

Model 380 Card Rack

Installation Manual



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WARNING WARNING WARNING

The installation of this card rack may expose you to AC Voltage and the risk of electric shock or electrocution. **Turn off the AC power and use accepted and recognized safety precautions to avoid exposure to the risk of electric shock or electrocution.** Electric shock may cause severe injury or death.

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Improper or incomplete preemption programming of the traffic signal controller or the PLE Preempt Module may cause improper operation of the traffic signal indications, which may result in personal injury. **Confirm that the operation of the traffic signal controller or the PLE Preempt Module is appropriate for your needs before, during, and after activation of the preempt inputs or the controller input functions used by the PLE Preempt Module.** Improper operation of the traffic signal indications may result in unsafe conditions for motorists.

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A completed installation that is not tested may result in improper system operation, which may result in accidents and/or injuries. **To avoid this problem, test the system after installation to confirm proper operation.** Improper system operation may result in unsafe conditions for motorists.

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Using one 2-channel discriminator
with PLE Preempt Module

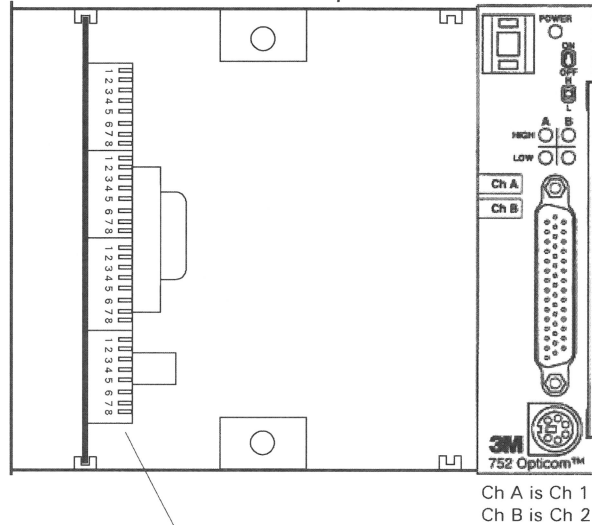


Figure 4

The PLE Preempt Module is installed in the slot located behind the front panel of the 380 Card Rack.

The 380 Card Rack works with the following:

- 262, 2-channel discriminators
- 562, 2-channel discriminators
- 252, 2-channel discriminators
- 254, 4-channel discriminators
- 452, 2-channel discriminators
- 454, 4-channel discriminators
- 752, 2-channel discriminators
- 754, 4-channel discriminators

INTRODUCTION

The Model 380 Card Rack will facilitate the installation of preemption discriminator modules into a traffic signal cabinet. The Model 380 will work with two 2-channel or one 4-channel discriminator module as follows (see Figure 1, 2 & 3):

- two 2-channel 262 modules
- two 2-channel 562 modules
- two 2-channel 252 modules or one 4-channel 254 module
- two 2-channel 452 modules or one 4-channel 454 module
- two 2-channel 752 modules or one 4-channel 754 module

The Model 380 Card Rack is a direct replacement for the 360 Card Rack.

The Model 380 Card Rack can be used in 3 different configurations:

Where the internal preemption program of the traffic signal controller is used. This configuration simply connects the output/s of the discriminator module/s to the preemption inputs of the traffic signal controller.

Where the traffic signal controller is preempted using the Model PLE Preempt Module (see Figure 4). This configuration allows preemption operation for 4-phase (NEMA connectors A & B) and 8-phase (NEMA connectors A, B & C) traffic signal controllers without internal preemption software.

Where the traffic signal controller is preempted using the Model PLE Preempt Module. This configuration allows preemption operation for 2-phase (NEMA connector "A" only) traffic signal controllers without internal preemption software.

The Model 138 Optical Cable is connected to the Model 380 Card Rack via an 8-position terminal strip located on the front panel of the card rack.

An ON/OFF power switch is mounted on the front of the card rack.

INSTALLATION WHEN USING THE INTERNAL PREEMPTION PROGRAM OF THE NEMA TRAFFIC SIGNAL CONTROLLER

The 380 Card Rack is normally shipped ready for installation into a traffic signal cabinet where the internal preemption program of the traffic signal controller is being used.

