Cygnus SmartNet 100 Datasheet

SmartNet-100 Heat Detector with Standard Radio Base

Part Number: S1.DTH0.RB00.1 / S1.DTH1.RB00.1

Heat Type A1R Detector with Radio Base

Heat Type B Detector with Radio Base

The Cygnus SmartNet wireless fire detection and alarm system is a network of battery powered, wireless fire detection and alarm products suitable for permanent installations, commercial premises and HMOs.

The Heat Detector with radio base is available with Type A1R or Type B for use with up to 511 other devices, serving small and large sites. It provides heat detection with radio in a single device.

Other products in the range include: Smoke and Heat Detectors, Manual Call Points, First Aid Alarms, Alarm Interface Unit and Control Panel.

Overview

- Reliable wireless mesh radio technology
- Completely wireless – no cables required
- Sensitive radio with up to 350m range
- 868MHz radio (915MHz also available)
- 3+ year battery life
- Designed to be EN 54 compliant
- Certified by Intertek
- Easy configuration via the Windows based CygnusConfig application
- Compatible with other Cygnus SmartNet devices

Features

Smoke detector	No (see SN.DTC / SN.DTS series)
Heat detector	Yes (Type B or A1R)
Sounder	No (see SN.DTH0.RB10.1 / RB20.1)
Visual indicator	No (see SN.DTH0.RB20.1)
Silent test	Yes
Tamper detection	Two (radio base and head)

Parameters

Dimensions (mm)	123Ø x 93h (inc combi-detector head)
Weight	550g
Operating temperature	-10°C to +55°C
Storage temperature	-10°C to +55°C
IP rating	IP21C, Type A (Indoor)
Relative humidity	>95% @ 25°C to 55°C

Doc Number. 2000-DTS-0046
Issue Number. V0.2 05-07-2024

Cygnus Group Limited
Stirling House, 6 Beacon Road, Rotherwas, Hereford, HR2 6JF
01432 279000 www.cygnus-systems.com

Power

Operating voltage range	2.5 to 3.8V (from lithium batteries)
Main battery	3x ER26500 Li-$SOCl_2$ (lithium thionyl chloride)
Backup battery	1x CR123 (must be fitted)
Battery Voltages	ER26500 = 3.6V nom. CR123 = 3.0V nom.
Power consumption	3mW
Battery life	Min 3 years (normal operation)

Radio

Radio operating frequency	865 to 868 MHz
Radio category	Category 1
Channels	10 (with channel hopping algorithm)
Bandwidth	250kHz
Channel spacing	300kHz
Transmit power	10mW (maximum)
Duty cycle	<0.1%
Protocol	Cygnus mesh protocol
Encryption	TDES (64-bit payload, 192-bit encryption key)
Self-forming	Cygnus self-forming algorithm
Self-healing	Cygnus self-healing algorithm

Additional Information

Heat detector setpoint	Type B: 72^{O}C, Type A1R: 55^{O}C (EN 54-5)
Model SN.DTH0.RB00.1	Type A1R
Model SN.DTH1.RB00.1	Type B

Compliance

Current:

- ETSI EN 300 220-1 V3.1.1 (2017-02)
- ETSI EN 301 489-1 V2.2.2 (2019-09)
- ETSI EN 301 489-3 V2.1.1 (2019-03)
- EN61000-6-3:2007 +A1:2011
- EN50130-4:2011 +A1:2014
- EN61000-3-2:2014
- EN61000-3-3:2013

- EN 54-5:2017+A1:2018
- EN 54-18:2005
- EN 54-25:2008

Intertek

UK CA 0359

CE 0905

Doc Number. 2000-DTS-0046
Issue Number. V0.2 05-07-2024

Cygnus Group Limited
Stirling House, 6 Beacon Road, Rotherwas, Hereford, HR2 6JF
01432 279000 www.cygnus-systems.com

Ordering Information

Detector Head Options	A1R Heat Detector (Rate of Rise)	SN.DTH0.1
	Type B Heat Detector (72^0) Fixed Temp	SN.DTH1.1
Device Base(s) Options	Standard Radio Base (White)	S1.RB00.1

IO Functions (for EN 54-18:2005)

Inputs:

- Radio messaging from other devices
- Heat A1R detector
- Heat B detector
- Installation tamper switch

Outputs:

- Radio messaging to other devices

Cygnus Group Limited
Stirling House, 6 Beacon Road, Rotherwas, Hereford, HR2 6JF
01432 279000 www.cygnus-systems.com