-SET M8	1

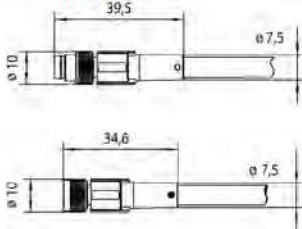


# Actuator sensor interface · M8 / M8 – cables

Male M8 straight to female M8 straight with PUR cable  
self-locking screwed connection  
c-track compatible, halogen free

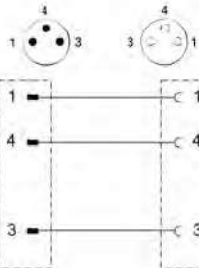


### Dimensions

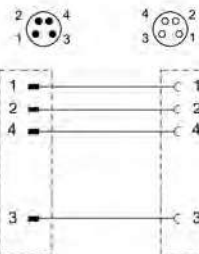


### PIN assignment

487003, 487006, 487010, 487015,  
487020, 487050



410003, 410006, 410010, 410015,  
410020, 410050



Description	Part-No.	Type	PU
<b>3-pole</b>			
Cable length	0.3 m	487003 S*	STG3-M8/KUG3-M8 0,3M PUR 1
	0.6 m	487006 S*	STG3-M8/KUG3-M8 0,6M PUR 1
	1.0 m	487010 S*	STG3-M8/KUG3-M8 1,0M PUR 1
	1.5 m	487015 S*	STG3-M8/KUG3-M8 1,5M PUR 1
	2.0 m	487020 S*	STG3-M8/KUG3-M8 2,0M PUR 1
	5.0 m	487050 S*	STG3-M8/KUG3-M8 5,0M PUR 1
<b>4-pole</b>			
Cable length	0.3 m	410003 S*	STG4-M8/KUG4-M8 0,3m PUR 1
	0.6 m	410006 S*	STG4-M8/KUG4-M8 0,6m PUR 1
	1.0 m	410010 S*	STG4-M8/KUG4-M8 1,0m PUR 1
	1.5 m	410015 S*	STG4-M8/KUG4-M8 1,5m PUR 1
	2.0 m	410020 S*	STG4-M8/KUG4-M8 2,0m PUR 1
	5.0 m	410050 S*	STG4-M8/KUG4-M8 5,0m PUR 1

Technical data	3-pole						4-pole					
Rated voltage $U_N$	AC/DC 24 V											
Rated voltage max.	60 V						30 V					
Rated current	4 A						4 A					
Pole number	3						4					
Cable length (m)	0.3	0.6	1.0	1.5	2.0	5.0	0.3	0.6	1.0	1.5	2.0	5.0
Status indication	-											
Current Consumption	4 mA											
Coding	-											
Shielding	-											

General	
Form male 1	M 8 male straight
Form male 2	M 8 female straight
Nominal insulation voltage	100 V
Test voltage	1500 V
Degree of pollution	3
Insulation resistance at 20 °C	≥ 1000 MΩ×km
Contact resistance	< 5 mΩ
Flamability according to UL 94	V0
Protection class	IP65/67/68
Housing material	TPU
Contact material	CuSn, gold-plated
Thread material	Zinc die-casting, nickel-plated
Material sealing ring	NBR
Number of conductors/cross-section	3 x 0.25 mm <sup>2</sup> (32 x 0.1)      4 x 0.25 mm <sup>2</sup> (32 x 0.1)
Jacket material	PUR
Jacket color	black
Conductor insulation	PP
Cable diameter	3.6 mm      3.9 mm
Bending radius	10 x D
Storage temperature range	-30 °C ... +90 °C
Temperature range connector	-25 °C ... +90 °C
Temperature range fixed	-40 °C ... +80 °C
Temperature range moving	-25 °C ... +80 °C
Mechanical service life	-
Weight (kg/piece)	0.02   0.03   0.04   0.05   0.06   0.16   0.05   0.06   0.08   0.10   0.13   0.31
Approvals	cULus (E224249)

Accessories	Part-No.	Type	PU
Torque setting tool M 8	490090	DM-SET M8	1

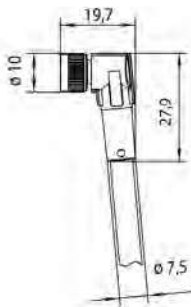
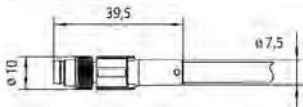
\* S Article from stock  
A Available with a lead time  
R Available on request

# Actuator sensor interface · M8 / M8 – cables

Male M8 straight to female M8 angled with PUR cable  
self-locking screwed connection  
c-track compatible, halogen free

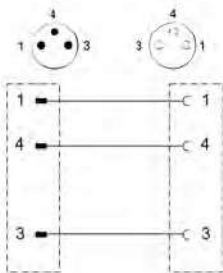


### Dimensions

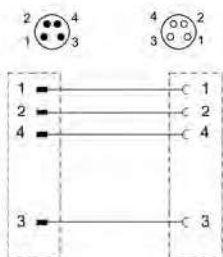


### PIN assignment

488003, 488006, 488010, 488015,  
488020, 488050



411003, 411006, 411010, 411015,  
411020, 411050



Description	Part-No.	Type	PU
<b>3-pole</b>			
Cable length	0.3 m	488003 S*	STG3-M8/KUW3-M8 0,3M PUR 1
	0.6 m	488006 S*	STG3-M8/KUW3-M8 0,6M PUR 1
	1.0 m	488010 S*	STG3-M8/KUW3-M8 1,0M PUR 1
	1.5 m	488015 S*	STG3-M8/KUW3-M8 1,5M PUR 1
	2.0 m	488020 S*	STG3-M8/KUW3-M8 2,0M PUR 1
	5.0 m	488050 S*	STG3-M8/KUW3-M8 5,0M PUR 1
<b>4-pole</b>			
Cable length	0.3 m	411003 S*	STG4-M8/KUW4-M8 0,3M PUR 1
	0.6 m	411006 S*	STG4-M8/KUW4-M8 0,6M PUR 1
	1.0 m	411010 S*	STG4-M8/KUW4-M8 1,0M PUR 1
	1.5 m	411015 S*	STG4-M8/KUW4-M8 1,5M PUR 1
	2.0 m	411020 S*	STG4-M8/KUW4-M8 2,0M PUR 1
	5.0 m	411050 S*	STG4-M8/KUW4-M8 5,0M PUR 1

Technical data	3-pole						4-pole					
Rated voltage $U_N$	AC/DC 24 V											
Rated voltage max.	60 V											
Rated current	4 A											
Pole number	3						4					
Cable length (m)	0.3	0.6	1.0	1.5	2.0	5.0	0.3	0.6	1.0	1.5	2.0	5.0
Status indication	-											
Current Consumption	- mA											
Coding	-											
Shielding	-											
<b>General</b>												
Form male 1	M 8 male straight											
Form male 2	M 8 female angle connector											
Nominal insulation voltage	100 V											
Test voltage	1500 V											
Degree of pollution	3											
Insulation resistance at 20 °C	$\geq 1000 \text{ M}\Omega \times \text{km}$											
Contact resistance	$< 5 \text{ m}\Omega$											
Flamability according to UL 94	V0											
Protection class	IP65/67/68											
Housing material	TPU											
Contact material	CuSn, gold-plated											
Thread material	Zinc die-casting, nickel-plated											
Material sealing ring	NBR											
Number of conductors/cross-section	$3 \times 0.25 \text{ mm}^2 (32 \times 0.1)$						$4 \times 0.25 \text{ mm}^2 (32 \times 0.1)$					
Jacket material	PUR											
Jacket color	black											
Conductor insulation	PP											
Cable diameter	3.6 mm						3.9 mm					
Bending radius	$10 \times D$											
Storage temperature range	$-30 \text{ }^\circ\text{C} \dots +90 \text{ }^\circ\text{C}$											
Temperature range connector	$-25 \text{ }^\circ\text{C} \dots +90 \text{ }^\circ\text{C}$											
Temperature range fixed	$-40 \text{ }^\circ\text{C} \dots +80 \text{ }^\circ\text{C}$											
Temperature range moving	$-25 \text{ }^\circ\text{C} \dots +80 \text{ }^\circ\text{C}$											
Mechanical service life	-											
Weight (kg/piece)	0.02	0.03	0.04	0.05	0.06	0.16	0.05	0.06	0.08	0.10	0.13	0.31
Approvals	cULus (E224249)											

Accessories	Part-No.	Type	PU
Torque setting tool M 8	490090	DM-SET M8	1

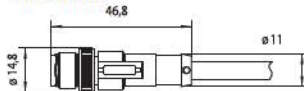


# Actuator sensor interface · M12 - cables

Male M12 straight with PUR cable, open end  
self-locking screwed connection  
c-track compatible, halogen free



### Dimensions



### PIN assignment

471020, 471050, 471100

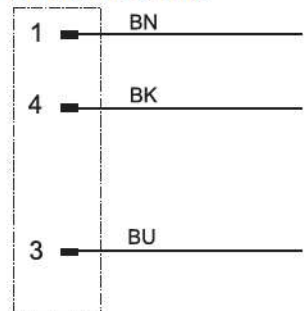


472020, 472050, 472100

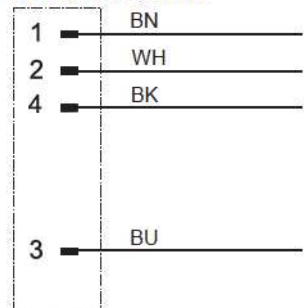


### Circuit diagram

471020, 471050, 471100



472020, 472050, 472100



Description	Part-No.	Type	PU
<b>3-pole</b>			
Cable length	2.0 m	471020 S*	STG3-M12 2M PUR 1
	5.0 m	471050 S*	STG3-M12 5M PUR 1
	10.0 m	471100 S*	STG3-M12 10M PUR 1
<b>4-pole</b>			
Cable length	2.0 m	472020 S*	STG4-M12 2M PUR 1
	5.0 m	472050 S*	STG4-M12 5M PUR 1
	10.0 m	472100 S*	STG4-M12 10M PUR 1

Technical data	3-pole			4-pole		
Rated voltage $U_N$	AC/DC 24 V					
Rated voltage max.	250 V					
Rated current	4 A					
Pole number	3			4		
Cable length (m)	2.0	5.0	10.0	2.0	5.0	10.0
Status indication	-					
Current Consumption	- mA					
Coding	A					
Shielding	-					
<b>General</b>						
Form male 1	M 12 male straight					
Nominal insulation voltage	250 V					
Test voltage	2500 V					
Degree of pollution	3					
Insulation resistance at 20 °C	≥ 1000 MΩ×km					
Contact resistance	< 5 mΩ					
Flamability according to UL 94	V0					
Protection class	IP65/67/68					
Housing material	TPU					
Contact material	CuSn, gold-plated					
Thread material	Zinc die-casting, nickel-plated					
Material sealing ring	-					
Number of conductors/cross-section	3 × 0.34 mm <sup>2</sup> (42 × 0.1)			4 × 0.34 mm <sup>2</sup> (42 × 0.1)		
Jacket material	PUR					
Jacket color	black					
Conductor insulation	PP					
Cable diameter	3.8 mm			4.1 mm		
Bending radius	10 × D					
Storage temperature range	-30 °C ... +90 °C					
Temperature range connector	-25 °C ... +90 °C					
Temperature range fixed	-40 °C ... +80 °C					
Temperature range moving	-25 °C ... +80 °C					
Mechanical service life	-					
Weight (kg/piece)	0.090	0.190	0.380	0.100	0.200	0.400
Approvals	cULus (E224249)					

Accessories	Part-No.	Type	PU
Torque setting tool M 12	490091	DM-SET M12	1

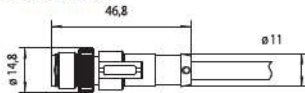
\* S Article from stock  
A Available with a lead time  
R Available on request

# Actuator sensor interface · M12 - cables

Male M12 straight with PUR cable, open end  
self-locking screwed connection  
c-track compatible, halogen free



### Dimensions

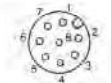


### PIN assignment

473020, 473050, 473100

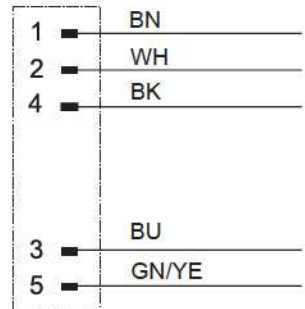


482020, 482050, 482100

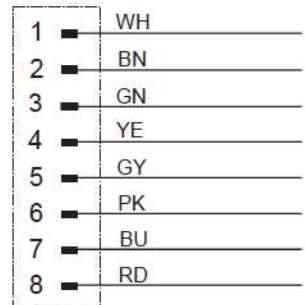


### Circuit diagram

473020, 473050, 473100



482020, 482050, 482100



Description	Part-No.	Type	PU
<b>5-pole</b>			
Cable length	2.0 m	473020 S*	STG5-M12 2M PUR 1
	5.0 m	473050 S*	STG5-M12 5M PUR 1
	10.0 m	473100 S*	STG5-M12 10M PUR 1
<b>8-pole</b>			
Cable length	2.0 m	482020 S*	STG8-M12 2M PUR 1
	5.0 m	482050 S*	STG8-M12 5M PUR 1
	10.0 m	482100 S*	STG8-M12 10M PUR 1

Technical data	5-pole		8-pole		
Rated voltage $U_N$	AC/DC 24 V				
Rated voltage max.	60 V			30 V	
Rated current	4 A			2 A	
Pole number	5			8	
Cable length (m)	2.0	5.0	10.0	2.0	5.0
Status indication	-				
Current Consumption	- mA				
Coding	A				
Shielding	-				
<b>General</b>					
Form male 1	M 12 male straight				
Nominal insulation voltage	63 V			36 V	
Test voltage	1500 V				
Degree of pollution	3				
Insulation resistance at 20 °C	≥ 1000 MΩ×km				
Contact resistance	< 5 mΩ				
Flamability according to UL 94	V0				
Protection class	IP65/67/68				
Housing material	TPU				
Contact material	CuSn, gold-plated				
Thread material	Zinc die-casting, nickel-plated				
Material sealing ring	-				
Number of conductors/cross-section	5 × 0.34 mm <sup>2</sup> (42 × 0.1)		8 × 0.25 mm <sup>2</sup> (32 × 0.1)		
Jacket material	PUR				
Jacket color	black				
Conductor insulation	PP				
Cable diameter	4.5 mm		5.9 mm		
Bending radius	10 × D				
Storage temperature range	-30 °C ... +90 °C				
Temperature range connector	-25 °C ... +90 °C				
Temperature range fixed	-40 °C ... +80 °C				
Temperature range moving	-25 °C ... +80 °C				
Mechanical service life	-				
Weight (kg/piece)	0.100	0.250	0.480	0.110	0.260
Approvals	cULus (E224249)				

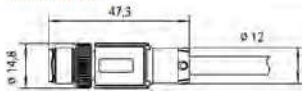
Accessories	Part-No.	Type	PU
Torque setting tool M 12	490091	DM-SET M12	1

# Actuator sensor interface · M12 - cables

Male M12 straight with PUR cable, shielded 360°, open end self-locking screwed connection  
c-track compatible, halogen free



### Dimensions

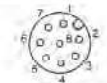


### PIN assignment

456202, 456205, 456210

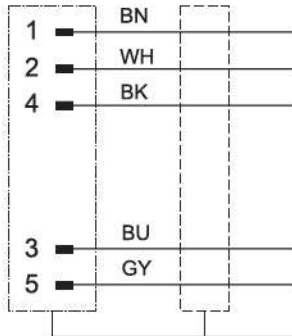


458702, 458705, 458710

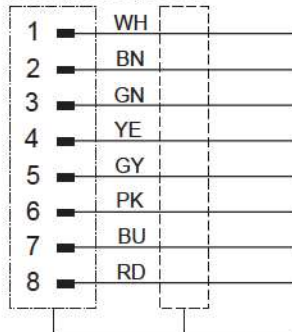


### Circuit diagram

456202, 456205, 456210



458702, 458705, 458710

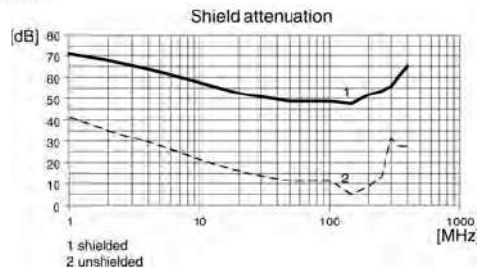


Description	Part-No.	Type	PU
<b>5-pole</b>			
Cable length	2.0 m	456202 S*	STG5-M12(C)2m PUR 1
	5.0 m	456205 S*	STG5-M12(C)5m PUR 1
	10.0 m	456210 S*	STG5-M12(C) 10m PUR 1
<b>8-pole</b>			
Cable length	2.0 m	458702 S*	STG8-M12(C) 2M PUR 1
	5.0 m	458705 S*	STG8-M12(C) 5M PUR 1
	10.0 m	458710 S*	STG8-M12(C) 10M PUR 1

