

1 Node Descriptor 23 – PIR (Infrared Motion) sensor

1.1 Device Description

The wireless motion sensor uses an infrared sensor to accurately detect movements made by people/animals within 16.4 ft (5 m) range.

1.2 Hardware Details

1.2.1 PIR

Possible hardware combinations include:

- Platform RFSC Rev A, Ver 0: Unsupported.
- Platform RFSC Rev B, Ver 0: SP4, SP5, SP6.
- Platform RFSC Rev C, Ver 0: SP4, SP5, SP6

Rated Detection Distance:	5m (16.4 ft) Max
Detection Range:	Horizontal: 100°
	Vertical: 82°
Detection Zones:	64 zones
Operating Range:	2.2V – 3.0V
Rated Standby Consumption Current:	46µA typical, 60 µA max
Rated Consumption Current:	170 µA typical, 300 µA max
Output current, max:	100 µA
Output voltage, min:	Vdd-0.5V
Circuit stability time	7 s typical, 30 s max

1.3 Enclosure Details

The Infrared Motion sensor fits into all standard enclosures: WIT, WIT2, Industrial, Wi-Fi.

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	Currently not used
Self Test Status	1 bit	Self Test results are normal (0) or out of range (1)
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 1 bytes for this application.

SDATA[0]: App_DiscoverState()

SDATA[1]: Motion Detected = 1, No Motion = 0.

Field	Length	Value	Format
SDATA[0]	1 byte	Int8	STATE
SDATA[1]	1 byte	Int8	No Motion (0), Motion detected (1)

1.5 General Configuration Defaults

The Configuration Defaults below are native to the PIR only.

Field	Default	Min	Max	Comments
NODEDESC	23	N/A	N/A	Fixed.

1.6 Profile Defaults

The PIR sensor operates using the Trigger device profile.

Field	Default	Min	Max	Comments
PROFILE	2	N/A	N/A	2 = Triggered profile.
DETEVTYPE	0	0	0	Always 0, trigger on motion detected
DETEVPERIOD	25	25	10000	Sampling period
DETEVCOUNT	3	3	3000	Detection Validation Count
REARMTRIG	30	1	3600	Rearm time after event occurs
BISTABLE	0	0	1	Reports in on motion detection and heartbeat only when 0. Reports No Motion after the rearm time has elapsed twice when 1.
RSVD	-	-	-	