**LynTec RS-232 Controlled Panels and Load Centers**

Motorized Breakers Make Control Easy!

All relay based systems **MUST** be electrically protected by a circuit breaker. Motorized breakers eliminate the need for wall or rack mounted relay based systems...

- Saves Space
- Saves redundant installation and hardware costs!
- UL listed circuit breaker with built-in internal switching capability manufactured by **SQUARE D**
- Time tested, in service over 20 years
- Available in 15A, 20A and 30A - 1, 2 or 3 poles for remote control of all electrical loads
- Robust - rated for 60k on, off, on cycles
- Energy efficient - NO holding current or heat sinks required to maintain state - Runs cool, lasts long!
- Automatic load shedding and brownout protection in every panel.
- Emergency override function standard on every panel.

**Specifying in 5 easy steps**

1. Choose the control method: **SC**=RS-232
2. Choose the cabinet style: **LC** for load center and **P** for panelboard
3. Choose three phase (3) or single phase (1)
4. Choose the number of circuits: **26** or **41** Panelboards are only available in 41 circuits.
5. Choose the maximum number of controlled circuits: **10, 20, 30, 40, or 50**.

**EX:** **SCLC 326-20** = a 3 phase load center with 26 circuits (24 max controlled)

**SCP 341-30** = a 3 phase panel board with 41 circuits (30 max controlled)

**All panels and load centers**
**AVAILABLE MODELS**

See www.LynTec.com for model specific design and submittal PDFs

### LOAD CENTERS

**SCLC 326-xx-Mxxx RS-232 Controlled Load Center**
30, 208Y/120 Vac, 4 wire. — 100 Amp Main Breaker Standard

**LynTec RS-232 Controlled Load Center**

**MODEL NUMBERS**

- **SCLC 326-10-Mxxx** (Up to 10 RS-232 controlled circuits)
- **SCLC 326-20-Mxxx** (Up to 20 RS-232 controlled circuits)
- **SCLC 326-30-Mxxx** (Up to 30 RS-232 controlled circuits)

Square D QO327M100 Load Center with LynTec low-voltage sidecar.

Standard back-fed Main Breaker:
Squred D# QO3100VH. 100A,

VH = 22k AIR

[amps Interrupt Rating]

Back-fed Main Breaker options
Part# suffix — **Bold face** — Amps

- M3030: - M3040: (10kAIR)

Square D# QO30xxx

- M3050, - M3060, - M3070 or - M3090

Square D# QO3xxVH

(all VH = 22k AIR)

Wire Sizes

- #4 - 2/0 Cu

Outside dimensions
20.9” w., 29.8” h., 3.9” d.

**Main Lug Only** — **MLO option**
Remove back fed main and top feed as a MLO to gain 3 circuits.
Feed from a protected disconnect.

Provides access to branch breaker positions 1, 3, & 5.

Model number becomes a

**SCLC 329-10-MLO**
(10 RS-232 controlled circuits)

**SCLC 329-20-MLO**
(20 RS-232 controlled circuits)

**SCLC 329-30-MLO**
(Up to 29 RS-232 controlled circuits)

(only 29 one pole breakers)

125 Amp. Panel Bus Rating

Wire size: #6 - 2/0 Cu

**SCLC 341-xx-Mxxx RS-232 Controlled Load Center**
30, 208Y/120 Vac, 4 wire. — 225 Amp Main Breaker Standard

**LynTec RS-232 Controlled Load Center**

**MODEL NUMBERS**

- **SCLC 341-10-Mxxx** (Up to 10 RS-232 controlled circuits)
- **SCLC 341-20-Mxxx** (Up to 20 RS-232 controlled circuits)
- **SCLC 341-30-Mxxx** (Up to 30 RS-232 controlled circuits)
- **SCLC 341-40-Mxxx** (Up to 40 RS-232 controlled circuits)

Square D QO342MQ225 Load Center with LynTec low-voltage sidecar.

