



INSTALLATION INSTRUCTIONS FOR DCP-CLASS A FRCMA/FRCMA-I FAST RESPONSE CONTACT MONITORING MODULE

The information contained in this installation instruction is a quick reference guide. For detailed system information refer to the panel manufacturers installation manual. This instruction is generic and will not address specific programming procedures.

GENERAL DESCRIPTION:

This instruction applies to the DCP Class A Fast Response Contact Monitoring Module (FRCMA/FRCMA-I) which is to be connected to a DCP Signaling Line Circuit (SLC). Typical applications are manual pull stations, water flow devices or any dry contact alarm device, N/O contact can be monitored. This module can be wired in Class A (style D) or Class B (style B).

MOUNTING REQUIREMENTS:

All the modules will follow Fig. 1B, 2, 2A , 2B & 2C for wiring connections.

WIRING:

- NOTE: All wiring must conform to local codes, ordinances and regulations.
- 1) Install module wiring in accordance with the job drawings and appropriate wiring diagram (see Fig. 1B, 2, 2A, 2B & 2C).
 - 2) Secure the module to a U.L. listed electrical box (supplied by installer) as shown in Fig. 3
 - 3) The address must be set on the FRCMA before the cover plate is attached (see Fig. 1A).

CAUTION !!!

IF THIS MODULE WILL BE INSTALLED IN AN EXISTING OPERATIONAL SYSTEM, INFORM THE OPERATOR AND LOCAL AUTHORITY THAT THE SYSTEM WILL BE TEMPORARILY OUT OF SERVICE. DISCONNECT POWER TO THE CONTROL PANEL BEFORE INSTALLING THE MODULE.

TABLE 1: WIRING LIMITATIONS

Maximum Distance Between Module and EOL Device	
14 AWG	1500 Ft.
16 AWG	900 Ft.
18 AWG	550 Ft.

* Insert programming jack into TCH-B100 Address Programmer. See TCH-B100 instructions for programming detail.

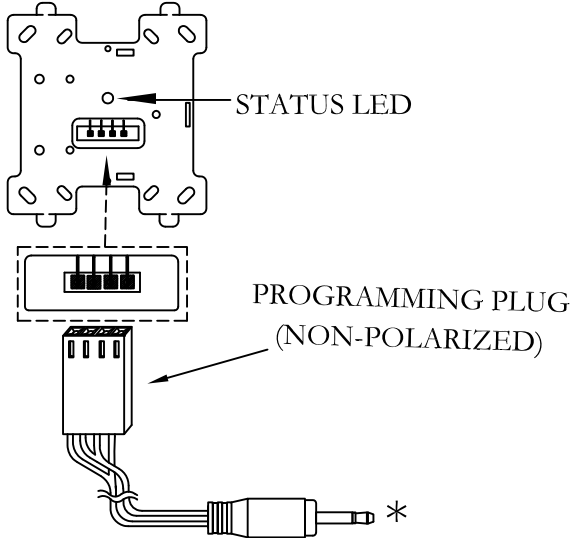


FIGURE 1A FRCMA

Note:

An average of 6.75mA (communication current) per loop of SLC devices, must be factored into the panel battery backup calculations.

Note:

Radio Frequency Interference and Electro-Magnetic Interference are sources of noise that can adversely affect the fire alarm systems installation. Avoid running SLC circuits in the same conduit as power lines. Utilize twisted pair and shielded wire in environments where excessive noise is expected. When installing fire alarm system devices, avoid placing devices or wiring close to potential noise sources such as:

- Transmitters or antennas;
- Ballast lighting;
- Electrical motors;
- Large power transformers;
- Large machines.

SPECIFICATIONS

SPECIFICATIONS	
SLC Applied Voltage	Rated Range 25.3 - 39 VDC
SLC Current Consumption	Maximum - 6.3mA Nominal - 630µA
SCI Isolation Current	10mA (Typical)
EOL Device for Input	HOCHIKI AMERICA CORP. Part No. 0400-01046 10KΩ, 1/4W, 1/4inch
Visual Indicator (status LED)	Bi-color LED - Green and Red Color and mode - selected and programmed by Control Panel's software (pulsing, steady, etc.) Yellow Led - (SCI version only) LED on indicates SCI circuit is ACTIVE
Operating Temperature Range	0°C (32°F) ~ 49°C (120°F)
Storage Temperature	-30°C (-22°F) ~ 70°C (158°F)
Maximum Relative Humidity	Up to 90% RH non-condensing
Environment	For dry Indoor use only
Dimensions	4.2"W x 4.7"H x 1.4"D
Weight	Approximately 20.0 ounces

MODELS

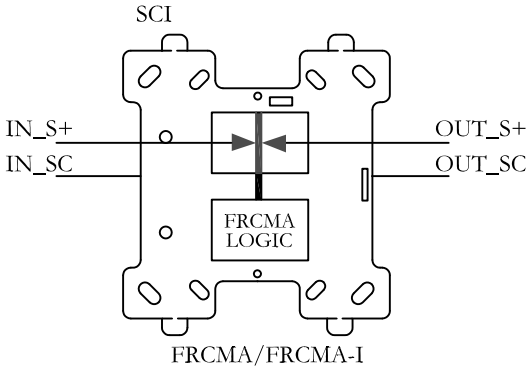
FRCMA-I version has built-in SCI Short Circuit Isolator circuitry.

