

# YF2A13-010UA1M8U13

Sensor/actuator cable

**PLUG CONNECTORS AND CABLES** 





### Ordering information

Туре	Part no.
YF2A13-010UA1M8U13	2107811

Other models and accessories → www.sick.com/Sensor\_actuator\_cable



#### Detailed technical data

#### Technical specifications

Accessory group         Plug connectors and cables           Connection type head A         Connection cables           Connection type head B         Male connector, M8, 3 pin, straight, A-coded           Locking plug connector         Screw connection           Connector material         TPU           Connector color         Black           Locking nut material         FKM           Understand         PKM           Might across flats         9 (M8), 13 (M12)           Width across flats         9 (M8), 13 (M12)           Understand         PUR, halogen-free           Jacket material         PUR, halogen-free           Jacket color         Black           Cable diameter         4.1 mm           Conductor cross section         0.25 mm²           Shalding         Unshielded           Bending radius         Flexible use         > 10 x cable diameter           Stationary position         > 5 x cable diameter           Drag chain operation         2.0 x cable diameter           Status voltage, cable         300 V AC<	reemmean opermeaneme	
Connection type head A Connection type head B Locking plug connector Screw connection Connector material TPU Connector color Locking nut material FKM Tightening torque Width across flats 9 (MS), 13 (M12) Cable Jacket material PUR, halogen-free Jacket adenue Jacket color Cable diameter Conductor cross section Shelding Bending radius Flexible use Stationary position Drag chain operation Drag chain operation Drag chain operation Sov AC Gov DC Rated impulse voltage Current loading Female connector, M12, 3-pin, straight, A-coded Male connector, M8, 3-pin, straight, A-coded  Black Locking plug connector Black Locking nut material FKM  Jipa die-cast, nickel-plated (female connector), Nickel-plated brass (male connector)  FKM  Jipa die-cast, nickel-plated (female connector), Nickel-plated brass (male connector)  FKM  Jipa die-cast, nickel-plated (female connector), Nickel-plated brass (male connector)  FKM  Jipa die-cast, nickel-plated (female connector), Nickel-plated brass (male connector)  FKM  Jipa die-cast, nickel-plated (female connector), Nickel-plated brass (male connector)  FKM  Jipa die-cast, nickel-plated (female connector), Nickel-plated brass (male connector)  FKM  Jipa die-cast, nickel-plated (female connector), Nickel-plated brass (male connector)  FKM  Jipa die-cast, nickel-plated (female connector), Nickel-plated brass (male connector)  FKM  Jipa die-cast, nickel-plated (female connector), Nickel-plated brass (male connector)  FKM  Jipa die-cast, nickel-plated (female connector), Nickel-plated brass (male connector)  FKM  Jipa die-cast, nickel-plated (female connector), Nickel-plated brass (male connector	Accessory group	Plug connectors and cables
Connection type head B Locking plug connector Connector material TPU Connector color Locking nut material Seal material FKM Tightening torque Width across flats 9 (Ms), 13 (M12) Value free Jacket material PUR, halogen-free Jacket color Black Cable Jacket color Chale diameter Conductor cross section Shelding Bending radius Flexible use Stationary position Drag chain operation Drag chain voltage, cable Reference voltage Ference voltage Current loading Serve connector, M8, 3-pin, straight, A-coded Screw connector Screw connection TPU Screw connection Screw connection TPU Screw connection Screw connection Screw connection TPU Screw connector, M8, 3-pin, straight, A-coded Screw connection TPU Screw connection Sheak Incompact of the screw connection Screw connector. Nickel-plated brass (male connector), Nickel-plated brass (male connector) Screw connector. Nickel-plated brass (male connector), Nickel-plated brass (male connector) Screw connector. Nickel-plated brass (male connector) Screw connector. Nickel-plated (female connector), Nickel-plated brass (male connector) Screw connector. Nickel-plated brass (male connector), Nickel-plated brass (male connector) Screw connector. Nickel-plated brass (male connector) Screw connector. Nickel-plated brass (male connector), Nickel-plated brass (male connector) Screw connector. Nickel-plated brass (male connector) Screw Connector. Nickel-plated brass (male connector) Now (M12) Screw Connector (M12) Screw Connector (M12) Screw Connector (M12) Screw Connector (M12) Screw Connecto	Accessory family	Connection cables
Locking plug connector         Screw connection           Connector material         TPU           Connector color         Black           Locking nut material         Zinc die-cast, nickel-plated (female connector), Nickel-plated brass (male connector)           Seal material         FKM           Tightening torque         0.4 Nm (M8), 0.6 Nm (M12)           Width across flats         9 (M8), 13 (M12)           Cable         1 m, 3-wire, PUR, halogen-free           Jacket material         PUR, halogen-free           Jacket color         Black           Cable diameter         4.1 mm           Conductor cross section         0.25 mm²           Shielding         Unshielded           Bending radius         Fiexible use Stationary position Drag chain operation         > 5 x cable diameter           Parag chain operation Drag chain operation Dra	Connection type head A	Female connector, M12, 3-pin, straight, A-coded