Technical data	5-pole		8-pole			
Rated voltage U <sub>N</sub>	AC/DC 24 V					
Rated voltage max.	60 V		30 V			
Rated current	4 A		2 A			
Pole number	5		8			
Cable length (m)	2.0	5.0	10.0	2.0	5.0	10.0
Status indication	-					
Current Consumption	- mA					
Coding	A					
Shielding	-					
<b>General</b>						
Form male 1	M 12 male straight					
Nominal insulation voltage	63 V		36 V			
Test voltage	1500 V					
Degree of pollution	3					
Insulation resistance at 20 °C	≥ 1000 MΩ×km					
Contact resistance	< 5 mΩ					
Flamability according to UL 94	V0					
Protection class	IP65/67					
Housing material	TPU					
Contact material	CuSn, gold-plated					
Thread material	Zinc die-casting, nickel-plated					
Material sealing ring	-					
Number of conductors/cross-section	5 × 0.34 mm <sup>2</sup> (42 × 0.1)		8 × 0.25 mm <sup>2</sup> (32 × 0.1)			
Jacket material	PUR					
Jacket color	black					
Conductor insulation	PP					
Cable diameter	5.3 mm		5.9 mm			
Bending radius	10 × D					
Storage temperature range	-30 °C ... +90 °C					
Temperature range connector	-25 °C ... +90 °C					
Temperature range fixed	-40 °C ... +80 °C					
Temperature range moving	-25 °C ... +80 °C					
Mechanical service life	-					
Weight (kg/piece)	0.150	0.300	0.565	0.155	0.305	0.570
Approvals	cULus (E224249)					

Accessories	Part-No.	Type	PU
Torque setting tool M 12	490091	DM-SET M12	1

### Action chart



\* S Article from stock  
A Available with a lead time  
R Available on request

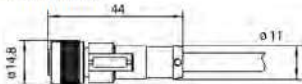


# Actuator sensor interface · M12 - cables

Female M12 straight with PUR cable, open end  
self-locking screwed connection  
c-track compatible, halogen free



### Dimensions



### PIN assignment

465020, 465050, 465100

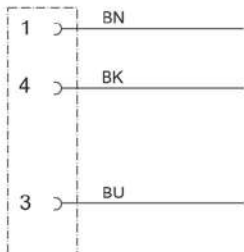


466020, 466050, 466100

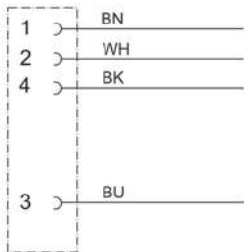


### Circuit diagram

465020, 465050, 465100



466020, 466050, 466100



Description	Part-No.	Type	PU	
<b>3-pole</b>				
Cable length	2.0 m	465020 S*	KUG3-M12 2M PUR	1
	5.0 m	465050 S*	KUG3-M12 5M PUR	1
	10.0 m	465100 S*	KUG3-M12 10M PUR	1
<b>4-pole</b>				
Cable length	2.0 m	466020 S*	KUG4-M12 2M PUR	1
	5.0 m	466050 S*	KUG4-M12 5M PUR	1
	10.0 m	466100 S*	KUG4-M12 10M PUR	1

Technical data	3-pole			4-pole		
Rated voltage $U_N$	AC/DC 24 V					
Rated voltage max.	250 V					
Rated current	4 A					
Pole number	3			4		
Cable length (m)	2.0	5.0	10.0	2.0	5.0	10.0
Status indication	-					
Current Consumption	- mA					
Coding	A					
Shielding	-					
<b>General</b>						
Form male 1	M 12 female straight					
Nominal insulation voltage	250 V					
Test voltage	2500 V					
Degree of pollution	3					
Insulation resistance at 20 °C	$\geq 1000 \text{ M}\Omega \times \text{km}$					
Contact resistance	$< 5 \text{ m}\Omega$					
Flamability according to UL 94	V0					
Protection class	IP65/67/68					
Housing material	TPU					
Contact material	CuSn, gold-plated					
Thread material	Zinc die-casting, nickel-plated					
Material sealing ring	-					
Number of conductors/cross-section	$3 \times 0.34 \text{ mm}^2 (42 \times 0.1)$			$4 \times 0.34 \text{ mm}^2 (42 \times 0.1)$		
Jacket material	PUR					
Jacket color	black					
Conductor insulation	PP					
Cable diameter	3.8 mm			4.1 mm		
Bending radius	$10 \times D$					
Storage temperature range	$-30 \text{ }^\circ\text{C} \dots +90 \text{ }^\circ\text{C}$					
Temperature range connector	$-25 \text{ }^\circ\text{C} \dots +90 \text{ }^\circ\text{C}$					
Temperature range fixed	$-40 \text{ }^\circ\text{C} \dots +80 \text{ }^\circ\text{C}$					
Temperature range moving	$-25 \text{ }^\circ\text{C} \dots +80 \text{ }^\circ\text{C}$					
Mechanical service life	-					
Weight (kg/piece)	0.090	0.190	0.380	0.100	0.200	0.400
Approvals	cULus (E224249)					

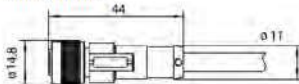
Accessories	Part-No.	Type	PU
Torque setting tool M 12	490091	DM-SET M12	1

# Actuator sensor interface · M12 - cables

Female M12 straight with PUR cable, open end  
self-locking screwed connection  
c-track compatible, halogen free



### Dimensions



### PIN assignment

477020, 477050, 477100

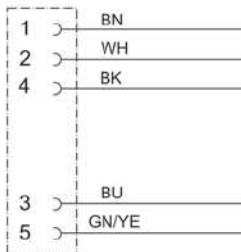


478020, 478050, 478100

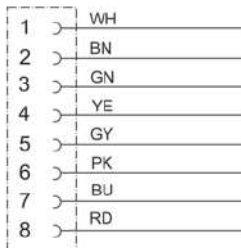


### Circuit diagram

477020, 477050, 477100



478020, 478050, 478100



Description	Part-No.	Type	PU	
<b>5-pole</b>				
Cable length	2.0 m	477020 S*	KUG5-M12 2M PUR	1
	5.0 m	477050 S*	KUG5-M12 5M PUR	1
	10.0 m	477100 S*	KUG5-M12 10M PUR	1
<b>8-pole</b>				
Cable length	2.0 m	478020 S*	KUG8-M12 2M PUR	1
	5.0 m	478050 S*	KUG8-M12 5M PUR	1
	10.0 m	478100 S*	KUG8-M12 10M PUR	1

Technical data	5-pole	8-pole				
Rated voltage U <sub>N</sub>	AC/DC 24 V					
Rated voltage max.	60 V	30 V				
Rated current	4 A	2 A				
Pole number	5	8				
Cable length (m)	2.0	5.0	10.0			
Status indication	-					
Current Consumption	- mA					
Coding	A					
Shielding	-					
<b>General</b>						
Form male 1	M 12 female straight					
Nominal insulation voltage	63 V	36 V				
Test voltage	1500 V					
Degree of pollution	3					
Insulation resistance at 20 °C	≥ 1000 MΩ×km					
Contact resistance	< 5 mΩ					
Flamability according to UL 94	V0					
Protection class	IP65/67/68					
Housing material	TPU					
Contact material	CuSn, gold-plated					
Thread material	Zinc die-casting, nickel-plated					
Material sealing ring	-					
Number of conductors/cross-section	5 × 0.34 mm <sup>2</sup> (42 × 0.1)	8 × 0.25 mm <sup>2</sup> (32 × 0.1)				
Jacket material	PUR					
Jacket color	black					
Conductor insulation	PP					
Cable diameter	4.5 mm	5.9 mm				
Bending radius	10 × D					
Storage temperature range	-30 °C ... +90 °C					
Temperature range connector	-25 °C ... +90 °C					
Temperature range fixed	-40 °C ... +80 °C					
Temperature range moving	-25 °C ... +80 °C					
Mechanical service life	-					
Weight (kg/piece)	0.100	0.250	0.480	0.110	0.260	0.525
Approvals	cULus (E224249)					

Accessories	Part-No.	Type	PU
Torque setting tool M 12	490091	DM-SET M12	1

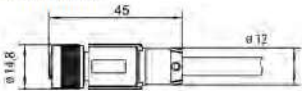
\* S Article from stock  
A Available with a lead time  
R Available on request

# Actuator sensor interface · M12 - cables

Female M12 straight with PUR cable, shielded 360°, open end self-locking screwed connection  
c-track compatible, halogen free



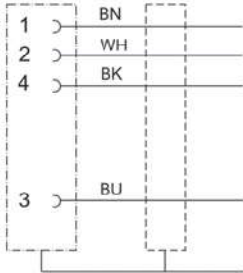
### Dimensions



### PIN assignment



### Circuit diagram



Description	Part-No.	Type	PU	
Cable length	2.0 m	456402 S*	KUG4-M12(C) 2m PUR	1
	5.0 m	456405 S*	KUG4-M12(C) 5m PUR	1
	10.0 m	456410 S*	KUG4-M12(C) 10m PUR	1

### Technical data

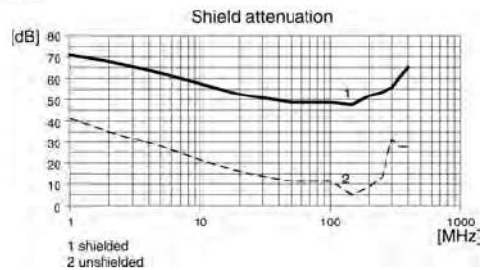
Rated voltage $U_N$	AC/DC 24 V		
Rated voltage max.	250 V		
Rated current	4 A		
Pole number	4		
Cable length (m)	2.0	5.0	10.0
Status indication	-		
Current Consumption	- mA		
Coding	A		
Shielding	360°		

### General

Form male 1	M 12 female straight		
Nominal insulation voltage	250 V		
Test voltage	2500 V		
Degree of pollution	3		
Insulation resistance at 20 °C	$\geq 1000 \text{ M}\Omega \times \text{km}$		
Contact resistance	$< 5 \text{ m}\Omega$		
Flamability according to UL 94	V0		
Protection class	IP65/67		
Housing material	TPU		
Contact material	CuSn, gold-plated		
Thread material	Zinc die-casting, nickel-plated		
Material sealing ring	-		
Number of conductors/cross-section	$4 \times 0.34 \text{ mm}^2 (42 \times 0.1)$		
Jacket material	PUR		
Jacket color	black		
Conductor insulation	PP		
Cable diameter	4.9 mm		
Bending radius	$10 \times D$		
Storage temperature range	$-30 \text{ }^\circ\text{C} \dots +90 \text{ }^\circ\text{C}$		
Temperature range connector	$-25 \text{ }^\circ\text{C} \dots +90 \text{ }^\circ\text{C}$		
Temperature range fixed	$-40 \text{ }^\circ\text{C} \dots +80 \text{ }^\circ\text{C}$		
Temperature range moving	$-25 \text{ }^\circ\text{C} \dots +80 \text{ }^\circ\text{C}$		
Mechanical service life	-		
Weight (kg/piece)	0.125	0.275	0.520
Approvals	cULus (E224249)		

Accessories	Part-No.	Type	PU
Torque setting tool M 12	490091	DM-SET M12	1

### Action chart



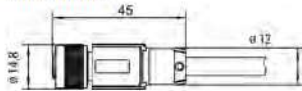


# Actuator sensor interface · M12 - cables

Female M12 straight with PUR cable, shielded 360°, open end self-locking screwed connection  
c-track compatible, halogen free



### Dimensions



### PIN assignment

456502, 456505, 456510

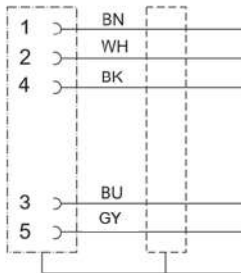


458802, 458805, 458810

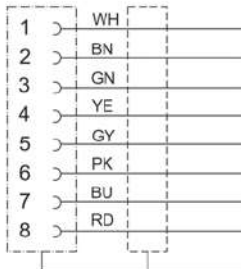


### Circuit diagram

456502, 456505, 456510



458802, 458805, 458810

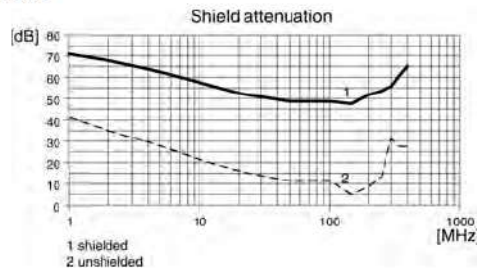


Description	Part-No.	Type	PU
<b>5-pole</b>			
Cable length	2.0 m	456502 S*	KUG5-M12(C) 2m PUR 1
	5.0 m	456505 S*	KUG5-M12(C) 5m PUR 1
	10.0 m	456510 S*	KUG5-M12(C) 10m PUR 1
<b>8-pole</b>			
Cable length	2.0 m	458802 S*	KUG8-M12(C) 2M PUR 1
	5.0 m	458805 S*	KUG8-M12(C) 5M PUR 1
	10.0 m	458810 S*	KUG8-M12(C) 10M PUR 1

Technical data	5-pole			8-pole		
Rated voltage U <sub>N</sub>	AC/DC 24 V					
Rated voltage max.	60 V			30 V		
Rated current	4 A			2 A		
Pole number	5			8		
Cable length (m)	2.0	5.0	10.0	2.0	5.0	10.0
Status indication	-					
Current Consumption	- mA					
Coding	A					
Shielding	360°					
<b>General</b>						
Form male 1	M 12 female straight					
Nominal insulation voltage	63 V			36 V		
Test voltage	1500 V					
Degree of pollution	3					
Insulation resistance at 20 °C	≥ 1000 MΩ×km					
Contact resistance	< 5 mΩ					
Flamability according to UL 94	V0					
Protection class	IP65/67					
Housing material	TPU					
Contact material	CuSn, gold-plated					
Thread material	Zinc die-casting, nickel-plated					
Material sealing ring	-					
Number of conductors/cross-section	5 × 0.34 mm <sup>2</sup> (42 × 0.1)			8 × 0.25 mm <sup>2</sup> (32 × 0.1)		
Jacket material	PUR					
Jacket color	black					
Conductor insulation	PP					
Cable diameter	5.3 mm			5.9 mm		
Bending radius	10 × D					
Storage temperature range	-30 °C ... +90 °C					
Temperature range connector	-25 °C ... +90 °C					
Temperature range fixed	-40 °C ... +80 °C					
Temperature range moving	-25 °C ... +80 °C					
Mechanical service life	-					
Weight (kg/piece)	0.150	0.300	0.565	0.150	0.305	0.570
Approvals	cULus (E224249)					

Accessories	Part-No.	Type	PU
Torque setting tool M 12	490091	DM-SET M12	1

### Action chart



\* S Article from stock  
A Available with a lead time  
R Available on request

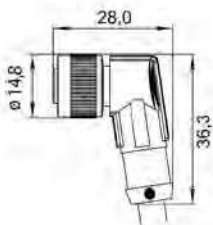
# Actuator sensor interface · M12 - cables

Female M12 angled with PUR cable, open end self-locking screwed connection  
c-track compatible, halogen free



Description	Part-No.	Type	PU
<b>3-pole</b>			
Cable length	2.0 m	462020 S*	KUW3-M12 2M PUR 1
	5.0 m	462050 S*	KUW3-M12 5M PUR 1
	10.0 m	462100 S*	KUW3-M12 10M PUR 1
<b>4-pole</b>			
Cable length	2.0 m	464020 S*	KUW4-M12 2M PUR 1
	5.0 m	464050 S*	KUW4-M12 5M PUR 1
	10.0 m	464100 S*	KUW4-M12 10M PUR 1