Standard Main Breaker:
Square D# QDL32225. 225 Amp

Main Breaker options
Part# suffix — **Bold face** — Amps

- M3150 or - M3200

Square D# QDLD3xxx series

(25k AIR) [Amps Interrupt Rating]

**Available Models**

**Main wire**: 3Ø, 208Y/120 Vac, 4 wire.

3Ø, 208Y/120 Vac, 4 wire.

[amps Interrupt Rating]

High voltage interior may be

field inverted for top feed

**SCLC 341-40-MLO** (Up to 30 RS-232 controlled circuits)

SCLC 341-30-MLO (Up to 20 RS-232 controlled circuits)

SCLC 341-20-MLO (Up to 10 RS-232 controlled circuits)

SCLC 341-10-MLO (up to 4 RS-232 controlled circuits)

SCLC 341-0 MLO (up to 1 RS-232 controlled circuits)

10A supplied installed

Also available with LynTec low-voltage sidecar.

**SCP 341-xx-Mxxx RS-232 Controlled Panelboards**
30, 208Y/120 Vac, 4 wire. — 225 Amp Main Breaker Standard

**LynTec RS-232 Controlled Panelboards**

**MODEL NUMBERS**

- **SCP 341-10-Mxxx** (Up to 10 RS-232 controlled circuits)
- **SCP 341-20-Mxxx** (Up to 20 RS-232 controlled circuits)
- **SCP 341-30-Mxxx** (Up to 30 RS-232 controlled circuits)
- **SCP 341-40-Mxxx** (Up to 40 RS-232 controlled circuits)
- **SCP 341-50-Mxxx** (Up to 41 RS-232 controlled circuits — limited by 42 circuit code rule)

Square D NQOD-NL MB Panel with LynTec low-voltage sidecar.

Standard SCP-225A Main Breaker: 225 Amp. - 65k AIR - MJG36225

Main Breaker options
Part# suffix — **Bold face** — Amps

- MHG3125, - MG3150, - MG3175 or - MJG3200

Wire Sizes

- #4 - 2/0 Cu

Outside dimensions
28.06” w., 50” h., 6.13” d.

Knockout panels supplied in both ends

Optional isolated technical ground
sidecar not shown

**SCP 341-xx-M400 RS-232 Controlled Panelboard**
30, 208Y/120 Vac, 4 wire. — 400 Amp Main Breaker Standard

**LynTec RS-232 Controlled Panelboard**

**MODEL NUMBERS**

- **SCP 401-10-M400** (Up to 10 RS-232 controlled circuits)
- **SCP 401-20-M400** (Up to 20 RS-232 controlled circuits)
- **SCP 401-30-M400** (Up to 30 RS-232 controlled circuits)
- **SCP 401-40-M400** (Up to 40 RS-232 controlled circuits)
- **SCP 401-50-M400** (Up to 41 RS-232 controlled circuits — limited by 42 circuit code rule)

Square D NQOD MB Panel with LynTec low-voltage sidecar.

Standard SCP 400A Main Breaker: 400 Amp. - 10k AIR - LA36400

[amps Interrupt Rating]

Wire Sizes

- #1 - #1-750 kcmil Cu or

- 2 - #1-250 kcmil Cu (per NEC)

100% Neutral has one feed lug that accepts one #1-750 kcmil or two #1-300 kcmil Cu wires.

Outside dimensions:
28.06” w., 68.2” h., 6.13” d.

Optional isolated technical ground
All A.C. power for the A/V system shall be supplied from a source capable of being remote controlled via RS-232 control protocol.

Circuits shall be individually addressable providing on and off control via RS232 protocol.

A means of visual operator feedback shall provide an indication of circuit on/off status locally via LEDs.

The system shall have brownout (undervoltage) protection; monitoring the line voltage and triggering an automatic shutdown if the line voltage drops below 95 volts for more than 2 seconds. The system shall automatically return circuits to on state when power resumes and remains above 105 volts for more than 2 seconds without operator intervention.

