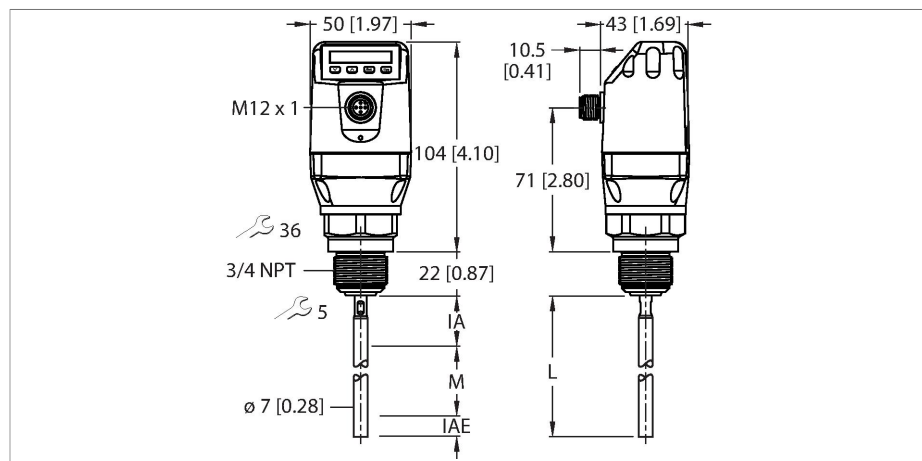


# LS-534-0500-LIU22PN8X-H1151

## Level Sensor – With Analog Output and 2 × Switching Outputs



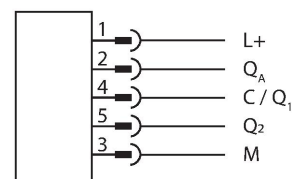
### Technical data

|                                           |                                                                                                                   |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Type                                      | LS-534-0500-LIU22PN8X-H1151                                                                                       |
| ID no.                                    | 100001861                                                                                                         |
| Remark to product                         | Attention: Coaxial tubes (accessories) are only available for LS-551 level sensors with process connection G3/4". |
| Medium temperature                        | -20...+100 °C                                                                                                     |
| Application area                          | liquids                                                                                                           |
| Probe length (L)                          | 500 mm                                                                                                            |
| Max. loading of probe                     | 6 Nm                                                                                                              |
| Probe accuracy                            | ± 5 mm                                                                                                            |
| Temperature drift                         | ≤ 0.1                                                                                                             |
| Hysteresis                                | ≥ 2 mm                                                                                                            |
| Repeatability                             | ≤ 2 mm                                                                                                            |
| Inactive area at process connection       | 25 mm                                                                                                             |
| Inactive area at probe end                | 10 mm                                                                                                             |
| Dielectric constant                       | ≥ 5                                                                                                               |
| Pressure resistance                       | -1...10 bar                                                                                                       |
| <b>Electrical data</b>                    |                                                                                                                   |
| Operating voltage                         | 12...30 VDC                                                                                                       |
| Current consumption                       | ≤ 100 mA                                                                                                          |
| Short-circuit/reverse polarity protection | yes / yes                                                                                                         |
| Inductive load                            | < 1 H                                                                                                             |
| Capacitive load                           | 100 nF                                                                                                            |
| Insulation class                          | III                                                                                                               |

### Features

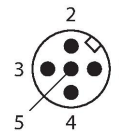
- Multiple output signals: one system for both level detection and continuous level monitoring
- Low maintenance and quick commissioning without calibration
- High flexibility due to cuttable probe
- Compact, rotatable display housing ensures easy installation
- Small inactive areas, ideal for small containers
- Process temperature to 212 °F
- Process pressure up to 145 psi
- Coaxial tubes available for non-metallic tanks
- IO-Link 1.1
- 12...30 VDC
- 1 × analog output 4... 20 mA/0... 10 V (automatic switchover depending on load)
- 1 × transistor output (PNP) or IO-Link
- 1 × transistor output (PNP/NPN switchable)
- Process connection NPT 3/4" male thread
- Probe length 500 mm

### Wiring diagram



## Technical data

| Outputs                        |                                                                        |
|--------------------------------|------------------------------------------------------------------------|
| Output 1                       | Analog output (current/voltage, automatic switching depending on load) |
| Output 2                       | IO-Link/switching output (PNP)                                         |
| Output 3                       | Switching output (PNP/NPN)                                             |
| Switching output               |                                                                        |
| Communication protocol         | IO-Link                                                                |
| Output function                | NO/NC, PNP/NPN, analog output                                          |
| Analog output                  |                                                                        |
| Current output                 | 4...20 mA                                                              |
| High level signal current      | 20...20.5 mA                                                           |
| Low level signal current       | 3.8...4 mA                                                             |
| Load resistance current output | ≤ 0.5 kΩ                                                               |
| Voltage output                 | 0...10 V                                                               |
| High level signal voltage      | U <sub>v</sub> - 2 V                                                   |
| Low level signal voltage       | ≤ 2 V                                                                  |
| Load resistance voltage output | ≥ 0.75 kΩ                                                              |
| Response time typical          | < 400 ms                                                               |
| IO-Link                        |                                                                        |
| IO-Link specification          | V 1.1                                                                  |
| IO-Link port type              | Class A                                                                |
| Transmission physics           | COM 2 (38.4 kBaud)                                                     |
| Frame type                     | 2.2                                                                    |
| Included in the SIDI GSDML     | Yes                                                                    |
| Mechanical data                |                                                                        |
| Housing material               | Plastic, PBT                                                           |
| Materials (contact with media) | Stainless steel 1.4404 (AISI 316L), PTFE, FKM                          |
| Process connection             | 3/4" NPT male thread                                                   |
| Electrical connection          | Connector, M12 × 1                                                     |
| Protection class               | IP67                                                                   |
| Environmental conditions       |                                                                        |
| Ambient temperature            | -20...+60 °C                                                           |
| Storage temperature            | -40...+80 °C                                                           |
| Tests/approvals                |                                                                        |
| Approvals                      | UL                                                                     |
| UL registration number         | E356899                                                                |



## Functional principle

The LS-5 series liquid level sensors uses time-of flight technology to measure electromagnetic waves to generate a level signal. The advanced technology enables calibration free commissioning with probes that can be cut to length for quick integration into most applications. Highly resistant to deposit formations with no moving parts, the LS-5 series offers significant cost saving due to multiple output signals for both continuous level detection and point level monitoring. Simply setup with four buttons and integral display, or through an IO-Link interface

## Technical data

### Display functions

|         |                 |
|---------|-----------------|
| Display | Digital display |
| MTTF    | 194 years       |