IU2055NC Conventional Zone Monitor Unit Installation Sheet

EN

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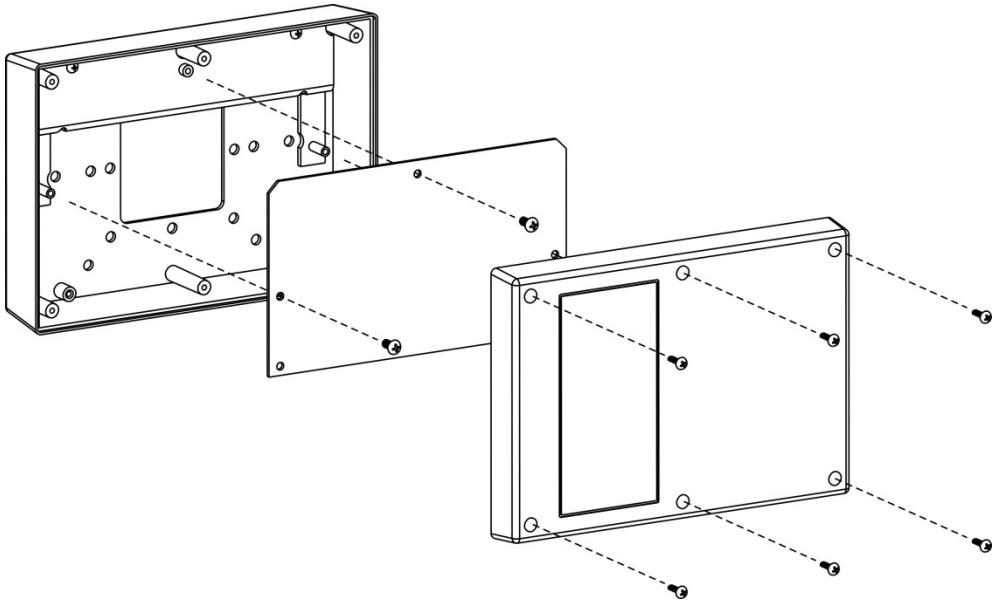

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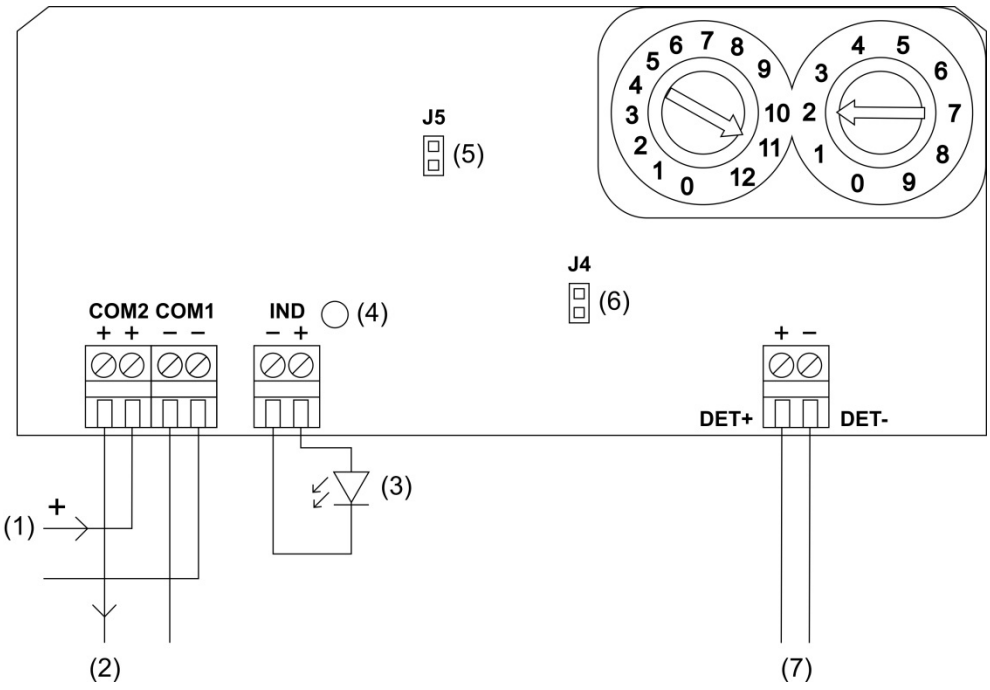