## Dimensions



## PIN assignment

462020, 462050, 462100

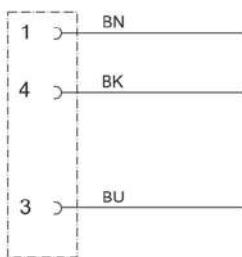


464020, 464050, 464100

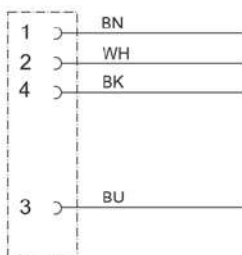


## Circuit diagram

462020, 462050, 462100



464020, 464050, 464100



Technical data	3-pole			4-pole		
Rated voltage $U_N$	AC/DC 24 V					
Rated voltage max.	250 V					
Rated current	4 A					
Pole number	3			4		
Cable length (m)	2.0	5.0	10.0	2.0	5.0	10.0
Status indication	-					
Current Consumption	- mA					
Coding	A					
Shielding	-					
<b>General</b>						
Form male 1	M 12 female angle connector					
Nominal insulation voltage	250 V					
Test voltage	2500 V					
Degree of pollution	3					
Insulation resistance at 20 °C	$\geq 1000 \text{ M}\Omega \times \text{km}$					
Contact resistance	$< 5 \text{ m}\Omega$					
Flamability according to UL 94	V0					
Protection class	IP65/67/68					
Housing material	TPU					
Contact material	CuSn, gold-plated					
Thread material	Zinc die-casting, nickel-plated					
Material sealing ring	NBR					
Number of conductors/cross-section	$3 \times 0.34 \text{ mm}^2 (42 \times 0.1)$			$4 \times 0.34 \text{ mm}^2 (42 \times 0.1)$		
Jacket material	PUR					
Jacket color	black					
Conductor insulation	PP					
Cable diameter	3.8 mm			4.1 mm		
Bending radius	$10 \times D$					
Storage temperature range	$-30 \text{ }^\circ\text{C} \dots +90 \text{ }^\circ\text{C}$					
Temperature range connector	$-25 \text{ }^\circ\text{C} \dots +90 \text{ }^\circ\text{C}$					
Temperature range fixed	$-40 \text{ }^\circ\text{C} \dots +80 \text{ }^\circ\text{C}$					
Temperature range moving	$-25 \text{ }^\circ\text{C} \dots +80 \text{ }^\circ\text{C}$					
Mechanical service life	-					
Weight (kg/piece)	0.090	0.190	0.380	0.100	0.200	0.400
Approvals	cULus (E224249)					

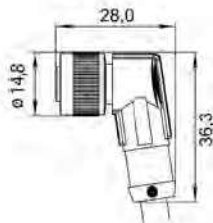
Accessories	Part-No.	Type	PU
Torque setting tool M 12	490091	DM-SET M12	1

# Actuator sensor interface · M12 - cables

Female M12 angled with PUR cable, open end self-locking screwed connection  
c-track compatible, halogen free



### Dimensions



### PIN assignment

443020, 443050, 443100

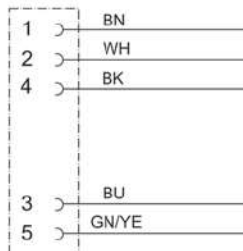


479020, 479050, 479100

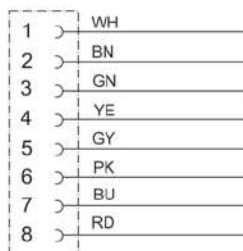


### Circuit diagram

443020, 443050, 443100



479020, 479050, 479100



Description	Part-No.	Type	PU	
<b>5-pole</b>				
Cable length	2.0 m	443020 S*	KUW5-M12 2M PUR	1
	5.0 m	443050 S*	KUW5-M12 5M PUR	1
	10.0 m	443100 S*	KUW5-M12 10M PUR	1
<b>8-pole</b>				
Cable length	2.0 m	479020 S*	KUW8-M12 2M PUR	1
	5.0 m	479050 S*	KUW8-M12 5M PUR	1
	10.0 m	479100 S*	KUW8-M12 10M PUR	1

Technical data	5-pole	10-pole	2-pole	5-pole	10-pole
Rated voltage U <sub>N</sub>	AC/DC 24 V				
Rated voltage max.	60 V			30 V	
Rated current	4 A			2 A	
Pole number	5			8	
Cable length (m)	2.0	5.0	10.0	2.0	5.0
Status indication	-				
Current Consumption	- mA				
Coding	A				
Shielding	-				
<b>General</b>					
Form male 1	M 12 female angle connector				
Nominal insulation voltage	63 V			36 V	
Test voltage	1500 V				
Degree of pollution	3				
Insulation resistance at 20 °C	≥ 1000 MΩ×km				
Contact resistance	< 5 mΩ				
Flamability according to UL 94	V0				
Protection class	IP65/67/68				
Housing material	TPU				
Contact material	CuSn, gold-plated				
Thread material	Zinc die-casting, nickel-plated				
Material sealing ring	NBR				
Number of conductors/cross-section	5 × 0.34 mm <sup>2</sup> (42 × 0.1)		8 × 0.25 mm <sup>2</sup> (32 × 0.1)		
Jacket material	PUR				
Jacket color	black				
Conductor insulation	PP				
Cable diameter	4.5 mm		5.9 mm		
Bending radius	10 × D				
Storage temperature range	-30 °C ... +90 °C				
Temperature range connector	-25 °C ... +90 °C				
Temperature range fixed	-40 °C ... +80 °C				
Temperature range moving	-25 °C ... +80 °C				
Mechanical service life	-				
Weight (kg/piece)	0.100	0.250	0.480	0.110	0.260
Approvals	cULus (E224249)				

Accessories	Part-No.	Type	PU
Torque setting tool M 12	490091	DM-SET M12	1

\* S Article from stock  
A Available with a lead time  
R Available on request



# Actuator sensor interface · M12 - cables

Female M12 angled with PUR cable, shielded 360°, open end self-locking screwed connection  
c-track compatible, halogen free

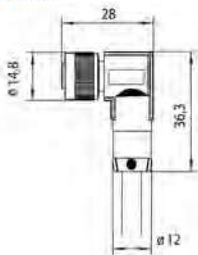


Description	Part-No.	Type	PU
<b>4-pole</b>			
Cable length	2.0 m	456702 S*	KUW4-M12(C) 2m PUR 1
	5.0 m	456705 S*	KUW4-M12(C) 5m PUR 1
	10.0 m	456710 S*	KUW4-M12(C) 10m PUR 1

Technical data		4-pole	
Rated voltage $U_N$		AC/DC 24 V	
Rated voltage max.		250 V	
Rated current		4 A	
Pole number		4	
Cable length (m)	2.0	5.0	10.0
Status indication		-	
Current Consumption		- mA	
Coding		A	
Shielding		360°	

General	
Form male 1	M 12 female angle connector
Nominal insulation voltage	250 V
Test voltage	2500 V
Degree of pollution	3
Insulation resistance at 20 °C	$\geq 1000 \text{ M}\Omega \times \text{km}$
Contact resistance	$< 5 \text{ m}\Omega$
Flamability according to UL 94	V0
Protection class	IP65/67
Housing material	TPU
Contact material	CuSn, gold-plated
Thread material	Zinc die-casting, nickel-plated
Material sealing ring	NBR
Number of conductors/cross-section	4 x 0.34mm <sup>2</sup> (42 x 0.1)
Jacket material	PUR
Jacket color	black
Conductor insulation	PP
Cable diameter	4.9 mm
Bending radius	10 x D
Storage temperature range	-30 °C ... +90 °C
Temperature range connector	-25 °C ... +90 °C
Temperature range fixed	-40 °C ... +80 °C
Temperature range moving	-25 °C ... +80 °C
Mechanical service life	-
Weight (kg/piece)	0.125      0.275      0.520
Approvals	cULus (E224249)

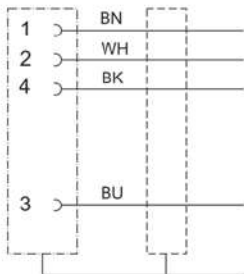
## Dimensions



## PIN assignment

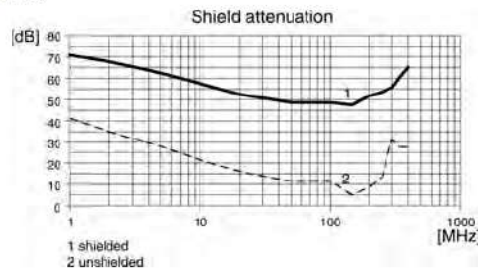


## Circuit diagram



Accessories	Part-No.	Type	PU
Torque setting tool M 12	490091	DM-SET M12	1

## Action chart

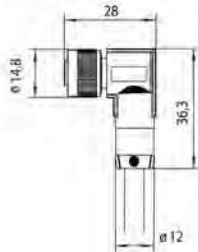


# Actuator sensor interface · M12 - cables

Female M12 angled with PUR cable, shielded 360°, open end self-locking screwed connection  
c-track compatible, halogen free

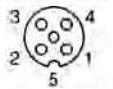


### Dimensions

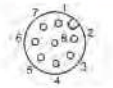


### PIN assignment

456802, 456805, 456810

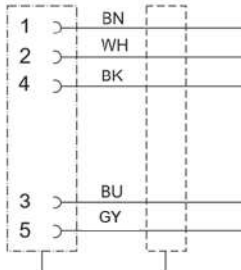


458902, 458905, 458910

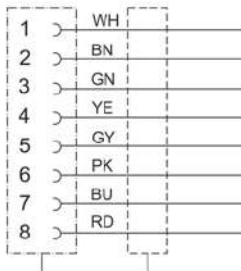


### Circuit diagram

456802, 456805, 456810



458902, 458905, 458910

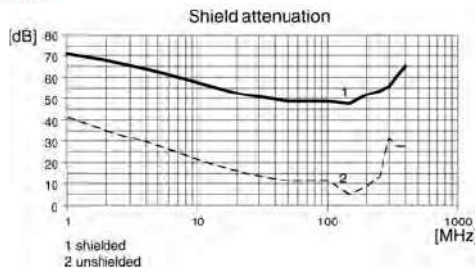


Description	Part-No.	Type	PU
<b>5-pole</b>			
Cable length	2.0 m	456802 S*	KUW5-M12(C) 2m PUR 1
	5.0 m	456805 S*	KUW5-M12(C) 5m PUR 1
	10.0 m	456810 S*	KUW5-M12(C) 10m PUR 1
<b>8-pole</b>			
Cable length	2.0 m	458902 S*	KUW8-M12(C) 2M PUR 1
	5.0 m	458905 S*	KUW8-M12(C) 5M PUR 1
	10.0 m	458910 S*	KUW8-M12(C) 10M PUR 1

Technical data	5-pole	8-pole				
Rated voltage $U_N$	AC/DC 24 V					
Rated voltage max.	60 V	30 V				
Rated current	4 A	2 A				
Pole number	5	8				
Cable length (m)	2.0	5.0	10.0			
Status indication	-					
Current Consumption	- mA					
Coding	A					
Shielding	360°					
<b>General</b>						
Form male 1	M 12 female angle connector					
Nominal insulation voltage	63 V	36 V				
Test voltage	1500 V					
Degree of pollution	3					
Insulation resistance at 20 °C	≥ 1000 MΩ×km					
Contact resistance	< 5 mΩ					
Flamability according to UL 94	V0					
Protection class	IP65/67					
Housing material	TPU					
Contact material	CuSn, gold-plated					
Thread material	Zinc die-casting, nickel-plated					
Material sealing ring	NBR					
Number of conductors/cross-section	5 × 0.34 mm <sup>2</sup> (42 × 0.1)	8 × 0.25 mm <sup>2</sup> (32 × 0.1)				
Jacket material	PUR					
Jacket color	black					
Conductor insulation	PP					
Cable diameter	5.3 mm	5.9 mm				
Bending radius	10 × D					
Storage temperature range	-30 °C ... +90 °C					
Temperature range connector	-25 °C ... +90 °C					
Temperature range fixed	-40 °C ... +80 °C					
Temperature range moving	-25 °C ... +80 °C					
Mechanical service life	-					
Weight (kg/piece)	0.150	0.300	0.565	0.155	0.305	0.570
Approvals	cULus (E224249)					

Accessories	Part-No.	Type	PU
Torque setting tool M 12	490091	DM-SET M12	1

### Action chart



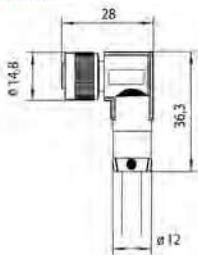
\* S Article from stock  
A Available with a lead time  
R Available on request

# Actuator sensor interface · M12 - cables

Female M12 angled, with LEDs and PUR cable, open end self-locking screwed connection  
c-track compatible, halogen free



### Dimensions



### PIN assignment

468100, 468050, 468020

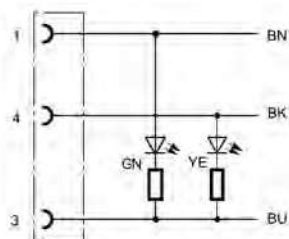


469020, 469050, 469100

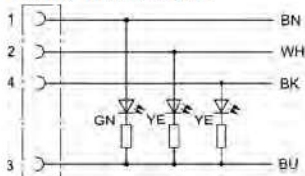


### Circuit diagram

468100, 468050, 468020



469020, 469050, 469100



Description	Part-No.	Type	PU
<b>3-pole</b>			
Cable length	2.0 m	468020 S*	KUW/LED A-M12 2M PUR 1
	5.0 m	468050 S*	KUW/LED A-M12 5M PUR 1
	10.0 m	468100 S*	KUW/LED A-M12 10M PUR 1
<b>4-pole</b>			
Cable length	2.0 m	469020 S*	KUW/LED P-M12 2M PUR 1
	5.0 m	469050 S*	KUW/LED P-M12 5M PUR 1
	10.0 m	469100 S*	KUW/LED P-M12 10M PUR 1

Technical data	3-pole	4-pole				
Rated voltage $U_N$	AC/DC 24 V					
Rated voltage max.	28 V					
Rated current	4 A					
Pole number	3	4				
Cable length (m)	10.0	5.0	2.0	5.0	10.0	
Status indication	Operating voltage: LED green I/O: LED yellow					
Current Consumption	10 mA					
Coding	A					
Shielding	-					
<b>General</b>						
Form male 1	M 12 female angle connector					
Nominal insulation voltage	32 V					
Test voltage	- V					
Degree of pollution	3					
Insulation resistance at 20 °C	$\geq 1000 \text{ MQ}\times\text{km}$					
Contact resistance	$< 5 \text{ m}\Omega$					
Flamability according to UL 94	V0					
Protection class	IP65/67/68					
Housing material	TPU					
Contact material	CuSn, gold-plated					
Thread material	Zinc die-casting, nickel-plated					
Material sealing ring	NBR					
Number of conductors/cross-section	$3 \times 0.34 \text{ mm}^2 (42 \times 0.1)$		$4 \times 0.34 \text{ mm}^2 (42 \times 0.1)$			
Jacket material	PUR					
Jacket color	black					
Conductor insulation	PP					
Cable diameter	3.8 mm		4.1 mm			
Bending radius	$10 \times D$					
Storage temperature range	$-30 \text{ }^\circ\text{C} \dots +90 \text{ }^\circ\text{C}$					
Temperature range connector	$-25 \text{ }^\circ\text{C} \dots +90 \text{ }^\circ\text{C}$					
Temperature range fixed	$-40 \text{ }^\circ\text{C} \dots +80 \text{ }^\circ\text{C}$					
Temperature range moving	$-25 \text{ }^\circ\text{C} \dots +80 \text{ }^\circ\text{C}$					
Mechanical service life	-					
Weight (kg/piece)	0.370	0.190	0.095	0.100	0.200	0.390
Approvals	cULus (E224249)					

Accessories	Part-No.	Type	PU
Torque setting tool M 12	490091	DM-SET M12	1

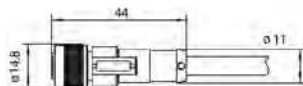
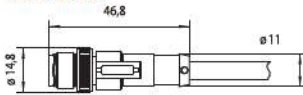


# Actuator sensor interface · M12 / M12 – cables

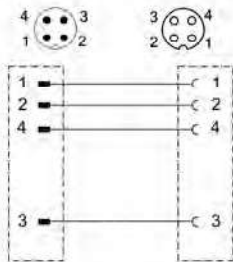
Male M12 straight to female M12, straight with PUR cable  
self-locking screwed connection  
c-track compatible, halogen free



### Dimensions



### PIN assignment



Description	Part-No.	Type	PU
<b>4-pole</b>			
Cable length	0.3 m	429003 S*	STG4-M12/KUG4-M12 0,3M PUR 1
	0.6 m	429006 S*	STG4-M12/KUG4-M12 0,6mPUR 1
	1.0 m	429010 S*	STG4-M12/KUG4-M12 1,0M PUR 1
	1.5 m	429015 S*	STG4-M12/KUG4-M12 1,5M PUR 1
	2.0 m	429020 S*	STG4-M12/KUG4-M12 2,0M PUR 1
	5.0 m	429050 S*	STG4-M12/KUG4-M12 5,0M PUR 1

Technical data		4-pole					
Rated voltage $U_N$		AC/DC 24 V					
Rated voltage max.		250 V					
Rated current		4 A					
Pole number		4					
Cable length (m)	0.3	0.6	1.0	1.5	2.0	5.0	
Status indication		-					
Current Consumption		- mA					
Coding		A					
Shielding		-					

