



LFP0300-B4NMB

LFP Cubic

LEVEL SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
LFP0300-B4NMB	1057093

Other models and accessories → www.sick.com/LFP_Cubic

Detailed technical data

Features

Medium	Fluids
Measurement	Switch, Continuous
Design	Standard
Probe type	Rod probe
Probe length	300 mm
Process pressure	-1 bar ... 10 bar
Process temperature	-20 °C ... +100 °C
RoHS certificate	✓
IO-Link	✓
cULus certificate	✓

Performance

Accuracy of sensor element	± 5 mm ¹⁾
Reproducibility	≤ 2 mm
Resolution	< 2 mm
Response time	< 400 ms
Dielectricity constant	≥ 5 for rod probe / cable probe ≥ 1.8 with coaxial tube
Conductivity	No limitation
Maximum level change	≤ 500 mm/s
Deactivated area at process connection	25 mm ²⁾

¹⁾ With water under reference conditions.

²⁾ With parameterized container with water under reference conditions, otherwise 40 mm.

Deactivated area at end of probe	$\geq 10 \text{ mm}^{1)}$
MTTF	194.3 years (EN ISO 13849-1)
Display	✓

¹⁾ With water under reference conditions.

²⁾ With parameterized container with water under reference conditions, otherwise 40 mm.

Electronics

Communication interface	IO-Link
Supply voltage	12 V DC ... 30 V DC ¹⁾
Power consumption	$\leq 100 \text{ mA}$ at 24 V DC without output load
Initialization time	$\leq 5 \text{ s}$
Protection class	III
Connection type	Round connector M12 x 1, 5-pin
Output signal	1 x PNP + 1 x PNP/NPN + 4 mA ... 20 mA / 0 V ... 10 V
Output load	4 mA ... 20 mA < 350 Ohm at $U_v > 12 \text{ V}$, 0 V ... 10 V > 750 Ohm at $U_v 14 \geq \text{V}$
Hysteresis	$\geq 2 \text{ mm}^{2)}$
Output current	< 100 mA
Inductive load	< 1 H
Capacitive load	100 nF
Enclosure rating	IP67: EN 60529
Temperature drift	< 0.1 mm/K
Lower signal level	3.8 mA ... 4 mA
Upper signal level	20 mA ... 20.5 mA
EMC	EN 61326-2-3, 2014/30/EU

¹⁾ All connections are polarity protected. All outputs are overload and short-circuit protected.

²⁾ Freely adjustable.

Mechanics

Wetted parts	1.4404, PTFE FKM
Process connection	$\frac{3}{4}$ " NPT
Housing material	Plastic PBT
Max. probe load	$\leq 6 \text{ Nm}$

Ambient data

Ambient operating temperature	-20 °C ... +60 °C
Ambient temperature, storage	-40 °C ... +80 °C

Certificates

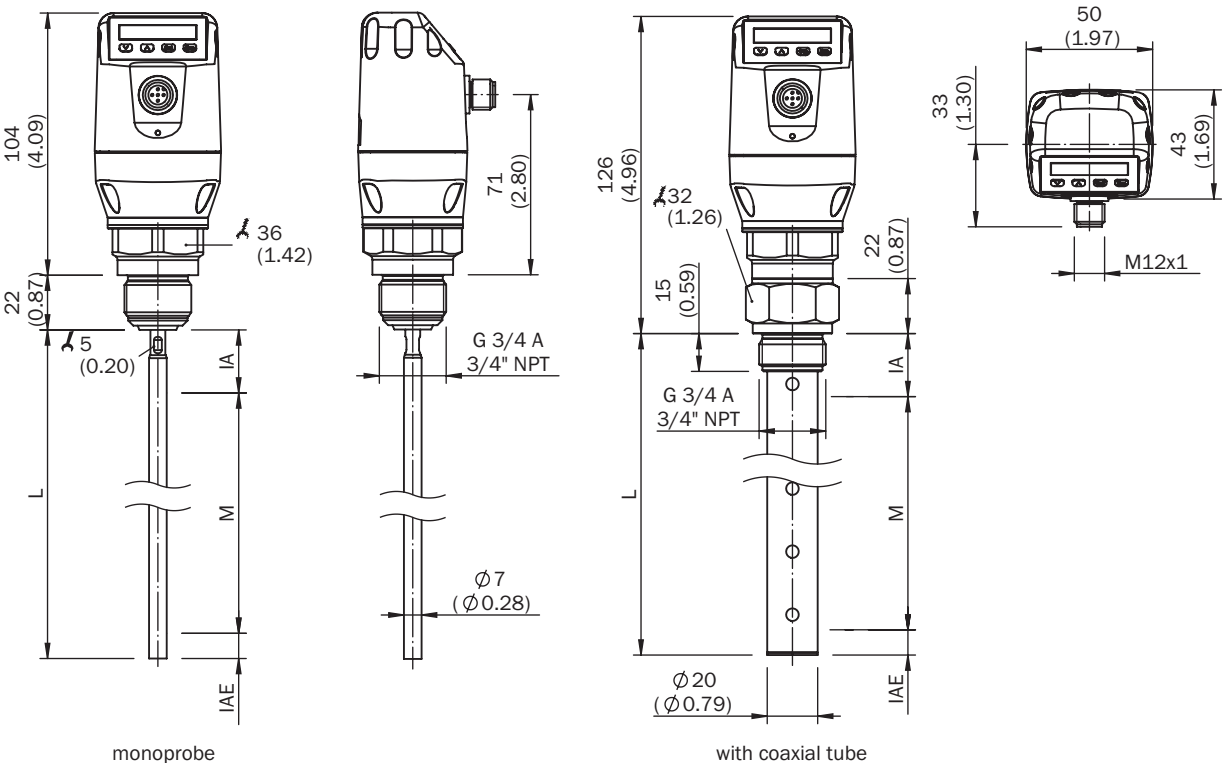
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China-RoHS	✓
cULus certificate	✓

