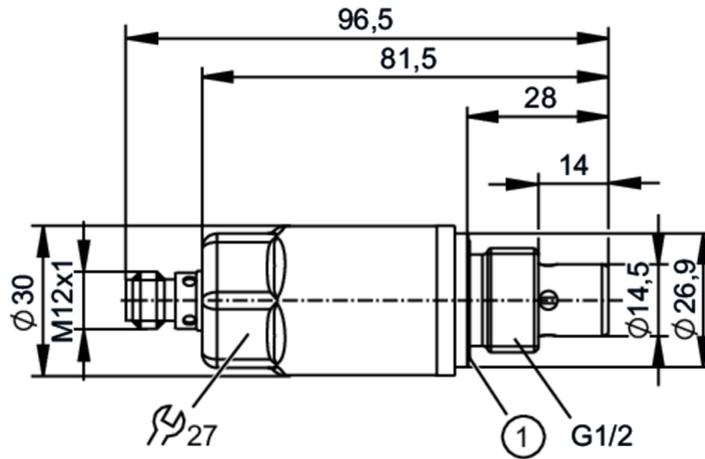


# LDH110



## Oil humidity sensor

OIL HUMIDITY SENSOR ANALOG



1 sealing



### Product characteristics

|                              |                             |
|------------------------------|-----------------------------|
| Number of inputs and outputs | Number of analog outputs: 2 |
| Process connection           | threaded connection G 1/2   |

### Application

|                          |   |
|--------------------------|---|
| System                   | gold-plated contacts                                |
| Media                    | mineral oils; synthetic esters; biodegradable oils  |
| Cannot be used for       | See operating instructions, chapter "Intended use". |
| Medium temperature [°C]  | -40...120   |
| Pressure rating          | 50 bar   5 MPa                                      |
| Vacuum resistance [mbar] | -1000   |

### Electrical data

|                             |           |
|-----------------------------|-----------|
| Operating voltage [V]       | 9...33 DC |
| Current consumption [mA]    | < 50      |
| Protection class            | III       |
| Reverse polarity protection | yes       |
| Power-on delay time [s]     | 2         |
| Max. current load total [A] | 0.085     |

### Inputs / outputs

|                              |                             |
|------------------------------|-----------------------------|
| Number of inputs and outputs | Number of analog outputs: 2 |
|------------------------------|-----------------------------|

### Outputs

|                            |                                      |
|----------------------------|--------------------------------------|
| Total number of outputs    | 2                                    |
| Output signal              | analog signal                        |
| Output function            | analog output humidity / temperature |
| Number of analog outputs   | 2                                    |
| Analog current output [mA] | 4...20                               |
| Max. load [Ω]              | (UB - 5V) * 50                       |

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| Measuring/setting range      |                   |   |
|------------------------------|-------------------|---|
| Measuring range              | [% RH]            | 0...100   |
| Temperature measurement      |                   |   |
| Measuring range              | [°C]              | -40...120   |
| Accuracy / deviations        |                   |   |
| Accuracy                     |                   | ± 3%; ( ± 5 % in the range < 10 %, > 90 %)  |
| Repeatability                |                   | ± 0,5 %   |
| Resolution                   | [%]               | 12 Bit  |
| Temperature measurement      |                   |   |
| Accuracy                     | [K]               | ± 1   |
| Repeatability                | [K]               | ± 0,5   |
| Resolution                   | [%]               | 12 Bit process value  |
| Reaction times               |                   |   |
| Response time                | [s]               | oil: T09 < 30   |
| Temperature measurement      |                   |   |
| Response time                | [s]               | oil: T09 < 30   |
| Operating conditions         |                   |   |
| Ambient temperature          | [°C]              | -40...85  |
| Storage temperature          | [°C]              | -40...85  |
| Max. relative air humidity   | [%]               | 100   |
| 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 61000-6-4  |   |
| 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]           | 284   |
| UL approval                  | File number UL    | E364788   |
| Pressure equipment directive |                   | sound engineering practice; can be used for group 2 fluids; group 1 fluids on request |
| Mechanical data              |                   |   |
| Weight                       | [g]               | 118.5   |
| Material                     |                   | stainless steel (1.4404 / 316L); PEI; sealing: FKM                                    |
| Materials (wetted parts)     |                   | stainless steel (1.4404 / 316L); PA6 GF50; epoxy resin; sealing: NBR                  |
| Process connection           |                   | threaded connection G 1/2   |
| Remarks                      |                   |   |
| Remarks                      |                   | Accuracy values expressed in percent refer to the measuring span                      |
| Pack quantity                |                   | 1 pcs.  |

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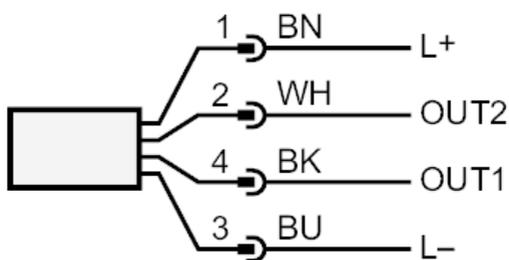
OIL HUMIDITY SENSOR ANALOG

### Electrical connection

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



### Connection



OUT1            analog output temperature  
OUT2            analog output humidity  
Colors to DIN EN 60947-5-2

BK=            black  
BN=            brown  
BU=            blue  
WH=            white