

Installation Instructions for Industrial Series Optical Liquid Level Sensors

GENERAL DESCRIPTION

The LLC Industrial Series liquid level sensor provides a single point detection via a TTL compatible output.

Sensor range was designed to directly switch incandescent indicators, sounders or relays.

An infra-red LED and phototransistor accurately positioned at the base of the cone ensure good optical coupling between the two when the sensor is in air. When the sensor's cone is immersed in liquid, the infra-red light escapes from the cone causing a change in the amount of light at the phototransistor which makes the output change state. Various electrical outputs are available to suit different applications.

CLEANING

Proper fluids should be selected based on type of contamination to be removed. SST Sensing recommends freon and alcohol based solvents. DO NOT use chlorinated solvents such as trichlorethane as these are likely to attack the sensor material.

Liquid Media Compatibility

Before use check that the fluid in which you wish to use these devices is compatible with polysulphone.

ELECTRICAL SPECIFICATIONS

Supply voltage (Vs)	5 to 15Vdc or 10 to 28Vdc ($\pm 5\%$)
Supply current	15 mA nominal
Output Type	An "L" in the part number indicates that The sensor output will go low in air. Otherwise the output will be high in air (see notes below).
Output sink/source current (Io)	500 mA max
Operating temperature	-40 to +85°C (standard temperature range) or -40 to +125°C (extended temperature range)
Storage temperature	-40 to +85°C (standard temperature range) or -40 to +125°C (extended temperature range)

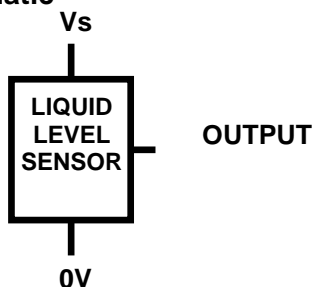


MOUNTING

Housing Type	LLC200 and LLC210 series	LLC600 and LLC610 series
Thread	M12x1x8g with hex nut *	1/2" SAE with o-ring *
Tightening torque	1.5 N m/13.26 in lb max.	
Pressure (using sealing washer/O-ring)	7 bar max	
Mounting hole	Ø12mm	Ø 1/2 Inch
Housing Material	Polysulphone	
Sensor Termination	20AWG, 250mm PTFE Wires, 8mm Tinned	

* Hex nuts and o-rings sold separately, please contact us for details.

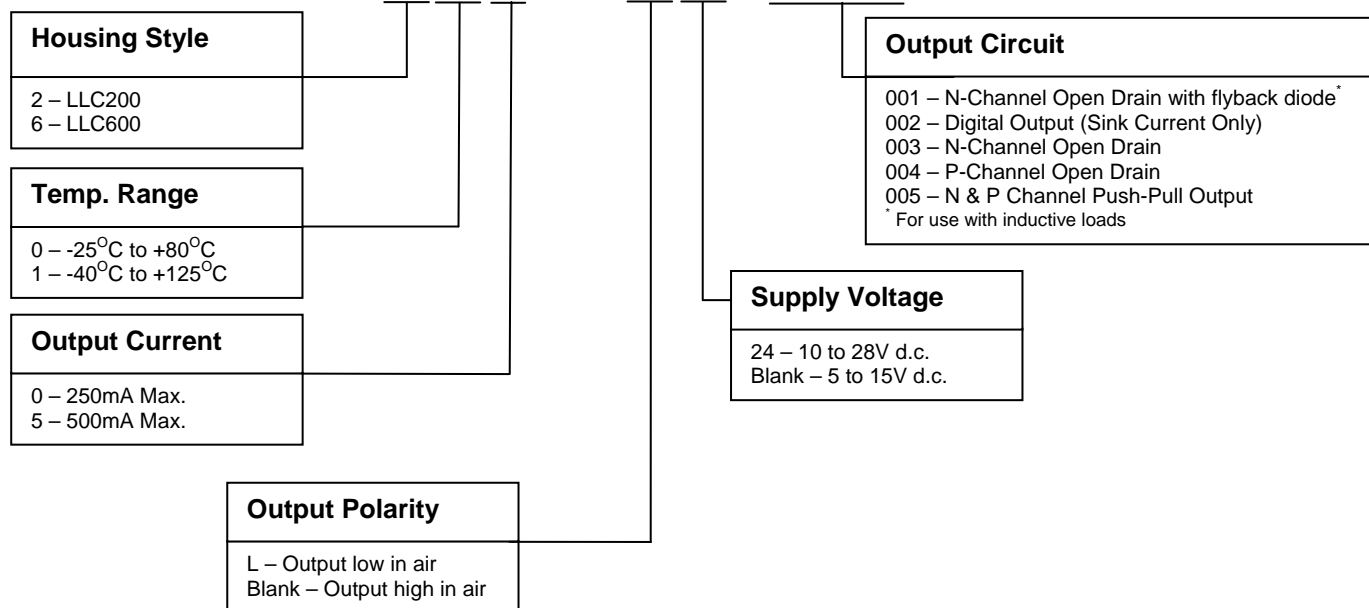
Sensor Schematic



WIRE	DESIGNATION
RED	Vs
GREEN	OUTPUT
BLUE	0V

PART NUMBERING SYSTEM

LLC X X X D 3 X X - ITEM

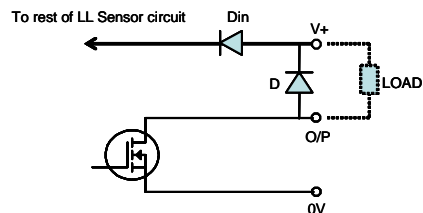


OUTPUT TYPES

In order to suit any application, these sensors have been designed with various output circuit configurations. They are identified by the a 3-digit code at the end of part number and are as follows:

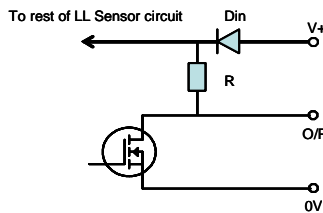
ITEM = -001

N-Channel Open Drain with Flyback protection diode for use with inductive loads



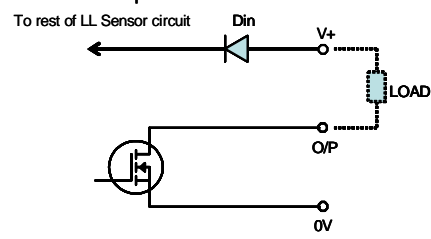
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Digital output with internal pull-up resistor - Intended for connection to digital interface



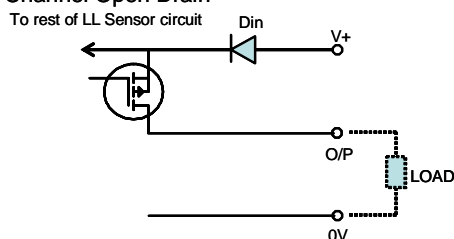
ITEM = -003

N-Channel Open Drain



ITEM = -004

P-Channel Open Drain



ITEM = -005

N & P-Channel Open Drain Push-Pull Output

