Cygnus SmartNet PRO Datasheet

SmartNet Pro Fire Control Panel 64/96 Zones

Part Number: SN.CIE20.A / SN.CIE30.A / SN.CIE70.A /SN.CIE80.A

Wireless Fire Control Panel with Colour Touch Screen Display

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.

This Control Panel is for use with up to 511 SiteNet devices, serving small and large sites.

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

Overview

- Reliable wireless mesh radio technology
- Completely wireless communication
- Requires single mains power connection to Control Panel
- Cause & Effect engine
- Sensitive radio with up to 700m range
- 868MHz Radio (915MHz also available)
- Three-to-four-day backup battery life
- Wired terminal connections for inputs, outputs and expansion
- Designed to be EN 54 compliant
- Certified by Intertek

Features

- 7” full-colour touchscreen display
- Resistive touchscreen for use with gloves
- Recessed or surface mount enclosure
- Key-lockable door
- Level 2 key access
- Removeable internal parts for ease of installation
- Removeable door
- Silent test mode
- Zone LED option for BS5839 compliance
- Easy configuration via the Windows based Cygnus ConfigGUI application

Parameters

Dimensions (mm) Surface mounted Recessed	460w x 385h x 105d (excluding keys) 460w x 385h x 50d (excluding keys)
Weight	7.8kg with batteries (3.4kg without)
Operating Temperature	-5OC to +40OC
IP Rating	IP30
Relative Humidity	95% @ 40OC

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Power

Operating voltage range	230V AC ±10%, 50/60 Hz
Rated current	0.4A rms
Backup batteries	2x NP7-12FR 12V SLA, 7Ah (Fire Rated) *2
Backup battery voltage	24V (2x 12V batteries connected in series)
Mains power wiring	Supplied fitted with 13A plug
Battery life – 2x 7Ah batteries	3 days
Fuse ratings	Mains Fuse: T1A H250V, 1A (slow blow) 5 x 20mm Battery Fuse: 3A Mini-Automotive Blade Fuse

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

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 54-2:1997 + A1-2006
- EN54-4:1997+A1:2002+A2:2006
- EN 54-25:2008

Intertek

UK CA
0359

CE
0905

*2 Approved Batteries:
Yuasa NP7-12FR, Enersys NP7-12FR

Notes

- 64 or 96 zone panels are available

Model	Zones	Zone LEDs
SN.CIE20.A	64	Yes
SN.CIE30.A	96	Yes
SN.CIE70.A	64	No
SN.CIE80.A	96	No

- Zone LEDs hidden until lit

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IO Functions (for EN 54-18:2005)

Inputs:

- Radio messaging from other devices
- Lid tamper switch
- Two digital inputs (see below)

Note: Inputs must not be supplied with a voltage. Points 'A' and 'B' must be shorted together to activate the inputs.
Inputs are fault monitored and a fault will appear if the termination resistors are not fitted. Please connect as shown in the diagram below.
If an input is unused, please fit a 4.7 k

Outputs:

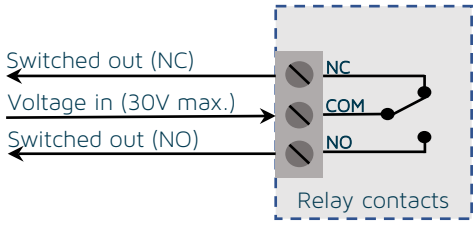
- Radio messaging to other devices
- Two digital outputs (see below)

Note: Outputs must be supplied with external power to the relay contacts (no power is available from the batteries fitted to this device).
Outputs are operated from the control panel and configured using the CygnusConfig application.

Two digital inputs	Short together for activation *(termination resistors required)*
Two outputs	NO, COM, NC dry contacts
Contacts Current Rating	2A @ 30V DC max.
Contacts Power Rating	60W max.

Note: All Inputs and Outputs operate independently

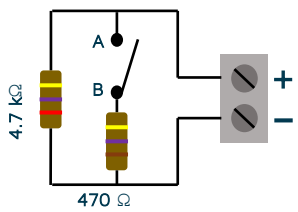
Output Wiring Connection



NC	Normally Closed Relay Contact
COM	Common Relay Contact
NO	Normally Open Relay Contact

Input Wiring Connection

4.7 kΩ resistor	This is an end-of-line termination resistor, so must be connected to the furthest point of the wiring. 4.7 kΩ is also 4,700Ω.
470 Ω resistor	This is a series resistor which must be connected in series with a switch or relay contacts



Input Connection

+	High-side input (do not apply a voltage to this terminal)
–	Low-side input (do not apply a voltage to this terminal)

Input States

Open contact (A and B	Input inactive 
Closed contact (A and B connected / switch closed)	Input activated 
Open circuit state	No resistance present (4.7 k resistor missing or wire cut)
Short circuit state	Plus and minus terminals shorted together

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