

# 1 Node Descriptor 26 – Liquid Level 8-inches

## 1.1 Device Description

The wireless liquid level sensor uses an 8 inch long solid-state, resistance sensitive ribbon sensor to measure the level of a liquid in a container.

## 1.2 Hardware Details

### 1.2.1 Resistive Strip

Possible hardware combinations include:

- Platform RFSC Rev A, Ver 0: Not supported.
- Platform RFSC Rev B, Ver 0: SP5 + SP6 Bridged, SP7; Inner two leads on taped soldered to these 2 ports
- Platform RFSC Rev C, Ver 0: SP5 + SP6 Bridged, SP7; Inner two leads on taped soldered to these 2 ports

#### Sensor Specifications:

Sensor Material	Pylyethylene Terephthalate (PET)
Sensor Length	10.1 inch (256.6 mm)
Active Sensor Length	8.6 inch (218.4 mm)
Sensor Width	1.0 inch (25.4 mm)
Sensor Thickness	0.015 inch (0.381 mm)
Actuation Depth	Nominal 1 inch (25.4 mm)
Resolution	1/32 inch (0.794)

## 1.3 Enclosure Details

Available in WIT2.

## 1.4 Message Details

### 1.4.1 STATE (SOM, SDM)

Both the Spurious Orphan Message (SOM) and the Spurious Data Message (SDM) contain the STATE field. STATE is defined here. (For definition of STATE, refer to Monnit Network Specifications, Section 4.2).

Field	Length	Description
Test Active	1 bit LSB	Test state is active (1) or inactive (0)
Aware State	1 bit	Aware state is active (1) or inactive (0)
Sensor Disable	1 bit	Sensor is disable (communication still happens)
RSVD	1 bit	Currently not used
Calibrate Active	1 bit	Calibrate is active (1) or inactive (0)
Self Test Status	1 bit	Not used. Always 0.
Not Used	1 bit	
Not Used	1 bit MSB	

This application does not specify any Action Control Types.

### 1.4.2 SDATA (SDM)

The Spurious Data Message contains the SDATA field, which is defined here. The SDATA field is defaulted to 2 bytes for this application.

SDATA[0]: STATE.

SDATA[1-2]: Unsigned Int16, inches \* 100.

Field	Length	Value	Format
SDATA[0]	1 byte	Int8	STATE
SDATA[1-2]	2 bytes	Int16	Inches multiplied by 100.

## 1.5 General Configuration Defaults

The Configuration Defaults below are native to the 0-20 mA sensor only.

Field	Default	Min	Max	Comments
NODEDESC	26	N/A	N/A	Fixed.

## 1.6 Profile Defaults

The Liquid Level 8-inch sensor operates using the Interval device profile.

Field	Default	Min	Max	Comments
PROFILE	1	N/A	N/A	1=Interval profile.
MRES	1	1	250	Measurements per heartbeat
SYNCMASK	0	0	0x00FF	Synchronization or offset of heartbeats.
HYST	0	0		Buffer zone around a threshold value.
THRSHMIN	0	0	750	Minimum Threshold for awareness.
THRSHMAX	2450	0	800	Maximum Threshold for awareness.
CALVAL_1	17000	0	17000	Empty
CALVAL_2	4500	0	16000	Full
CALVAL_3	800	0	800	Inches. Used for calibration
CALVAL_4	100	0	700	Inches. Used for calibration

\*NPN Collector input, up to 40V, sinking up to 20 mA. Base has 10K resistor on input, emitter is grounded and collector is the signal to I/O on processor.