

LynTec

LCRP series Lighting Control Relay Panels Individual DMX512 control of non-dimmed lighting and related devices

Add remote individual circuit control to an existing load center or panelboard.

- Tested, complete package — low labor — mount next to circuit breaker panel to DMX control AC power "hot" lines
- Time proven, reliable, G-E RR7P3 latching relays snap in and have low voltage plug-in connectors
- Low power consumption — no continuous relay coil current — runs cool for long life
- Diagnostic LEDs and internal ON - OFF test switches speed installation for testing and troubleshooting
- Cabinet and all components connected to high voltage are UL listed — Electrician friendly
- 4, 8 or 10 circuits — 120 or 277 volt models available

New!! Simplified Control Protocol

Each 20 Amp, RR7 Latching power relay is individually DMX512 addressable.

Once addressed, individual breakers may be turned ON, OFF, or set to a NO CHANGE status.



Who is LynTec?

Ask any sound contractor. Chances are, they'll tell you that LynTec pretty much wrote the book on remote controlled, sequencing power systems for the installed sound industry.

LynTec sequencing can be found in high-profile venues where reliable power control is mission critical. Stadiums, arenas and performing arts centers hosting national exposure events have been sequenced on and off by LynTec power panels for over 15 years.

Now, LynTec brings that same expertise to non-dimmed DMX power control.

Using the same proven cabinets and latching relays, LynTec now offers a relay panel with a new DMX512 control system for lighting.

WWW.[LynTec](http://LynTec.COM).COM

Job-specific questions?
Ask our Application Engineers.

800-724-4047

M-F, 8-5 Central Time

LCRP-10 INTERIOR and WIRING

24 V — 40 VA Power transformer.
Connect to 10A circuit breaker.
Mark

DMX CONTROL POWER

with supplied label.

This circuit breaker panel is shown for illustration purposes and is not sold by LynTec.

To avoid nuisance circuit breaker tripping on high inrush current devices, specify **High Magnetic** circuit breakers.

High Magnetic type breakers typically have the **HM** suffix such as Square D QO120HM, Cutler Hammer CH120HM or G-E THQL1120HM.

Numbered circuit LED
Indicates status of relay.
Flashes during Delayed OFF
countdown.

Movable circuit jumpers set the
DMX **STARTING** address.

Jumpers may be set to any
address from 1 to 503.
Why 503? See **INVALID
Address** example below.

DMX ADDRESS SAVER

At power-up, each board scans
for connected relays and uses
only as many addresses as
there are relays attached.

If the relay configuration is
changed by adding, deleting or
moving relays, update the relay
status with a re-scan.

Cycle the **DMX CONTROL POWER**
breaker off for at least 3
seconds to re-scan.

120 Ohm
Input Termination
resistor

Receiving DMX LED
Flashes when a valid
DMX signal is received.

MTA .156"
DMX Input
Test plug

Wago Cage-Clamp
Input Terminals
Press white levers toward
board to insert stripped wire.

DMX Input
Terminated

Buffered DMX Output
Flickering LED indicates
presence of data.

Warning LED
Fast flash = Low line voltage

Slow flash = Invalid Address
(Set to **total** above 512).

Example: With a **STARTING
address** set at 504 and 10
relays attached, the **total** would
be 513, exceeding DMX512's
capacity.

