X-RPS™
RAILROAD PREEMPTION SYSTEM

x-RPS™ is a railroad preemption interface system that simplifies interconnection between existing and enhanced railroad preemption circuits and the traffic signal controller, and provides system health checking for all I/O.

BENEFITS

Easy installation in existing traffic signal cabinets replaces need for bulky preemption relay panels

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

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

Menu-driven setup simplifies programming, reducing time and minmizing 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

FEATURES

- Supports advance, advance pedestrian, simultaneous, gate down, and traffic signal health

- Track clearnance, maximum preemption, track extension, and track clearance safe guard timers

- NEMA compliant

- 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 equipment

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

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

- Output driver recorder inputs (24 V dc) and/or external LED indicators

- Confirmation provides special light flash patterns generated by EVP or railroad preemption

- x-ACO Output provides 120 V ac load switch circuitry ideal for AC switching of blank-out sign or confirmation light control

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 |PE 2PE| PE3|PE 4)

User Interface

-OLED display with 4 navigation buttons

-Self-hosted WiFi connectivity for data management

-Logging up to 3000 events

-Realtime clock

x-RPS™ Expansion Module
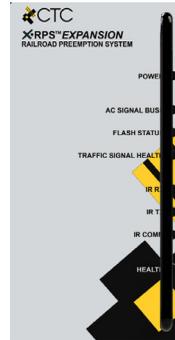
Inputs

-Adds an additional isolated, self-checked preemption input (APP | SUP | GU | ISL)

-2 (120 V ac) inputs for soft flash and signal loss 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)

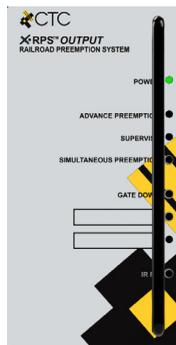-Isolated railroad-ready 12 V dc traffic signal health output

OPTIONAL Modules (additional features for site-specific needs)

x-RPS™ Confirmation Module
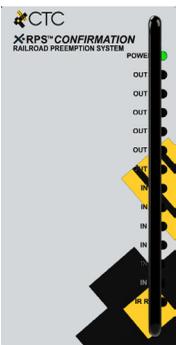
Inputs

-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 module

Outputs

-Isolated 24 V dc supply

-6 isolated open collector outputs

x-ACO™ AC Output Module

Inputs

-6 ground true

-Selectable 120 V ac 12-24 V dc input power

Outputs

-4 isolated triac controlled outlets at 3.0 A per channel

ALL x-RPS™ Modules

Power

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

Mounting

- Shelf

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)

ALL 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.