The system shall have emergency shutdown capability triggered by external contacts or the system operator.

Un-motorized circuits, as required, shall be supplied from the same A.C. source so that a single lever main circuit breaker is dedicated to the system.

All Load Centers shall have an isolated technical ground bar.

All branch circuit breakers shall be snap-in.

The Serial Controlled Panelboard system shall be the LynTec model SCLC xxx series Load Center.

Manufacturer shall warrant specified equipment to be free from defects in materials and workmanship as follows: at least (15) months from date of purchase for line voltage equipment; at least (5) years from the date of purchase for control electronics.

LynTec — 800-724-4047 — www.LynTec.com

Models:

Single Phase, 22k AIR: **SCLC 129-12, SCLC 129-24, SCLC 129-36**

Balanced Power, 60v — 0 — 60v, 22k AIR: **SCLC 119-12, SCLC 119-24**

Three Phase, 10k AIR: **SCLC 326-12, SCLC 326-24, SCLC 326-36**

Three Phase, 25k AIR: **SCLC 341-12, SCLC 341-24, SCLC 341-36, SCLC 341-48**

This document available in Word format: [http://www.lyntec.com/139-0578_SCLC_A&E_Spec.docx](http://www.lyntec.com/139-0578_SCLC_A&E_Spec.docx)

Most recent version pdf: [http://www.lyntec.com/139-0578_SCLC_A&E_Spec.pdf](http://www.lyntec.com/139-0578_SCLC_A&E_Spec.pdf)

139-0578-00_SCP_A&E_Spec 10/10/11
SC-10 RS232 PROTOCOL

Commands set

<table>
<thead>
<tr>
<th>Command</th>
<th>Decimal</th>
<th>Hexadecimal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start byte</td>
<td>176</td>
<td>0xB0</td>
</tr>
<tr>
<td>Stop byte</td>
<td>240</td>
<td>0xF0</td>
</tr>
<tr>
<td>Board address</td>
<td>1 - 99</td>
<td>0x01 - 0x63</td>
</tr>
<tr>
<td>Output address</td>
<td>1 - 10</td>
<td>0x01 - 0x0A</td>
</tr>
<tr>
<td>Output ON</td>
<td>180</td>
<td>0xB4</td>
</tr>
<tr>
<td>Output OFF</td>
<td>181</td>
<td>0xB5</td>
</tr>
<tr>
<td>Output status</td>
<td>182</td>
<td>0xB6</td>
</tr>
<tr>
<td>Status of all outputs</td>
<td>189</td>
<td>0xBD</td>
</tr>
<tr>
<td>All ON</td>
<td>186</td>
<td>0xBA</td>
</tr>
<tr>
<td>All OFF</td>
<td>187</td>
<td>0xBB</td>
</tr>
<tr>
<td>Set/clear output verification status*</td>
<td>190</td>
<td>0xBE</td>
</tr>
</tbody>
</table>

*Not be implemented - autoscan can distinguish between RR7 and RR9

2. Commands description

2.1 Outputs ON command

0xB0, board_address, 0xB4, output_address_1, ..., output_address_m, 0xF0
m <= 10 (0x0A)

Example: B0 01 B4 04 0A F0, turns on outputs at 4 and 10, on 1st card

2.2 Outputs OFF command

0xB0, board_address, 0xB5, output_address_1, ..., output_address_n, 0xF0
n <= 10 (0x0A)

Example: B0 02 B5 09 F0, turns off output at 9, on 2nd card

2.3 Outputs ON/OFF command

0xB0, board_address, 0xB4, output_address_1, ..., output_address_m, 0xB5, output_address_1, ..., output_address_n, 0xF0
m and n <= 10 (0x0A)

Example: B0 01 B4 04 0A B5 09 F0, turns on output at 4 and 10, and turns off output at 9, on 1st card