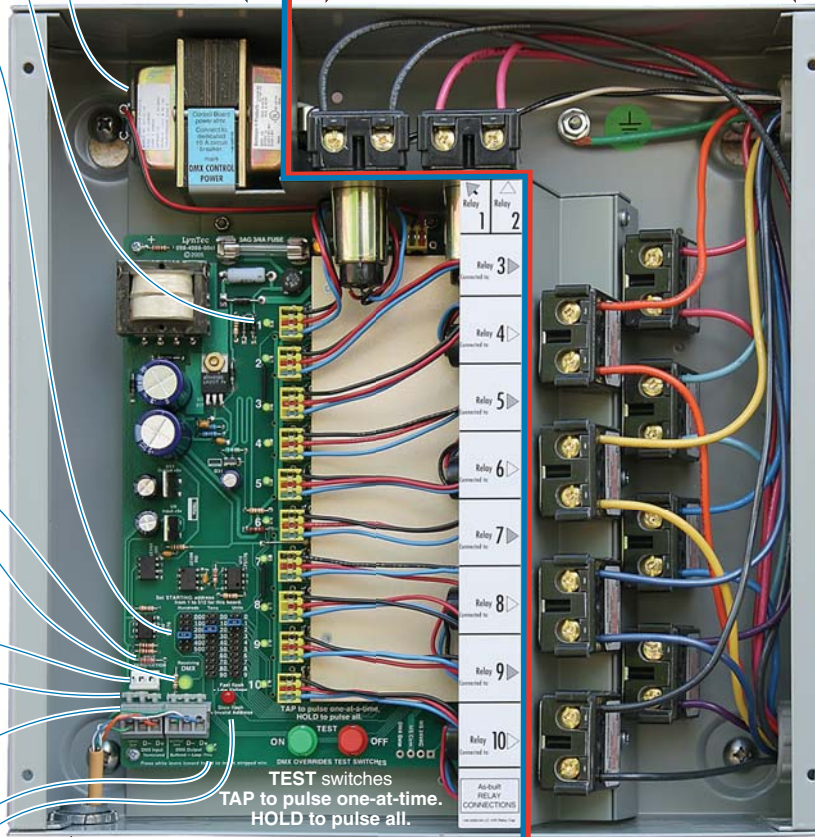
Lit Continuously =
No relays attached.

NEED 208V DMX control?
See LCLC or LCP
Motorized Breaker Panels
PAGE 3

DIVIDING
WALL

LOW
VOLTAGE
SECTION

HIGH VOLTAGE SECTION



15A or 20A
circuit
breaker
"hots"
feed
DMX
Controlled
Relays

DMX Controlled "hots" to
lighting instruments

DMX In — DMX Out
Typically Cat 5 cable

Test switches provide manual control
in the absence of a DMX signal.
DMX OVERRIDES TEST SWITCHES

G-E RR7P3 Latching Relay



G-E RR7 Relay ratings

Power Contacts: Latching

20A Tungsten, 125Vac 1/2HP motor at 110-125Vac

30A Ballast, 277Vac 1 1/2 HP motor at 277Vac

30A Resistive, 277VAC

20A Ballast, 347VAC 1 1/2 HP motor at 220-277VAC

20A Resistive, 347Vac

FOR COPPER WIRE ONLY

This product is **NEC 110 Compliant** when used in accordance with
the following: Suitable For Use On A Circuit Capable Of Delivering
Not More Than 10 kA Sym. Amps., 277 Volts Maximum.

