EV-Mini IP2 – Mini Input Module with Isolator	EN 54-17: 2005 / AC: 2007 – Short Circuit Isolators EN 54-18: 2005 / AC: 2007 – Input / Output Devices
CE 19 0905 UKCA 0359	**For use with Nittan Evolution Protocol Only.** **Loop Voltage: 20 to 38 Vdc** **Quiescent Current: 690µA** **Alarm Current: 3.3mA (Inc. LED)** **Loop resistance: < 50 ohm/ km** **Input line resistance: < 50 ohm/ km** **EOL resistor: 10k ohm** **Input resistance: 470 ohm or 680 ohm** **Input threshold level: ON : < 680 ohm,** **Short : <50 ohm,** **Open : > 20k ohm** **Min sw open voltage (Vso min): 11 Vdc** **Max sw open voltage (Vso max): 14 Vdc** **Min sw close voltage (Vsc min): 3 Vdc** **Max sw close voltage (Vsc max): 10 Vdc** **Max line current (Ic max): 500 mA** **Max switching current (Is max): 1500 mA** **Max leakage current (Il max): 15 mA** **Max switch resistance (Zc max): 150 mΩ** **Wire size: Min. 0.75mm²** **Max. 2.5mm²** **Operating temperature: -10°C to 55°C** **Storage temperature: -40°C to 80°C** **Max. relative humidity: 95%RH, non-condensing** **Mass: 40g** **Technical Data Sheet: TD-EV-Mini IP2**
DoP Number: 00641	
NITTAN	**Nittan Europe Ltd.** Hipley Street, Old Woking, Surrey, GU22 9LQ United Kingdom **Tel:** +44 (0) 1483 769 555 **Fax:** +44 (0) 1483 756 686 **Email:** sales@nittan.co.uk **Web:** www.nittan.co.uk

RoHS Compliance Statement

This product complies with the European Union RoHS (Restriction of Hazardous Substances) directive (EU) 2015/863 which restricts the use of the following ten hazardous materials in the manufacture of electronic and electrical equipment.

- Cadmium (Cd): < 100 ppm
- Lead (Pb): < 1000 ppm
- Mercury (Hg): < 1000 ppm
- Hexavalent Chromium (Cr VI): < 1000 ppm
- Polybrominated Biphenyls (PBB): < 1000 ppm
- Polybrominated Diphenyl Ethers (PBDE): < 1000 ppm
- Bis(2-Ethylhexyl) phthalate (DEHP): < 1000 ppm
- Benzyl butyl phthalate (BBP): < 1000 ppm
- Dibutyl phthalate (DBP): < 1000 ppm
- Diisobutyl phthalate (DIBP): < 1000 ppm

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EV-Mini IP2 Installation instructions

NOTE: Please read these instructions carefully and keep for future reference. The information in this document is subject to change without notice. For updates please refer to our website.

NOTE: Follow the requirements for the installation of the product in accordance with the Specifications. Otherwise it may cause malfunction

NOTE: Do not install the product in any location where oil, dust, iron powder, chemicals, or hydrogen sulphide may occur or affect the product. It may cause malfunction.

This package contains the following items:

Main unit:	x 1
EOL resistor:	10k ohm x 1
Alarm Resistor:	680 ohm x 1
Manual:	(this document) x 1

General Description

The EV-Mini IP2 Mini Input Module is a compact size addressable input module with –ve Line short circuit isolator. The module provides the function to monitor an input from manual call points, aspirating smoke detectors, beam detectors, ventilation control and fire door control systems, etc.

The EV-Mini IP2 provides one input circuit (Class B) that can be connected to input devices with a normally open dry contact. The EV-Mini IP2 monitors the dry contact input through a 10k EOL resistor. The monitoring state (normal, input, open, or short) of the device is transmitted to the control panel.

The module is equipped with a constant current output (2.5mA typ.) for a remote indicator, which allows the remote indicator STA-R1 to be connected.

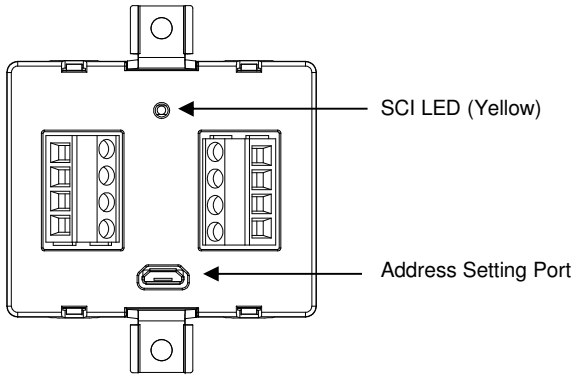

Figure 1

Address Setting

Use EV-AD2-EXT to set the address of the EV-Mini IP2. The factory default address of 1 is given to the module. Connect the EV-AD2-EXT to the address setting port with the Micro USB cable for the programmer, and change the address to any of 1-254, with reference to the instruction manual of EV-AD2-EXT programmer. (Note that the number of available addresses can be less depending on a control panel model.) The address can be set regardless of whether power supply from the control panel is turned on or off.

Address setting is possible even after connecting the module to the Loop.

Installation

This compact size allows it to fit inside UK 1-gang boxes (Min 35mm depth) or devices such as manual call points and aspirating smoke detectors. Use the mounting tabs to secure the module to the 1 gang box. To install the EV- Mini IP2 in aspirating smoke detectors or beam-type smoke detectors, cut off the mounting tabs if necessary.

