

Railroad Interface Panel (RRIP)

Cabinets

Controllers

Signals

Signs

Software

Specialty



NEMA/Caltrans RRIP



ATC Cabinet RRIP

Overview

McCain's Railroad Interface Panel (RRIP) helps traffic agencies improve safety and operations at railroad crossings in adherence with the proposed regulations from the Federal Highway Administration (FHWA) standard. The RRIP provides a single termination panel for all field wires in any traffic cabinet/controller configuration. Data collected from five field inputs enables traffic agencies to easily monitor railroad status and interface with the signal controller. McCain's independently-certified RRIP also features built in fail-safe circuits that continually monitor the state of the critical inputs. Any change in state will be relayed to the traffic controller to help ensure motorist and pedestrian safety.

Benefits

- Boost motorist and pedestrian safety at railroad crossings with an enhanced fail-safe design
- Provide a single entry point for railroad inputs, making it easier to setup, maintain, and troubleshoot
- Compatible with Caltrans, NEMA, and ATC cabinets

Product Description

The McCain RRIP is a termination panel for railroad field wires and acts as a single multi-wire preemption interface. Limiting interfaces between field wires and traffic controllers makes it easy for traffic agencies to troubleshoot, maintain, and replace.

The compact RRIP has five input circuits that bring in preempt data such as TCR, XR, and gate-down status. By design, both sides of the relay contacts are monitored for a change of state. The outputs to the traffic controller are optically isolated before leaving the board. A health circuit monitors the traffic cabinet and if its in flash or fault, opens the health circuit relay contacts. LED indicators display controller status (vs. panel status) for easy visual verification of proper wiring and an active connection.

The RRIP is available in two form factors - a PCB design for NEMA/Caltrans cabinets and a rack-mounted design for ATC cabinets, offering a solution for any cabinet and controller configuration.

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Standard Features

LED Status Indicators

Labeled LED indicators illuminate based on the output from the controller to ensure the controller is accurately monitoring each input.

- Input indicators, one per input (5)
- Controller watchdog indicator (1)
- Fault indicator (1)

Health Circuit

A health circuit, consisting of a mechanical relay, indicates to the railroad if an issue arises with the traffic cabinet, e.g. if there is a problem with the TCR and SUP field wires, which can cause the cabinet to not see a preemption.

Wire Harness (NEMA/Caltrans)

There are three wire harness options which all include a direct connection to the RRIP:

- **C11 connector** - Plugs directly into the 2070 controller's C11 connector and provides all the inputs and outputs used.
- **Input file cable with spade lugs** - Enables the RRIP to be wired directly into the cabinet's input file. This option *is not* compatible with the LED status indicators.
- **C5 connector with spade lugs** - Provides wires with spade lugs for the input file and a C5 connector to drive LED indicators from outputs in the auxiliary file.



Wire harness with 2070 C11 connector
(sold separately)

Terminal Blocks

The RRIP supports five (5) standard relay connections (NO, NC and common) and one mechanical relay for the traffic cabinet health circuit. The RRIP panel circuits are:

Three-position terminal blocks

- ADV – Advance Preemption
- TCR – Traffic control relay (sometimes called PRE)
- SUP – Supervisor relay (reverse operation of the TCR)
- XR – Crossing active when lights start flashing and gates start down
- ISL – Island circuit or gate down circuit when gates are near horizontal

Additional terminal block

- HLT – Health circuit, a closed circuit means the traffic cabinet is operating normally

General Specifications

Dimensions:	NEMA/Caltrans: 4" H x 4.5" W ATC: 19"W x 1.75"H x 3.0"D
Power:	NEMA/Caltrans: The railroad side requires an external +12 volts @ 1/4A DC power supply. The status LEDs are powered by a +24 volt power supply. ATC: The railroad side has an internal +12 volts isolated power supply rated at 1/4A. The status LEDs are powered by the cabinet's +24 volt power supply.
Environment:	Operating Temperature: -37°C to +74°C Humidity: 0 to 95% (non-condensing)
Mounting:	NEMA/Caltrans: Four (4) ½" standoffs for mounting to cabinet side panel ATC: 19" EIA rack mount
Weight:	1 lb

Part Numbers

M54419A	RAILROAD INTERFACE PANEL, NEMA/ CALTRANS PCB
M73140	RAILROAD INTERFACE PANEL, ATC CABINET RACK MOUNT
M54451	RRIP HARNESS AND MOUNTING KIT, C11
M54766	RRIP HARNESS AND MOUNTING KIT, SPADE LUNGS
M55309	RRIP HARNESS AND MOUNTING KIT, C5 & SPADE LUNGS

To learn more about
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