2.4 Outputs status

0xB0, board_address, 0xB6, output_address_1, ..., output_address_m, 0xF0
m <= 10 (0x0A)

Example: B0 03 B6 04 0A F0, status of outputs at 4 and 10, on 3rd card

2.5 Status of all outputs

0xB0, board_address, 0xBD, 0xF0

2.6 All ON - turn on all available outputs

0xB0, board_address, 0xBA, 0xF0
2.7 All OFF - turn off all available outputs
0xB0, board_address, 0xBB, 0xF0

2.8 Set/clear output verification status (NOT IMPLEMENTED)
0xB0, board_address, 0xBE, output_address_i, output_ver_status_i, output_address_j, output_ver_status_j, ...
output_address_n, output_ver_status_n, 0xF0
output_address_i, output_ver_status_i, output_address_j, output_ver_status_j, ...
output_address_n - addresses and status of outputs, n<=10

Output_ver_status coding

<table>
<thead>
<tr>
<th>Status</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disable</td>
<td>0x01</td>
</tr>
<tr>
<td>Enable</td>
<td>0x02</td>
</tr>
</tbody>
</table>

When verification status of the output is disabled, the board will always respond with “no verification” status for this output. Verification status shall be disabled for all outputs driving RR7 relays.

3. Responses

3.1 Output status codes

<table>
<thead>
<tr>
<th>Status</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off</td>
<td>0x01</td>
</tr>
<tr>
<td>On</td>
<td>0x02</td>
</tr>
<tr>
<td>Fault</td>
<td>0x03</td>
</tr>
<tr>
<td>No verification, expected off</td>
<td>0x04</td>
</tr>
<tr>
<td>No verification, expected on</td>
<td>0x05</td>
</tr>
<tr>
<td>Empty</td>
<td>0x06</td>
</tr>
</tbody>
</table>

3.2 Output status change response

This response is transmitted when output(s) change(s) status for ANY reason (RS232 command, button push, brown out, recover from brown out, emergency override, recover from emergency override).

0xB0, board_address, 0xB6, output_address_i, output_status_i, ...
output_address_n, output_status_n, 0xF0
n<=10 (0x0A)

Example: B0 01 B6 04 01 05 02 0A 06 F0, output at 4 is off, at 5 is on, and at 10 is empty, on 1st card

3.3 Status of all ten outputs (transmitted only in reply to status of all outputs command)

0xB0, board_address, 0xBD, byte_1, ..., byte_10, 0xF0

Example: B0 02 BD 01 01 01 01 01 02 02 02 02 06 F0, outputs 1 thru 5 are off, 6 thru 9 are on, and 10 is empty, on 2nd card

4. AMX Device Discovery

Beacon request: “AMXr”

Beacon: “AMXB<-SDKClass=Utility><-Make=Lyntec><-Model=SC10><-Revision=1.0.0>\r”
Planning and Layout Worksheet — As-built door label
SCLC 341-xx-M150 to -M225 Serial Control Load Center
Breaker types, sizes, positions and connections

Transfer as-built information to the door label upon completion.
Keep this sheet for as-built documentation

Available as PDF download
www.lyntec.com/139-0547_SCLC341_Plnr.pdf

SCLC 341-xx
(25k AIR main) - 225A bus
xx = Number of controller circuits
10, 20, 30, or 40.
See right side of page for model number explanation.
Cabinet outline - Surface mount only
Outside dimensions: 20.9" w, 39.9 h, .3" d

Square D QO342MQ225 Load Center
with LynTec low-voltage sidescar.
Standard Main Breaker: QDL3/225. 225 Amp
Main Breaker options
Partit suffix - M3150 or -M3200 Amps,
QDL3/2xx series (all 25k AIR)
[Amps Interrupt Rating]
If 200% neutrals or bolt-on breakers are required,
use SCP 341-xx Panelboard.