General							
Form male 1		M 12 male straight					
Form male 2		M 12 female straight					
Nominal insulation voltage		320 V					
Test voltage		2500 V					
Degree of pollution		3					
Insulation resistance at 20 °C		≥ 1000 MΩ×km					
Contact resistance		< 5 mΩ					
Flamability according to UL 94		V0					
Protection class		IP65/67/68					
Housing material		TPU					
Contact material		CuSn, gold-plated					
Thread material		Zinc die-casting, nickel-plated					
Material sealing ring		NBR					
Number of conductors/cross-section		4 × 0.34 mm <sup>2</sup> (42 × 0.1)					
Jacket material		PUR					
Jacket color		black					
Conductor insulation		PP					
Cable diameter		4.1 mm					
Bending radius		10 × D					
Storage temperature range		-30 °C ... +90 °C					
Temperature range connector		-25 °C ... +90 °C					
Temperature range fixed		-40 °C ... +80 °C					
Temperature range moving		-25 °C ... +80 °C					
Mechanical service life		-					
Weight (kg/piece)	0.05	0.07	0.09	0.11	0.14	0.26	
Approvals		cULus (E224249)					

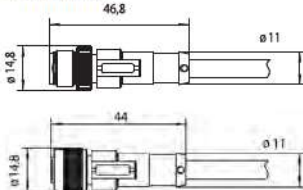
Accessories	Part-No.	Type	PU
Torque setting tool M 12	490091	DM-SET M12	1

# Actuator sensor interface · M12 / M12 – cables

Male M12 straight to female M12 straight with PUR cable  
self-locking screwed connection  
c-track compatible, halogen free

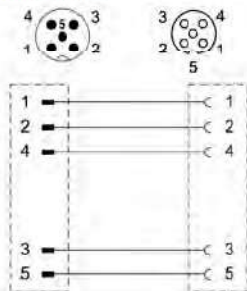


### Dimensions

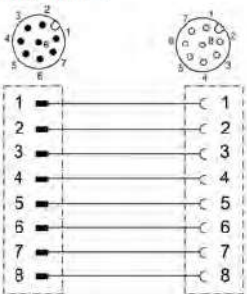


### PIN assignment

442003, 442006, 442010, 442015,  
442020, 442050



420003, 420006, 420010, 420015,  
420020, 420050



Description	Part-No.	Type	PU
<b>5-pole</b>			
Cable length	0.3 m	442003 S*	STG5-M12/KUG5-M12 0,3M PUR 1
	0.6 m	442006 S*	STG5-M12/KUG5-M12 0,6M PUR 1
	1.0 m	442010 S*	STG5-M12/KUG5-M12 1,0M PUR 1
	1.5 m	442015 S*	STG5-M12/KUG5-M12 1,5M PUR 1
	2.0 m	442020 S*	STG5-M12/KUG5-M12 2,0M PUR 1
	5.0 m	442050 S*	STG5-M12/KUG5-M12 5,0M PUR 1
<b>8-pole</b>			
Cable length	0.3 m	420003 S*	STG8-M12/KUG8-M12 0,3M PUR 1
	0.6 m	420006 S*	STG8-M12/KUG8-M12 0,6M PUR 1
	1.0 m	420010 S*	STG8-M12/KUG8-M12 1,0M PUR 1
	1.5 m	420015 S*	STG8-M12/KUG8-M12 1,5M PUR 1
	2.0 m	420020 S*	STG8-M12/KUG8-M12 2,0M PUR 1
	5.0 m	420050 S*	STG8-M12/KUG8-M12 5,0M PUR 1

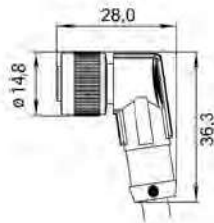
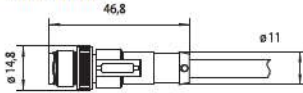
Technical data	5-pole					8-pole									
Rated voltage $U_N$	AC/DC 24 V														
Rated voltage max.	30 V														
Rated current	4 A					2 A									
Pole number	5					8									
Cable length (m)	0.3	0.6	1.0	1.5	2.0	5.0	0.3	0.6	1.0	1.5	2.0	5.0			
Status indication	-														
Current Consumption	- mA														
Coding	A														
Shielding	-														
<b>General</b>															
Form male 1	M 12 male straight														
Form male 2	M 12 female straight														
Nominal insulation voltage	63 V					36 V									
Test voltage	1500 V														
Degree of pollution	3														
Insulation resistance at 20 °C	$\geq 1000 \text{ M}\Omega \times \text{km}$														
Contact resistance	$< 5 \text{ m}\Omega$														
Flamability according to UL 94	V0														
Protection class	IP65/67/68														
Housing material	TPU														
Contact material	CuSn, gold-plated														
Thread material	Zinc die-casting, nickel-plated														
Material sealing ring	NBR														
Number of conductors/cross-section	$5 \times 0.34 \text{ mm}^2 (42 \times 0.1)$					$8 \times 0.25 \text{ mm}^2 (32 \times 0.1)$									
Jacket material	PUR														
Jacket color	black														
Conductor insulation	PP														
Cable diameter	4.5 mm					5.9 mm									
Bending radius	$10 \times D$														
Storage temperature range	$-30 \text{ }^\circ\text{C} \dots +90 \text{ }^\circ\text{C}$														
Temperature range connector	$-25 \text{ }^\circ\text{C} \dots +90 \text{ }^\circ\text{C}$														
Temperature range fixed	$-40 \text{ }^\circ\text{C} \dots +80 \text{ }^\circ\text{C}$														
Temperature range moving	$-25 \text{ }^\circ\text{C} \dots +80 \text{ }^\circ\text{C}$														
Mechanical service life	-														
Weight (kg/piece)	0.05	0.06	0.09	0.11	0.14	0.30	0.05	0.06	0.09	0.11	0.14	0.30			
Approvals	cULus (E224249)														
<b>Accessories</b>															
Torque setting tool M 12	Part-No.	490091										Type	DM-SET M12	PU	1

# Actuator sensor interface · M12 / M12 – cables

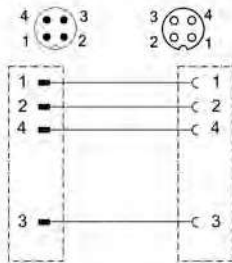
Male M12 straight to female M12 angled with PUR cable  
self-locking screwed connection  
c-track compatible, halogen free



### Dimensions



### PIN assignment



Description	Part-No.	Type	PU
<b>4-pole</b>			
Cable length	0.3 m	418003 S*	STG4-M12/KUW4-M12 0,3M PUR 1
	0.6 m	418006 S*	STG4-M12/KUW4-M12 0,6M PUR 1
	1.0 m	418010 S*	STG4-M12/KUW4-M12 1,0M PUR 1
	1.5 m	418015 S*	STG4-M12/KUW4-M12 1,5M PUR 1
	2.0 m	418020 S*	STG4-M12/KUW4-M12 2,0M PUR 1
	5.0 m	418050 S*	STG4-M12/KUW4-M12 5,0M PUR 1

Technical data		4-pole					
Rated voltage $U_N$		AC/DC 24 V					
Rated voltage max.		250 V					
Rated current		4 A					
Pole number		4					
Cable length (m)	0.3	0.6	1.0	1.5	2.0	5.0	
Status indication		-					
Current Consumption		- mA					
Coding		A					
Shielding		-					

General	
Form male 1	M 12 male straight
Form male 2	M 12 Female angle connector
Nominal insulation voltage	320 V
Test voltage	2500 V
Degree of pollution	3
Insulation resistance at 20 °C	$\geq - MQ \times km$
Contact resistance	< 5 m $\Omega$
Flamability according to UL 94	V0
Protection class	IP65/67/68
Housing material	TPU
Contact material	CuSn, gold-plated
Thread material	Zinc die-casting, nickel-plated
Material sealing ring	NBR
Number of conductors/cross-section	4 x 0.34 mm <sup>2</sup> (42 x 0.1)
Jacket material	PUR
Jacket color	black
Conductor insulation	PP
Cable diameter	4.1 mm
Bending radius	10 x D
Storage temperature range	-30 °C ... +90 °C
Temperature range connector	-25 °C ... +90 °C
Temperature range fixed	-40 °C ... +80 °C
Temperature range moving	-25 °C ... +80 °C
Mechanical service life	-
Weight (kg/piece)	0.05
Approvals	cULus (E224249)

Accessories	Part-No.	Type	PU
Torque setting tool M 12	490091	DM-SET M12	1

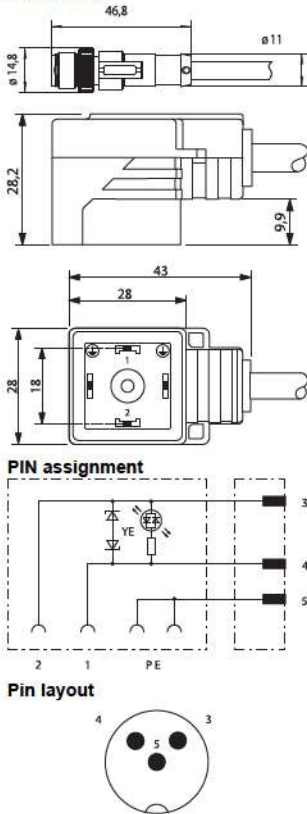


# Actuator sensor interface · M12 / valve suppressor

Male M12 straight to valve connector form A  
with protection device and LED status indication  
c-track compatible, halogen free



### Dimensions



Description	Part-No.	Type	PU
<b>Construction A + Z-diode</b>			
Cable length	0.3 m	435003 S*	STG3-M12/LZ-A 0,3M PUR 1
	0.6 m	435006 S*	STG3-M12/LZ-A 0,6M PUR 1
	1.0 m	435010 S*	STG3-M12/LZ-A 1,0M PUR 1
	1.5 m	435015 S*	STG3-M12/LZ-A 1,5M PUR 1
	2.0 m	435020 S*	STG3-M12/LZ-A 2,0M PUR 1
	5.0 m	435050 S*	STG3-M12/LZ-A 5,0M PUR 1

Technical data		Construction A + Z-diode					
Rated voltage $U_N$		AC/DC 24 V					
Rated voltage range		10 V – 28 V					
Rated current		4 A					
Rated frequency		50 – 60 Hz					
Protection device		Z-diode + LED					
Pole number		3					
Cable length (m)	0.3 0.6 1.0 1.5 2.0 5.0						
Status indication		LED yellow					
Current Consumption		10 mA					
Cut-off peak		≤ 52 V					
Holding Capacity		100 VA					
<b>General</b>							
Form male 1		M 12 male straight					
Form male 2		Valve connector Baufl. A					
Nominal insulation voltage		32 V					
Test voltage		– V					
Degree of pollution		3					
Insulation resistance at 20 °C		≥ 100 MΩ×km					
Contact resistance		< 5 mΩ					
Flamability according to UL 94		V0					
Protection class		IP65/67					
Housing material		TPU					
Contact material		CuSn, gold-plated					
Thread material		Zinc die-casting, nickel-plated					
Material sealing ring		–					
Number of conductors/cross-section		3 × 0.5 mm <sup>2</sup>					
Jacket material		PUR					
Jacket color		black					
Conductor insulation		PP					
Cable diameter		4.5 mm					
Bending radius		10 × D					
Storage temperature range		-30 °C ... +90 °C					
Temperature range connector		-20 °C ... +85 °C					
Temperature range fixed		-40 °C ... +80 °C					
Temperature range moving		-20 °C ... +80 °C					
Mechanical service life		–					
Weight (kg/piece)	0.045 0.053 0.065 0.079 0.096 0.146						
Standards		EN 175301-803					
Approvals		–					

Accessories	Part-No.	Type	PU
Torque setting tool M 12	490091	DM-SET M12	1

### Comments

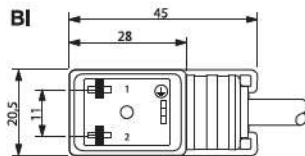
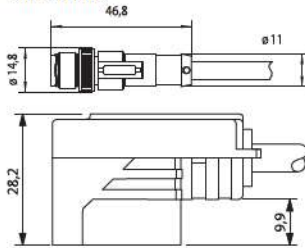
Silicone free, Free from paint wetting impairment substances, resistant to microbes and hydrolysis. Very good resistance to acids, alkalines and solvents. The material resistance is based on the application for use with aggressive media.

# Actuator sensor interface · M12 / valve suppressor

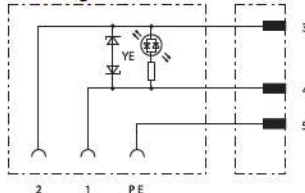
Male M12 straight to valve suppressor form B / form BI with protection device and LED status indication  
c-track compatible, halogen free



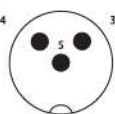
### Dimensions



### PIN assignment



### Pin layout



Description	Part-No.	Type	PU
<b>Construction BI + Z diode</b>			
Cable length	0.3 m	439003 S*	STG3-M12/LZ-BI 0° 0,3M PUR 1
	0.6 m	439006 S*	STG3-M12/LZ-BI 0° 0,6M PUR 1
	1.0 m	439010 S*	STG3-M12/LZ-BI 0° 1,0M PUR 1
	1.5 m	439015 S*	STG3-M12/LZ-BI 0° 1,5M PUR 1
	2.0 m	439020 S*	STG3-M12/LZ-BI 0° 2,0M PUR 1
	5.0 m	439050 S*	STG3-M12/LZ-BI 0° 5,0M PUR 1

Technical data		Construction BI + Z diode				
Rated voltage $U_N$		AC/DC 24 V				
Rated voltage range		10 V – 28 V				
Rated current		4 A				
Rated frequency		50 – 60 Hz				
Protection device		Z-diode + LED				
Pole number		3				
Cable length (m)	0.3 0.6 1.0 1.5 2.0 5.0					
Status indication		I/O: LED yellow				
Current Consumption		4 mA				
Cut-off peak		≤ 52 V				
Holding Capacity		100 VA				
<b>General</b>						
Form male 1		M 12 male straight				
Form male 2		Valve connector BauF. B Ind.				
Nominal insulation voltage		32 V				
Test voltage		– V				
Degree of pollution		3				
Insulation resistance at 20 °C		≥ 100 MΩ×km				
Contact resistance		< 5 mΩ				
Flamability according to UL 94		V0				
Protection class		IP65/67				
Housing material		TPU				
Contact material		CuSn, gold-plated				
Thread material		Zinc die-casting, nickel-plated				
Material sealing ring		–				
Number of conductors/cross-section		3 × 0.5 mm <sup>2</sup>				
Jacket material		PUR				
Jacket color		black				
Conductor insulation		PP				
Cable diameter		4.5 mm				
Bending radius		10 × D				
Storage temperature range		-30 °C ... +90 °C				
Temperature range connector		-25 °C ... +90 °C				
Temperature range fixed		-40 °C ... +80 °C				
Temperature range moving		-20 °C ... +80 °C				
Mechanical service life		–				
Weight (kg/piece)	0.06 0.08 0.10 0.12 0.14 0.28					
Standards		–				
Approvals		–				

Accessories	Part-No.	Type	PU
Torque setting tool M 12	490091	DM-SET M12	1

### Comments

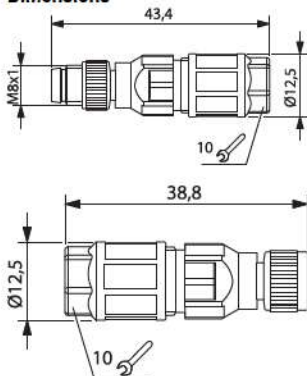
Silicone free, Free from paint wetting impairment substances, resistant to microbes and hydrolysis. Very good resistance to acids, alkalines and solvents. The material resistance is based on the application for use with aggressive media.

