TX7214

Addressable Broadcast Control Module
Installation and Operation Manual

To prevent severe injury and loss of life or property, read the instruction carefully before installing the module to ensure proper and safe operation of the system.

European Union directive
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 please visit the website at www.recyclethis.info

EN54 Part 18 Compliance

TX7214 Addressable Single Input/output Module complies with the requirements of EN 54-18:2005.

Table of Content

1 Introduction

1.1 Overview

The TX7214 Addressable Broadcast Control Module is characterized as one output volt free relay and control module. The unit is normally used for overriding equipment such as lift return, door holder, smoke extract fans, air handling unit, auto dialler to fire brigade, BMS and etc. The unit according to the pre-configured interface module command fire scenario, the alarm controller send out start command to the equipment required to start. After receiving the command, module enables its relay to change state. Once the module is under control and operated a confirmation signal will be sending back to the alarm controller. In addition, the unit incorporates an intelligent processor that provides automatic monitoring for both open and short circuit of the output signal line.

The unit manufactured base on the requirement of EN 54 part 18, European Standard. The unit is aesthetically pleasing with unobtrusive design that will complement modern building designs and its plug-in type assembles make installation and maintenance more convenient to the installer. The unit is compatible to the TX7008 Analogue Intelligent Fire Alarm Control Panel, produced by single manufacture T&A, to avoid addressable communication compatibility problem.

1.2 Feature and Benefits

- EN54-18 Compliance
- Built-in MCU processor and digital addressing
- 24VDC/2A Output relay contact and Control module
- Input Fire or Supervisory signal configuration
- LED status indicator
- Onsite Adjustable Parameter
- Loop or external power input
- Aesthetically pleasing design
- Surface mounting with fix base for simple installation

1.3 Technical Specification

• Compliance	EN 54-18:2005
• Input Voltage	Loop Power:24VDC [16V to 28V] External PSU: 20 to 28VDC
• Current Consumption	Loop: Standby 0.6mA, Alarm: 2.1mA External PSU: Standby 1.5mA, Alarm: 9.0mA
• Control output voltage	24VDC / 2A rating
• Input Relay	Normally Open dry contact
• Protocol/Addressing	T&A, Value range from 1 to 254
• Indicator Status	Normal: Fault blink/Active:Output Activation Steady /Fault: Fault Steady
• Material / Colour	ABS / White Glossy finishing
• Dimension / LWH	108 mm x 86 mm x38 mm
• Weight	160g (with Base), 89g (without Base)
• Operating Temperature	-10°C to +50°C
• Ingress Protection Rating	IP30
• Humidity	0 to 95% Relative Humidity, Non condensing

2 Installation

2.1 Installation Preparation

This interface module must be installed, commissioned and maintained by a qualified or factory trained service personnel. The installation must be installed in compliance with all local codes having a jurisdiction in your area or BS 5839 Part 1 and EN54.

T&A products has available range of interfaces, each interface module is designed for specific application, it is essential to consider the requirement of both sides of the interface to avoid malfunction and typical fault scenario. The main caution is to ensure that the voltage rating of the equipment and interface module are compatible.

2.2 Installation and Wiring

1. Mount the interface module base on standard one [1] gang electrical back box. Follow the arrow mark for the correct position. Do not over-tighten the screws otherwise the base will twist. Use two M4 standard screws.
2. Connect the wire in terminal according to the requirement as shown in Figure two [2]. Verify the device address and other parameters then stick on the label before attaching the module. The sticker labels are available on the control panel. Align the interface module and tabs and gently pushing the device until it locks into place.

