

Contact Monitor

Installers Handbook

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Description

The Stratos SenseNet Contact Monitor is designed for installation in any enclosure. The unit monitors up to seven inputs and sends that information to the SenseNET bus which is an RS485 data highway. A bank of switches selects the Contact Monitor address.

The unit is powered from a 24V DC nominal power supply. Power is distributed internally from an isolated converter.

Construction

The unit consists of a printed circuit board (PCB) with screw terminals. The PCB has terminals for the power supply input, connection to the RS485 data highway and inputs. The board may be mounted using four stand-offs.

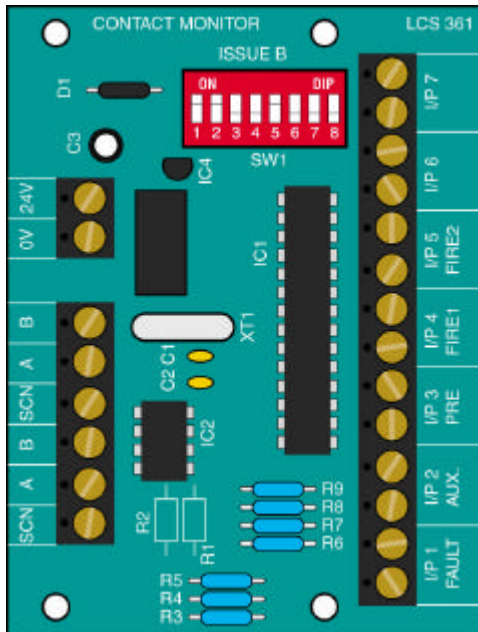
Installation

RS485 wiring should be made using screened twisted pair cable. The cable screens should be connected locally and not to power supply 0V or to mains earth.

The RS485 connections form part of an Airsense Technology Ltd SenseNET Bus. All other devices on this bus must have an isolated RS485 port.

The unit contains static sensitive devices. Precautions must be taken during installation.

Contact Monitor board



The address switch on the contact monitor should be set to the required address.

The contact monitor status can be displayed by an RDU by setting the RDU to the same address as the contact monitor. No bargraph will be displayed.

The Fault contacts should be normally closed. Opening the connection will result in a Fault signal being sent.

Aux, Pre-Alarm, Fire 1 and Fire 2 contacts are normally open and send the appropriate alarm signal when closed.

IP6 and IP7 are extra contacts that may be used for signalling.

Cabling

The SenseNET data cable should be 120Ω screened twisted pair such as Belden 9841 24 AWG.

The Contact Monitor, unlike the Stratos-HSSD 2 detector, has no repeater built in so the maximum length of cable that can be directly connected to a Contact Monitor is 1.2 kilometres.

An optional repeater unit is available if a longer cable run than 1.2 kilometres is unavoidable.

Connections

| | |
|------|---|
| 0V | Power supply 0 Volts. This must NOT be connected to data SCN. |
| +24V | Power supply 24 Volts input. |
| SCN | Data cable screen. |
| A | Data loop A circuit. |
| B | Data loop B circuit. |

Power supplies

The power requirement for the Contact Monitor is 20mA max at 24 Volts \pm 10%.

Appendix A - Address table

| Address | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---------|---|---|---|---|---|---|---|---|
| 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 5 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 7 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 9 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 10 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| 11 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| 13 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| 14 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 15 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 16 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 17 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 18 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| 19 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| 20 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| 21 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| 22 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 |
| 23 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 |
| 24 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| 25 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| 26 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 |
| 27 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 |
| 28 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 |
| 29 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 |
| 30 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 31 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 32 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 33 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 34 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| 35 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| 36 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| 37 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| 38 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| 39 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| 40 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |
| 41 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |
| 42 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| 43 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| 44 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| 45 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| 46 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 |
| 47 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 |
| 48 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| 49 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| 50 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 |
| 51 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 |
| 52 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| 53 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| 54 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| 55 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| 56 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| 57 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| 58 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 |
| 59 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 |
| 60 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| 61 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| 62 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 |
| 63 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 |
| 64 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |

| | | | | | | | | |
|-----|---|---|---|---|---|---|---|---|
| 65 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 66 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| 67 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| 68 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| 69 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| 70 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| 71 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| 72 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| 73 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| 74 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 |
| 75 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 |
| 76 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 |
| 77 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 |
| 78 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 |
| 79 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 |
| 80 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 81 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 82 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 |
| 83 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 |
| 84 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| 85 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| 86 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 |
| 87 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 |
| 88 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 |
| 89 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 |
| 90 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| 91 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| 92 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 |
| 93 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 |
| 94 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 |
| 95 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 |
| 96 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 97 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 98 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 |
| 99 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 |
| 100 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| 101 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| 102 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 |
| 103 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 |
| 104 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 |
| 105 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 |
| 106 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 |
| 107 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 |
| 108 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| 109 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| 110 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 |
| 111 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 |
| 112 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 |
| 113 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 |
| 114 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 |
| 115 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 |
| 116 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 |
| 117 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 |
| 118 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 |
| 119 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 |
| 120 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 |
| 121 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 |
| 122 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 |
| 123 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 |
| 124 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 |
| 125 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 |
| 126 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 127 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |

Appendix B - Specification

Nominal operating Voltage: 24 Volts \pm 10%

Maximum input Voltage range: 18 to 30 Volts DC

Maximum operating current: 20 mA

Operating temperature range: -10 to +60 °C

Storage temperature range: -25 to +85 °C

Operating humidity range: 0 to 90 % non-condensing

Isolation and Product Safety Strategy - IEC 950

All power will be supplied via a purpose made supply built to EN54 or equivalent. This supply will incorporate isolation sufficient that its outputs are SELV.

System interconnections will therefore be SELV whether floating or not.

Bus interfaces will not be isolated and it will be the responsibility of the installer to provide sufficient isolation in connected equipment.

Enclosures will be earthed either through its mounting or by use of shielded supply cabling.

Electrical Interfaces

Terminals.

Type: Screw terminals M3

Maximum wire size: 2.5mm²

Appendix C - Troubleshooting

symptom

Contact Monitor not responding

probable cause

Input Voltage missing or too low or address switch set incorrectly.