# Actuator sensor interface · M8 - connector

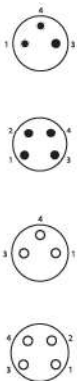
Field wireable connector, M8 straight  
Male / female  
IDC quick-connect technology



### Dimensions



### Pin layout

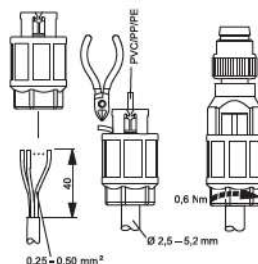


Description	Part-No.	Type	PU
<b>Male</b>			
Pole number	3	490123 S*	STGK-M8 3 POL. SNK 1
	4	490124 S*	STGK-M8 4POL. SNK 1
<b>Female</b>			
Pole number	3	490125 S*	KUGK-M8 3 POL. SNK 1
	4	490126 S*	KUGK-M8 4POL. SNK 1

Technical data	Male	Female
Rated voltage $U_N$	AC/DC 24 V	
Rated voltage max.	60 V	30 V
Rated current	- A	
Pole number	3	4
Status indication	-	
Current Consumption	- mA	
Coding	-	
Shielding	-	
<b>General</b>		
Connection device	IDC 0.25 mm <sup>2</sup> - 0.5 mm <sup>2</sup>	
Design	M 8x1 male straight	M 8x1 female straight
Contact material	CuSn, gold-plated	
Material sealing ring	-	
Test voltage	1500	800
Degree of pollution	3	
Insulation resistance	> 100 MΩ	
Contact resistance	< 5 mΩ	
Flamability according to UL 94	V0	
Protection class	IP67	
Housing material	PA	
Thread material	CuZn nickel-plate	
Cable diameter	2.5 - 5 mm	
Storage temperature range	-40 °C ... +90 °C	
Temperature range connector	-40 °C ... +80 °C	
Mechanical service life	10 x same cross-section	
Weight (kg/piece)	0.008	0.007
Approvals	cULus (E256031)	
Standards	-	

Accessories	Part-No.	Type	Jacket material
matching cables	117240	SU TR AS PUR 3x0,25 UL	PUR
	117241	SU TR AS PUR 4x0,25 UL	PUR
	117243	SU TR AS PUR 3x0,34 UL	PUR
	117244	SU TR AS PUR 4x0,34 UL	PUR

### Mounting diagram



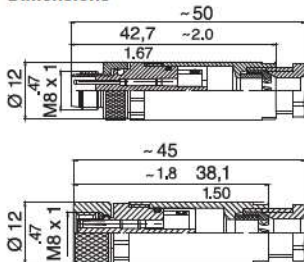


# Actuator sensor interface · M8 - connector

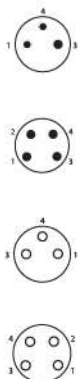
Field wireable connector, M8 straight  
Male / female  
Screw terminal



### Dimensions



### Pin layout

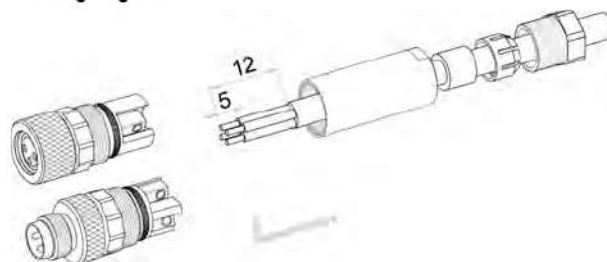


Description	Part-No.	Type	PU
<b>Male</b>			
Pole number	3	490035 S*	STGK-M8 3 POL. SK 1
	4	490057 S*	STGK-M8 4 POL. SK 1
<b>Female</b>			
Pole number	3	490037 S*	KUGK-M8 3 POL. SK 1
	4	490059 S*	KUGK-M8 4 POL. SK 1

Technical data	Male	Female
Rated voltage $U_N$	AC/DC 24 V	
Rated voltage max.	60 V	
Rated current	4 A	
Pole number	3	4
Status indication	-	
Current Consumption	- mA	
Coding	-	
Shielding	-	
<b>General</b>		
Connection device	Screw terminal 0.14 mm <sup>2</sup> – 0.5 mm <sup>2</sup>	
Design	M 8x1 male straight	
Contact material	CuZn, gold-plated	
Material sealing ring	-	NBR
Test voltage	1500	
Degree of pollution	3	
Insulation resistance	> 10000 MΩ	
Contact resistance	< 3 mΩ	
Flamability according to UL 94	V0	
Protection class	IP67	
Housing material	PBT	
Thread material	CuZn nickel-plate	
Color of the housing	black	
Cable diameter	3.5 – 5 mm	
Storage temperature range	-40 °C ... +90 °C	
Temperature range connector	-25 °C ... +85 °C	
Mechanical service life	>100 insertion cycles	
Weight (kg/piece)	0.040	
Approvals	cULus (E224249)	

Accessories	Part-No.	Type	Jacket material
matching cables	117240	SU TR AS PUR 3x0,25 UL	PUR
	117241	SU TR AS PUR 4x0,25 UL	PUR
	117243	SU TR AS PUR 3x0,34 UL	PUR
	117244	SU TR AS PUR 4x0,34 UL	PUR

### Mounting diagram



\* S Article from stock  
A Available with a lead time  
R Available on request

# Actuator sensor interface · M12 - connector

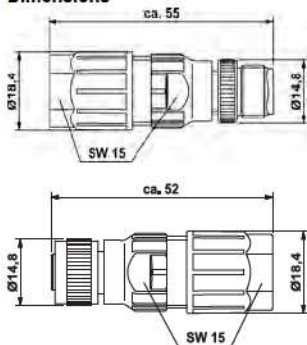
Field wireable connector, M12 straight

Male / female - A coded

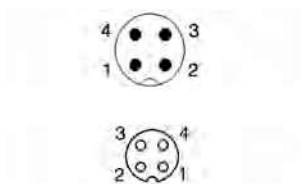
Fast connection method, IDC method of termination



### Dimensions



### Pin layout



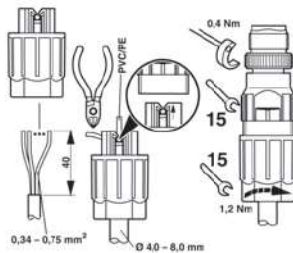
Description	Part-No.	Type	PU
<b>Male</b>			
Pole number	4	490028 S*	STGK-M12 4POL-SNK 1
<b>Female</b>			
Pole number	4	490029 S*	KUGK-M12 4POL. SNK 1

Technical data	Male	Female
Rated voltage $U_N$	AC/DC 24 V	
Rated voltage max.	250 V	
Rated current	4 A	
Pole number	4	
Status indication	-	
Current Consumption	- mA	
Coding	A	
Shielding	-	

General	
Design	M 12x1
Nominal insulation voltage	300 V
Test voltage	2500 V
Degree of pollution	3
Insulation resistance	> 1000 MΩ
Contact resistance	< 5 mΩ
Flamability according to UL 94	V0
Protection class	IP67
Housing material	PBT
Color of the housing	black
Contact material	CuZn, gold-plated
Thread material	CuZn nickel-plate
Material sealing ring	- NBR
Cable diameter	4 - 7.5 mm
Storage temperature range	-40 °C ... +90 °C
Temperature range connector	-25 °C ... +80 °C
Connection device	Compliant terminal
Cross-section, metric	0.75 mm <sup>2</sup>
Mechanical service life	>100 insertion cycles
Weight (kg/piece)	0.030
Approvals	cULus (E224249)

Accessories	Part-No.	Type	Jacket material
matching cables	117243	SU TR AS PUR 3x0,34 UL	PUR
	117244	SU TR AS PUR 4x0,34 UL	PUR

### Mounting diagram

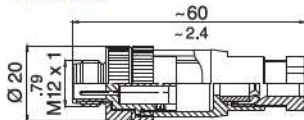


# Actuator sensor interface · M12 - connector

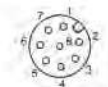
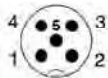
Field wireable connector, M12 straight  
Male - A coded  
Screw terminal



### Dimensions



### Pin layout



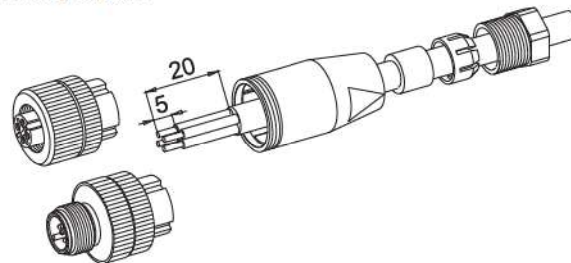
Description	Part-No.	Type	PU
<b>Male</b>			
Pole number	4	490017 S*	STGK-M12 4POL.SK PG7 1
	5	490018 S*	STGK M12 5 POL. SK PG7 1
	8	490070 S*	STGK M12 8 POL. SK PG9 1

Technical data		Male	
Rated voltage $U_N$		AC/DC 24 V	
Rated voltage max.	250 V	125 V	60 V
Rated current		4 A	2 A
Pole number	4	5	8
Status indication		-	
Current Consumption		- mA	
Coding		A	
Shielding		-	

General			
Design		M 12x1	
Nominal insulation voltage	2500 V	1500 V	800 V
Test voltage	2950 V	1750 V	910 V
Degree of pollution		3	
Insulation resistance		> 10000 MΩ	
Contact resistance		< 3 mΩ	
Flamability according to UL 94		V0	
Protection class		IP67	
Housing material		PBT	
Color of the housing		black	
Contact material		CuZn, gold-plated	
Thread material		CuZn nickel-plate	
Material sealing ring		-	
Cable diameter		4 – 6 mm	6 – 8 mm
Storage temperature range		-40 °C ... +90 °C	
Temperature range connector		-25 °C ... +85 °C	
Connection device		Screw terminal max. 0.75 mm <sup>2</sup>	Screw terminal max. 0.5 mm <sup>2</sup>
Cross-section, metric		0.75 mm <sup>2</sup>	0.5 mm <sup>2</sup>
Mechanical service life		>100 insertion cycles	
Weight (kg/piece)		0.040	
Approvals		cURus (E224249)	

Accessories	Part-No.	Type	Jacket material
matching cables	117243	SU TR AS PUR 3x0,34 UL	PUR
	117244	SU TR AS PUR 4x0,34 UL	PUR
	117245	SU TR AS PUR 5x0,34 UL	PUR
	117246	SU TR AS PUR 5x0,34 UL	PUR
	117242	SU TR AS PUR 8x0,25 UL	PUR

### Mounting diagram



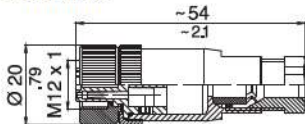


# Actuator sensor interface · M12 - connector

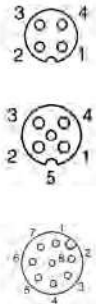
Field wireable connector, M12 straight  
Female - A coded  
Screw terminal



### Dimensions



### Pin layout



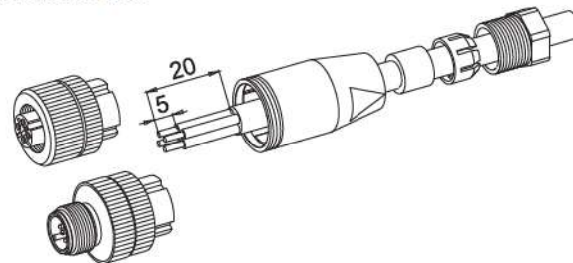
Description	Part-No.	Type	PU
<b>Female</b>			
Pole number	4	490011 S*	KUGK-M12 4POL. SK PG7 1
	5	490012 S*	KUGK-M12 5pol. SK PG7 1
	8	490071 S*	KUGK-M12 8POL. SK PG9 1

Technical data		Female	
Rated voltage $U_N$		AC/DC 24 V	
Rated voltage max.	250 V	125 V	60 V
Rated current	4 A		2 A
Pole number	4	5	8
Status indication		-	
Current Consumption		- mA	
Coding		A	
Shielding		-	

General			
Design		M 12x1	
Nominal insulation voltage	2500 V	1500 V	800 V
Test voltage	2950 V	1750 V	910 V
Degree of pollution		3	
Insulation resistance		> 10000 MΩ	
Contact resistance		< 3 mΩ	
Flamability according to UL 94		V0	
Protection class		IP67	
Housing material		PBT	
Color of the housing		black	
Contact material		CuZn, gold-plated	
Thread material		CuZn nickel-plate	
Material sealing ring		-	
Cable diameter	4 - 6 mm	6 - 8 mm	
Storage temperature range	-40 °C ... +90 °C		
Temperature range connector	-25 °C ... +85 °C		
Connection device	Screw terminal max. 0.75 mm <sup>2</sup>	Screw terminal max. 0.5 mm <sup>2</sup>	
Cross-section, metric	0.75 mm <sup>2</sup>	0.5 mm <sup>2</sup>	
Mechanical service life	>100 insertion cycles		
Weight (kg/piece)	0.040		
Approvals	cURus (E224249)		

Accessories	Part-No.	Type	Jacket material
matching cables	117243	SU TR AS PUR 3x0,34 UL	PUR
	117244	SU TR AS PUR 4x0,34 UL	PUR
	117245	SU TR AS PUR 5x0,34 UL	PUR
	117246	SU TR AS PUR 5x0,34 UL	PUR
	117242	SU TR AS PUR 8x0,25 UL	PUR

### Mounting diagram

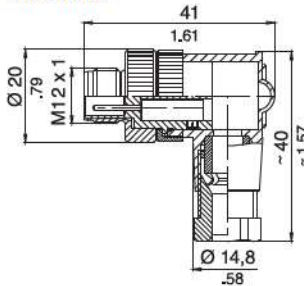


# Actuator sensor interface · M12 - connector

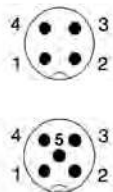
Field wireable connector, M12 angled  
Male - A coded  
Screw terminal



### Dimensions



### Pin layout



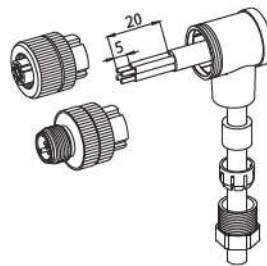
Description	Part-No.	Type	PU
<b>Male</b>			
Pole number	4	490020 S*	STWK-M12 4POL. SK PG7 1
	5	490021 S*	STWK-M12 5POL. SK PG7 1

Technical data		Male	
Rated voltage $U_N$		AC/DC 24 V	
Rated voltage max.	250 V		60 V
Rated current		4 A	
Pole number	4		5
Status indication		-	
Current Consumption		- mA	
Coding		A	
Shielding		-	

General		M 12x1	
Design		M 12x1	
Nominal insulation voltage	2500 V		1500 V
Test voltage	2950 V		1750 V
Degree of pollution		3	
Insulation resistance		> 10000 MΩ	
Contact resistance		< 3 mΩ	
Flamability according to UL 94		V0	
Protection class		IP67	
Housing material		PBT	
Color of the housing		black	
Contact material		CuZn, gold-plated	
Thread material		CuZn nickel-plate	
Material sealing ring		-	
Cable diameter		4 - 6 mm	
Storage temperature range		-40 °C ... +90 °C	
Temperature range connector		-25 °C ... +85 °C	
Connection device		Screw terminal max. 0.75 mm <sup>2</sup>	
Cross-section, metric		0.75 mm <sup>2</sup>	
Mechanical service life		>100 insertion cycles	
Weight (kg/piece)		0.040	
Approvals		cURus (E224249)	

Accessories	Part-No.	Type	Jacket material
matching cables	117243	SU TR AS PUR 3x0,34 UL	PUR
	117244	SU TR AS PUR 4x0,34 UL	PUR
	117245	SU TR AS PUR 5x0,34 UL	PUR
	117246	SU TR AS PUR 5x0,34 UL	PUR

### Mounting diagram

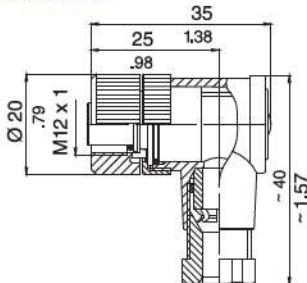


# Actuator sensor interface · M12 - connector

Field wireable connector, M12 angled  
 Female - A coded  
 Screw terminal



### Dimensions



### Pin layout



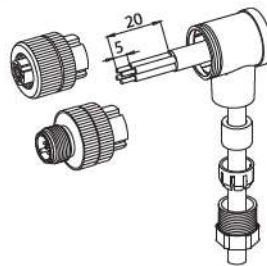
Description	Part-No.	Type	PU
<b>Female</b>			
Pole number	4	490014 S*	KUWK-M12 4POL.SK PG7 1
	5	490015 S*	KUWK-M12 5POL.SK PG7 1

Technical data		Female	
Rated voltage $U_N$		AC/DC 24 V	
Rated voltage max.	250 V		60 V
Rated current		4 A	
Pole number	4		5
Status indication		-	
Current Consumption		- mA	
Coding		A	
Shielding		-	

General		M 12x1	
<b>Design</b>			
Nominal insulation voltage	2500 V		1500 V
Test voltage	2950 V		1750 V
Degree of pollution		3	
Insulation resistance		> 10000 M $\Omega$	
Contact resistance		< 3 m $\Omega$	
Flamability according to UL 94		V0	
Protection class		IP67	
Housing material		PBT	
Color of the housing		black	
Contact material		CuZn, gold-plated	
Thread material		CuZn nickel-plate	
Material sealing ring		NBR	
Cable diameter		4 – 6 mm	
Storage temperature range		-40 °C ... +90 °C	
Temperature range connector		-25 °C ... +85 °C	
Connection device		Screw terminal max. 0.75 mm <sup>2</sup>	
Cross-section, metric		0.75 mm <sup>2</sup>	
Mechanical service life		>100 insertion cycles	
Weight (kg/piece)		0.040	
Approvals		cURus (E224249)	

Accessories	Part-No.	Type	Jacket material
matching cables	117243	SU TR AS PUR 3x0,34 UL	PUR
	117244	SU TR AS PUR 4x0,34 UL	PUR
	117245	SU TR AS PUR 5x0,34 UL	PUR
	117246	SU TR AS PUR 5x0,34 UL	PUR