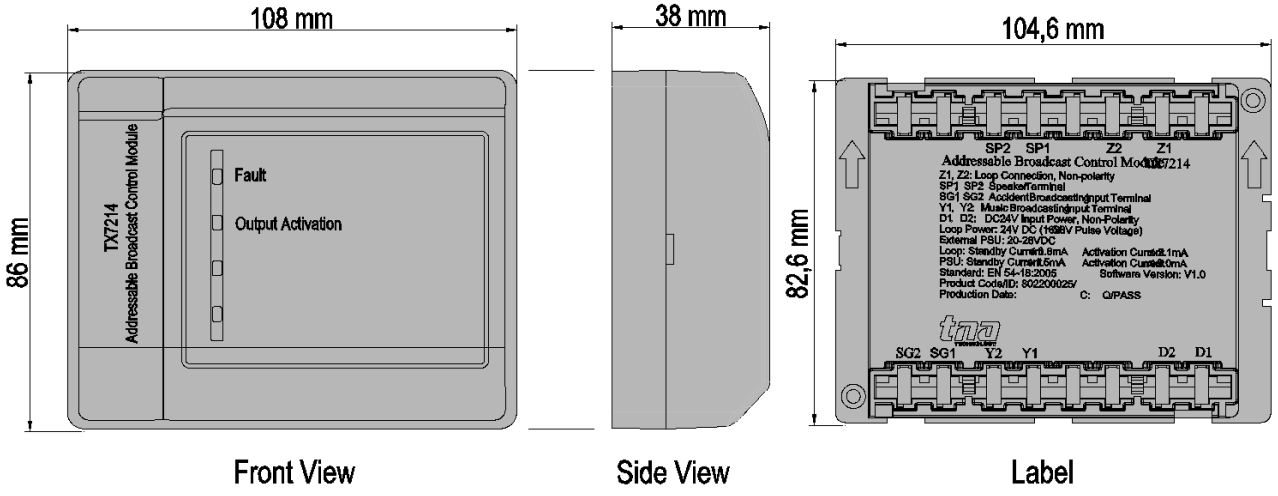

Figure 1: Addressable Broadcast Control Module Structure

Terminal Description

Z1 Signal In (+)
Z1 Signal Out (+)
Z2 Signal In (-)
Z2 Signal Out (-)
SP1 Speaker Output Cable
SP2 Speaker Output Cable
D1 External Power Supply In (+)
D2 External Power Supply In (-)
YI Music Broadcasting Input (+)
Y2 Music Broadcasting Input (-)
SG1 Accident Broadcasting Input Cable
SG2 Accident Broadcasting Input Cable

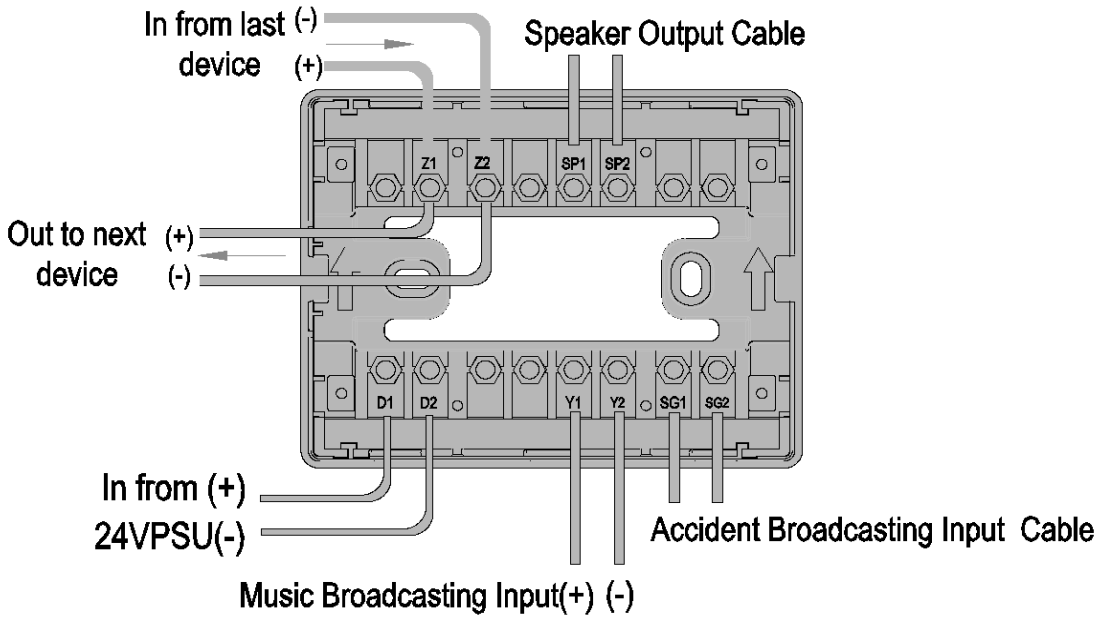

Figure 2:Wiring Details

Signal	Monitoring	When Off (normal)	When On (active)
Relay Output	Yes	Normally Open	Normally Close
		Normally Close	Normally Open
Power Limited Output	Yes	+1.5-3Vdc	+24Vdc