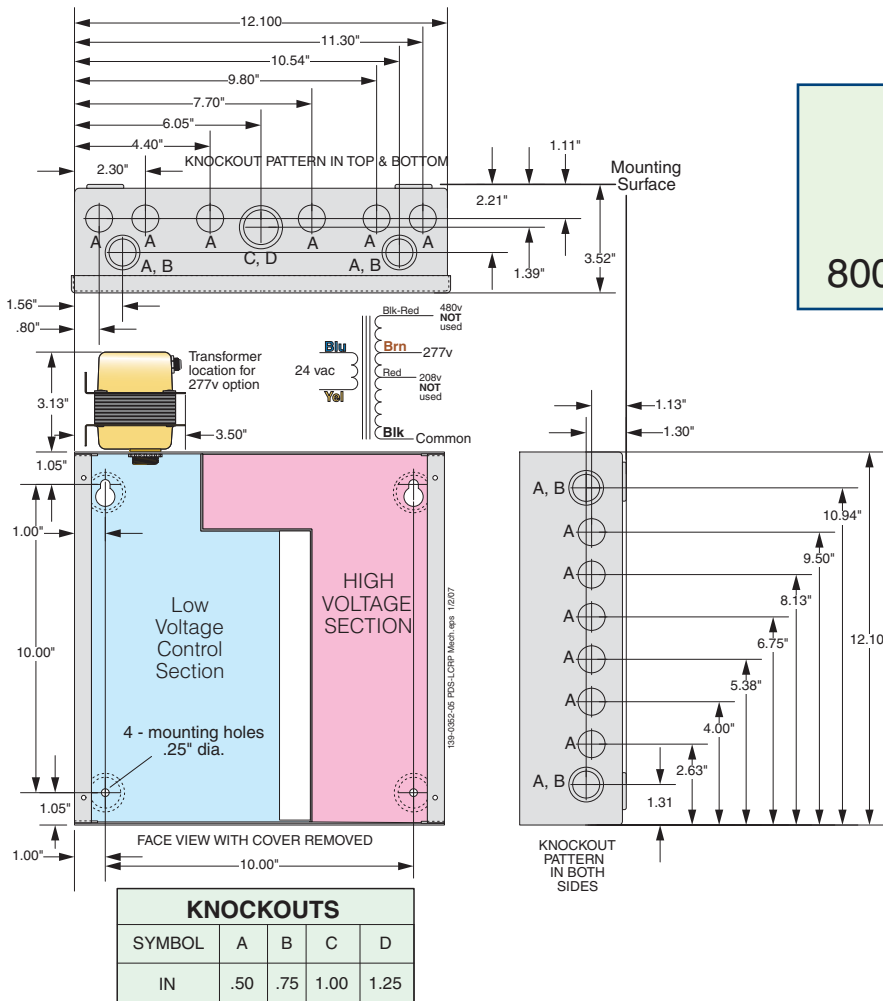
UL Listed 508G Industrial Control Equipment — CSA certified

Low voltage characteristics — RR7P3

P3 suffix denotes a 3 pin, .156" AMP or Molex connector attached.

Actuating coils: 21-30 Vac (class 2) Momentary. OFF (1-black),
ON (2-red), Common (3-Blue) 55-60 Ohms DCR, each coil.

LCRP-10 MECHANICAL



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OTHER LynTec DMX PRODUCTS

- **LCLC series Lighting Control Load Centers**
- **LCP series Lighting Control Panelboards**

One panel DMX control using Square D motorized circuit breakers.
 Mix regular QO breakers with QOPL motorized breakers for unlimited circuit design flexibility
 10 to 41 DMX controlled circuits
 100A to 400A — 3 Phase Panels
 1, 2 or 3 pole 15A, 20A or 30A motorized circuit breakers



Up to 5 DMX universes optional depending on model

- **RBLC Remote Breaker Lighting Controller**

DMX control of motorized breakers
 in any Square D QO series panel

http://www.lyntec.com/139-0370_DMX_Breaker_AllPanel.pdf



Circuits controlled by one or more LC-10 Lighting Control boards

The LC-10R board has 10 drivers capable of powering one RR7 relay. Each relay has its own individual DMX512 address.

Bold face type = legends printed on LC-10 boards.

STARTING address

The **STARTING address** is field programmed by installing push-on jumpers.

Each board has a starting DMX address which is typically set between 1 and 503. Subsequent addresses are automatically assigned as needed, determined by how many relays are attached to the board.

ADDRESS SAVER

To conserve DMX addresses, the LC-10 board only assigns subsequent addresses for relays it locates at power-up. At power-up, the board scans and pulses all relay connectors from 1 to 10. Each relay load found is assigned the next subsequent address regardless of its numerical position.

Empty connectors are skipped to save addresses.

EXAMPLE

If the **STARTING address** were set at 301, the number 1 position would be DMX address 301.

If the second connector had no relay plugged in, it wouldn't draw any control current during the power-up scan. It would be skipped and wouldn't be assigned a DMX address.

The third and fourth connectors have relays and would be assigned DMX addresses 302 and 303.