### Mounting diagram



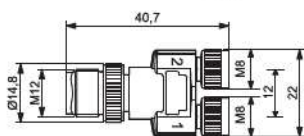
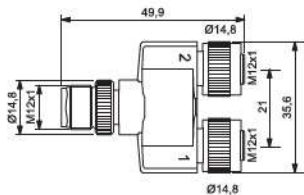


# Actuator sensor interface · M12, M12/M8 -connector

## T piece

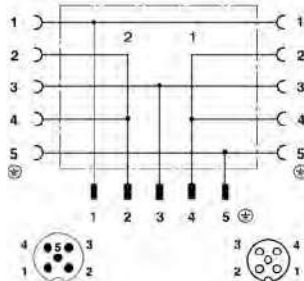
Male M12 to 2× female M12, 5pin PIN 2+4 bridged + PE

Male M12 4pin to 2× female M8, 3pin

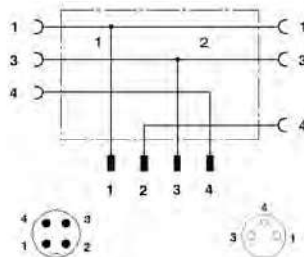


### PIN assignment

#### 490026



#### 490038



Description	Part-No.	Type	PU	
Pole number	5	490026 S*	AST M 12/2xM 12	1
	3	490038 S*	T-VERTEILER M12 AUF 2x M8	1

Technical data	490026	490038
Rated voltage $U_N$	AC/DC 24 V	
Rated voltage max.	60 V	30 V
Rated current	4 A	3 A
Pole number	5	3
Status indication	-	
Current Consumption	- mA	
Coding	A	
Shielding	-	

General	M 12x1/M 12x1	M 12x1/M 8x1
Design	M 12x1/M 12x1	M 12x1/M 8x1
Nominal insulation voltage	60 V	
Test voltage	1500 V	
Degree of pollution	3	
Insulation resistance	> 10000 MΩ	
Contact resistance	< 5 mΩ	
Flamability according to UL 94	HB	
Protection class	-	
Housing material	TPU	
Color of the housing	black	
Contact material	CuZn, gold-plated	
Thread material	Zinc die-casting, nickel-plated	
Material sealing ring	NBR	
Storage temperature range	-25 °C ... +90 °C	
Temperature range connector	-25 °C ... +90 °C	
Connection device	-	
Mechanical service life	>100 insertion cycles	
Weight (kg/piece)	0.029	0.014
Approvals	cULus (E224249)	

Accessories	Part-No.	Type	PU
Torque setting tool M 8	490090	DM-SET M8	1
Torque setting tool M 12	490091	DM-SET M12	1

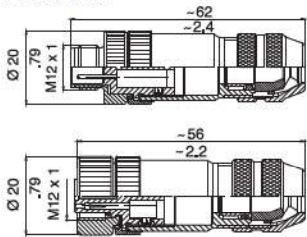
\* S Article from stock  
 A Available with a lead time  
 R Available on request

# Actuator sensor interface · M12 - connector

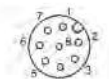
Field wireable connector, M12 straight shielded  
Male / female - A coded (CAN)  
Screw terminal



### Dimensions



### Pin layout



Description	Part-No.	Type	PU
<b>Male</b>			
Pole number	4	490050 S*	STGK4-M12(C) 4-POL. A-cod. SK 1
	5	490051 S*	STGK5-M12(C) 5-POL. A-cod. SK 1
	8	490054 S*	STGK8-M12(C) 8-POL. A-cod. SK 1
<b>Female</b>			
Pole number	4	490052 S*	KUGK4-M12(C) 4-POL. A-cod. SK 1
	5	490053 S*	KUGK5-M12(C) 5-POL. A-cod. SK 1
	8	490077 S*	KUGK8-M12(C) 8-POL. A-cod. SK 1

Technical data	Male			Female		
Rated voltage $U_N$	AC/DC 24 V					
Rated voltage max.	250 V	60 V	30 V	250 V	60 V	30 V
Rated current	4 A		2 A	4 A		2 A
Pole number	4	5	8	4	5	8
Status indication	-					
Current Consumption	- mA					
Coding	A					
Shielding	360°					

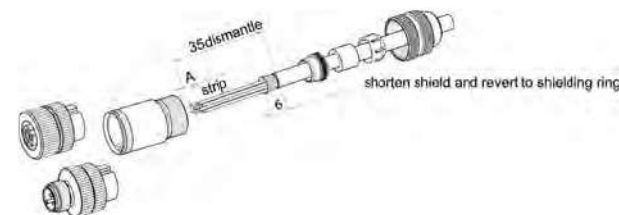
General						
Design	M 12x1					
Nominal insulation voltage	- V					
Test voltage	2500 V	1500 V	800 V	2500 V	1500 V	800 V
Degree of pollution	3					
Insulation resistance	> 10000 MΩ					
Contact resistance	< 3 mΩ					
Flamability according to UL 94	HB					
Protection class	IP67					
Housing material	Zinc die-casting					
Color of the housing	-					
Contact material	CuZn, gold-plated					
Thread material	CuZn nickel-plate					
Material sealing ring	NBR					
Cable diameter	6 - 8 mm					
Storage temperature range	-40 °C ... +90 °C					
Temperature range connector	-25 °C ... +85 °C					

Connection device	Screw terminal max. 0.75 mm <sup>2</sup>			Screw terminal max. 0.5 mm <sup>2</sup>	
Cross-section, metric	0.75 mm <sup>2</sup>	0.5 mm <sup>2</sup>	0.75 mm <sup>2</sup>	0.5 mm <sup>2</sup>	0.5 mm <sup>2</sup>
Mechanical service life	>100 insertion cycles				
Weight (kg/piece)	0.045				
Approvals	cURus (E224249)				

Accessories	Part-No.	Type	Jacket material
matching cables	117253	SU TR AS(C)PUR (3x0,34) UL	PUR
	117254	SU TR AS(C)PUR (4x0,34) UL	PUR
	117255	SU TR AS(C)PUR (5x0,34) UL	PUR
	117252	SU TR AS(C)PUR (8x0,25) UL	PUR

**Comments**  
5-pole variant for Device Net and CAN, see bus cables

### Mounting diagram

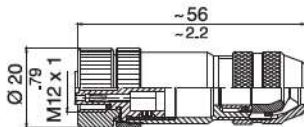
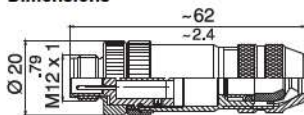


# Actuator sensor interface · M12 - connector

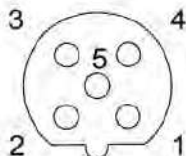
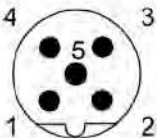
Field wireable connector, M12 straight shielded  
Male / female - B coded (Profibus, Interbus)  
Screw terminal



### Dimensions



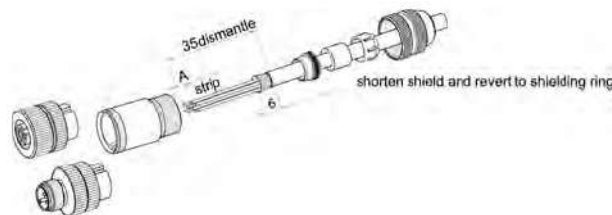
### Pin layout



Description	Part-No.	Type	PU
<b>Male</b>			
Pole number	5	490072 S*	STGK5-M12(C) 5-POL. B-cod. SK 1
<b>Female</b>			
Pole number	5	490073 S*	KUGK5-M12(C) 5-POL. B-cod. SK 1
<b>Technical data</b>			
<b>Male</b>		<b>Female</b>	
Rated voltage $U_N$		AC/DC 24 V	
Rated voltage max.		60 V	
Rated current		4 A	
Pole number		5	
Status indication		-	
Current Consumption		- mA	
Coding		B	
Shielding		360°	
<b>General</b>			
Design		M 12x1	
Nominal insulation voltage		- V	
Test voltage		1500 V	
Degree of pollution		3	
Insulation resistance		> 10000 MΩ	
Contact resistance		< 3 mΩ	
Flamability according to UL 94		HB	
Protection class		IP67	
Housing material		Zinc die-casting	
Contact material		CuZn, gold-plated	CuSn, gold-plated
Thread material		CuZn nickel-plate	
Material sealing ring		NBR	
Cable diameter		6 - 8 mm	
Storage temperature range		-40 °C ... +90 °C	
Temperature range connector		-25 °C ... +85 °C	
Connection device		Screw terminal max. 0.75 mm <sup>2</sup>	
Cross-section, metric		-	
Mechanical service life		>100 insertion cycles	
Weight (kg/piece)		0.040	
Approvals		cURus (E224249)	

**Comments**  
suitable for Profibus and Interbus, see bus cables

### Mounting diagram



\* S Article from stock  
A Available with a lead time  
R Available on request

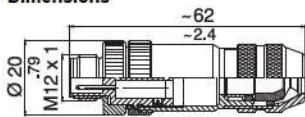


# Actuator sensor interface · M12 - connector

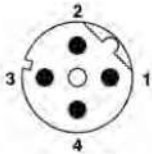
Field wireable connector, M12 straight shielded  
Male - D coded Cat 5e (Ethernet, Profinet)  
Screw terminal



### Dimensions



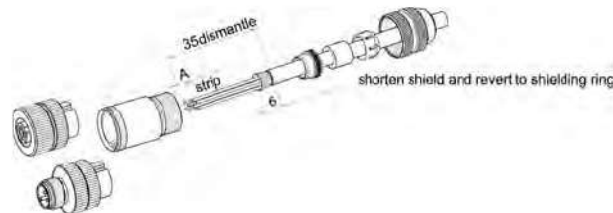
### Pin layout



Description	Part-No.	Type	PU
<b>Male</b>			
Pole number	4	490074 S*	STGK4-M12(C) 4-POL. D-cod. SK 1
<b>Technical data</b>			
<b>Male</b>			
Rated voltage $U_N$		AC/DC 24 V	
Rated voltage max.		60 V	
Rated current		4 A	
Pole number		4	
Status indication		-	
Current Consumption		- mA	
Coding		D	
Shielding		360°	
<b>General</b>			
Design		M 12x1 male	
Nominal insulation voltage		250 V	
Test voltage		2950 V	
Degree of pollution		3	
Insulation resistance		> 10000 MΩ	
Contact resistance		< 3 mΩ	
Flamability according to UL 94		HB	
Protection class		IP67	
Housing material		Zinc die-casting	
Contact material		CuZn, gold-plated	
Thread material		CuZn nickel-plate	
Material sealing ring		NBR	
Cable diameter		6 – 8 mm	
Storage temperature range		-40 °C ... +90 °C	
Temperature range connector		-25 °C ... +85 °C	
Connection device		Screw terminal	
Cross-section, metric		without AE: 0.25–0.75 mm <sup>2</sup> with AE: 0.14–0.75 mm <sup>2</sup>	
Mechanical service life		>100 insertion cycles	
Weight (kg/piece)		0.045	
Approvals		cURus (E224249)	

**Comments**  
suitable for Ethernet and Profinet, see bus cables

### Mounting diagram

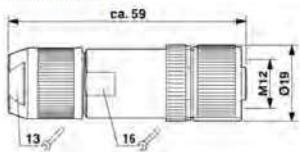


# Actuator sensor interface · M12 - connector

Field wireable connector, M12 straight shielded  
 Female - D coded Cat 5e (Ethernet, Profinet)  
 Shield termination via iris spring, cage clamp



### Dimensions

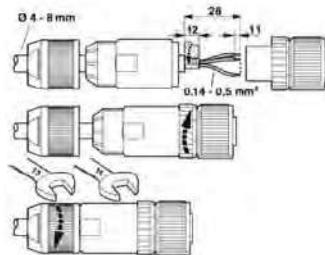


### Pin layout



Description	Part-No.	Type	PU
<b>Female</b>			
Pole number	4	490095 S*	KUGK4-M12(C) 4-POL. D-cod. SK 1
<b>Technical data</b>			
		<b>Female</b>	
Rated voltage $U_N$	AC/DC 24 V		
Rated voltage max.	60 V		
Rated current	4 A		
Pole number	4		
Status indication	-		
Current Consumption	- mA		
Coding	D		
Shielding	360°		
<b>General</b>			
Design	M 12x1 female		
Nominal insulation voltage	60 V		
Test voltage	800 V		
Degree of pollution	3		
Insulation resistance	> 10000 MΩ		
Contact resistance	< 8 mΩ		
Flamability according to UL 94	V0		
Protection class	IP67		
Housing material	Zinc die-casting		
Contact material	CuSn, gold-plated		
Thread material	CuZn nickel-plate		
Material sealing ring	NBR		
Cable diameter	4 - 8 mm		
Storage temperature range	-40 °C ... +90 °C		
Temperature range connector	-40 °C ... +85 °C		
Connection device	Spring terminal 0.14 mm <sup>2</sup> - 0.5 mm <sup>2</sup> AWG 26 - AWG 20		
Mechanical service life	>100 insertion cycles		
Weight (kg/piece)	0.042		
Approvals	-		
<b>Comments</b>			
suitable for Ethernet and Profinet, see bus cables			

### Mounting diagram



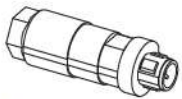
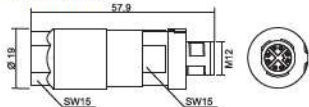
\* S Article from stock  
 A Available with a lead time  
 R Available on request

# Actuator sensor interface · M12 - connector

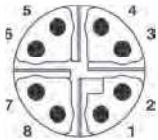
Field wireable connector, M12 straight shielded  
 Male - X coded Cat 6<sub>A</sub> (Ethernet, Profinet)  
 IDC/quick-connect technology



### Dimensions



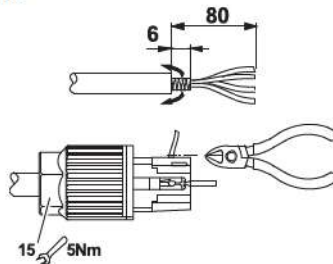
### Pin layout



Description	Part-No.	Type	PU
<b>Male</b>			
Pole number	8	490167 S*	STGK8-M12(C) 8pol. X-kod. Cat.6A 1
<b>Technical data</b>			
		<b>Male</b>	
Rated voltage $U_N$		DC 50 V	
Rated current		0.6 A	
Pole number		8	
Coding		X	
Shielding		360°	
<b>General</b>			
Design		M 12x1	
Degree of pollution		3	
Insulation resistance		> 100 MΩ	
Flamability according to UL 94		V0	
Contact resistance		≤5 mΩ	
Protection class		IP65/67	
Housing material		Zinc die-casting	
Contact material		CuSn, gold-plated	
Material sealing ring		NBR	
Strand diameter			
Cable diameter		0.9 – 1.6 mm	
Storage temperature range		-40 °C ... +85 °C	
Temperature range connector		-40 °C ... +85 °C	
Connection device		Compliant terminal	
Cross-section AWG		AWG 26-22	
Mechanical service life		>100 insertion cycles	
Weight (kg/piece)		0.043	

Accessories	Part-No.	Type	Jacket material
matching cables	104338	EL BUS(C)PVC ET(4x(2xAWG26/7)St)C Cat.6A	PVC
	104331	EL ET BUS(C)PVC PIMF (4x(2xAWG26/7)) GN	PVC
	104347	SU BUS(C)P ET(4x2xAWG26/19)C UL Cat.6	PUR

### Mounting diagram





# Actuator sensor interface

## Field wireable connector, M12 straight shielded Female - X coded Cat 6<sub>A</sub> (Ethernet, Profinet) IDC/quick-connect technology

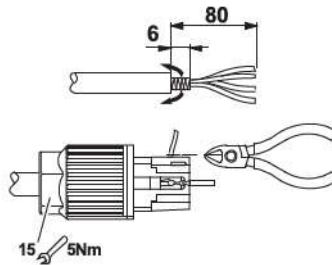


Pin layout



Description	Part-No.	Type	PU
Pole number	8	490168 S*	KUGK8-M12(C) 8pol. X-kod. Cat.6A 1
<b>Technical data</b>			
Rated voltage $U_N$		DC 50 V	
Rated current		0.6 A	
Pole number		8	
Coding		X	
Shielding		360°	
<b>General</b>			
Design		M 12x1	
Degree of pollution		3	
Insulation resistance		> 100 MΩ	
Flamability according to UL 94		V0	
Contact resistance		—	
Protection class		IP65/67	
Housing material		Zinc die-casting	
Contact material		CuSn, gold-plated	
Material sealing ring		NBR	
Strand diameter			
Cable diameter		5 – 9.7 mm	
Storage temperature range			
Temperature range connector		-40 °C ... +85 °C	
Connection device		Compliant terminal	
Cross-section AWG		AWG 26-22	
Mechanical service life		>100 insertion cycles	
Weight (kg/piece)		0.022	