Output Parameters

Signal	Output Check
Relay Output	-
Power Limited Output	**3Y**(Yes)-Supervise Accident Broadcasting and Speaker continuity **4N**(No)- No supervision - **Default setting**

3 Interface Module Configuration

3.1 Preparation

The TX7930 handheld programmer is used to configure interface module soft address and parameter. This tools are not included, must be purchased separately. The programmer is packed with twin 1.5V AA battery and cable, ready for usage once received.

It is mandatory for the commissioning personnel to have programmer tool in order to adjust the module conferring to the site situation and environmental requirements.

Program a unique address number for each device according to the project layout before placing from the Terminal Base.

Warning: *Disconnect the loop connection whilst connecting to the handheld programmer.*

3.2 Write: Addressing

1. Connect the programming cable to Z1 and Z2 terminals (Figure 3). Press **"Power"** to switch on the unit.
2. Switch-on the programmer, then press button **"Write"** or number **"2"** to enter Write Address mode (Figure 4).
3. Input the desire device address value from 1 to 254, and then press **"Write"** to save the new address (Figure 5).

   Note: If display **"Success",** means the entered address is confirmed. If display **"Fail",** means failure to program the address (Figure 6).

4. Press **"Exit"** key to go back Main Menu. Press **"Power"** key to switch-off the programmer

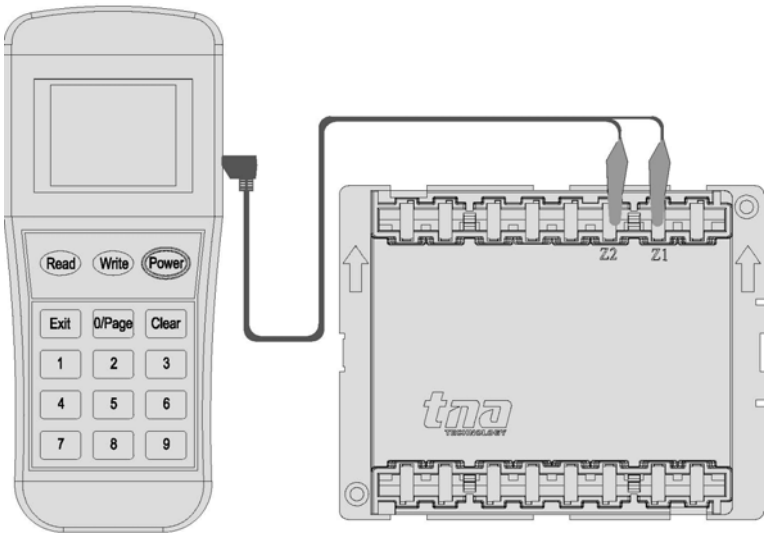

Figure 3: Programmer Connection Detail

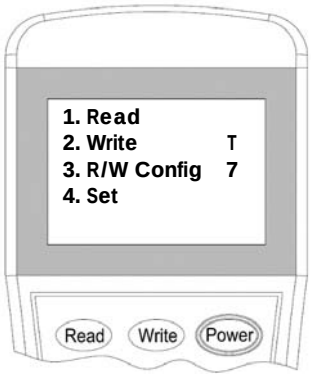

Figure 4

Figure 5

Figure 6

3.3 Output Check Mode

1. Output Check mode is use to enable voltage monitoring. The module will report to the panel in the event of low voltage output cause by open and short circuit occur in the wiring.
2. Connect the programming cable to Z1 and Z2 terminals (Figure 3). Press **"Power"** to switch-on the unit.
3. Switch-on the programmer, then press button **"3"** to enter to Configuration mode (Figure 7).
4. Input the **"3"** for **Check** mode then press **"Write"** to change the setting (Figure 8).
   Note: If display **"Success",** means the entered mode is confirmed. If display **"Fail",** means failure to program the mode.