IO-Link	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

Classifications

ECLASS 5.0	27200513
ECLASS 5.1.4	27200513
ECLASS 6.0	27200513
ECLASS 6.2	27200513
ECLASS 7.0	27200513
ECLASS 8.0	27200513
ECLASS 8.1	27200513
ECLASS 9.0	27200513
ECLASS 10.0	27200513
ECLASS 11.0	27200513
ECLASS 12.0	27200513
ETIM 5.0	EC001447
ETIM 6.0	EC001447
ETIM 7.0	EC001447
ETIM 8.0	EC001447
UNSPSC 16.0901	41113710

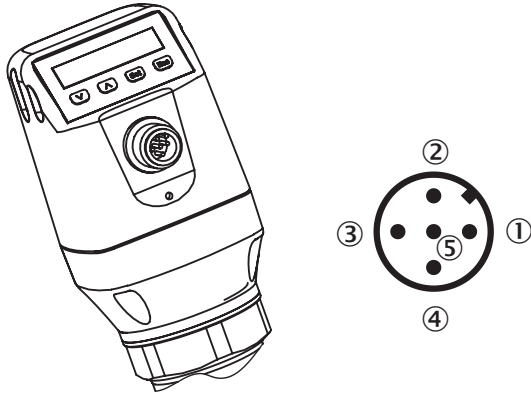
Dimensional drawing: rod probe



Dimensions in mm (inch)