Mounting diagram



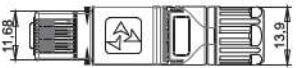
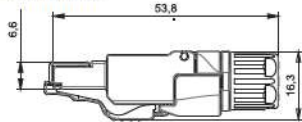
\* S Article from stock  
A Available with a lead time  
R Available on request

# Actuator sensor interface

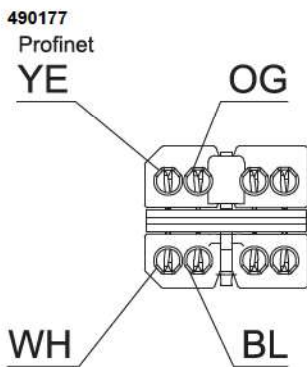
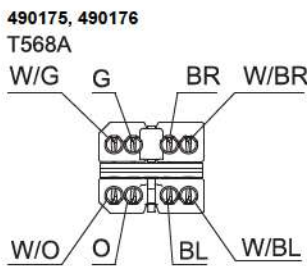
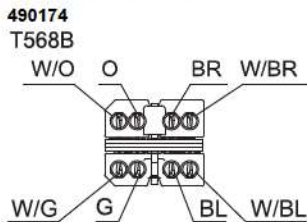
## Industrial connector RJ45 solid metal housing, quick-connect technology AWG 27–22 Cat 6<sub>A</sub> / Cat 5e



### Dimensions



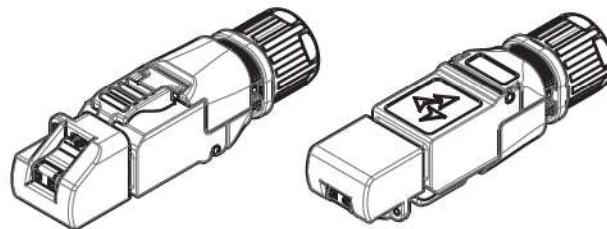
### Connection assignment



Description	Part-No.	Type	PU
Connection according to TIA 568 B	490174 S*	RJ45-M 8pol. Cat.6A T568B	1
Connection according to TIA 568 A	490175 S*	RJ45-M 8pol. Cat.6A T568A	1
Connection according to TIA 568 B	490176 S*	RJ45-M 8pol. Cat.6A T568B	1
Connecting according to color coded Profinet.	490177 S*	RJ45-MS 4pol. PROFINET	1

Technical data	490174	490175	490176	490177
Rated voltage			30 V	
Rated current			≤1 A per contact	
Pole number		8		4
Transfer rate		10 Gbit/s		100 Mbit/s
Category		Cat.6 <sub>A</sub>		Cat.5e
Shielding			shielded	
<b>General</b>				
Design			RJ45	
Degree of pollution			1	
Insulation resistance			> 500 MΩ	
Contact resistance			< 20 mΩ	
Flamability according to UL 94			V0	
Protection class			IP20	
Housing material			Zinc die-casting	
Color of the housing			silver	
Cover			PBT black	
Contact material			Spring steel gold-plated	
Strand diameter			1 – 1.6 mm	
Cable diameter			5.5 – 10 mm	
Cross-section AWG	AWG 24/1-22/1, AWG 27/7-22/7, AWG 24/19-22/19	AWG 26/1-24/1, AWG 27/7-24/7, AWG 26/19	AWG 24/1-22/1, AWG 27/7-22/7, AWG 24/19-22/19	
Operation temperature range			-40 °C ... +85 °C	
Storage temperature range			-40 °C ... +85 °C	
Mechanical service life			>750 insertion cycles	
Dimensions (w x h x d)			13.9 x 16.3 x 53.8 mm	
Weight (kg/piece)			0.025	
Approvals			cULus (E326112)	
Standards		IEC 60603-7-51		IEC 61784-5-3
<b>Comments</b>				
Suitable for Profinet, SERCOS3, Ethercat, Ethernet/IP, Powerlink, VARAN, Power over Ethernet+ (PoE+IEEE 802.3at)				
Suitable cables, see overview assignment Ethernet cables to connectors				

### Mounting diagram

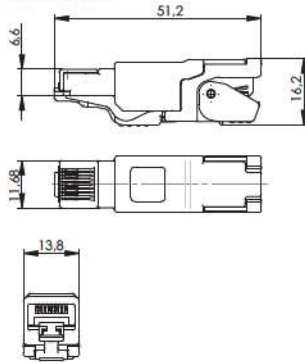


# Actuator sensor interface · RJ45 connector

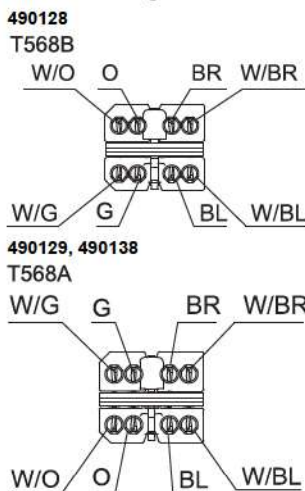
**Industrial connector RJ45**  
**solid metal housing, quick-connect technology AWG 27–22**  
**Cat 6<sub>A</sub>**



**Dimensions**



**Connection assignment**



Description	Part-No.	Type	PU	
Description	Connection according to TIA 568 B	490128 S*	RJ45-M 8pol. Cat.6A T568B	1
	Connection according to TIA 568 A	490129 S*	RJ45-M 8pol. Cat.6A T568A	1
	Connection according to TIA 568 B	490138 S*	RJ45-M 8pol. Cat.6A T568B AWG 26/19	1

Technical data	490128	490129	490138
Rated voltage		30 V	
Rated current		≤1 A	
Pole number		8	
Transfer rate		10 Gbit/s	
Category		Cat.6 <sub>A</sub>	
Shielding		shielded	
<b>General</b>			
Design		RJ45	
Degree of pollution		1	
Insulation resistance		> 500 MΩ	
Contact resistance		< 20 mΩ	
Flamability according to UL 94		V0	
Protection class		IP20	
Housing material		Zinc die-casting	
Color of the housing		black	
Cover		PBT black	
Contact material		Spring steel gold-plated	
Strand diameter		0.85 – 1.6 mm	0.85 – 1.1 mm
Cable diameter		5 – 9 mm	
Cross-section AWG		AWG 24/1-22/1, AWG 27/7-22/7	AWG 26/1, AWG 26/7, AWG 26/19
Operation temperature range		-40 °C ... +70 °C	
Storage temperature range		-40 °C ... +70 °C	
Mechanical service life		>750 insertion cycles	
Dimensions (w × h × d)		13.8 × 16.2 × 53.1 mm	
Weight (kg/piece)		0.025	
Approvals		cULus (E326112)	
Standards		IEC 60603-7-51	

**Comments**  
 Suitable for Profinet, SERCOS3, Ethercat, Ethernet/IP, Powerlink, VARAN, Power over Ethernet+ (PoE+IEEE 802.3at)  
 Suitable cables, see overview assignment Ethernet cables to connectors



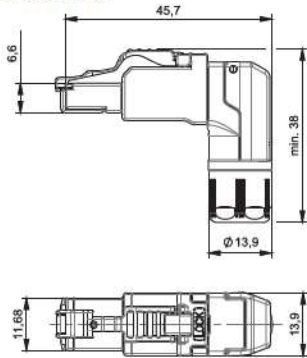
# Actuator sensor interface · RJ45 connector

Industrial connector RJ45, angled  
solid metal housing, quick-connect technology AWG 27–22  
Cat 6<sub>A</sub> / Cat 5e

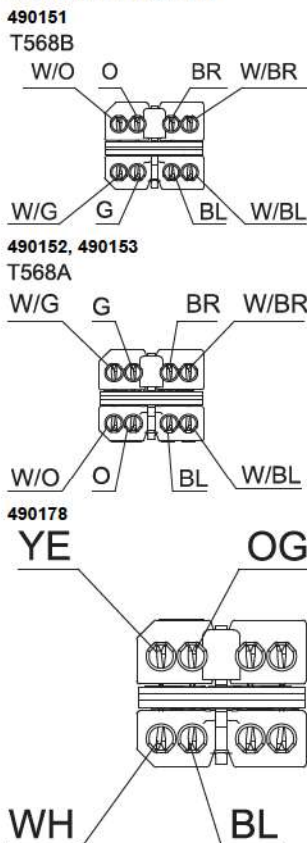


Description	Part-No.	Type	PU	
Description	Connection according to TIA 568 B	490151 S*	RJ45-X 8pol. Cat.6A T568B	1
	Connection according to TIA 568 A	490152 S*	RJ45-X 8pol. Cat.6A T568A	1
	Connection according to TIA 568 B	490153 S*	RJ45-X 8pol. Cat.6A T568B AWG 26/19	1
	Connecting according to color coded Profinet.	490178 S*	RJ45-MR 4pol. PROFINET	1

### Dimensions

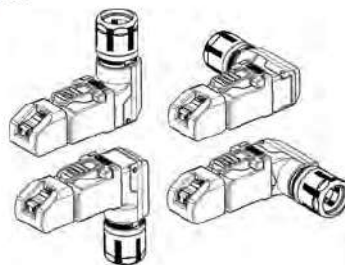


### Connection assignment



Technical data	490151	490152	490153	490178
Rated voltage	30 V			
Rated current	≤1 A per contact			
Pole number	8		4	
Transfer rate	10 Gbit/s		100 Mbit/s	
Category	Cat.6 <sub>A</sub>		Cat.5e	
Shielding	shielded			
<b>General</b>				
Design	RJ45 angle connector			
Degree of pollution	1			
Insulation resistance	> 500 MΩ			
Contact resistance	< 20 mΩ			
Flamability according to UL 94	V0			
Protection class	IP20			
Housing material	Zinc die-casting			
Color of the housing	silver			
Cover	PBT black			
Contact material	Spring steel gold-plated			
Strand diameter	1 – 1.6 mm	0.85 – 1.1 mm		1 – 1.6 mm
Cable diameter	5.5 – 10 mm			
Cross-section AWG	AWG 24/1-22/1, AWG 27/7-22/7	AWG 26/1-24/1, AWG 27/7-24/7, AWG 26/19	AWG 24/1-22/1, AWG 27/7-22/7, AWG 24/19-22/19	
Operation temperature range	-40 °C ... +85 °C			
Storage temperature range	-40 °C ... +85 °C			
Mechanical service life	>750 insertion cycles			
Dimensions (w x h x d)	13.9 x 38.0 x 45.7 mm			
Weight (kg/piece)	0.030		0.025	
Approvals	cULus (E326112)			
Standards	IEC 60603-7-51		IEC 61784-5-3	
<b>Comments</b>	Suitable for Profinet, SERCOS3, Ethercat, Ethernet/IP, Powerlink, VARAN, Power over Ethernet+ (PoE+IEEE 802.3at) Suitable cables, see overview assignment Ethernet cables to connectors			

### Mounting diagram

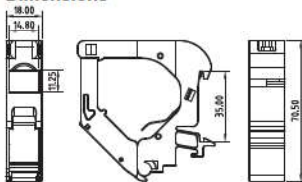


# Interface Technology · Ethernet connectivity

Module holder, RJ45, female / IDC  
For TS35 DIN rail  
Cat. 6A



### Dimensions



### Connection assignment RJ45

	TIA 568A	TIA 568 B	Profinet
1	WHGN	WHOG	YE
2	GN	OG	OG
3	WHOG	WHGN	WH
4	BU	BU	-
5	WHBU	WHBU	-
6	OG	GN	BU
7	WHBR	WHBR	-
8	BR	BR	-

Description	Part-No.	Type	PU
<b>Suitable for Ethernet applications</b>			
Description	8-pin	490166 S* MDT-RJ45 F 8pol. Cat.6A	1
<b>Technical data</b>			
		<b>490166</b>	
Rated voltage	125		
Rated current	≤1.5 A per contact		
Pole number	8		
Transfer rate	10 Gbit/s		
Category	Cat.6		
Contact type	IDC		
Shielding	shielded		
<b>General</b>			
<b>Design</b>		RJ45 female	
Nominal insulation voltage	- V		
Test voltage	- V		
Degree of pollution	1		
Insulation resistance	> 100 MΩ		
Contact resistance	< 50 mΩ		
Flamability according to UL 94	V0		
Protection class	IP20		
Housing material	PC		
Color of the housing	grey		
Contact material	CuSn, gold-plated		
Cable diameter	4.5 – 8 mm		
Cross-section AWG	AWG 24-22		
Operation temperature range	-40 °C ... +70 °C		
Storage temperature range	-40 °C ... +70 °C		
Mechanical service life	>750 insertion cycles		
Dimensions (w × h × d)	18.0 × 70.5 × 67.5 mm		
Weight (kg/piece)	0.063		
Approvals	cULus (E326112)		
Standards	-		
<b>Accessories</b>			
Patch cable RJ45 Cat.5e	192000.xxxx	xxxx cable length from 0.5 - 30 m	1
Patch cable RJ45 Cat.6	192100.xxxx	xxxx cable length from 0.5 - 30 m	1

\* S Article from stock  
A Available with a lead time  
R Available on request

# Actuator sensor interface · M8 panel jack

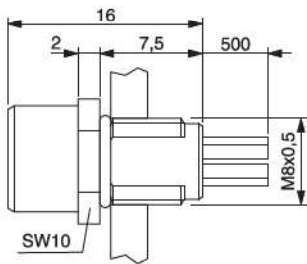
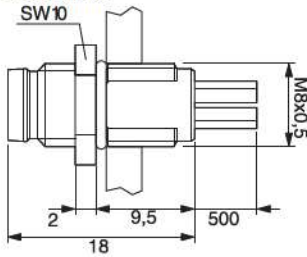
## M8 panel connectors using M8 thread

Male / female

0.5 m TPE wire



### Dimensions

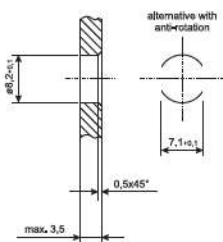


### Pin layout



### Mounting diagram

assembling board with through bore-hole  
2:1



Description	Part-No.	Type	PU	
<b>Male</b>				
Pole number	3	490062 S*	STGE-M8 3pol. 0,5m Litze	1
	4	490063 S*	STGE-M8 4pol. 0,5m Litze	1
<b>Female</b>				
Pole number	3	490060 S*	KUGE-M8 3pol. 0,5m Litze	1
	4	490061 S*	KUGE-M8 4pol. 0,5m Litze	1

Technical data	Male		Female	
Rated voltage $U_N$	AC/DC 24 V			
Rated voltage max.	60 V	30 V	60 V	30 V
Rated current	4 A			
Pole number	3	4	3	4
Cable length	0.5 m			
Coding	-			
Shielding	-			

General	M 8×1 male		M 8×1 female	
Design	M 8×1 male		M 8×1 female	
Test voltage	1500 V	800 V	1500 V	800 V
Degree of pollution	3			
Insulation resistance	> 100 MΩ			
Contact resistance	< 3 mΩ			
Flamability according to UL 94	HB			
Protection class	IP67			
Housing material	Zinc die-casting			
Contact material	CuZn, gold-plated			
Thread material	CuZn nickel-plate			
Material sealing ring	-		NBR	
Number of conductors/cross-section	0.25 mm <sup>2</sup> (14×0.15 mm)			
Jacket material	-			
Conductor insulation	TPE			
Cable diameter	- mm			
Bending radius	-			
Storage temperature range	-40 °C ... +90 °C			
Temperature range connector	-25 °C ... +85 °C			
Connection device	M 8			
Cross-section, metric	0.25 mm <sup>2</sup>			
Mechanical service life	>100 insertion cycles			
Weight (kg/piece)	0.012	0.014	0.012	0.014
Approvals	-			

### Comments

Included in scope of delivery: M8 lock nut

### Connection assignment

**Pole / wire color:**

- 1/ BN (brown)
- 3/ BU (blue)
- 4/ BK (black)

- 1/ BN (brown)
- 2/ WH (white)
- 3/ BU (blue)
- 4/ BK (black)

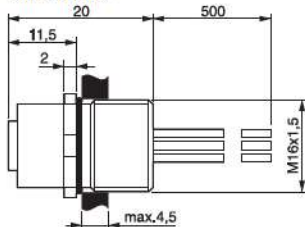


# Actuator sensor interface · M12 panel jack

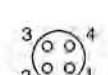
M12 connectors panel mounted using M16 thread  
 Male / female - A coded  
 0.5 m TPE wire



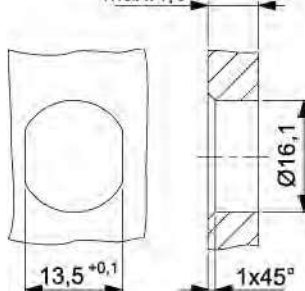
### Dimensions



### Pin layout



### Mounting diagram



Description	Part-No.	Type	PU	
<b>Male</b>				
Pole number	4	490067 S*	STGE-M12 4pol. 0,5m Litze	1
	5	490068 S*	STGE-M12 5pol. 0,5m Litze	1
	8	490069 S*	STGE-M12 8pol. 0,5m Litze	1
<b>Female</b>				
Pole number	4	490064 S*	KUGE-M12 4pol. 0,5m Litze	1
	5	490065 S*	KUGE-M12 5pol. 0,5m Litze	1
	8	490066 S*	KUGE-M12 8pol. 0,5m Litze	1

