



**INTELLI-SENSE**

Addressable Control Panel

**INSTALLATION, COMMISSIONING  
& OPERATING MANUAL FOR  
BMS GRAPHICS INTERFACE**

## CFX-Plus Intelli-Sense

## BMS Graphics Interface

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## Specifications:

### Models, Sales Order Parts:

TI-002330	BMS Interface – Card Only (/FT = Fault Tolerant network)
TI-002330-BX	BMS Interface – Boxed (/FT = Fault Tolerant network)

### Applications / Limitations:

Provides remote access to devices on an Ad Net network.  
Provides connection to various 3<sup>rd</sup> party Graphics Systems (Contact Sales for an up-to-date list of compatible systems).  
RS232 Communications baud rate selectable between 19200 or 38400.

### Compatibility:

Intelli-Sense Series Fire Alarm Panels

Use the standard model on standard networks.  
Use the fault tolerant model on fault tolerant networks.

Item	Specification Details
Applicable Standards	EN54-18
Operating Temperature	-5°C to 40°C
Relative Humidity	95% Non Condensing (maximum)
PCB	38.5mm (H) x 245mm (W) x 90mm (L)
Supply	24V (18V to 28V) DC
Supply Current	48mA (/FT: 86mA) at 24V DC
Serial Interface	Isolated RS232 Interface (max. 3m / 10')
Fault Input	Monitor Input for Power Supply Fault Output
Indications	On-board LED indicators for HEARTBEAT, NETWORK transmit / receive, RS232 transmit / receive
Enclosure	IP30: Dimensions 218mm (H) x 300mm (W) x 45mm (D) RAL7035
Weight	2 kg
Knockouts	4 Top, 1 Bottom, 4 Bottom Rear
As our policy is one of constant product improvement the right is therefore reserved to modify product specifications without prior notice	



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## 1 Introduction

The BMS Interface allows BMS systems and graphics PCs to be integrated with the Intelli-Sense series of Fire Control Panels and Remote Terminals.

The interface is an integral part of the Intelli-Sense-Net network, handling all the network traffic, prioritisation, etc. whilst allowing the external BMS/Graphics systems to issue commands and receive information over a simple RS232 bi-directional serial port.

Multiple interfaces can be connected at different positions on the network as required (following the normal Intelli-Sense-Net Network rules to give each node its own unique network address, etc.).

The BMS Interface is supplied as either a card only (for installation in an Intelli-Sense rack utility enclosure or other suitable enclosure) or as a boxed version.

### 1.1 Mounting

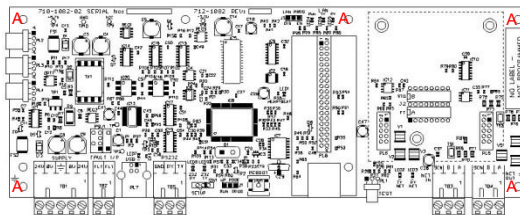
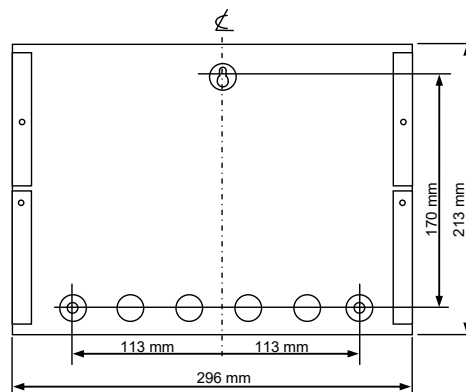
The boxed version enclosure is provided with three (6mm diameter) fixing points. Refer to the diagram opposite for dimensions. Use appropriate fixings to mount the enclosure on the wall.

Ensure that there is sufficient space to allow the cover to be removed / opened when the panel is finally mounted.

If the cover is completely removed, remember to reconnect the earth lead prior to re-assembly.

The card should be mounted in an earthed enclosure.

Use the supplied M3x10 Brass Pillars and screws (x5) and mount using fixing holes marked 'A' in the diagram opposite.



### 1.2 Wiring

The unit is designed for easy wiring installation.

"Plug-in" terminal blocks are provided for all connections to the unit.

The diagram below shows the positions for all connections to the unit.

N.B: Minimum / Maximum cable size for all connections is limited to 0.5mm<sup>2</sup> / 2.5mm<sup>2</sup> (22-14AWG).