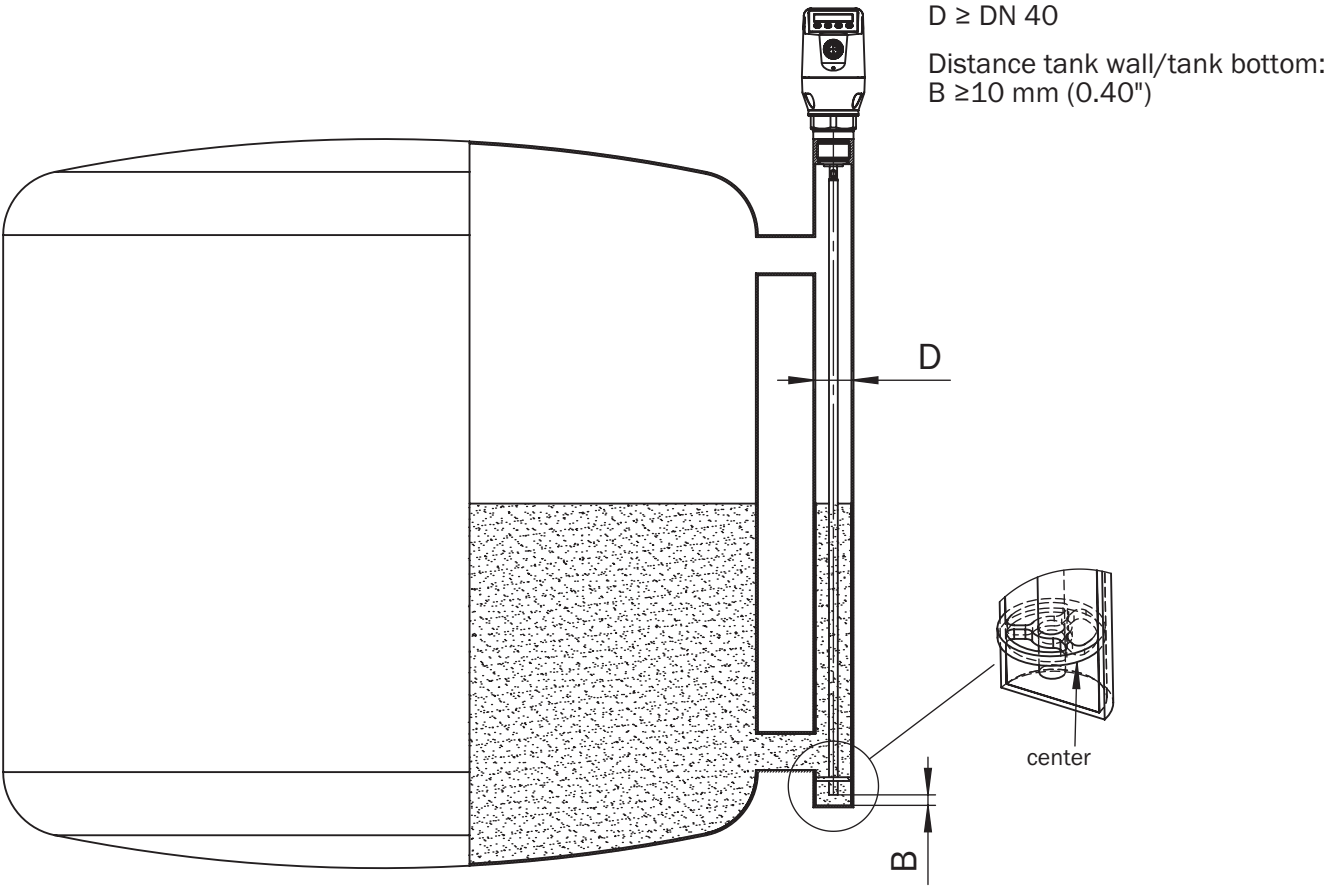
- ① M: measuring range
- ② L: Probe length
- ③ IA: Inactive area at process connection 25 mm (0.98")
- ④ IAE: Inactive area at probe end 10 mm (0.39")

