1   Node Descriptor 4 – Water

1.1 Device Description

The Water Sensor will notify the network of the presence or absence of water (spot detection). The user can set alerts to trigger either when water is detected or when water is absent. This sensor sends a data message whenever the state changes, regardless of the heartbeat, as the event is configured as an interrupt on the processor.

1.2 Hardware Details

1.2.1 Leaded Wire

Possible hardware combinations include:

•   Platform RFSC Rev A, Version x: 4.7M resistor on S2. Input: SP2. Ground: SP4

•   Platform RFSC Rev B, Version x: 4.7M resistor on S2. Input: SP2. Ground: SP4

•   Platform RFSC Rev C, Version x: 4.7 M resistor on S2. Input: SP2. Ground: SP4

The sensor will come prepared with 36" of wire plus a compatible header. The leads of the water sensor may also have a sponge between them to help protect the bare wires from being exposed and giving false readings.

1.3 Enclosure Details

Standard Monnit enclosures including: WIT, WIT2, Industrial, MOWI.

1.4 MNP 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
Not used	1 bit	
Not used	1 bit	
Not used	1 bit	
Not used	1 bit MSB	

This application specifies no additional 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 3 bytes for this application.

SDATA[0]: App_DiscoverState()

SDATA[1]: If the device is set to trigger on the water's presence, then 0 = no water and 1 = water detected. If the device is set to trigger on water's absence, then 0 = water detected and 1 = no water.

SDATA[2]: 0

Field	Length	Value	Format
SDATA[0]	1 byte	Int8	STATE
SDATA[1]	1 byte	Int8	Trigger when there's water: 0 = no water, 1 = water detected. Trigger when there's no water: 0 = water detected; 1 = no water.
SDATA[2]	1 byte	Int 8	Always 0.

1.5 General Configuration Defaults

The Configuration Defaults below are native to the Water sensor only.

Field	Default	Min	Max	Comments
NODEDESC	4	N/A	N/A	Fixed

1.6 Profile Defaults

The Water sensor operates using the Trigger device profile.

Field	Default	Min	Max	Comments
PROFILE	2	N/A	N/A	2 = Triggered profile.
DETEVTYPE	0	0	1	Port idle high for trigger on water present.
DETEVPERIOD	50	25	10000	Value is in milliseconds.
DETEVCOUNT	30	3	3000	Number of events to trigger detection
REARMTRIG	1	1	3600	Value in seconds for trigger rearm.
BISTABLE	1	0	1	Reports on both water present and absent
RSVD	-	-	-	Reserved for future use.

DETEVTYPE configurable values:

0	Port idle high for trigger on water present
1	Port idle low for trigger on water absent