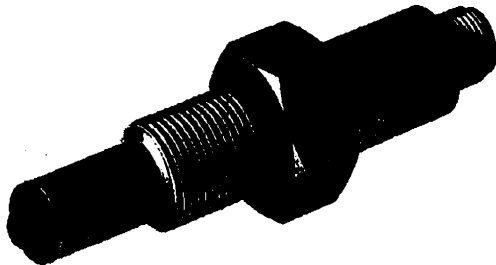


LLN Series Industrial sensors



Features

- Solid-state reliability
- No moving parts
- TTL - compatible - 200 mA sinking output; fast response
- Stainless-steel housing for long life and ease of cleaning
- Quick-connect, industry standard cable assembly for easy installation
- Wide operating temperature range (-40°C to +125°C)
- Polysulphone sensor dome suitable for hygiene applications
- High pressure housing, rated up to 25 bars
- High degree of sealing-IP67

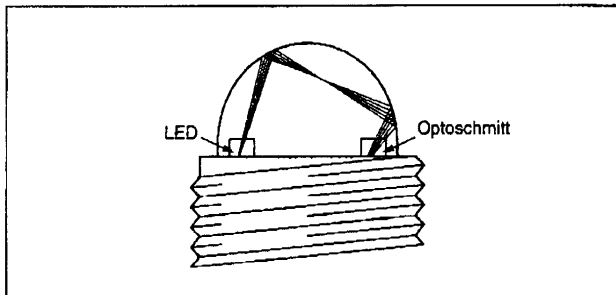
Description

LLN Series industrial liquid level sensors are designed for industrial environments exposed to extremes of temperature, pressure, vibration and shock. Standard devices feature rugged stainless steel housings and polysulphone domes.

The mode of operation is based on the same principal as the LL series.

An internal regulator enables a supply voltage in the range of 10-40Vdc to be used while the output is capable of sinking up to 200 mA.

Principle - In air



Typical Applications

- Industrial compressors
- Machine tools
- Material handling
- Processing and packaging equipment
- Heavy duty automotive

Technical information

| Specifications | |
|---|---|
| Operation mode | User defined single on/off switch |
| Repeatability (mm) | ±1 |
| Hysteresis (mm) | 1 (Dependent on liquid) |
| Response time | Rising liquid level - 50 µs Falling liquid level - 1s max. (in ethanol) Response in other liquids dependent on viscosity |
| Mechanical | |
| Mounting | Exterior mounting by 3/8" B.S.P. thread |
| Connector | 3-pin integral Lumberg/Brad Harrison type connector Pin 1 supply (V _{cc}) Pin 3 0 V Pin 4 output A range of cable/connector assemblies is available |
| Material | Polysulphone dome; stainless steel housing (other materials available on request) |
| Dimensions | Dome 3,5 mm radius Thread 3/8" B.S.P. Hex 24 mm |
| Environmental | |
| Operating temperature (°C) | -40 to 125 (Sensing end only) |
| Storage temperature (°C) | -50 to +90 |
| Humidity | No effect on operation, dependent upon catalogue listing |
| Vibration / shock | Qualification tested 100 to 5000 Hz at 30g to B.S.2011 part 2.1 |
| Pressure range (bar) | 0 - 25 |
| Ambient light limit (mW/cm ²) | 0.5 in operation |
| Electrical | |
| Supply Voltage (V _{cc}) | 10 to 40 Vdc Reverse voltage protection to 40 Vdc Short circuit protection to 40 Vdc |
| Supply current | Optoschmitt (I _s) 8mA Typical LED (I _{LED}) 15 to 50 mA, dependent upon catalogue listing |
| Output sink current (I _o) | 200 mA max |