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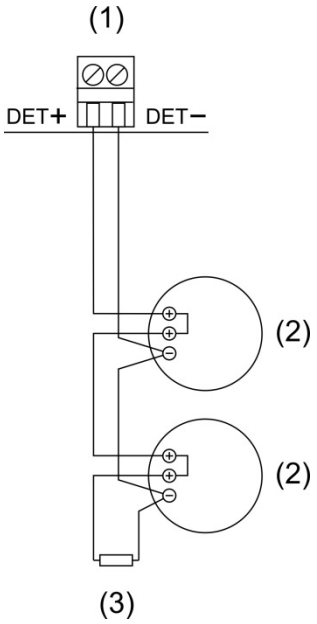

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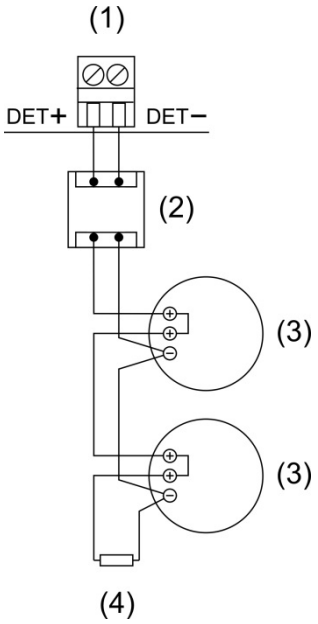

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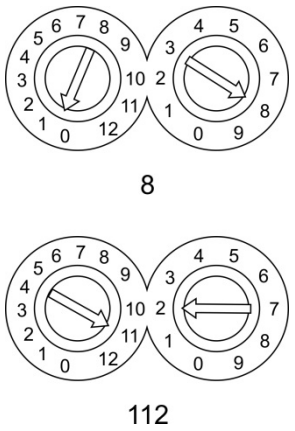

EN: Installation Sheet

Description

This document includes installation information for the IU2055NC Conventional Zone Monitor Unit. The IU2055NC provides an interface between conventional detection devices and compatible addressable fire control panels.

The module supervises the conventional zone for open circuits, short circuits, device faults, and alarm conditions.

The module enables the addressable panel to monitor the presence and operation of:

- Up to 30 compatible conventional detectors in standard installations

  – or –

- Up to 20 compatible intrinsically safe (IS) conventional detectors in intrinsically safe installations

Caution: Only use compatible devices as specified in the IU2055NC Compatibility List (available at firesecurityproducts.com).

Figures

Figure 1: Module assembly

Figure 2: Module layout

(1) Addressable loop in
(2) Addressable loop out
(3) Remote LED output
(4) Fault LED (yellow)
(5) Configuration jumper J5
(6) Configuration jumper J4
(7) Conventional zone output

Figure 3: Standard installation wiring (non-IS)

(1) Conventional zone output
(2) Compatible conventional detector
(3) 3.9 kΩ end-of-line resistor

Figure 4: IS installation wiring

(1) Conventional zone output
(2) GBX2000 barrier
(3) Compatible conventional detector (IS)
(4) 3.9 kΩ end-of-line resistor

Figure 5: Example address settings

Installation

Caution:

For general guidelines on system planning, design, installation, commissioning, use, and maintenance, refer to the EN 54-14 standard and local regulations.

See your control panel compatibility list for details of devices that can be used in fire system applications that require EN 54-13 compliance.

Before installation

Conventional zone monitoring units add a significant load to the addressable detection loop.

Always use the System Builder loop calculation software to validate the predicted loop load before installation. If the number of modules required in your installation requires a higher load than is available, consider adding conventional fire panels to your addressable network to avoid overloading the detection loop.

Guidelines for intrinsically safe installations

The module must be installed immediately outside the intrinsically safe (Ex-classified) area and as close to the GBX2000 barrier as possible when used in an intrinsically safe system.

The module must be configured for intrinsically safe operation (see “Configuration” on page 3).

WARNING: Only devices connected to the output of the GBX2000 may enter the intrinsically safe area.

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Assembly

Install the module into the protective housing as shown in Figure 1. Connecting cables should be fed through the cable entry hole at the rear of the protective housing before the module is fixed into place.

Addressing

Each module must be assigned an address from 1 to 128. Use the rotary dial marked 0 to 12 to set the tens and hundreds part of the address, and the rotary dial marked 0 to 9 for the remaining digits. See Figure 5 for example address settings.