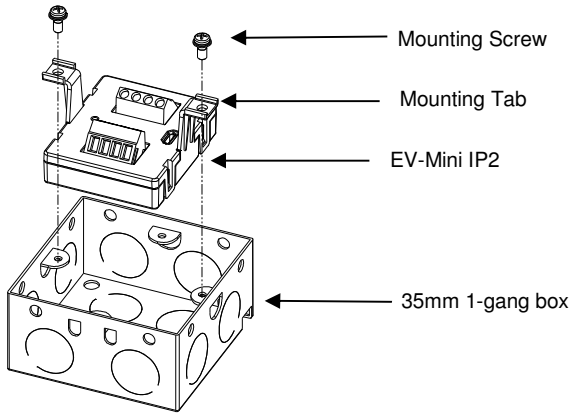

Figure 2

Connections

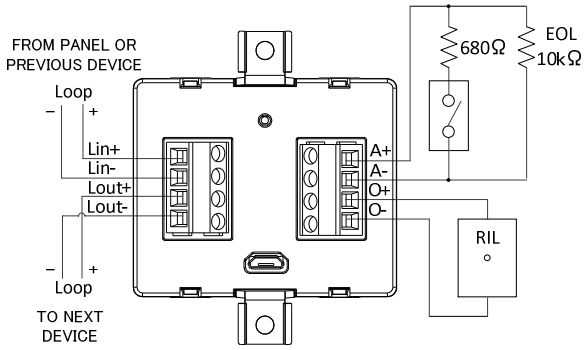

Figure 3

NOTES:

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General Operation

Standby condition: The module receives polling from the control panel at the regular interval.

Input condition: When the monitored contact switches into an input state, the module reports the state to the control panel.

Fault condition: The module reports to the control panel on an open or short circuit in the input circuit.

SCI in active condition: When SCI is activated to isolate a short circuit in the loop, the LED on the module illuminates yellow.

Compatible Remote LED Indicator

The EV-Mini IP2 is compatible with Nittan remote LED indicator: STA-R1

Interchangeability with Existing Products

It is necessary to update the firmware of the control panel to respond to EV-Mini IP2, prior to the replacement of the existing model EV-Mini IP. The EOL resistors will also need to be changed.
NOTE: Product Not compatible with Advanced MxPro4 Panel

SCI Function

The EV-Mini IP2 has a built-in –ve Line short circuit isolator. The SCI circuit prevents entire loop failure in the event of a short between L+ and L- on the loop. If a short circuit is detected, the section of line containing a short circuit is automatically isolated.
NOTE: It is not possible to mix -ve and older +ve isolator styles on a system.

Service and Maintenance

Inspection and tests of the module shall be carried out periodically according to the requirements of BS 5839 Part 1, Fire Detection and Alarm Systems for Buildings: Code of Practice for System Design, Installation and Servicing, or equivalent local codes of practice.

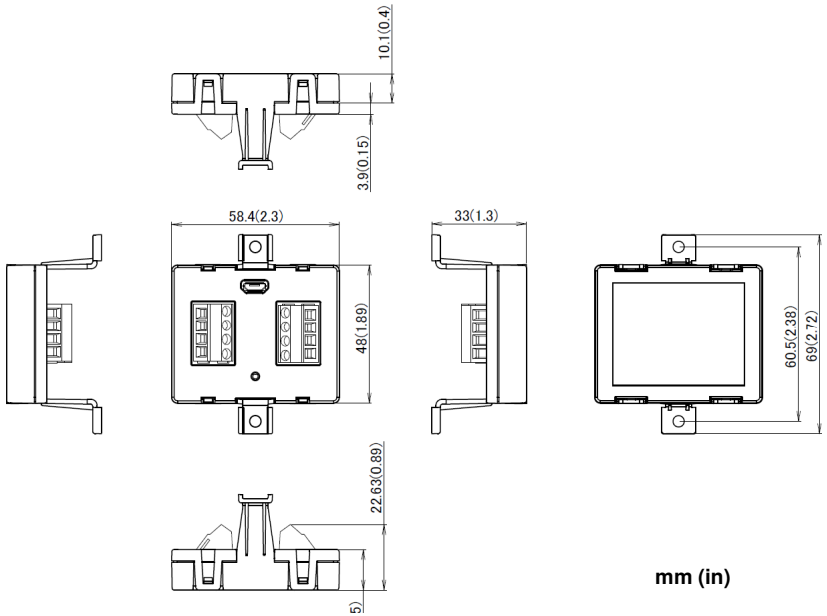
For a routine inspection, ensure the module is secure and undamaged.

When carrying out site testing of the module, set the Fire Alarm Control Panel to test mode and take any necessary precautions, so as to limit the activation of alarm sounders/bells and any fire service summoning device.

Trouble shooting

Problem	Possible cause
No response	The module falls off. Address setting is not correct. Duplicate address. Loop wiring is not correct. An open or short circuit in the loop. Loop voltage is too low.
Communication error	Duplicate address. Loop voltage is too low.
The module information is not found on the panel	Data registered on the control panel is not correct.
Open circuit is detected in the input circuit	Input wiring is not correct. An open circuit in the input circuit. EOL resistor is removed.
Short circuit is detected in the input circuit	Input wiring is shorted.
Input condition is latched	Insulation in the input circuit is not enough. Input wiring is not correct. EOL resistor is not appropriate.
Input is not detected	Input wiring is not correct. Input resistor is not appropriate.
Short circuit is detected in the input condition	Input wiring is not correct. Input resistor is not connected.
SCI operates	There is a short circuit in the loop. Too many devices (over 20mA in total in a standby condition) are connected between the module and the next SCI.

Dimensions



mm (in)

Figure 4

End of Life Disposal

Like all electronic equipment, at the end of its working life this unit should not be disposed of in a refuse bin. All Nittan products since 2005 have been marked with the WEEE Logo in compliance with European Directive 2012/19/EU and Nittan Europe Limited is a member of a WEEE Compliance Scheme. Contact sales@nittan.co.uk for a copy of our WEEE Compliance Policy.