

# YG8U13-050UA1M2A13

Sensor/actuator cable





### Ordering information

Туре	Part no.
YG8U13-050UA1M2A13	2122842

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



#### Detailed technical data

#### Technical specifications

Connection type head A         Female connector, M8, 3-pin, angled, A-coded           Connection type head B         Male connector, M12, 3-pin, straight, A-coded           Locking plug connector         Screw connection           Connector material         TPU           Connector color         Black           Connectant material         FKM           Locking nut material         FKM           Tightening torque         0.4 Nm (M8), 0.6 Nm (M12)           Width across flats         9 (M8), 13 (M12)           Cable         5 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           > 5 x cable diameter           Post voltage, cable         2,500 v AC           Reference voltage         50 v AC           GoV VC         60 v DC           Rated impulse voltage         1,5 kV           Current loading         4 A           Tavelling d		
Locking plug connector         Screw connection           Connector material         TPU           Connector color         Black           Locking nut material         Zinc die cast, nickel-plated           Seal material         FKM           Tightening torque         0.4 Nm (M8), 0.6 Nm (M12)           Width across flats         9 (M8), 13 (M12)           Cable         5 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           Flexible use         > 5 x cable diameter           Stationary position Drag chain operation         > 5 x cable diameter           Drag chain operation         10 x cable diameter           Sto vocable diameter         > 10 x cable diameter           Sto vocable diameter         > 5 x cable diameter           So v Ac         50 V AC           60 V DC           Rated impulse voltage         1.5 kV           Current loading         4 A           Traversing speed         3 m/s	Connection type head A	Female connector, M8, 3-pin, angled, A-coded
Connector color         Black           Locking nut material         Zinc die-cast, nickel-plated           Seal material         FKM           Tightening torque         0.4 Nm (M8), 0.6 Nm (M12)           Width across flats         9 (M8), 13 (M12)           Cable         5 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           Post cable diameter         > 5 x cable diameter           Post cable diameter         > 5 x cable diameter           Post voltage, cable         300 V AC           Test voltage, cable         300 V AC           Reference voltage         50 V AC           60 V DC           Rated impulse voltage         1.5 kV           Current loading         4 A           Traversing speed         3 m/s	Connection type head B	Male connector, M12, 3-pin, straight, A-coded
Connector color     Black       Locking nut material     Zinc die-cast, nickel-plated       Seal material     FKM       Tightening torque     0.4 Nm (M8), 0.6 Nm (M12)       Width across flats     9 (M8), 13 (M12)       Cable     5 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       Should undered     > 10 x cable diameter       So v AC     2,500 v AC       Reference voltage     50 v AC       Go v DC       Rated impulse voltage     1.5 kV       Current loading     5 4 A       Traversing speed     3 m/s	Locking plug connector	Screw connection
Locking nut material  Seal material  FKM  O.4 Nm (M8), 0.6 Nm (M12)  Width across flats  9 (M8), 13 (M12)  Cable  5 m, 3-wire, PUR, halogen-free  Jacket material  Jacket color  Black  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  Reference voltage  50 V AC 60 V DC  Rated impulse voltage  Current loading  FKM  O.4 Nm (M12)  9 (M8), 0.6 Nm (M12)  9 (M8), 0.2 Nm (M12)	Connector material	TPU
Seal material         FKM           Tightening torque         0.4 Nm (M8), 0.6 Nm (M12)           Width across flats         9 (M8), 13 (M12)           Cable         5 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           Flexible use Stationary position Drag chain operation         > 5 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           60 V DC           Rated impulse voltage         1.5 kV           Current loading         4 A           Traversing speed         3 m/s	Connector color	Black
Tightening torque         0.4 Nm (M8), 0.6 Nm (M12)           Width across flats         9 (M8), 13 (M12)           Cable         5 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           Flexible use Stationary position Drag chain operation         > 5 x cable diameter           Drag chain operation         > 10 x cable diameter           So v able diameter         > 10 x cable diameter           Test voltage, cable         300 V AC           Reference voltage         50 V AC           60 V DC         60 V DC           Rated impulse voltage         1.5 kV           Current loading         ≤ 4 A           Traversing speed         3 m/s	Locking nut material	Zinc die-cast, nickel-plated
Width across flats         9 (M8), 13 (M12)           Cable         5 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           > 10 x cable diameter         > 10 x cable diameter           Pool on Cool         > 10 x cable diameter           Stationary position Drag chain operation         > 10 x cable diameter           Source         > 10 x cable diame	Seal material	FKM
