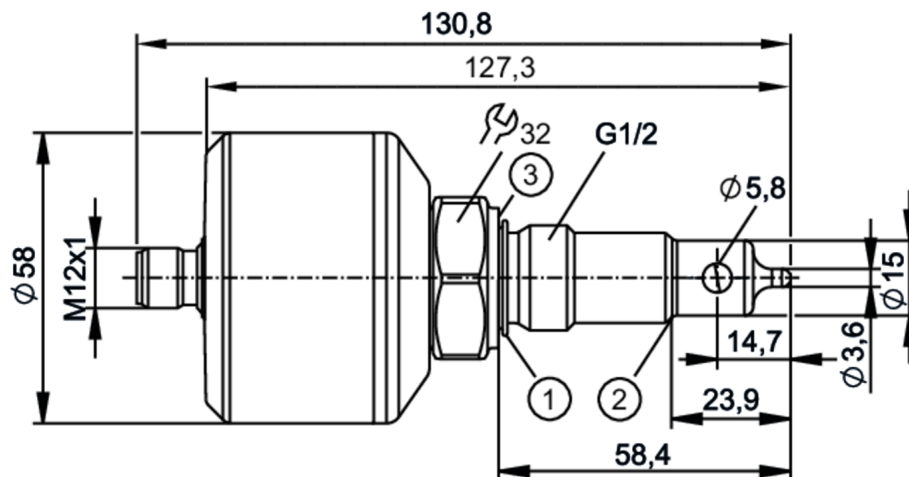# LDL220

Inductive conductivity sensor

IND CONDUCTIVITY HYG G1/2 SC

Digital meets analog: integrating modern IO-Link sensors the analog way. The EIO104 allows you to realize two analog signals from intelligent IO-Link sensors with several process values.

1   Gasket FKM (for sealing on the back - not pressure resistant) / removable
2   Sealing edge Note: The unit must only be installed in a process connection for G1/2 sealing cone.
3   groove for sealing ring DIN 3869-21

Product characteristics	
Number of inputs and outputs	Number of analog outputs: 1
Process connection	threaded connection G 1/2 external thread sealing cone

Application	
System	gold-plated contacts
Media	Conductive liquids
Note on media	water
	milk
	CIP liquids
Cannot be used for	See the operating instructions, chapter "Function and features".
Medium temperature [°C]	-25...100; (< 1 h: 150)
Pressure rating [bar]	16
Vacuum resistance [mbar]	-1000

Electrical data	
Operating voltage [V]	18...30 DC
Current consumption [mA]	< 100
Protection class	III
Reverse polarity protection	yes
Power-on delay time [s]	2
Measuring principle	inductive

Inputs / outputs	
Number of inputs and outputs	Number of analog outputs: 1

Outputs	
Total number of outputs	1

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Output signal		analog signal; IO-Link
Output function		analog output; scalable; selectable conductivity / temperature
Number of analog outputs		1
Analog current output	[mA]	4...20
Max. load	[Ω]	500

Measuring/setting range

conductivity measurement

Measuring range	[µS/cm]	100...1000000	
Resolution	[µS/cm]	0...10.000	1
		10.000...100.000	10
		100.000...1.000.000	100

Temperature measurement

Measuring range	[°C]	-25...150

Accuracy / deviations

conductivity measurement

Accuracy (in the measuring range)		2 % MW ± 25 µS/cm
Drift	[%/K]	0,05 %/K MW
Repeatability		1 % MW ± 25 µS/cm
Long-term stability		1 % MW ± 25 µS/cm

Temperature measurement

Accuracy	[K]	20...50 °C: < ± 0,2 K; -25...150 °C: < ± 1,5 K
Repeatability	[K]	0,2
Resolution	[K]	0.1

Reaction times

conductivity measurement

Response time	[s]	< 2; (T09; Damping = 0)

Temperature measurement

Response time	[s]	< 40; (T09)

Interfaces

Communication interface	IO-Link
Transmission type	COM2 (38,4 kBaud)
IO-Link revision	1.1
SDCI standard	IEC 61131-9
Profiles	Measuring Sensor, Identification and Diagnosis
SIO mode	no
Required master port class	A
Process data analog	1
Min. process cycle time [ms]	5.6

Supported DeviceIDs	**Type of operation**	**DeviceID**
	default	922

Operating conditions

Ambient temperature	[°C]	-40...60

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Storage temperature	[°C]	-40...85	
Protection		IP 68; IP 69K; (7 days / 3 m water depth / 0.3 bar: IP 68)	

Tests / approvals			
EMC		DIN EN 61000-6-2	
		DIN EN 61000-6-3	
Shock resistance		DIN EN 60068-2-27	50 g (11 ms)
Vibration resistance		DIN EN 60068-2-6	20 g (10...2000 Hz)
MTTF	[years]	131	

| **Mechanical data**		
Weight	[g]	606.2
Material		stainless steel (1.4404 / 316L); PEEK; PEI; FKM
Materials (wetted parts)		PEEK
Process connection		threaded connection G 1/2 external thread sealing cone

Remarks	
Remarks	Note: The unit must only be installed in a process connection for G1/2 sealing cone.
	MW = Measured value
Notes	Digital meets analog: integrating modern IO-Link sensors the analog way. The EIO104 allows you to realize two analog signals from intelligent IO-Link sensors with several process values.
Pack quantity	1 pcs.

Electrical connection

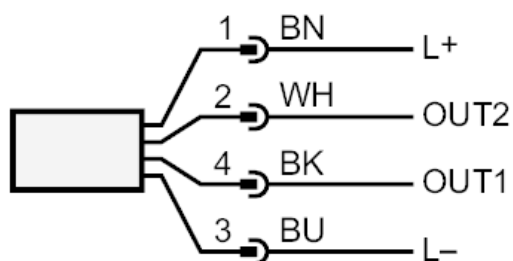Connector: 1 x M12 (EN 61067-2-101); coding: A; Contacts: gold-plated
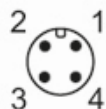
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Inductive conductivity sensor

IND CONDUCTIVITY HYG G1/2 SC

Connection

OUT1	IO-Link
OUT2	analog output
	Colors to DIN EN 60947-5-2
	Core colors :
BK =	black
BN =	brown
BU =	blue
WH =	white