To insure that the 380 Card Rack is configured for this type of operation, perform the following:

Remove the left side of the card rack (when looking at the rack from the front).

Check to make sure there are four jumper wires soldered on the back of the printed circuit board. If the four jumpers are there, reinstall the side of the card rack.

If the four jumper wires are missing, solder four new wires connecting the top and bottom of each solder point and reinstall the side of the card rack.

Connect the wiring harness of the 380 Card Rack as follows:

<u>PIN</u>	<u>FUNCTION</u>	<u>WIRE COLOR</u>
1	AC +	Black
2	AC-	White
3	Chassis Ground	Green
4	Logic Ground	Gray
5	<i>not used</i>	Red
6	<i>not used</i>	Violet
7	<i>not used</i>	Brown
8	<i>not used</i>	Blue
9	Preempt 1	Gray/White
10	<i>not used</i>	White/Red
11	<i>not used</i>	White/Violet
12	<i>not used</i>	White/Brown
13	<i>not used</i>	White/Blue
14	Preempt 2	Blue/White
15	Preempt 3	Violet/White
16	Preempt 4	Brown/White

Do not cut the unused wires. There may be a time when you may want to use the card rack in another configuration in the traffic signal cabinet. Tape and cable tie the unused wires.

Using one 4-channel discriminator

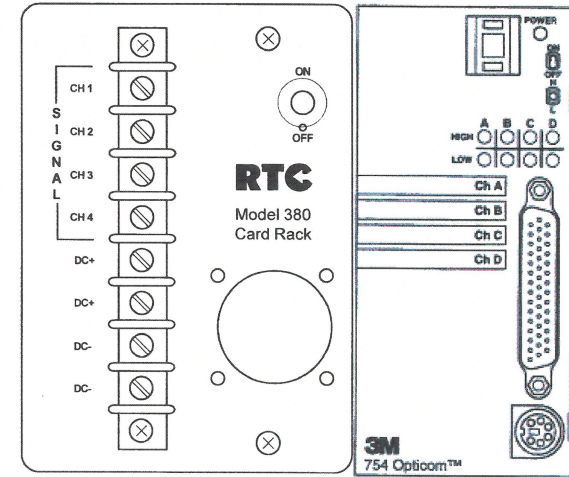


Figure 3

The 380 Card Rack works with the following:

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- 254, 4-channel discriminators
- 452, 2-channel discriminators
- 454, 4-channel discriminators
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- 754, 4-channel discriminators

**INSTALLATION WHEN USING
THE MODEL PLE PREEMPT MODULE
WITH A 4-PHASE OR 8-PHASE NEMA TRAFFIC CONTROLLER**

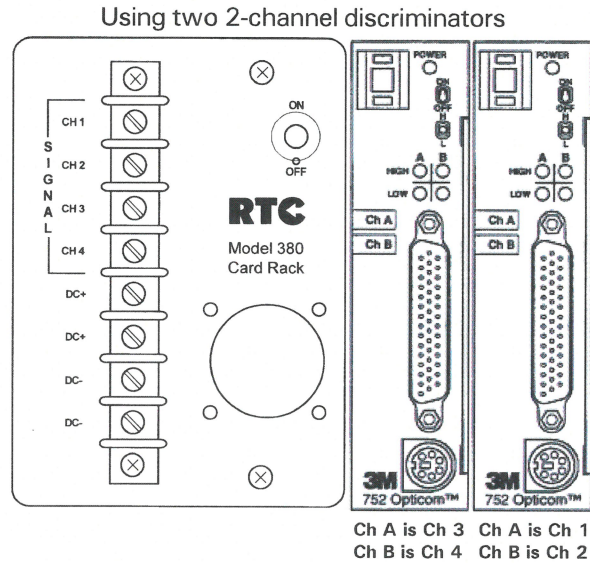


Figure 2

The 380 Card Rack works with the following:

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- 452, 2-channel discriminators
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- 752, 2-channel discriminators
- 754, 4-channel discriminators

The 380 Card Rack is normally shipped ready for installation into a traffic signal cabinet where the internal preemption program of the traffic signal controller is being used.

