



CFP0300-XPXNNBX

CFP Cubic

LEVEL SENSORS

SICK
Sensor Intelligence.



Illustration may differ



IO-Link



Ordering information

Type	Part no.
CFP0300-XPXNNBX	1083123

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

Detailed technical data

Features

Medium	Water and oil-based liquids
Measurement	Switch, Continuous
Probe length	300 mm
Process pressure	-0.5 bar ... 3 bar
Process temperature	-20 °C ... +80 °C
UL approval	✓
RoHS certificate	✓
IO-Link	✓

Performance

Accuracy of sensor element	± 15 mm (with water or oil under reference conditions)
Reproducibility	< 5 mm
Resolution	< 2 mm
Response time	< 300 ms
Dielectricity constant	≥ 2
Conductivity	No limitation
Deactivated area at end of probe	7 mm ... 15 mm, Depending on probe length

Electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
Power consumption	≤ 100 mA at 24 V DC without output load
Initialization time	≤ 4 s

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

Protection class	III
Connection type	Round connector M12 x 1, 5-pin
Output signal	2 x PNP/NPN/push-pull transistor outputs switchable and 1 x analog output 4 mA ... 20 mA / 0 V ... 10 V automatically switchable depending on output load or output voltage depending on the load
Output load	4 mA ... 20 mA < 500 Ohm at $U_v > 15 \text{ V}$, 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	Min. 3 mm, min. 2 °C, free adjustable
Signal voltage HIGH	$U_v - 3 \text{ V}$
Signal voltage LOW	< 3 V
Output current	< 100 mA
Inductive load	< 1 H
Capacitive load	100 nF
Enclosure rating	IP65 / IP67
Temperature drift	< 0.1 mm/K
Lower signal level	3.8 mA ... 4 mA
Upper signal level	20 mA ... 20.5 mA
Resolution of analog output	12 bit

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

Mechanics

Wetted parts	Outer tube: polypropylene (PP-H), G 3/4" and 3/4" NPT: PPSU, Easy-clamp bracket: PP
Process connection	Without process connection
Housing material	PBT / PC
Max. probe load	≤ 4 Nm
Probe diameter	16 mm

Ambient data

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

Classifications

ECI@ss 5.0	27200503
ECI@ss 5.1.4	27200503
ECI@ss 6.0	27200503
ECI@ss 6.2	27200503
ECI@ss 7.0	27200503
ECI@ss 8.0	27200503
ECI@ss 8.1	27200503
ECI@ss 9.0	27200503
ECI@ss 10.0	27200503
ECI@ss 11.0	27200503
ETIM 5.0	EC001447
ETIM 6.0	EC001447
ETIM 7.0	EC001447

UNSPSC 16.0901	41113710
----------------	----------

Type code

Probe length in mm

0100	100 mm (in increments of 50 mm)
0500	500 mm (in increments of 100 mm)
1000	1,000 mm

Special design

P	Rod probe from PP
---	-------------------

Process connection

X	Without process connection
A	G 3/4 A; made from PBT
B	3/4" NPT; made from PBT

Application type

N	Oil and water application
---	---------------------------

Housing

N	Plastic housing with display
---	------------------------------

Electrical output

A	2 digital outputs
B	2 digital outputs + 1 analog output
C	4 digital outputs + 2 analog outputs

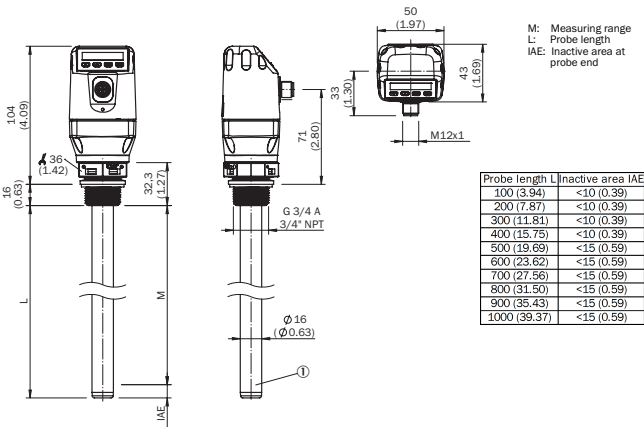
Additional option

T	With temperature sensor
X	No additional options

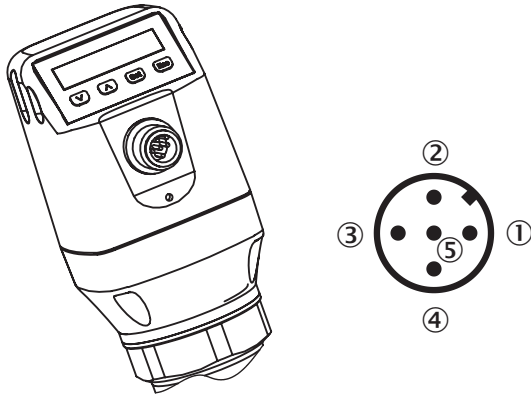
CFP		-	X	P			N	N			
-----	--	---	---	---	--	--	---	---	--	--	--

Not all variants of the type code can be combined!

Dimensional drawing (Dimensions in mm (inch))



Connection type



- ① L⁺: Supply voltage
- ② Q_A: Analog current/voltage output
- ③ M: Ground, reference ground for current/voltage output
- ④ C/Q1: Switching output 2, PNP/NPN/DRV (Push-Pull) / IO-Link
- ⑤ Q₂: Switching output 2, PNP/NPN/DRV (Push-Pull)

Recommended accessories

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

	Brief description	Type	Part no.
Terminal and alignment brackets			
	Easy-clamp bracket for variable probe fastening, without mounting hardware	BEF-FL-PRBCFP-HLDR	2087299
Plug connectors and cables			
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m	YF2A15-020UB5XLEAX	2095617
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m	YF2A15-020VB5XLEAX	2096239
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 5 m	YF2A15-050UB5XLEAX	2095618
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A15-050VB5XLEAX	2096240
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 10 m	YF2A15-100UB5XLEAX	2095619
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 10 m	YF2A15-100VB5XLEAX	2096241

	Brief description	Type	Part no.
	Head A: female connector, M12, 5-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m	YG2A15-020UB5XLEAX	2095772
	Head A: female connector, M12, 5-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m	YG2A15-020VB5XLEAX	2096215
	Head A: female connector, M12, 5-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 5 m	YG2A15-050UB5XLEAX	2095773
	Head A: female connector, M12, 5-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YG2A15-050VB5XLEAX	2096216
	Head A: female connector, M12, 5-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 10 m	YG2A15-100UB5XLEAX	2095774
	Head A: female connector, M12, 5-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 10 m	YG2A15-100VB5XLEAX	2096217

Recommended services

Additional services → www.sick.com/CFP_Cubic

	Type	Part no.
Function Block Factory		
Description: The Function Block Factory supports common programmable logic controllers (PLCs) from various manufacturers, such as Siemens, Beckhoff, Rockwell Automation and B&R. More information on the FBF can be found here.	Function Block Factory	On request

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.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com