Connector material Connector color Locking nut material FKM Tightening torque 0.4 Nm (MB), 0.6 Nm (M12) Width across flats 9 (M8), 13 (M12) Cable 1 m, 3-wire, PUR, halogen-free Jacket material Jacket color Cable diameter Conductor cross section Shielding Bending radius Flexible use Stationary position Drag chain operation Drag chain operation Bending cycles Nominal voltage, cable Test voltage, cable Cunnet color Rated impulse voltage Current loading  Flexible use 50 V AC 60 V DC Rated impulse voltage Current loading  Flexible connector), Nickel-plated brass (male connector) FKM  Zinc die-cast, nickel-plated (female connector), Nickel-plated brass (male connector)  FKM  Zinc die-cast, nickel-plated (female connector), Nickel-plated brass (male connector)  FKM  Zinc die-cast, nickel-plated (female connector), Nickel-plated brass (male connector)  FKM  Zinc die-cast, nickel-plated (female connector), Nickel-plated brass (male connector)  FKM  2 inc die-cast, nickel-plated (female connector), Nickel-plated brass (male connector)  FKM  2 inc die-cast, nickel-plated (female connector), Nickel-plated brass (male connector)  FKM  2 inc die-cast, nickel-plated (female connector), Nickel-plated brass (male connector)  FKM  0.4 Nm (MB), 0.6 Nm (M12)  9 (M8), 13 (M12)  1 m, 3-wire, pluR, halogen-free  Black  4.1 mm  2 cable diameter  > 5 x cable diameter  > 5 x cable diameter  > 10,000,000  > 300 v AC	Connection type head B	Male connector, M8, 3-pin, straight, A-coded
Connector color     Black       Locking nut material     Zinc die-cast, nickel-plated (female connector), Nickel-plated brass (male connector)       Seal material     FKM       Tightening torque     0.4 Nm (Ms), 0.6 Nm (M12)       Width across flats     9 (Ms), 13 (M12)       Cable     1 m, 3-wire, PUR, halogen-free       Jacket color     Black       Cable diameter     4.1 mm       Conductor cross section     0.25 mm²       Shielding     Unshielded       Bending radius     Flexible use Stationary position Drag chain operation     > 10 x cable diameter       Drag chain operation     > 10 x cable diameter       Bending cycles     10,000,000       Nominal voltage, cable     300 V AC       Test voltage, cable     2,500 V AC       Reference voltage     50 V AC       Go V DC       Rated impulse voltage     1.5 kV       Current loading     ≤ 4 A	Locking plug connector	Screw connection
Seal material   FKM	Connector material	TPU
Seal material         FKM           Tightening torque         0.4 Nm (M8), 0.6 Nm (M12)           Width across flats         9 (M8), 13 (M12)           Cable         1 m, 3-wire, PUR, halogen-free           Jacket material         PUR, halogen-free           Jacket color         Black           Cable diameter         4.1 mm           Conductor cross section         0.25 mm²           Shielding         Unshielded           Bending radius         Flexible use           Stationary position         > 5 x cable diameter           Drag chain operation         > 10 x cable diameter           Bending cycles         1,000,000           Nominal voltage, cable         300 V AC           Test voltage, cable         2,500 V AC           Reference voltage         50 V AC           60 V DC           Rated impulse voltage         1,5 kV           Current loading         ≤ 4 A	Connector color	Black
Tightening torque         0.4 Nm (M8), 0.6 Nm (M12)           Width across flats         9 (M8), 13 (M12)           Cable         1 m, 3-wire, PUR, halogen-free           Jacket material         PUR, halogen-free           Jacket color         Black           Cable diameter         4.1 mm           Conductor cross section         0.25 mm²           Shielding         Unshielded           Bending radius         Flexible use Stationary position Drag chain operation         > 10 x cable diameter           > 5 x cable diameter         > 10 x cable diameter           > 10 x cable diameter         > 10 x cable diameter           Source         300 V AC           Test voltage, cable         2,500 V AC           Reference voltage         50 V AC           60 V DC           Rated impulse voltage         1.5 kV           Current loading         ≤ 4 A	Locking nut material	Zinc die-cast, nickel-plated (female connector), Nickel-plated brass (male connector)
Width across flats         9 (M8), 13 (M12)           Cable         1 m, 3-wire, PUR, halogen-free           Jacket color         Black           Cable diameter         4.1 mm           Conductor cross section         0.25 mm²           Shelding         Unshielded           Bending radius         Flexible use Stationary position Drag chain operation         > 10 x cable diameter           Stationary position Drag chain operation         > 10 x cable diameter           Nominal voltage, cable         10,000,000           Reference voltage         300 V AC           Test voltage, cable         2,500 V AC           Reference voltage         50 V AC           60 V DC           Rated impulse voltage         1.5 kV           Current loading         ≤ 4 A	Seal material	FKM