When using the PLE Preempt Module cut the wire jumpers on the card rack printed circuit board (PCB) as follows:

Remove the left side of the card rack (when looking at the rack from the front).

Cut the four jumper wires that are soldered on the back of the printed circuit board.

Reinstall the left side of the card rack.

Remove the front panel of the card rack.

Configure the PLE Preempt Module for proper operation and install the PLE module in the slot behind the front panel.

Replace the front panel of the card rack.

Connect the wiring harness of the 380 Card Rack as follows:

<u>PIN</u>	<u>FUNCTION</u>	<u>WIRE COLOR</u>
1	AC +	Black
2	AC -	White
3	Chassis Ground	Green
4	Logic Ground	Gray
5	Phase 1 Omit	Red
6	Phase 3 Omit	Violet
7	Phase 5 Omit	Brown
8	Phase 7 Omit	Blue
9	Manual Control Enable	Red/Black
10	Phase 2 Omit	White/Red
11	Phase 4 Omit	White/Violet
12	Phase 6 Omit	White/Brown
13	Phase 8 Omit	White/Blue
14	Preempt Disable	Violet/Black
15	Spare Output	Brown/Black
16	Interval Advance	Blue/Black

**INSTALLATION WHEN USING
THE MODEL PLE PREEMPT MODULE
WITH A DEDICATED 2-PHASE NEMA TRAFFIC CONTROLLER**

The 380 Card Rack is normally shipped ready for installation into a traffic signal cabinet where the internal preemption program of the traffic signal controller is being used.

When using the PLE Preempt Module cut the wire jumpers on the card rack printed circuit board (PCB) as follows:

Remove the left side of the card rack (when looking at the rack from the front).

Cut the four jumper wires that are soldered on the back of the printed circuit board.

Reinstall the left side of the card rack.

Remove the front panel of the card rack.

Configure the PLE Preempt Module for 2-phase operation and install the PLE module in the slot behind the front panel.

Replace the front panel of the card rack.

Connect the wiring harness of the 380 Card Rack as follows:

<u>PIN</u>	<u>FUNCTION</u>	<u>WIRE COLOR</u>
1	AC +	Black
2	AC-	White
3	Chassis Ground	Green
4	Logic Ground	Gray
5	Phase 1 Green (24VDC)	Red
6	<i>not used</i>	<i>Violet</i>
7	<i>not used</i>	<i>Brown</i>
8	<i>not used</i>	<i>Blue</i>
9	Manual Control Enable	Red/Black
10	Phase 2 Green (24VDC)	White/Red
11	<i>not used</i>	<i>White/Violet</i>
12	<i>not used</i>	<i>White/Brown</i>
13	<i>not used</i>	<i>White/Blue</i>
14	Preempt Disable	Violet/Black
15	Spare Output	Brown/Black
16	Interval Advance	Blue/Black

WARNING: Connect the phase 1 and phase 2 greens to the output of the controller (24VDC). **DO NOT CONNECT THE GREEN WIRES TO THE 120VAC LOAD SWITCH OUTPUT.**

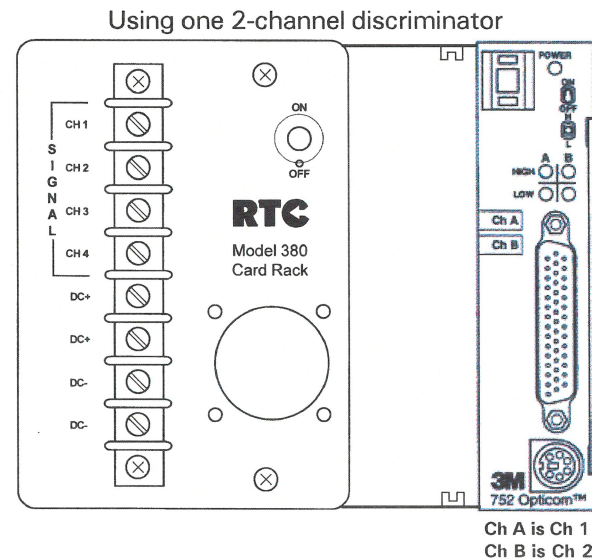


Figure 1

The 380 Card Rack works with the following:

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