Module	Feature	SLC Loop Connectors
DCP-FRCMA-I	Integrated SCI	IN_S+, IN_S-; OUT_S+, OUT_SC-
DCP-FRCMA	No SCI	S+, SC-

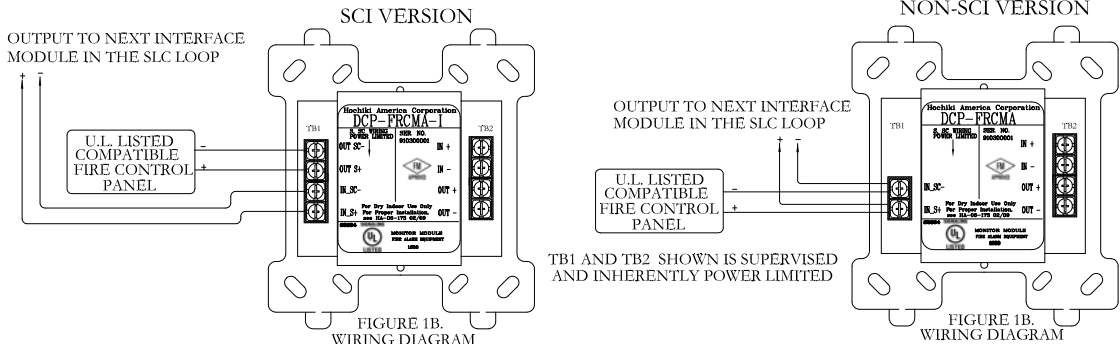
INTEGRATED SCI SHORT CIRCUIT ISOLATOR OPERATION

The DCP-FRCMA-I module has built-in integrated SCI circuitry. In the event of a short on the S-SC line, the SCI circuit will activate and its Yellow LED indicator will be turned on steady and the module will report the short circuit condition to the Fire Control Panel.

The SCI has a fast response time but the Control Panel will detect a momentarily short before the SCI circuit breaks open if the short occurs during normal operation. However, if the S-SC line was short before power-on, the Control Panel will only detect an open loop because the SCI switch circuit never closes. In that case, it will rely on the module to report a short. The SCI circuit will prevent entire loop failure in case of a short. Upon removal of the short condition, the SCI will automatically restore the entire loop to normal operating state.



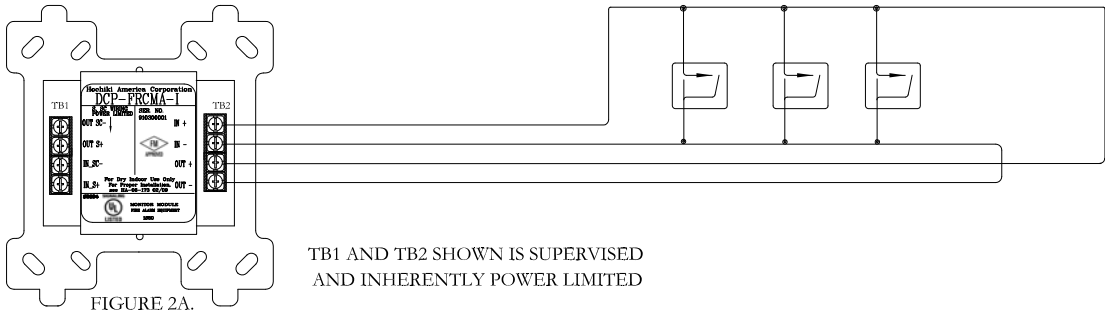
WIRING DIAGRAMS FOR FRCMA AND FRCMA-I:



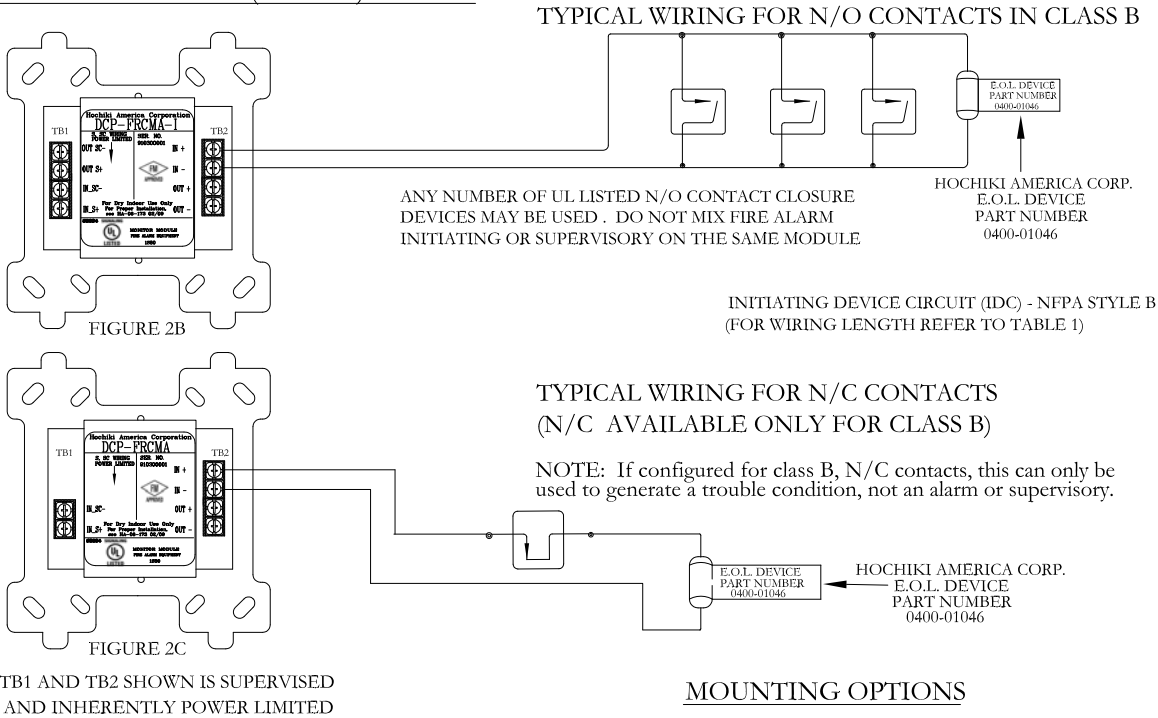
Note: SLC circuit is in reference to S, and SC

WIRING DIAGRAMS FOR CLASS A (STYLE D) WIRING

NOTE: CLASS A can only monitor N/O contacts



WIRING DIAGRAMS FOR CLASS B (STYLE B) WIRING



CAUTION!

- 1) DO NOT WIRE SLC LOOP INTO IN+/IN- OR OUT+/OUT- TERMINALS. THIS WILL RESULT IN DAMAGE TO THE MODULE!
- 2) DO NOT CONNECT MORE THAN ONE N/C CONTACT TO AN INPUT.

NOTE: Only the same size wire from 12 to 22 AWG may be connected terminal block TB1 and TB2 when more than one conductor is being connected under each terminal. Maximum of 2 conductor per terminal.

WIRING LIMITATIONS

Maximum line impedance between input and initiating devies.
3.50Ω

MOUNTING OPTIONS

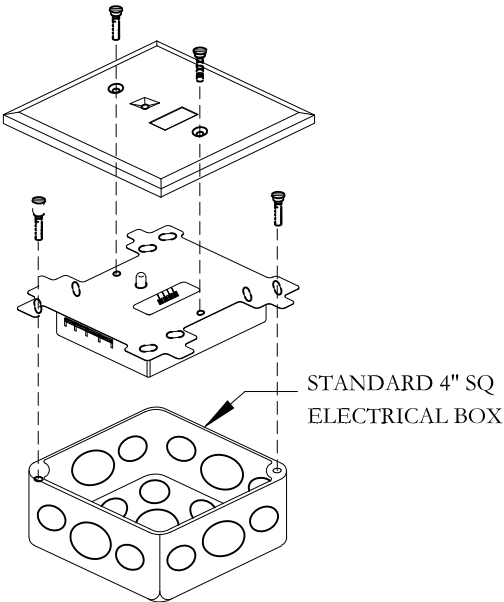


FIGURE 3 FRCMA/-AI

One Year Limited Warranty

Hochiki America (HA) warrants its digital communication modules to be in conformance with it's own plans and specifications and to be free from defects in materials and workmanship under normal use and service for a period of one (1) year from date of delivery. All warranties are void and HA is not obligated to repair or replace equipment which has been repaired by others, abused, improperly installed, altered or otherwise misused or damaged or exposed to conditions outside the products specifications in any way. HA will not be responsible for any dismantling, reassembling or re-installation charges. Please contact HA's Sales department for proper procedure for claims and return of merchandise. This warranty is in lieu of all other warranties expressed or implied.