Note: To overcome the mechanical effects of shipping and storage, we recommend that you first rotate each dial counter-clockwise (to the 0 position) and then clockwise (to the dial's maximum position) before setting the required address.

To change the address of a module that is operational:

1. Disconnect the module from the loop.

   Wait at least 5 seconds for the module to completely power down.
2. Change the address on the module using the rotary dials.
3. Connect the module to the loop.
4. Configure the device at its new address, and then remove the old device address at the panel.

Configuration

The module operation mode (standard or IS) is configured using jumpers J4 and J5, as shown in the table below. The default configuration is for standard operation (non-IS).

Jumper	Standard	Intrinsically safe
J4	On	Off
J5	Off	On

Caution: Always check the jumper configuration to ensure that it is correct for your installation type (standard or intrinsically safe).

Wiring

Standard installation wiring (non-IS)

Connect the module to the addressable loop using the COM1 (negative) and COM2 (positive) inputs, as shown in Figure 2. COM1 and COM2 are polarity sensitive.

For conventional zone output wiring for standard applications, see Figure 3. The conventional zone output requires a 3.9 kΩ end-of-line resistor.

Conventional loop impedance/loads for standard installation are shown in the table below.

Short circuit	< 40 Ω
Fire	130 Ω to 760 Ω
Fault	1.1 kΩ to 1.4 kΩ
Normal*	2.1 kΩ to 4.5 kΩ
Open circuit	> 7.5 kΩ

* Including all devices and the 3.9 kΩ EOL resistor.

Intrinsically safe installation wiring

Connect the module to the addressable loop using the COM1 (negative) and COM2 (positive) inputs, as shown in Figure 2. COM1 and COM2 are polarity sensitive.

For conventional zone output wiring for IS applications, see Figure 4. The conventional zone output requires a 3.9 kΩ end-of-line resistor.

Never install standard conventional detectors behind the IS barrier.

Conventional loop impedance/loads for IS installation are shown in the table below.

Short circuit	< 26 Ω
Fire	250 Ω to 450 Ω
Fault	680 Ω to 1 kΩ
Normal*	1.6 kΩ to 4 kΩ
Open circuit	> 7 kΩ

* Including all devices and the 3.9 kΩ EOL resistor.

Maintenance

Basic maintenance consists of a yearly visual inspection. Do not modify internal wiring or circuitry.

The wire impedance and threshold levels should also be checked as follows:

- Change EOL resistor to 330 Ω and check that the system reports an alarm.
- Change EOL resistor to 0 Ω and check that the system reports a fault.
- Change EOL resistor to open and check that the system reports a fault.
- Restore the EOL resistor to 3.9 kΩ and check that the system operates normally.

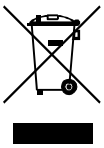
Specifications

Loop operating voltage	21 to 28 VDC
Loop current consumption	
Standby	< 15 mA
Alarm	< 40 mA
Remote LED current	3.6 mA
Zone operating voltage (in standby)	17.5 to 18.5 VDC
Zone cable resistance	
Standard installation	< 40 Ω
IS installation	< 26 Ω
Zone end-of-line resistor	3.9 kΩ, 5%, 1/4W
IP rating	IP40
Operating environment	
Operating temperature	−10 to +55°C
Storage temperature	−20 to +60ºC
Relative humidity	10 to 95% noncondensing
Weight	325 g
Dimensions	175 × 124 × 51 mm

Regulatory information

This section provides a summary on the declared performance according to the Construction Products Regulation (EU) 305/2011 and Delegated Regulations (EU) 157/2014 and (EU) 574/2014.

For detailed information, see the product Declaration of Performance (available at firesecurityproducts.com).

EU compliance	CE
Certification body	0370
Declaration of Performance number	10-5106-360-4001-01
Year of first CE marking	19
Product identification	IU2055NC
Intended use	See the product Declaration of Performance
Declared performance	See the product Declaration of Performance
Manufacturer	United Technologies Safety System Co. Ltd. 80, Changjiang East Road, QETDZ, Qinhuangdao, Hebei Province, China 066004 Authorized EU manufacturing representative: UTC Fire & Security B.V. Kelvinstraat 7, 6003 DH Weert, Netherlands
	2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: http://www.recyclethis.info.

Contact information and product documentation

For contact information or to download the latest product documentation, visit firesecurityproducts.com.

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