Each motorized breaker is actuated by a command from a RS-232 control device.
The RS-232 # ______ is the RS-232 address of this breaker.
The board jumpers set the RS-232 address of the board. Each breaker has a sub-address of 1-10
Fill in the box to indicate which control board this breaker is connected to.

RS-232 starting address: __________________________

by________________________ Date________________
Job____________________________________
Panel____________________________________
Comments____________________________________

www.LynTec.com
800-724-4047
M-F 8-5 Central time

Document # 139-0547-02 SCLC 341 Planner 09/27/11 Most current revision: www.lyntec.com/139-0547_SCLC341_Plnr.pdf
Mechanical Dimensions and Knockouts

**LynTec Models:** LCLC 338-xx, LCLC 341-xx, MSLC 338-xx, MSLC 341-xx, SCLC 338-xx, or SCLC 341-xx

### Surface Mount ONLY

#### Knobout Symbols

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
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</thead>
<tbody>
<tr>
<td>IN</td>
<td>.50</td>
<td>.75</td>
<td>1.00</td>
<td>1.25</td>
<td>1.50</td>
<td>2.00</td>
<td>2.50</td>
</tr>
<tr>
<td>MM</td>
<td>13</td>
<td>19</td>
<td>25</td>
<td>32</td>
<td>38</td>
<td>51</td>
<td>64</td>
</tr>
</tbody>
</table>

#### Load Center Bottom Panel Hole Pattern

- Pattern is the same as top except flipped end-to-end.

### Mechanical Dimensions

- **DUAL DIMENSIONS:**
  - Inches (4 HOLES)
  - Millimeters

### Knockouts

- **(4 HOLES)**
- **.44 Dia.**
- **[11]**

### Main Wire Size

- **AWG AL/CU**
- **#4-250**

### Control Boards

1. **Control Board 1**
2. **Control Board 2**
3. **Control Board 3**
4. **Control Board 4**

### Knockout Locations

- **A**, **B**, **C**, **D**, **E**, **F**, **G**

### LynTec Low Voltage Sequencer Sidecar

- **225A Copper Bus**
- **DMX CONTROL POWER or SEQUENCER POWER 10A supplied installed**

### Mechanical Dimensions

- **208Y/120 Vac 3Ø, 4W**
- **#4-250**
Thermal-magnetic Molded Case Circuit Breakers
250 Ampere Frame
Class 734

QDL & QGL
2 and 3-pole
70–250 Amperes

POWERPACT Q-frame► —250 A, Thermal-magnetic (240 Vac)

<table>
<thead>
<tr>
<th>Current Rating @ 40°C</th>
<th>AC Magnetic Trip Settings</th>
<th>D Interrupting</th>
<th>G Interrupting</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hold</td>
<td>Trip</td>
<td>Catalog Number</td>
</tr>
<tr>
<td>LynTec</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSP 139</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCP 139</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use a 2 pole, back-fed main breaker, rated at 100 AMPS or less.</td>
<td></td>
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</tr>
<tr>
<td>LynTec</td>
<td></td>
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<tr>
<td>MSP 119, MSP 141</td>
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<tr>
<td>SCP 141</td>
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<tr>
<td>▲▲ All models 70–225A</td>
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<td>Special order, NCNR</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>▲ Non Cancelable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>▲ Non Returnable</td>
<td></td>
<td></td>
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<tr>
<td>LynTec</td>
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<tr>
<td>LCLC 326</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Use a 3 pole, back-fed main breaker, rated at 100 AMPS or less.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LynTec</td>
<td></td>
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<tr>
<td>LCLC 341</td>
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<tr>
<td>MSLC 341</td>
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<td></td>
</tr>
<tr>
<td>SCLC 341</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>✚ Optional from stock</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>▲ Replacement lugs are not available for POWERPACT Q-frame circuit breakers. Lugs for the POWERPACT Q-frame circuit breakers accept (1) #4–300 kcmil.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Interrupting Ratings (kA)

<table>
<thead>
<tr>
<th></th>
<th>QD</th>
<th>GG</th>
</tr>
</thead>
<tbody>
<tr>
<td>240 V</td>
<td>25</td>
<td>65</td>
</tr>
</tbody>
</table>

For Branch Breaker Series Ratings see http://www.lyntec.com/139-0407_Series_Ratings.pdf
This page contains UL Tested and Certified series combination ratings for panelboards. These ratings apply to either an integral main located in the same enclosure or a remote main located in a separate enclosure.