Technical data	Male			Female		
Rated voltage $U_N$	AC/DC 24 V					
Rated voltage max.	250 V	60 V	30 V	250 V	60 V	30 V
Rated current	4 A		2 A	4 A		2 A
Pole number	4	5	8	4	5	8
Cable length	0.5 m					
Coding	A					
Shielding	-					
<b>General</b>						
Design	M 12x1					
Test voltage	2500 V	1500 V	800 V	2500 V	1500 V	800 V
Degree of pollution	3					
Insulation resistance	> 100 MΩ					
Contact resistance	< 3 mΩ					
Flamability according to UL 94	V0					
Protection class	IP67					
Housing material	Zinc die-casting					
Contact material	CuZn, gold-plated					
Thread material	CuZn nickel-plate					
Material sealing ring	-			NBR		
Number of conductors/cross-section	0.34 mm <sup>2</sup> (7x0.25 mm)		0.25 mm <sup>2</sup> (14x0.15 mm)	0.34 mm <sup>2</sup> (7x0.25 mm)		0.25 mm <sup>2</sup> (14x0.15 mm)
Jacket material	-					
Conductor insulation	TPE					
Cable diameter	1.25 mm	1.15 mm	1.25 mm	1.25 mm	1.15 mm	1.15 mm
Bending radius	-					
Storage temperature range	-40 °C ... +90 °C					
Temperature range connector	-25 °C ... +90 °C					
Connection device	M 16					
Cross-section, metric	0.34 mm <sup>2</sup>		0.25 mm <sup>2</sup>	0.34 mm <sup>2</sup>		0.25 mm <sup>2</sup>
Mechanical service life	>100 insertion cycles					
Weight (kg/piece)	0.020	0.021	0.025	0.020	0.021	0.025
Approvals	-					

Accessories	Part-No.	Type	PU
Counter nut M16	600361	GMS M16	100

### Comments

#### Connection assignment

#### Pole / wire color:

- 1/ BN (brown)
- 2/ WH (white)
- 3/ BU (blue)
- 4/ BK (black)

- 1/ BN (brown)
- 2/ WH (white)
- 3/ BU (blue)
- 4/ BK (black)
- 5/ GY (grey)

- 1/ WH (white)
- 2/ BN (brown)
- 3/ GN (green)
- 4/ YE (yellow)
- 5/ GY (grey)
- 6/ PK (pink)
- 7/ BU (blue)
- 8/ RD (red)

# Actuator sensor interface · USB-panel connector

USB 3.0 panel connector with M22 thread for front installation  
 USB connector Type A on straight USB plug Type A with PVC cable  
 Type: USB-3.0 A/A



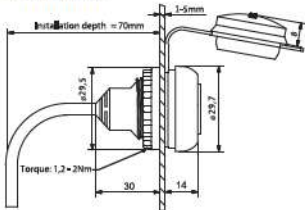
Description	Part-No.	Type	PU
<b>USB 3.0</b>			
Cable length	0.3 m	490113.0030 S* USB-3.0 A/A F/M 0,3m PVC	1
	0.6 m	490113.0060 S* USB-3.0 A/A F/M 0,6m PVC	1
	0.8 m	490113.0080 S* USB-3.0 A/A F/M 0,8m PVC	1
	1.5 m	490113.0150 S* USB-3.0 A/A F/M 1,5m PVC	1
	2.0 m	490113.0200 S* USB-3.0 A/A F/M 2,0m PVC	1
	3.0 m	490113.0300 S* USB-3.0 A/A F/M 3,0m PVC	1
	5.0 m	490113.0500 S* USB-3.0 A/A F/M 5,0m PVC	1

Technical data		USB 3.0					
Rated voltage $U_N$		AC/DC 5 V					
Rated voltage max.		30 V					
Rated current		0.9 A					
Pole number		9					
Cable length	0.3 m 0.6 m 0.8 m 1.5 m 2.0 m 3.0 m 5.0 m						
Transfer rate		5 Gbit/s					
USB standard		3.0					
Contact type		1 : 1					
Shielding		shielded					

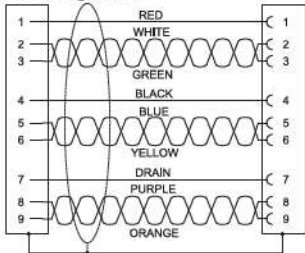
General	
Design	USB-A
Test voltage	- V
Degree of pollution	3
Insulation resistance at 20 °C	$\geq 100 \text{ M}\Omega \times \text{km}$
Contact resistance	$< 30 \text{ m}\Omega$
Flamability according to UL 94	-
Protection class	IP65 IP20
Housing material	PA, PVC
Cover	TPU
Contact material	CuSn, gold-plated
Mounting	Front installation
Installation depth	70 mm
Number of conductors/cross-section	$(2 \times \text{AWG}24 + 1 \times 2 \times \text{AWG}28 + 2 \times (1 \times 2 \times \text{AWG}28) \text{St}) \text{StC}$
Jacket material	PVC
Jacket color	black
Cable diameter	6.1 mm
Bending radius	$6 \times D$
Temperature range moving	-5 °C ... +70 °C
Operation temperature range	-5 °C ... +70 °C
Temperature range fixed	-25 °C ... +80 °C
Temperature range connector	
Mechanical service life	1500 insertion cycles
Dimensions (Ø×d)	29.5 × 45 mm
Weight (kg/piece)	0.046 0.058 0.066 0.094 0.113 0.152 0.232
Approvals	cULus (E326112)

**Comments**  
 Included in the delivery: captive safety cap

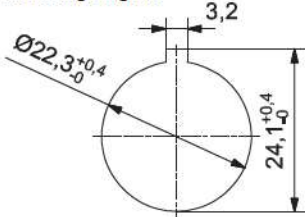
## Dimensions



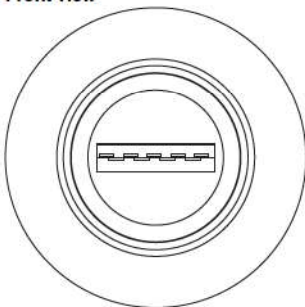
## PIN assignment



## Mounting diagram



## Front view

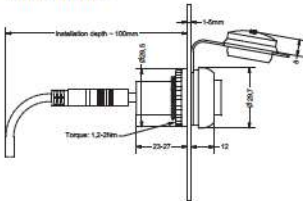


# Actuator sensor interface · USB-panel connector

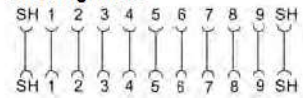
USB 3.0 panel connector with M22 thread for front installation  
 USB 3.0 female / female Type A/A  
 Typ: UBS-3.0 A/A F/F



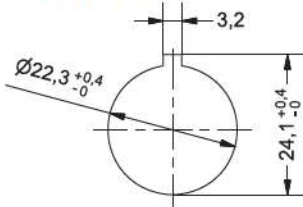
### Dimensions



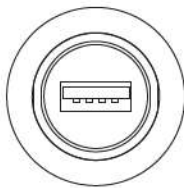
### PIN assignment



### Mounting diagram



front view



Description	Part-No.	Type	PU
USB 3.0	490112 S*	USB-3.0 A/A F/F	1
<b>Technical data</b>			
<b>USB 3.0</b>			
Rated voltage $U_N$	AC/DC 5 V		
Rated voltage max.	30 V		
Rated current	0.9 A		
Pole number	9		
Cable length	- m		
Transfer rate	5 Gbit/s		
USB standard	3.0		
Contact type	1 : 1		
Shielding	shielded		
<b>General</b>			
<b>Design</b>			
USB 3.0 female/female type A/A			
Test voltage	- V		
Degree of pollution	3		
Insulation resistance	> 100 MΩ		
Contact resistance	< 30 mΩ		
Flamability according to UL 94	-		
Protection class	IP65 IP20		
Housing material	PA, PVC		
<b>Cover</b>			
TPU			
Contact material	CuSn, gold-plated		
<b>Mounting</b>			
Front installation			
Installation depth	100 mm		
Number of conductors/cross-section	-		
Jacket material	-		
Cable diameter	- mm		
Bending radius	-		
Storage temperature range	-25 °C ... +80 °C		
Operation temperature range	-20 °C ... +70 °C		
Mechanical service life	>100 insertion cycles		
Dimensions (Ø x d)	29.5 x 42.5 mm		
Weight (kg/piece)	0.009		
Approvals	cULus (E326112)		
<b>Comments</b>			
Included in the delivery: captive safety cap			

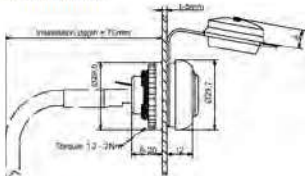


# Actuator sensor interface · RJ45 panel connector

RJ45 panel connector for front installation 22.5 mm  
female/female 1:1  
Cat 5e/6

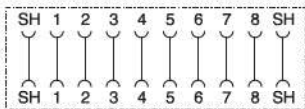


### Dimensions

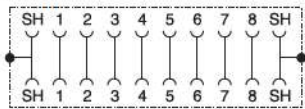


### Circuit diagram

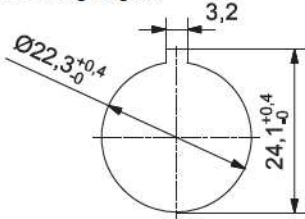
#### 492075



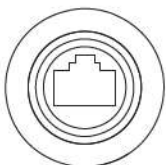
#### 491075



### Mounting diagram



front view:



Description	Part-No.	Type	PU	
<b>Category</b>				
Category	Cat.5e	492075 S*	RJ45 F/F 8/8 Cat.5e	1
	Cat.6	491075 S*	RJ45 F/F 8/8 Cat.6	1

Technical data	492075	491075
Rated voltage $U_N$		AC 24 V
Rated voltage max.	50 V	150 V
Rated current		1.5 A
Pole number		8
Cable length		- m
Transfer rate	100 MHz	250 MHz
Category	Cat.5e	Cat.6
Contact type		1 : 1
Shielding	connected through	360°

Coding -

### General

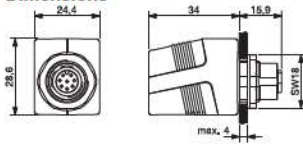
Design	RJ45
Test voltage	- V
Degree of pollution	3
Insulation resistance	> 100 MΩ
Contact resistance	< 30 mΩ
Flamability according to UL 94	V0
Protection class	IP65 IP20
Housing material	PA PBT
Cover	TPU
Contact material	CuSn, gold-plated
Mounting	Front installation
Installation depth	70 mm
Number of conductors/cross-section	8x2
Jacket material	-
Cable diameter	- mm
Bending radius	-
Operation temperature range	-25 °C ... +70 °C
Storage temperature range	-25 °C ... +80 °C
Mechanical service life	>750 insertion cycles
Dimensions (∅x d)	29.5 x 29 mm
Weight (kg/piece)	0.016
Approvals	cULus (E326112)

# Actuator sensor interface · RJ45 panel connector

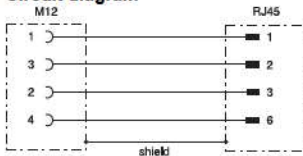
Control cabinet bushing M12 - RJ45  
female/female 1:1  
Cat 5e (Ethernet, Profinet)



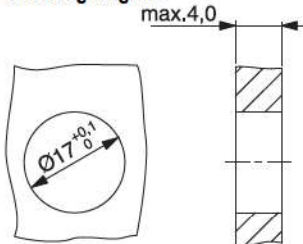
### Dimensions



### Circuit diagram



### Mounting diagram



Description	Part-No.	Type	PU
Design	490105	S*	M12-RJ45 F/F 90° 4/4 Cat.5e Profinet 1
	490106	S*	M12-RJ45 F/F 180° 4/4 Cat.5e Profinet 1
<b>Technical data</b>	<b>490105</b>	<b>490106</b>	
Rated voltage $U_N$		24 V	
Rated voltage max.		50 V	
Rated current		1 A	
Pole number		4	
Cable length		- m	
Transfer rate		0.1 Gbit/s	
Category		Cat.5e	
Contact type		1 : 1	
Shielding		360°	
Coding		D	
<b>General</b>			
Design		RJ45/M 12x1	
Test voltage		- V	
Degree of pollution		-	
Insulation resistance		> 100 MΩ	
Contact resistance		< 30 mΩ	
Flamability according to UL 94		V0	
Protection class		IP67	
Housing material		PA	
Cover		-	
Contact material		Phosphor Bronze, gold-plated	
Mounting		-	
Installation depth		70 mm	
Number of conductors/cross-section		-	
Jacket material		-	
Cable diameter		- mm	
Bending radius		-	
Operation temperature range		-25 °C ... +85 °C	
Storage temperature range		-25 °C ... +85 °C	
Mechanical service life		>750 insertion cycles	
Dimensions (Øxd)		29.5 × 29 mm	
Weight (kg/piece)		0.037	
Approvals		-	

# Actuator sensor interface

## Protective coverage

M8, M12

Color: black



Description	Part-No.	Type	PU	
Color	black	499989 S*	SK M8 FUER BUCHSE	100
	black	499994 S*	SK M12 FUER BUCHSE	100
<b>General</b>	<b>499989</b>	<b>499994</b>		
Housing material		PA		
Color		black		
Flamability according to UL 94		V0		
Connection device	M 8 x 1		M 12 x 1	
Storage temperature range		-20 °C ... +80 °C		
Operation temperature range		-20 °C ... +80 °C		
Dimensions (w x h x d)				
Weight (kg/piece)		0.002		



# Notes

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# Product Overview: Classification Ethernet

## Ethernet cables

Art.no.	Description	C-track compatible	Cat	Iso.	AWG								PROFI NET	ETHERNET POWERLINK Standardization Group	SERCOS the automation bus	CC-Link IE Field	EtherNet/IP	
					490128 - 490174	490175 - 490181	490182	490183	490184 - 490190	490191 - 490197	490198 - 490204	490205 - 490211						490212 - 490218
104301	Prof. (2X2XAWG22/1) UL		Type A	PVC														
104302	Prof. (2X2XAWG22/19) UL	•	Type C	PUR														
104303	Prof. (2X2XAWG22/7) UL	•	Type C	PUR														
104307	Prof. (2X2XAWG22/7) UL		Type B	PVC														
104331	Eth. (4X(2XAWG26/7) UL		7	PVC														
104335	Eth. (4X2XAWG26/7) UL		5e	PVC														
104336	Eth. (4X2XAWG24/7) UL		5e	PVC	•	•												
104337	Eth. (4X2XAWG24/19) UL	•	5e	PUR	•	•												
104338	Eth. (4X(2XAWG26/7) UL		6A	PVC														
104347	Eth. (4X2XAWG26/19) UL	•	6	PUR														
104350	Eth. (4X2XAWG22/7) UL		5e	PVC	•	•												
104379	Prof. (2X2XAWG26/19) UL	•	5e	PUR														
104396	Eth. (4X2XAWG26/19) UL	•	5e	PUR														
104397	Eth. (4X(2XAWG22/1) UL		6A	PVC	•	•												
104401	Eth. (4X(2XAWG24/7) UL	•	6A	PUR	•	•												

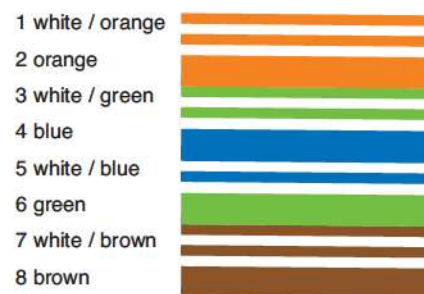
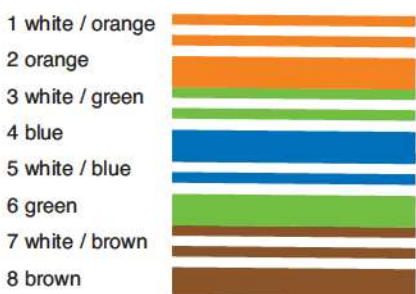
# Ethernet Cable and connector

## Ethernet connector RJ45 / M12

### RJ45 T568B RJ45 T568A RJ45 T568B AWG26



490128 with cable clamp    490174 with cable fitting    490151 with cable fitting    490129 with cable clamp    490175 with cable fitting    490152 with cable fitting    490138 with cable clamp    490176 with cable fitting    490153 with cable fitting



### RJ45 T568A/B M12 Profinet RJ45



490166 Module holder    490074 X-cod. pin    490095 D-cod. female    490167 X-cod. pin    490168 X-cod. female    490177 straight    490178 angled