5. Press **"Exit"** key to go back Main Menu. Press **"Power"** to switch off the programmer.

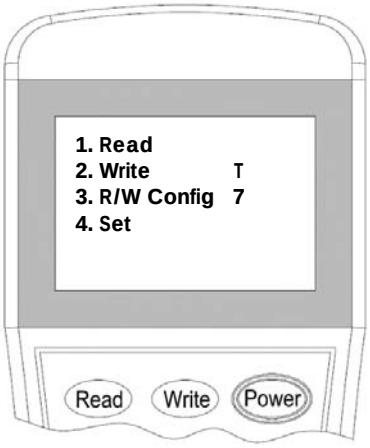

Figure 7

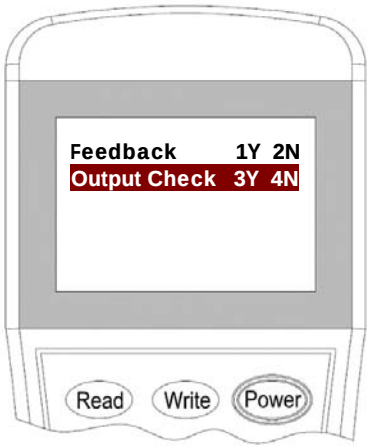

Figure 8

Parameter Description

3Y Enable Output Check Mode
4N Disable Output Check Mode (Default)

3.4 Read Configuration

1. Connect the programming cable to Z1 and Z2 terminals (Figure 3). Press **"Power"** to switch-on the unit.
2. Switch-on the programmer, then press button **"Read"** or **"1"** to enter to Read mode (Figure 9). The programmer will display the configuration after few seconds. (Figure 10).
3. Press **"Exit"** key to go back Main Menu. Press **"Power"** key to switch off the programmer.

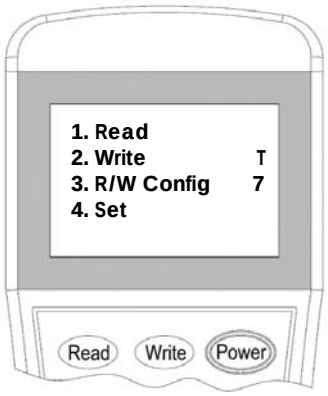

Figure 9

Figure 10

Parameter Description

Address: Unique number assigned
1Y Self-Feedback Mode
2N External-Feedback Mode
3Y Enable Output Check Mode
4N Disable Output Check Mode [Default]
ID: Device serial number

4 General Maintenance

1. Inform the suitable personnel before conducting the maintenance.
2. Disable the interface module on the control panel to prevent false alarm.
3. Do not attempt to repair the circuitry of the interface module, it may affect the operation to respond to a fire condition and will void the manufacturer's warranty.
4. Use a damp cloth to clean the surface.
5. Notify again proper personnel after conducting the maintenance and make sure to enable the interface module and confirm if up and running.
6. Perform the maintenance on semi-annually or depending on the site conditions.

5 Troubleshooting Guide

What you notice	What it means	What to do
Address not enrolling	The wiring is loose The address is duplicate	Conduct maintenance Re-Commission the device
Unable to commission	The damage the electronic circuit	Replace the device

Appendix 1

Limitation of Interface Module

The Interface Module cannot last forever. In order to keep the interface module working in good condition, please maintain the equipment continuously according to recommendations from manufacturers and relative nation codes and laws. Take specific maintenance measures on the basis of different environments.

These interface module contains electronic parts. Even though it is made to last for a long period of time, any of these parts could fail at any time. Therefore, test your module at least every half-year according to national codes or laws. Any interface module, fire alarm devices or any other components of the system must be repaired and/or replaced immediately as they fail.