**MSLC 326**

<table>
<thead>
<tr>
<th>Branch Circuit Breaker Designations and Allowable Amperes Ranges</th>
<th>Type</th>
<th>1-pole</th>
<th>2-pole</th>
<th>3-pole</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSLC 326</td>
<td>22k</td>
<td>15–30 A</td>
<td>15–60 A</td>
<td>15–100 A</td>
</tr>
<tr>
<td>SCLC 328</td>
<td>40k</td>
<td>15–30 A</td>
<td>15–60 A</td>
<td>15–100 A</td>
</tr>
<tr>
<td>SCLC 328</td>
<td>55k</td>
<td>15–30 A</td>
<td>15–60 A</td>
<td>15–100 A</td>
</tr>
<tr>
<td>MSP 119</td>
<td>105k</td>
<td>15–30 A</td>
<td>15–60 A</td>
<td>15–100 A</td>
</tr>
<tr>
<td>SCP 338</td>
<td>125k</td>
<td>15–30 A</td>
<td>15–60 A</td>
<td>15–100 A</td>
</tr>
<tr>
<td>SCP 338</td>
<td>155k</td>
<td>15–30 A</td>
<td>15–60 A</td>
<td>15–100 A</td>
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</tbody>
</table>

**SCLC 338**

<table>
<thead>
<tr>
<th>Branch Circuit Breaker Designations and Allowable Amperes Ranges</th>
<th>Type</th>
<th>1-pole</th>
<th>2-pole</th>
<th>3-pole</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSLC 326</td>
<td>22k</td>
<td>15–30 A</td>
<td>15–60 A</td>
<td>15–100 A</td>
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<tr>
<td>SCLC 328</td>
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<td>15–60 A</td>
<td>15–100 A</td>
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<td>15–30 A</td>
<td>15–60 A</td>
<td>15–100 A</td>
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<td>105k</td>
<td>15–30 A</td>
<td>15–60 A</td>
<td>15–100 A</td>
</tr>
<tr>
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<td>125k</td>
<td>15–30 A</td>
<td>15–60 A</td>
<td>15–100 A</td>
</tr>
<tr>
<td>SCP 338</td>
<td>155k</td>
<td>15–30 A</td>
<td>15–60 A</td>
<td>15–100 A</td>
</tr>
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</table>

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For the most up-to-date information, please visit [www.SquareD.com](http://www.SquareD.com).
**Instruction Bulletin**

**QO-PL (Plug-on), QOB-PL (Bolt-on) Powerlink® Remotely Operated Circuit Breakers**
(Use in Type QO Load Centers and Type NQO, NQOB, and NQOD Panelboards)

Retain for future use.

**REQUIREMENTS**

**Remotely Operated Circuit Requirements**

**DANGER**

HAZARD OF ELECTRIC SHOCK, BURN, OR EXPLOSION.

When servicing a branch circuit fed by a remotely operated circuit breaker, move handle of remotely operated circuit breaker to OFF position. Do not rely on remote operation to open circuit breaker.

Failure to follow these instructions will result in personal injury or death.

**CIRCUIT BREAKER INSTALLATION**

**DANGER**

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E.
- This equipment must be installed and serviced only by qualified electrical personnel.
- Turn off all power supplying this equipment before working on or inside equipment.
- Always use a properly rated voltage sensing device to confirm power is off.
- Replace all devices, doors, and covers before turning on power to this equipment.