Cable         1 m, 3-wire, PUR, halogen-free           Jacket material         PUR, halogen-free           Jacket color         Black           Cable diameter         4.1 mm           Conductor cross section         0.25 mm²           Shielding         Unshielded           Bending radius         > 10 x cable diameter           Stationary position Drag chain operation         > 5 x cable diameter           Drag chain operation Prag chain operation Drag chain operation         10,000,000           Nominal voltage, cable         300 V AC           Test voltage, cable         2,500 V AC           Reference voltage         50 V AC           60 V DC           Rated impulse voltage         1.5 kV           Current loading         ≤ 4 A	Tightening torque	0.4 Nm (M8), 0.6 Nm (M12)
Jacket color Black   Cable diameter 4.1 mm   Conductor cross section 0.25 mm²   Shielding Unshielded   Bending radius > 10 x cable diameter   Stationary position Drag chain operation > 5 x cable diameter   Bending cycles 10,000,000   Nominal voltage, cable 300 V AC   Test voltage, cable 2,500 V AC   Reference voltage 50 V AC   60 V DC   Rated impulse voltage 1.5 kV   Current loading ≤ 4 A	Width across flats	9 (M8), 13 (M12)
Jacket color Cable diameter 4.1 mm Conductor cross section Chielding Bending radius  Flexible use Stationary position Drag chain operation Drag chain operation  Bending cycles 10,000,000 Nominal voltage, cable Test voltage, cable Reference voltage 50 V AC 60 V DC  Rated impulse voltage Current loading  Black 4.1 mm 4.1 mm 4.2 mm 50 x cable diameter 510 x cable dia	Cable	1 m, 3-wire, PUR, halogen-free
Cable diameter Conductor cross section Shielding Bending radius  Flexible use Stationary position Drag chain operation Drag chain operation Nominal voltage, cable Test voltage, cable Reference voltage  50 V AC 60 V DC  Rated impulse voltage Current loading  4.1 mm  0.25 mm² Unshielded  > 10 x cable diameter > 5 x cable diameter > 10 x cable diameter	Jacket material	PUR, halogen-free
Conductor cross section  Shielding  Bending radius  Flexible use Stationary position Drag chain operation Drag chain operation  Section 2000 AC  Test voltage, cable  Reference voltage  50 ∨ AC 60 ∨ DC  Rated impulse voltage  Current loading  0.25 mm² Unshielded  10 x cable diameter > 5 x cable diameter > 10 x cable diameter	Jacket color	Black
Shielding Bending radius  Flexible use Stationary position Drag chain operation Drag chain operation  Bending cycles  Nominal voltage, cable Test voltage, cable Reference voltage  50 ∨ AC 60 ∨ DC  Rated impulse voltage  Current loading  Unshielded  > 10 x cable diameter > 5 x cable diameter > 10 x cable di	Cable diameter	4.1 mm
Flexible use Stationary position Drag chain operation  Bending cycles  Nominal voltage, cable  Test voltage, cable  Reference voltage  50 ∨ AC  60 ∨ DC  Rated impulse voltage  Current loading  Flexible use > 10 x cable diameter > 10 x cable diameter > 10,000,000  300 ∨ AC  2,500 ∨ AC  60 ∨ DC  Rated impulse voltage  1.5 kV  ⊆ 4 A	Conductor cross section	0.25 mm <sup>2</sup>
Flexible use Stationary position Drag chain operation  Bending cycles 10,000,000  Nominal voltage, cable Test voltage, cable  Reference voltage 50 V AC  60 V DC  Rated impulse voltage 1.5 kV  Current loading  > 10 x cable diameter > 5 x cable diameter > 10,000,000  300 V AC  2,500 V AC  50 V AC  60 V DC	Shielding	Unshielded
Stationary position Drag chain operation  Bending cycles 10,000,000  Nominal voltage, cable Test voltage, cable 2,500 V AC  Reference voltage 50 V AC  Rated impulse voltage 1.5 kV  Current loading  > 5 x cable diameter > 10 x cable diameter  2,000,000  800 V AC  2,500 V AC  10 X CAC	Bending radius	
Drag chain operation > 10 x cable diameter  10,000,000  Nominal voltage, cable 300 V AC  Test voltage, cable 2,500 V AC  Reference voltage 50 V AC  60 V DC  Rated impulse voltage 1.5 kV  Current loading ≤ 4 A	Flexible use	> 10 x cable diameter
Bending cycles       10,000,000         Nominal voltage, cable       300 V AC         Test voltage, cable       2,500 V AC         Reference voltage       50 V AC         60 V DC       60 V DC         Rated impulse voltage       1.5 kV         Current loading       ≤ 4 A	Stationary position	> 5 x cable diameter
Nominal voltage, cable       300 V AC         Test voltage, cable       2,500 V AC         Reference voltage       50 V AC         60 V DC       60 V DC         Rated impulse voltage       1.5 kV         Current loading       ≤ 4 A	Drag chain operation	> 10 x cable diameter
Test voltage, cable       2,500 V AC         Reference voltage       50 V AC         60 V DC         Rated impulse voltage       1.5 kV         Current loading       ≤ 4 A	Bending cycles	10,000,000
Reference voltage  50 V AC 60 V DC  Rated impulse voltage 1.5 kV  Current loading ≤ 4 A	Nominal voltage, cable	300 V AC
50 V AC 60 V DC  Rated impulse voltage 1.5 kV  Current loading ≤ 4 A	Test voltage, cable	2,500 V AC
60 V DC  Rated impulse voltage 1.5 kV  Current loading ≤ 4 A	Reference voltage	
Rated impulse voltage     1.5 kV       Current loading     ≤ 4 A		50 V AC
Current loading ≤ 4 A		
•	•	
Traversing speed 3 m/s		
	Traversing speed	3 m/s

