

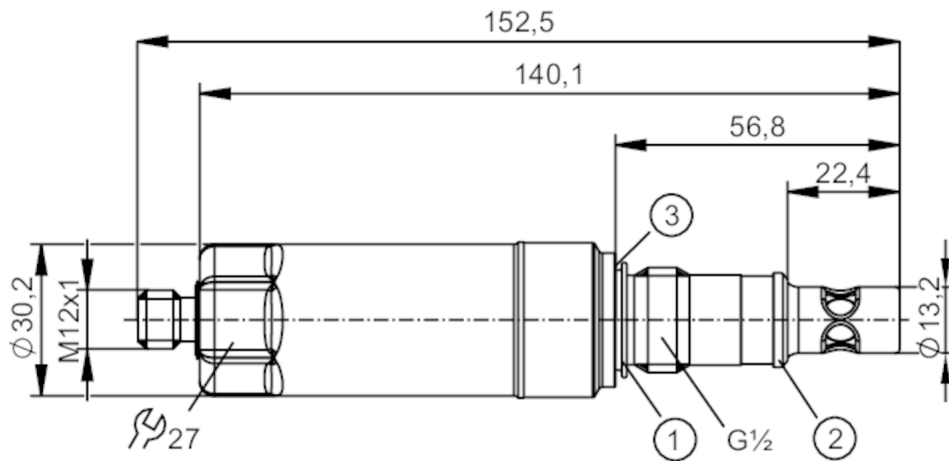
# LDL101



## Conductive conductivity sensor

COND CONDUCTIVITY UPW HYG G1/2

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



- 1 Gasket FKM (for sealing on the back - not pressure resistant) / removable
- 2 pre-mounted PEEK sealing ring (removable) / metallic sealing area
- 3 groove for sealing ring DIN 3869-21



EC 1935/2004 EHEDG Certified FCM FDA IO-Link UK CA

### Product characteristics

Number of inputs and outputs	Number of analogue outputs: 1
Process connection	threaded connection G 1/2 external thread sealing cone optional:hygienic PEEK gasket according to EHEDG

### Application

Special feature	Gold-plated contacts
Media	conductive liquids
Note on media	ultra-pure water
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]	< 60
Protection class	III
Reverse polarity protection	yes
Power-on delay time [s]	2
Measuring principle	konduktiv

### Inputs / outputs

Number of inputs and outputs	Number of analogue outputs: 1
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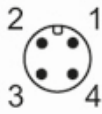
Outputs		
Total number of outputs	1	
Output signal	analogue signal; IO-Link	
Output function	analogue output; scalable; selectable conductivity / temperature	
Number of analogue outputs	1	
Analogue current output [mA]	4...20	
Max. load [ $\Omega$ ]	500	
Measuring/setting range		
Conductivity measurement		
Measuring range [ $\mu\text{S/cm}$ ]	0.04...1000	
Temperature measurement		
Measuring range [ $^{\circ}\text{C}$ ]	-25...150	
Accuracy / deviations		
Conductivity measurement		
Accuracy (in the measuring range)	3 % MW $\pm$ 0,03 $\mu\text{S/cm}$	
Resolution [ $\mu\text{S/cm}$ ]	0,001 (0...9,999)	
	0,01 (10...99,99)	
	0,1 (100...1000)	
Drift [%/K]	0,1 %/K MW	
Repeatability	1 % MW $\pm$ 0,010 $\mu\text{S/cm}$	
Long-term stability	1,5 % MW $\pm$ 0,015 $\mu\text{S/cm}$	
Temperature measurement		
Accuracy [K]	20...50 $^{\circ}\text{C}$ : $< \pm 0,5$ K; -25...150 $^{\circ}\text{C}$ : $< \pm 1,5$ K	
Repeatability [K]	0,2	
Resolution [K]	0.1	
Response times		
Conductivity measurement		
Response time [s]	$< 2$ ; (T09; Damping = 0)	
Temperature measurement		
Response time [s]	$< 9$ ; (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 type	A	
Process data analogue	1	
Min. process cycle time [ms]	5.6	
Supported DeviceIDs	Type of operation	DeviceID
	Default	1455

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Operating conditions	
Ambient temperature [°C]	-40...60
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]	173
Mechanical data	
Weight [g]	329.9
Materials	stainless steel (1.4404 / 316L); PEI; FKM
Materials (wetted parts)	stainless steel (1.4435 / 316L); PEEK
Process connection	threaded connection G 1/2 external thread sealing cone optional:hygienic PEEK gasket according to EHEDG
Remarks	
Remarks	MW = measured value
Notes	Digital meets analogue: integrating modern IO-Link sensors the analogue way. The EIO104 allows you to realise two analogue 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	
	

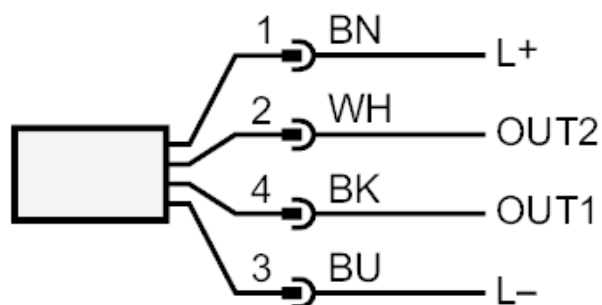
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### Connection



OUT1

IO-Link

OUT2

analogue output

colours to DIN EN 60947-5-2

Core colours :

BK =

black

BN =

brown

BU =

blue

WH =

white