Cable 5 m, 3-wire, PUR, halogen-free  Jacket material PUR, halogen-free Black Cable diameter 4.1 mm Conductor cross section 0.25 mm² Shielding Unshielded  Flexible use Stationary position Drag chain operation Drag chain operation 2.5 x cable diameter  Bending cycles 10,000,000 Nominal voltage, cable 300 V AC  Test voltage, cable 50 V AC  Reference voltage 50 V AC  Rated impulse voltage 50 V AC  Current loading 5 m, 3-wire, PUR, halogen-free 5 m, 3-wire, PUR, halogen-free 6  Black 4.1 mm 4.1 mm 4.2 m² 4.1 mm 4.2 m² 4.1 mm 4.2 m² 4.1 mm 4.2 m² 4.2 m² 4.3 m² 4.3 m/s	Tightening torque	0.4 Nm (M8), 0.6 Nm (M12)
Jacket material       PUR, halogen-free         Jacket color       Black         Cable diameter       4.1 mm         Conductor cross section       0.25 mm²         Shelding       Unshielded         Bending radius       > 10 x cable diameter         Flexible use Stationary position Drag chain operation 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         Traversing speed       3 m/s	Width across flats	9 (M8), 13 (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 Drag chain oper	Cable	5 m, 3-wire, PUR, halogen-free
Cable diameter Conductor cross section Shielding Bending radius Flexible use Stationary position Drag chain operation Drag chain operation Pest voltage, cable Reference voltage Flexible use Stationary position Drag chain operation Shielding Flexible use Stationary position Drag chain operation Drag chain operation Shielding cycles 10,000,000 10,000,000 10,000,000 10,000,00	Jacket material	PUR, halogen-free
Conductor cross section  Shielding  Bending radius  Flexible use Stationary position Drag chain operation  Nominal voltage, cable  Reference voltage  Rated impulse voltage  Current loading  Traversing speed  O.25 mm²  Unshielded  Unshielded  Unshielded  Unshielded  10 x cable diameter  > 10 x cabl	Jacket color	Black
Shielding Bending radius  Flexible use Stationary position Drag chain operation Drag chain operation  Bending cycles 10,000,000  Nominal voltage, cable Test voltage, cable  Ference voltage  50 V AC 60 V DC  Rated impulse voltage  Current loading Traversing speed  Unshielded  Unshielded  Unshielded  Vn x cable diameter  > 10 x cable diameter  > 10,000,000  > 200  > 300 V AC  2,500 V AC  60 V DC  Rated impulse voltage  1.5 kV  Current loading Traversing speed  3 m/s	Cable diameter	4.1 mm
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 ∨ AC  60 ∨ DC  Rated impulse voltage  Current loading  Traversing speed  > 10 × cable diameter  > 10,000,000  300 ∨ AC  2,500 ∨ AC  60 ∨ DC  Rated impulse voltage  5 × cable diameter  > 10,000,000  300 ∨ AC  2,500 ∨ AC  60 ∨ DC  Rated impulse voltage  1.5 kV  Current loading  Traversing speed	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  850 V AC 60 V DC  Rated impulse voltage Current loading Traversing speed  > 10 x cable diameter > 10 x cable diameter  > 10 x cable diameter  > 10,000,000   800 V AC  2,500 V AC  60 V DC  8 4 A  3 m/s	Shielding	Unshielded
Stationary position Drag chain operation  Bending cycles 10,000,000 Nominal voltage, cable 2,500 V AC  Test voltage Feference voltage 50 V AC 60 V DC  Rated impulse voltage 1.5 kV  Current loading  Traversing speed  > 5 x cable diameter > 10,000,000  2,000  300 V AC  2,500 V AC  60 V DC  8 At A  3 m/s	Bending radius	
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         60 V DC         Rated impulse voltage       1.5 kV         Current loading       ≤ 4 A         Traversing speed       3 m/s	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         Rated impulse voltage       1.5 kV         Current loading       ≤ 4 A         Traversing speed       3 m/s	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           Traversing speed         3 m/s	Drag chain operation	> 10 x cable diameter
Test voltage, cable  Reference voltage  50 V AC  60 V DC  Rated impulse voltage  1.5 kV  Current loading  Traversing speed  2,500 V AC  50 V AC  60 V DC  3 m/s	Bending cycles	10,000,000
Reference voltage $50 \text{ V AC}$ $50 \text{ V AC}$ $60 \text{ V DC}$ Rated impulse voltage $1.5 \text{ kV}$ Current loading $\leq 4 \text{ A}$ Traversing speed $3 \text{ m/s}$	Nominal voltage, cable	300 V AC
$50 \text{ V AC}$ $60 \text{ V DC}$ Rated impulse voltage $1.5 \text{ kV}$ Current loading $\leq 4 \text{ A}$ Traversing speed $3 \text{ m/s}$	Test voltage, cable	2,500 V AC
60 V DC  Rated impulse voltage 1.5 kV  Current loading ≤ 4 A  Traversing speed 3 m/s	Reference voltage	
Rated impulse voltage     1.5 kV       Current loading     ≤ 4 A       Traversing speed     3 m/s		50 V AC
Current loading     ≤ 4 A       Traversing speed     3 m/s		60 V DC
Traversing speed 3 m/s	Rated impulse voltage	
	Current loading	
Travelling distance 10 m		3 m/s
	Travelling distance	10 m
Acceleration ≤ 10 m/s²	Acceleration	≤ 10 m/s²

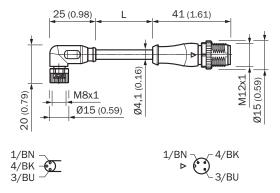
Signal type	Sensor/actuator cable
Torsion force	180°/1 m
Torsion cycles	2,000,000
Cycles per minutes	35
Application	Uncontaminated zones Zones with oils and lubricants Robot Drag chain operation
Authorizations	UL
UL File No.	E335179
Enclosure rating	IP65 / IP66K / IP67
Operating temperature	
Flexible 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

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



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