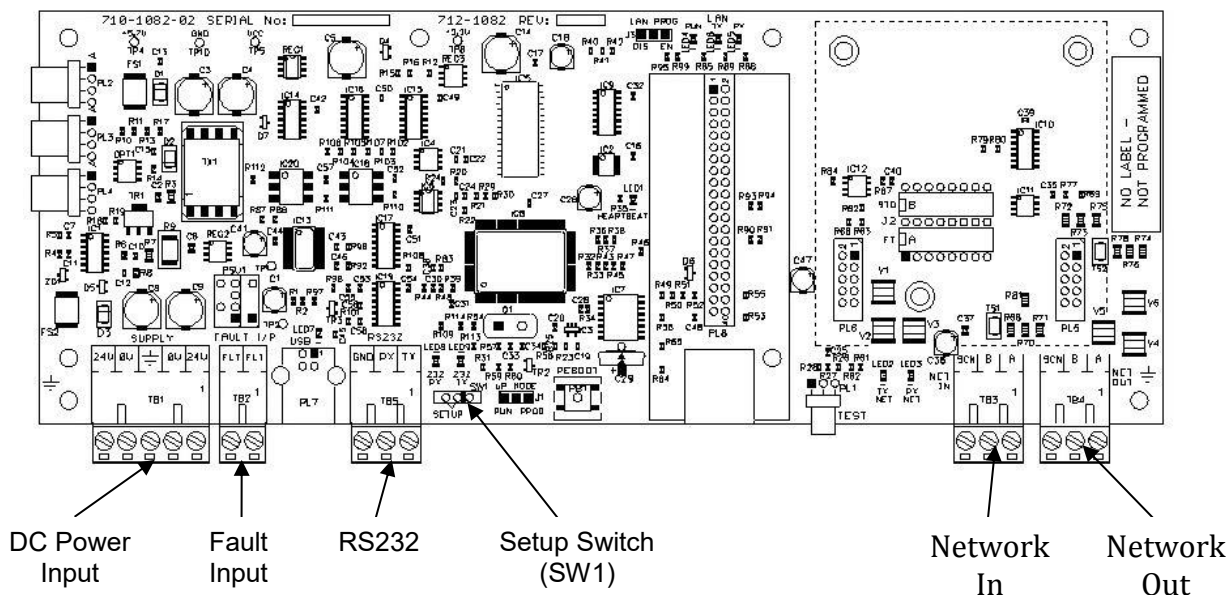
All electrical wiring installation work should be carried out in accordance with the code of practice applicable in the country of installation.

To maintain electrical integrity of the SELV wiring on the DC Power and Communications lines all SELV wiring should be segregated from LV mains wiring and be wired using cable with insulation suitable for the application.

To minimise the effects of EMC interference all data wiring circuits should be wired with a twisted pair of conductors with a cross sectional area suitable for the loading conditions.

In areas where cabling may come into contact with high frequency interference, such as portable radio transceivers etc, the data wiring cable should be of a twisted pair construction within an overall screen. Care should be taken to correctly terminate this screen, refer to the information below.





## 1.2.1 DC Power Supply

The TI-002330 requires a 24V power supply. Connect the 24V DC supply feed to the SUPPLY + 24V and 0V terminals.

Use cables of sufficient size to ensure that the power input voltage is maintained under all supply conditions – refer to the specification section.

Dual terminal screws are provided so that, if required, the DC Power can be routed on to another peripheral unit.



Connect the incoming power supply earth wire to the earth stud in the back box.

**Note:** The power supply used MUST BE designated a Safety Extra Low Voltage (SELV) supply.

## 1.2.2 Fault Input

The “FAULT INPUT” terminals are normally used to monitor the “normally closed” contacts of the fault relay output from the power supply. A 10KΩ series resistor should be connected to the relay terminals.

If more than one module is powered from the same power supply, it is only necessary to connect the fault output monitoring to one of the modules.

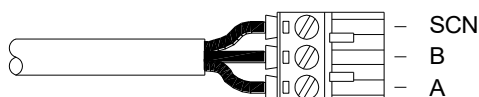
Should no fault relay be available, or if the monitoring of an external fault signal is not required, these two terminals should be shorted together with a 10KΩ resistor across the terminals of the “FLT-INPUT” terminal block.

## 1.2.3 Network Connections

Connect the 2 core twisted pair network data cable to the A and B terminals.

Connect the data cable screen to the network SCN terminals. Note that special screen termination circuits are included on the circuit card to prevent mains frequency earth-loop currents flowing between network nodes.

The data cable screen MUST NOT be connected to any other earth point.



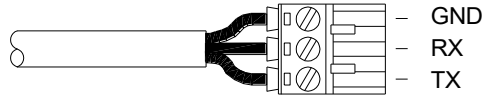
Please refer to document 680-502 for more detailed information on the Intelli-Sense Series Intelli-Sense-Net network.



## ABOUT THIS INTERFACE

### 1.2.4 RS232 Serial Interface

The connection to the external BMS/Graphics system is via a serial RS232 connector as tabled below. This connection is also used for the PC Configuration Tool.



Terminal	Function
GND (0V)	RS232 ground reference
TX	RS232 Transmit data to external BMS system
RX	RS232 Receive data from BMS system

The maximum length of the RS232 Installation cable is 3m (10').

This unit must be installed in the same room as the BMS / Graphics PC equipment.

### 1.3 Commissioning the Interface

Each interface must have a unique network node address. See also the Intelli-Sense-Net Technical Document (Document number TI-680-502) for detailed information on how to set-up and commission networks.

#### 1.3.1 Default Settings

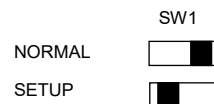
The following factory default settings are used, but these can be changed as required.

Network Node	50
Next Node	1
Interface Zone	100
RS232 Baud Rate	38400

Note that if multiple BMS/Graphics interfaces, or other network interfaces, with the same default settings are used it is essential to change the defaults to give unique parameters for each interface.

#### 1.3.2 Changing the interface settings

The above defaults can be changed as required after moving switch SW1 over to the "Setup" position (i.e. move to left).



Use any of the following:-

Connect a PC to the RS232 connector and run the "Virtual Terminal" display and select "Setup" from the virtual display.

Connect a PC to the RS232 connector and, using the Intelli-Sense Configuration software, transfer a file from the PC to the interface.

"Zone Text" should also be entered for the interface so that any events created by the BMS Interface can be readily identified from displays throughout the fire system network.

### 1.4 Normal Operation

If a display has been used to configure the interface, check that all commissioning operations are complete, with the display showing "[Commission]" in the top left corner of the display.

Ensure the RS232 connections to the BMS/Graphics system are made, then move switch SW1 out of "Commissioning" (i.e. move switch to right).

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