To avoid confusion, we would suggest that you not leave spaces except after the last connected relay. Then, your *existing* relay DMX addresses won't change if you add a relay. In the above example, if you were to plug a relay into the empty #2 position and re-scan, those relays that had addresses 302 and 303, would be *reassigned* new addresses of 303 and 304 for your convenience and amazement.

NOTE

If a relay is plugged into a connector *after* power-up it will be ignored until a new power-up scan is run by cycling the DMX CONTROL POWER breaker off for at least 3 seconds.

Indicator LEDs

Amber POWER LED

Power to each LC-10 circuit board is indicated by the amber **POWER** LED.

Numbered Green LEDs, 1 - 10

Green numbered LEDs, adjacent to each relay connector, light when the circuit relay has been pulsed on. When a "delayed Off command" is executing, that relay's LED will flash.

Red warning LED

Low Voltage, INVALID address or *No Relays Attached*

Low Voltage = A fast red flash indicates AC line voltage is below 105 VAC - No DMX reception or execution.

INVALID address = A slow (1 Hz) red flash indicates an invalid address setting **totaling** of more than 512.

Example: With a **STARTING address** set at 504 and 10 relays attached, the **total** would be 513, exceeding DMX512's capacity.

No Relays Attached = A continuously lit red LED indicates no relays were found at the time of the power-up scan.

Green Receiving DMX LED

When the **Receiving DMX LED** is flashing, the system is active and ready to execute DMX commands. The **Receiving DMX LED** stays lit during command execution.

Green DMX Output LED

Flickering LED indicates data presence at the Buffered DMX Output.

Brown-out protection

Five seconds after power stabilizes above 105 volts, the board begins receiving DMX signals, as indicated by a flashing green **Receiving DMX LED**.

When the Receiving DMX LED is flashing, the system is ready to execute DMX commands. A **fast** flashing red LED indicates the power hasn't been above 105 volts for the last 5 seconds and the controller is waiting for the power to stabilize before resuming DMX reception.

G-E RR7 Relay ratings — see page 2

G-E Cabinet — Type 1 Enclosure "INDOOR USE ONLY"
UL Listed 508G — Industrial Control Equipment — CSA Certified

DMX CONTROL POWER

A dedicated 10 Amp circuit breaker, marked DMX CONTROL POWER should be used to feed the 24v, 40 VA transformer or the 50 VA, 277v Option.

This 10 amp breaker should be left on continuously. This circuit breaker is used as an approved, switchable connection method to the high voltage. The 40VA, 120v, **UL & UL_c** listed transformer is impedance protected with an internal thermal fuse. The 50 VA, 277v Option transformer has a pushbutton-reset internal breaker.

Each controller board is protected by an on-board 3AG 3/4 amp fuse.

Power required: 50/60 Hz, 6.5 watts with 10 relays in the on condition.
(All indicator LEDs lit)

DMX PROTOCOL for LynTec LCRP series		
Code Range (8 bit)	%	Circuit Function
0-63	0-24	This relay instant off. When applied to all relays simultaneously, they turn OFF at a .25 second step rate.
64-191	25-74	No change
192-255	75-100	This relay instant on. When applied to all relays simultaneously, they turn ON at a .25 second step rate.

For brochures prior to board revision 08 see

http://www.lyntec.com/139-0380_LCRP_DMx_Relay_Broch_Disctnd..pdf

MODELS

- LCRP-4 ...** Ten circuit DMX Relay Controller cabinet with 4 - 20A Relays
- LCRP-8....** Ten circuit DMX Relay Controller cabinet with 8 - 20A Relays
- LCRP-10..** Ten circuit DMX Relay Controller cabinet with 10 - 20A Relays
- 277v Option...** Add -277 suffix to model number re: **LCRP-10-277**

ARCHITECTS & ENGINEERS SPECIFICATIONS

for PDF and Word file links
see http://www.lyntec.com/139-0381_LC_Relay_A&E_Specs.pdf

In the interest of product improvement, specifications are subject to change without notice — see web site for the most current data.

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