FACSIMILE TRANSMITTAL MEMO

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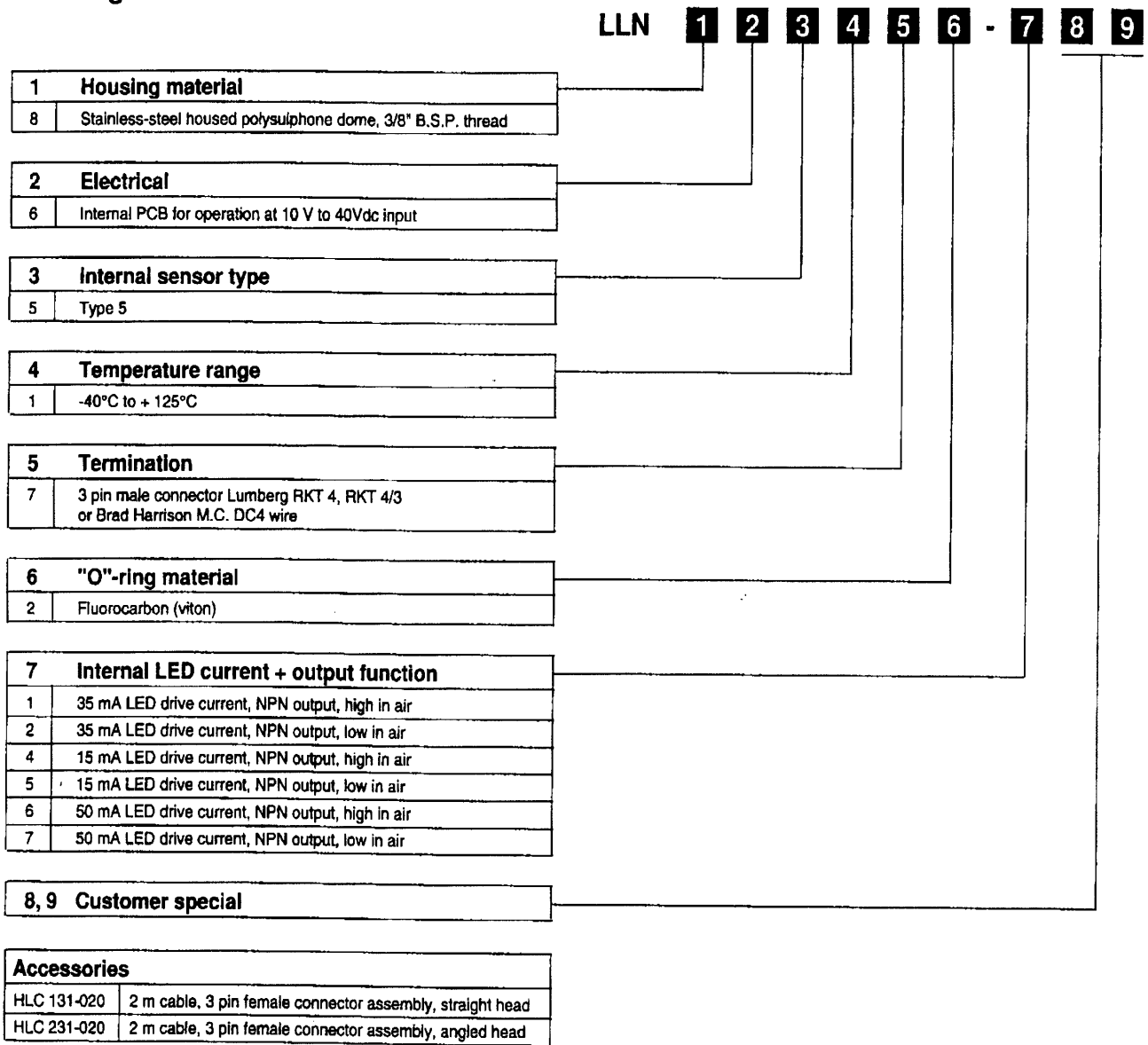
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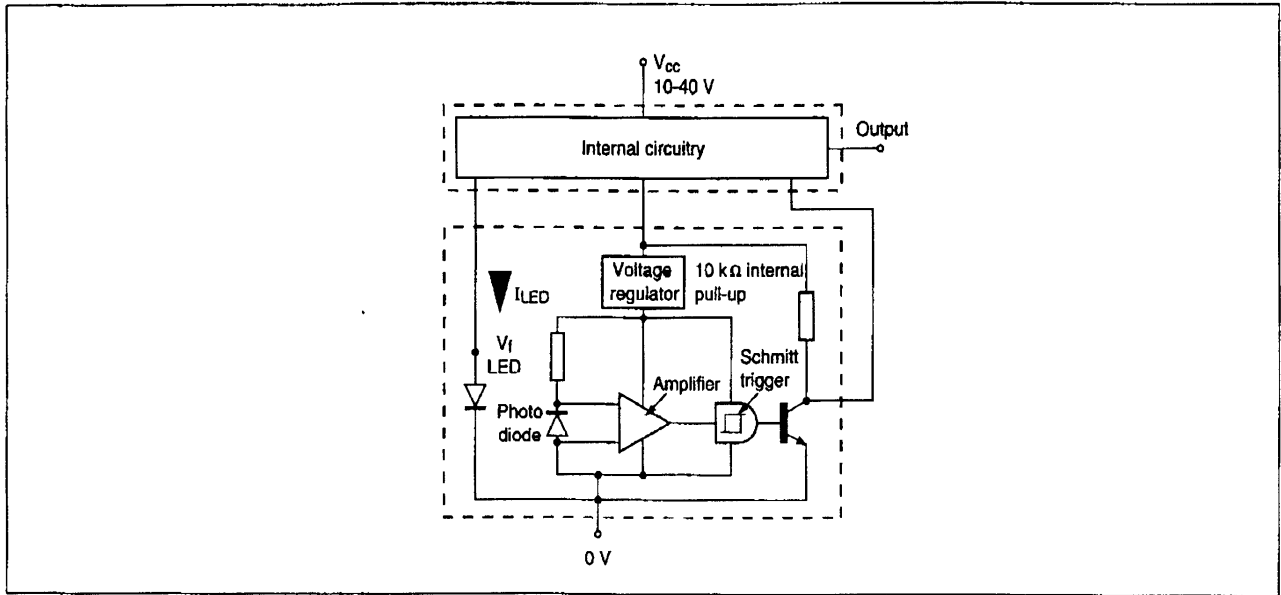
Ordering information