Connection type

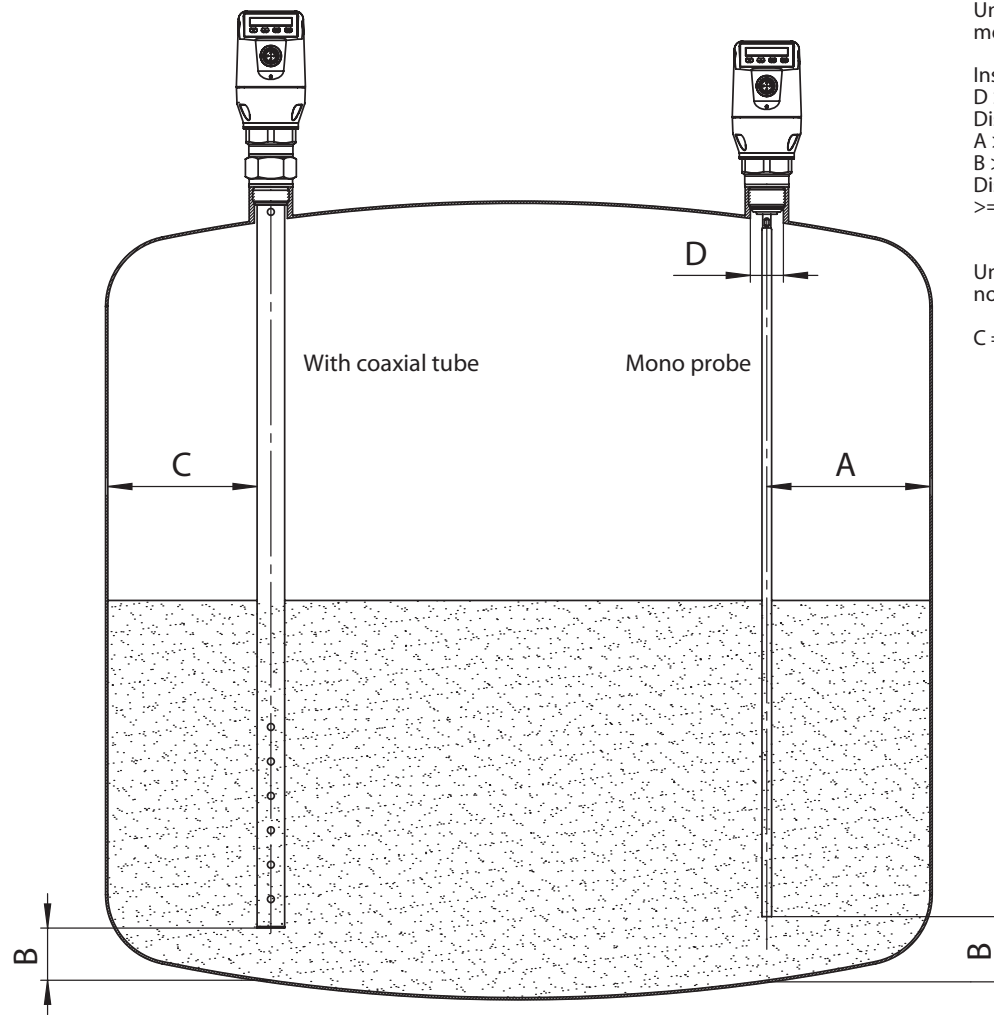


- ① L^+ : Supply voltage, brown
- ② Q_A : Analog current-/voltage output, white
- ③ M: Ground, reference ground for current-/voltage output, blue
- ④ C/Q_1 : Switching output 1, PNP/IO-Link-communication, black
- ⑤ Q_2 : Switching output 2, PNP/NPN, grey

Instruction for installation Installation in a metal immersion tube or metal bypass



Instruction for installation Installation in a metal tank



Unit with mono probe mounted in metal tank

Installation in nozzle:

$D \geq DN 25 (1")$

Distance tank wall/tank bottom:

$A \geq 50 \text{ mm } (1.97")$

$B \geq 10 \text{ mm } (0.40")$

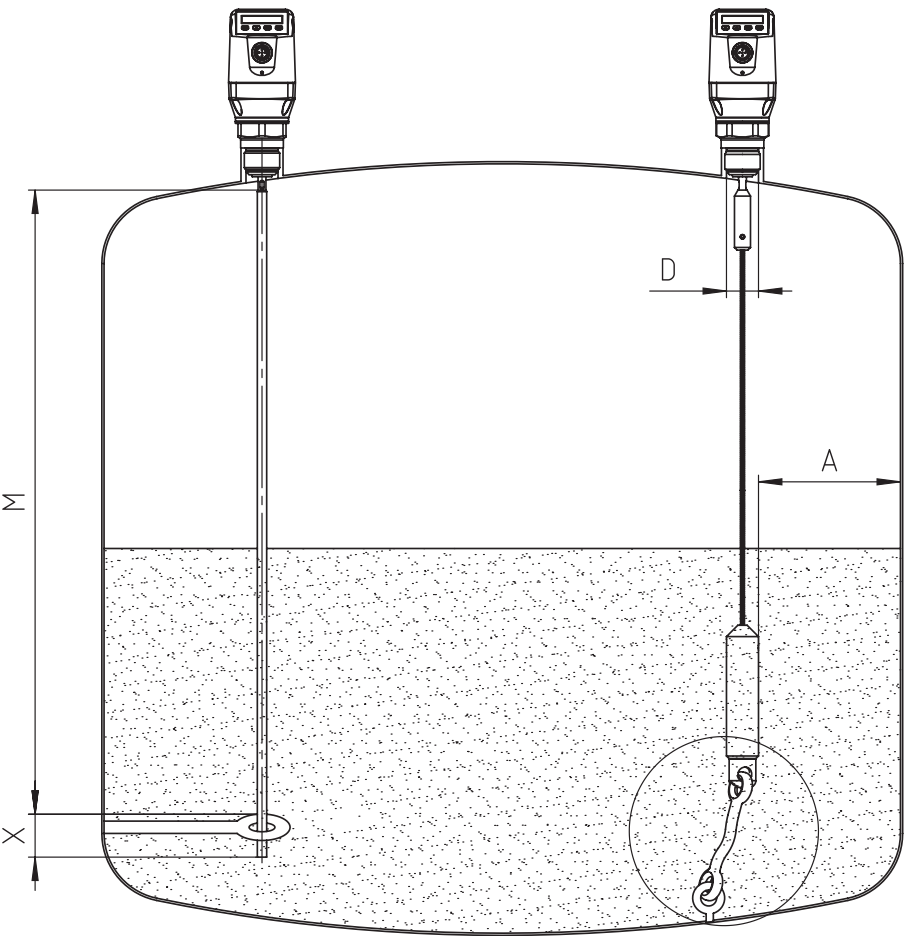
Distance to other tank fittings

$\geq 100 \text{ mm } (3.94")$

Unit with coaxial tube for metal and non metal tank

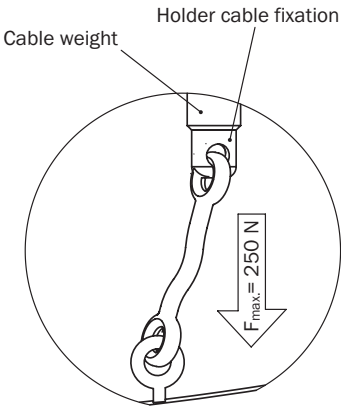
C = with a coaxial tube there are no minimum distances to the tank wall or to other tank fittings required

Instruction for installation



Mono rod probe mounted in metal tank
M = Measuring range
X = Inactive area at probe end
No measurement possible

Rope probe mounted in metal tank
Installation in nozzle:
D ≥ DN 25 (1")
Distance tank wall/tank bottom:
A ≥ 50 mm (1.97")
Distance to other tank fittings:
≥ 100mm (3.94")



Recommended accessories

Other models and accessories → www.sick.com/LFP_Cubic

	Brief description	Type	part no.
Mounting systems			
	• Description: Mounting bracket • Material: Stainless steel • Details: Stainless steel 1.4301 (AISI 304) • Items supplied: Mounting hardware included	BEF-FL-304LFP-HLDR	2077391
	• Description: Spare probe for LFP Cubic, probe length 1000 mm, material 1.4404/316L, diameter 7 mm	BEF-ER-SN1000-LFPC	2065700
	• Description: Spare probe for LFP Cubic, probe length 2000 mm, material 1.4404/316L, diameter 7 mm	BEF-ER-SN2000-LFPC	2065701

	Brief description	Type	part no.
connectors and cables			
	Connection type head A: Female connector, M12, 5-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 5-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YG2A15-020VB5XLEAX	2096215
	Connection type head A: Female connector, M12, 5-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 5-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YG2A15-050VB5XLEAX	2096216
	Connection type head A: Female connector, M12, 5-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 10 m, 5-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YG2A15-100VB5XLEAX	2096217
	Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 5-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF2A15-020UB5XLEAX	2095617
	Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 5-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF2A15-050UB5XLEAX	2095618
	Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 10 m, 5-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF2A15-100UB5XLEAX	2095619
	Connection type head A: Female connector, M12, 5-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 5-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YG2A15-020UB5XLEAX	2095772
	Connection type head A: Female connector, M12, 5-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 5-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YG2A15-050UB5XLEAX	2095773
	Connection type head A: Female connector, M12, 5-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 10 m, 5-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YG2A15-100UB5XLEAX	2095774
	Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 5-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YF2A15-020VB5XLEAX	2096239
	Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 5-wire, PVC Description: Sensor/actuator cable, unshielded	YF2A15-050VB5XLEAX	2096240

	Brief description	Type	part no.
	Application: Zones with chemicals, Untaminated zones Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 10 m, 5-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Untaminated zones	YF2A15-100VB5XLEAX	2096241
	Connection type head A: Female connector, M12, 5-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 0.6 m, 5-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YG2A15-C60UB5XLEAX	2145540
	Connection type head A: Female connector, M12, 5-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 3 m, 5-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YG2A15-030UB5XLEAX	2145543
	Connection type head A: Female connector, M12, 5-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 1 m, 5-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YG2A15-010UB5XLEAX	2145541
	Connection type head A: Female connector, M12, 5-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 0.6 m, 5-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Untaminated zones	YG2A15-C60VB5XLEAX	2145573
	Connection type head A: Female connector, M12, 5-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 1 m, 5-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Untaminated zones	YG2A15-010VB5XLEAX	2145574
	Connection type head A: Female connector, M12, 5-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 3 m, 5-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Untaminated zones	YG2A15-030VB5XLEAX	2145575
	Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 0.6 m, 5-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Untaminated zones	YF2A15-C60VB5XLEAX	2145570
	Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 3 m, 5-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Untaminated zones	YF2A15-030VB5XLEAX	2145572

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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.

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For us, that is “Sensor Intelligence.”

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