

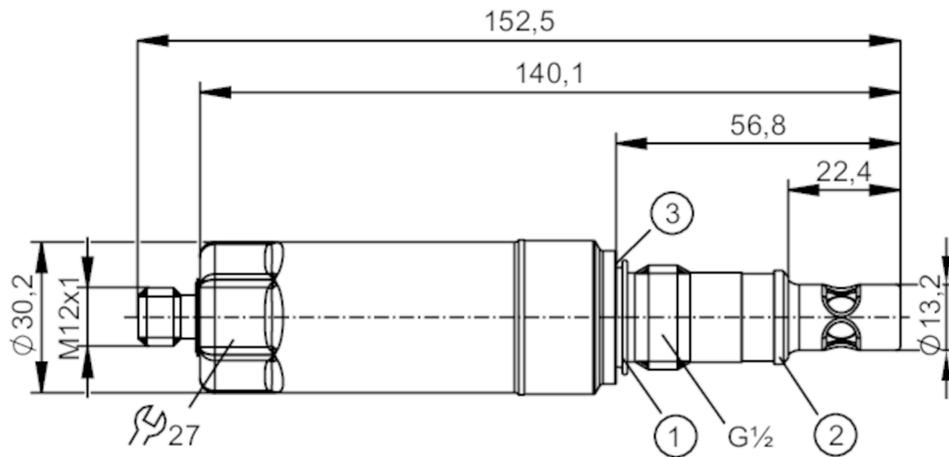
# LDL101



## Conductive conductivity sensor

COND CONDUCTIVITY UPW HYG G1/2

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 pre-mounted PEEK sealing ring (removable) / metallic sealing area
- 3 groove for sealing ring DIN 3869-21



EC 1935/2004

EHEDG Certified

FCM



IO-Link



### Product characteristics

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

### Application

System	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	35 bar / 3.5 MPa
Vacuum resistance	-1000 mbar / -0.1 MPa

### 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 analog outputs: 1
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### Outputs

Total number of outputs	1
Output signal	analog signal; IO-Link

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Output function	analog output scalable; selectable conductivity / temperature	
Number of analog outputs	1	
Analog current output [mA]	4...20	
Max. load [ $\Omega$ ]	500	

### Measuring/setting range

Conductivity measurement		
Measuring range [ $\mu\text{S/cm}$ ]	0.04...1000	
Resolution [ $\mu\text{S/cm}$ ]	0...9,999	0.001
	10...99,99	0.01
	100...1000	0.1

Temperature measurement		
Measuring range [ $^{\circ}\text{C}$ ]	-25...150	

### Accuracy / deviations

Conductivity measurement		
Accuracy (in the measuring range)	3 % MW $\pm$ 0,03 $\mu\text{S/cm}$	
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	

### Reaction 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	Smart Sensor - SSP 3.1	Measuring Sensor
	Common - I&D	Identification and Diagnosis
SIO mode	no	
Required master port class	A	
Process data analog	1	
Min. process cycle time [ms]	6.4	
Supported DeviceIDs	<b>Type of operation</b>	<b>DeviceID</b>
	default	1455

### Operating conditions

Ambient temperature [ $^{\circ}\text{C}$ ]	-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]		173
UL approval	File number UL	E364788

### Mechanical data

Weight [g]	346.8
Material	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
Surface characteristics Ra/Rz of the wetted parts	Ra ≤ 0.8 µm

### Remarks

Remarks	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



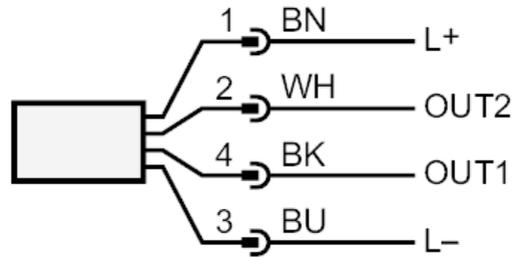
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### Connection



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