x-RPS™
RAILROAD PREEMPTION SYSTEM

x-RPS™ is a railroad preemption system that simplifies interconnection between railroad preemption circuits and the traffic signal controller

BENEFITS

Menu-driven setup simplifies programming, reducing time and minimizing configuration errors. Solid-state technology for increased reliability and long service life, reducing down time and minimizing maintenance

Configurable for single-break or double-break railroad interconnection circuits, and for two track clearance intervals (double-leg crossings) as required by site specific needs

Improves traffic signal operation and efficiency during railroad preemption events, and offers an additional safety layer for grade crossing preemption operation

Provides combination of enhanced isolated circuits to improve safety while meeting industry best practices

Replaces need for bulky preemption relay panels

Easy installation in existing and new traffic signal cabinets

FEATURES

- Supports advance, advance pedestrian and simultaneous preemption; supervisory, gate down, and traffic signal health circuits

- Track clearance monitoring, track clearance extension, maximum preemption and track clearance safeguard timers

- Programmable train simulator to perform system field tests

- x-RPS Expansion generates a 12 V dc isolated signal that provides traffic signal health status to railroad

- Real-time clock for date and time stamp validation | Event logging

- USB port for utility interface, printable data sheets and firmware updates

- x-RPS Output module is used to drive an external LED display or recorder inputs (24 V dc)

- x-RPS Confirmation module provides special light flash patterns for EVP and railroad preemption

- x-ACO Output module provides 120 V ac load switch circuitry ideal for AC switching of blank-out sign

- NEMA compliant

TECHNICAL SPECIFICATIONS

REQUIRED Basic System Modules

x-RPS™ Processor+ Module

Inputs
- 4 isolated, self-checked preemption inputs (AP | SUP | SIM | GD)

Outputs
- 4 self-checked preemption outputs (PE1 | PE2 | PE3 | PE4)

Features
- User Interface - OLED display with 4 navigation buttons
- WiFi connectivity for remote viewing and data management
- Logging up to 3000 events
- Real-time clock for local time keeping

x-RPS™ Expansion Module

Inputs
- Adds an additional preemption input (APP | SUP | GU | ISL)
- 2 (120 V ac) inputs for soft flash and signal buss detection (used for traffic signal health)
- 2 (120 V ac) inputs for track clearance monitoring

Outputs
- 2 self-checked preemption outputs (PE 5 | PE 6)
- 2 blank-out preemption sign drivers (AP | SIM)
- Isolated railroad-ready 12 V dc traffic signal health output

OPTIONAL Modules (additional features for site-specific needs)

x-RPS™ Confirmation Module

Inputs
- Reads railroad preemption data from x-RPS processor module
- 6 emergency vehicle preemption inputs

Outputs
- 6 preemption confirmation light drivers

x-RPS™ Output Module

Inputs
- Read railroad preemption data from x-RPS processor modules

Outputs
- Isolated 24 V dc supply
- 6 isolated open collector outputs

x-ACO™ AC Output Module

Inputs
- 4 ground true
- Selectable 120 V ac

Outputs
- 4 isolated triac controlled outputs at 3.0 A per channel

Power
- 12 to 24 V dc input

x-RPS™ Modules

Power
- 120 V ac (from x-RPS Smart Rack)

Mounting
- Card Rack
- Shelf (when using x-RPS Smart Rack

Temperature
- -40 to 185 °F (-40 to 85 °C)

Physical
- Length - 2.32 in (58.9 mm)
- Height - 4.50 in (114.3 mm)
- Depth - 6.875 in (174.6 mm)
- Weight - 6 1/2 lbs (2.95 kg)

x-RPS™ Smart Racks

	2-module rack	3-module rack	4-module rack
Width	5.5 in (139.7 mm)	7.75 in (196.8 mm)	10.0 in (254.0 mm)
Height	5.0 in (127.0 mm)	5.0 in (127.0 mm)	5.0 in (127.0 mm)
Depth	8.5 in (215.9 mm)	8.5 in (215.9 mm)	8.5 in (215.9 mm)

Call 817-886-8210 to incorporate the x-RPS™ into your traffic applications today.