Failure to follow these instructions will result in death, or serious injury.

**POWERLINK® QO(B)-PL Remotely Operated Circuit Breakers** require a power supply capable of delivering at least two amperes at 24 Vdc for a minimum of 50 milliseconds. One-, two-, and three-pole circuit breakers all have one internal motor, and power requirements are the same regardless of the number of poles and ampere ratings.

The required power supply ampacity and control device contact rating are determined by the number of circuit breakers to be switched simultaneously (i.e., four circuit breakers switched simultaneously require a power supply and a control device contact rated 8 amperes minimum). The control device may be either a normally-open (NO)/normally-closed (NC) contact; a single-pole, double-throw switch (SPDT); or other three-wire control device.

1. Turn off all power supplying this equipment before working on or inside equipment.
2. Before installing circuit breaker turn circuit breaker handle to OFF position.
3. Remove panelboard cover and deadfront. Verify power is off with voltage meter before proceeding.

**Installation of circuit breaker into panelboard/load center (refer to figure below)**

4. Except for remotely operated connections, QO(B)-PL remotely operated circuit breakers are installed in a panelboard/load center the same as conventional QO(B) circuit breakers.

**Connection of remotely operated circuit (refer to the figure on next page)**

5. Assure that power supply and control device meet requirements listed under "Remotely Operated Circuit Requirements."

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**See page 2 for LynTec part number explanation**

All LynTec supplied breakers have special 60" control wires. (Square D standards are 18").
CIRCUIT BREAKER INSTALLATION

HAZARD OF CIRCUIT BREAKER DAMAGE.

Connect the 24 Vdc remote control wiring as shown on this page.

Failure to follow these instructions can permanently damage the remotely operated circuit breaker.

**CAUTION**

Failure to follow these instructions can permanently damage the remotely operated circuit breaker.

6. All wiring and splicing must comply with applicable code requirements for Class 1 circuits. Refer to paragraph 373-8 and article 725 of the National Electrical Code.

7. Three #18 AWG control wires are attached to the remotely operated circuit breaker for connection to the power supply and remote control device and should be cut to the required length to reach the splice connections. Use #18 AWG or larger conductors with 600 V insulation and approved wire connectors for splices.

8. Connect the black lead of the remotely operated circuit breaker to the negative (-) terminal of the 24 Vdc power supply. Connect the red lead of the remotely operated circuit breaker to the positive (+) terminal of the 24 Vdc power supply. Connect the white lead of the remote control device. The remote control device provides connections between either positive or negative potential of the power supply and the white wire of the remotely operated circuit breaker, as appropriate.

9. Applying the positive potential of the power supply to the white wire (contact closure between the red wire and white wire) will operate the remote mechanism of the circuit breaker to the OFF position. Applying the negative potential of the power supply to the white wire (contact closure between the black wire and the white wire) will operate the remote mechanism of the circuit breaker to the ON position. A control circuit utilizing a normally open (NO)/normally closed (NC) contact is illustrated below.

NOTE: The remote mechanism will not move the circuit breaker handle. Also, the remote mechanism cannot turn power ON when the circuit breaker is tripped (VISI-TRIP® flag indicator showing) or when the circuit breaker handle is in the OFF position.

Installation of the trim and operational checks

10. Remove corresponding twist-out from panelboard trim and replace trim.

11. Turn power to panelboard on.

12. Turn remotely operated circuit breaker handle to the ON position.

13. Turn power to the remotely operated circuit on and test this circuit, turning remotely operated circuit breaker off remotely, then on remotely. If power to remote controlled circuit breaker load does not switch off and on, turn off power to remotely operated circuit and panelboard and check wiring.

NOTE: A power supply is available from Square D Company, Cat. No. QOPLPS (plug-on) or QOBLPS (bolt-on).

Splice not normally required with LynTec supplied breakers with 60" leads.