Travelling distance	10 m
Acceleration	≤ 10 m/s²
Signal type	Sensor/actuator cable
Torsion force	180°/1m
Torsion cycles	2,000,000
Cycles per minutes	35
Application	Zones with oils and lubricants Drag chain operation Robot
Authorizations	UL
UL File No.	E335179
Enclosure rating	IP65 / IP66K / IP67
Ambient operating temperature	
Flexible use	-25 °C +80 °C
Stationary position	-40 °C +80 °C
Drag chain operation	-25 °C +80 °C
Head	-25 °C +85 °C
Contamination rating	3
Insulation resistance	100 ΜΩ
Overvoltage category	III
Specific insulation resistance	30 mΩ
Thermal resistance, piping	Flame retardant according to UL 1581, horizontal flame test/CSA FT2 $/$ IEC 60332-1, IEC 60332-2-2

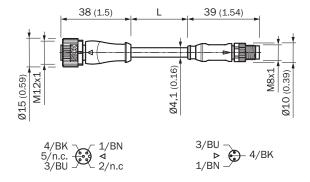
## Classifications

ECLASS 5.0	19030312
ECLASS 5.1.4	19030312
ECLASS 6.0	27060304
ECLASS 6.2	27060304
ECLASS 7.0	27060304
ECLASS 8.0	27060304
ECLASS 8.1	27060304
ECLASS 9.0	27060304
ECLASS 10.0	27060304
ECLASS 11.0	27060304
ECLASS 12.0	27060304
ETIM 5.0	EC000830
ETIM 6.0	EC000830
ETIM 7.0	EC003249
ETIM 8.0	EC003249
UNSPSC 16.0901	26121604

# YF2A13-010UA1M8U13 | Sensor/actuator cable

PLUG CONNECTORS AND CABLES

#### Dimensional drawing (Dimensions in mm (inch))



## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is "Sensor Intelligence."

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