Installation Instructions for
Metal Housed Industrial Optical Liquid Level Sensor Series

GENERAL DESCRIPTION

The Metal Housed Industrial Series liquid level sensor provides a single point detection via a MOSFET output.

The 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 recommends freon and alcohol based solvents. DO NOT use chlorinated solvents such as tricholorethane 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

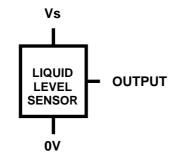|	
Supply voltage (Vs)	5 to 15Vdc or 10 to 28Vdc (±5%)
Supply current	15 mA nominal
Output Type	An "L" in the part number imdicates that the sensor output will go low in air. Otherwise the output will be high in air (see part numbering system).
Output sink/source current (Io)	500 mA max
Operating temperature	-40 to +125°C (extended temperature range)
Storage temperature	-40 to +125°C (extended temperature range)

LLM710D3L24-003

MOUNTING

Housing Type	LLM610 series	LLM710 series
Thread	½" SAE with o-ring *	1/4" NPT
Pressure (using sealing washer/O-ring)	20 bar max	
Mounting hole	Ø 12.7mm	Ø 13.7mm
Housing Material	Brass	
Sensing Tip Material	Polysulphone	
Sensor Termination	20AWG, 250mm PTFE Wires, 8mm Tinned	

* O-rings sold separately, please contact us for details.

Sensor Schematic

Vs

LIQUID LEVEL SENSOR — OUTPUT

0V

WIRE	DESIGNATION
RED	Vs
GREEN	OUTPUT
BLUE	0V

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PART NUMBERING SYSTEM

LLM   X X X D 3 X X - ITEM

Housing Style

6 – LLM600
7 – LLM700

Temp. Range

1 – -40°C to +125°C

Output Current

0 – 250mA Max.
5 – 500mA Max.

Output Polarity

L – Output low in air
Blank – Output high in air

Output Circuit

001 – N-Channel Open Drain with flyback diode*
002 – Digital Output (Sink Current Only)
003 – N-Channel Open Drain
004 – P-Channel Open Drain
005 – N & P Channel Push-Pull Output
* For use with inductive loads

Supply Voltage

24 – 10 to 28V d.c.
Blank – 5 to 15V d.c.

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

ITEM = -002
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