

x-RPS™ Railroad Preemption System

BENEFITS

- Menu-driven preemption interface simplifies installation process, reducing time and minimizing configuration errors
- Easily accommodated in existing traffic signal cabinets, replacing the need for bulky preemption relay panels
- Ability to provide a combination of enhanced isolated circuits to improve safety while meeting best industry practices
- Verifies integrity of interconnect cable by utilizing supervised circuit
- Provides an additional safety layer for grade crossing preemption operation
- Improves traffic signal operation and efficiency during railroad preemption events
- Solid-state technology for increased reliability and long service life, reducing down time and minimizing maintenance
- System health checking for all I/O circuits to provide fail-safe operation



FEATURES

- Single or double break configurable for railroad interface
- Supports advance, simultaneous, supervised, gate down, and traffic signal health circuits
- Maximum preemption, track clearance extension, and track clearance safe guard timers
- Programmable train simulator to perform system field tests
- Real time preemption status screen
- Dual watch dog timers with redundant failure mode hardware
- Innovative wireless connection between all CTC x-RPS™ modules
- x-RPS™ Expansion generates a 12 V dc isolated signal that provides traffic signal health status to railroad equipment
- x-RPS™ Output drives recorder inputs (24 V dc) and/or external LED indicators
- x-RPS™ Confirmation provides special confirmation light flash patterns generated by EVP or railroad preemption
- USB port for x-RPS™ Utility interface and firmware updates
- Complies with National Electrical Manufacturers Association (NEMA) requirements and Caltrans specifications for input file capability (170 | 2070)

Call **817.886.8210** to incorporate **x-RPS™** into your grade crossing applications today.



x-RPS™ Railroad Preemption System

TECHNICAL SPECIFICATIONS



x-RPS™ Processor module

Inputs

- 4 isolated, self-checked preemption inputs (AP | SUP | SIM | GD)
- Supervised input (SUP) doubles as an isolated 24 V ac power supply for double break interconnection

Outputs

- 4 self-checked preemption outputs to traffic controller (PE1 | PE2 | PE3 | PE4)

User interface

- OLED display with 4 navigation buttons



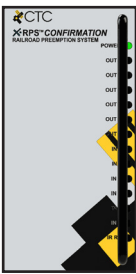
x-RPS™ Expansion module

Inputs

- 2 selectable isolated, self-checked preemption inputs (APP | SUP | PGD | GU | ISL)
- 2 (120 V ac) inputs for soft flash and signal loss detection (used for traffic signal health)

Outputs

- 2 self-checked preemption outputs (PE5 | PE6)
- 2 blank-out preemption sign drivers (AP | SIM)
- Isolated railroad-ready 12 V dc traffic signal health output



x-RPS™ Confirmation module

Inputs

- Reads railroad preemption data from x-RPS™ processor infrared serial communications
- 6 emergency vehicle preemption inputs

Outputs

- 6 preemption confirmation light drivers



x-RPS™ Output module

Inputs

- Reads railroad preemption data from x-RPS™ processor infrared serial communications

Outputs

- Isolated 24 V dc supply
- 6 isolated open collector outputs
- Isolated ground reference

x-RPS™ modules

Power

- 120 V ac from input file rack

Physical

- Length 2.32 in (58.9 mm)
- Height 4.50 in (114.3 mm)
- Depth 6.875 in (174.6 mm)

Mounting

- Existing input file rack
- Optional shelf-mounting (using x-RPS™ *Smart Rack*)

Temperature

- -40 to 185 °F (-40 to 85 °C)

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)