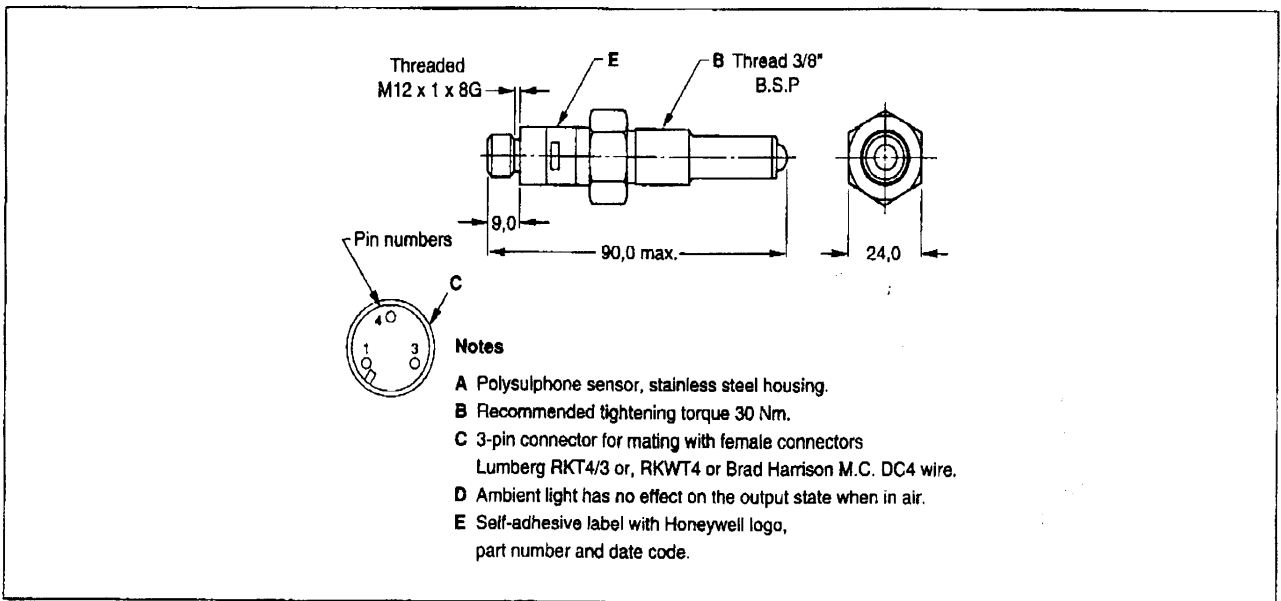
Note:

In normal operation a sensor with LED drive current of 35 mA should be selected. In situations where extreme bubbling may occur, then the sensors with drive current 15 mA should be selected (i.e. LLN865172-4 and LLN865172-5). Where extreme condensation may be present, then the sensors with drive current 50mA should be selected. (For assistance on these points contact local sales office).

Electrical connections



Mounting dimensions in mm (For reference only)



Connector drawings

