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](https://www.squared.com)
- 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**
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., 39.3" h., 3.9" d.

Square D QO32MQ225 Load Center
with LynTec low-voltage sidecar.
Standard Main Breaker: QDL3/225, 225 Amp

Main Breaker options
Part # suffix - M3150 or M3200 Amps,
QDL3x/xxx 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
Bold line around box = suggested control board: #1 (Top), #2, #3 or #4.
Fill in □ box to indicate which control board this breaker is connected to.

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

www.LynTec.com
800-724-4047
M-F 8-5 Central time
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, output_ver_status_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 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: “AMX\r”
Beacon: “AMXB-<SDKClass=Utility><-Make=Lyntec><-Model=SC10><-Revision=1.0.0>\r”

139-0573-00 SC-10 Program Card
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**

### Knockouts

<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>
</tr>
</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>

**LynTec**

Low Voltage Sequencer Sidecar

---

**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**

- **Control Board 1**
- **Control Board 2**
- **Control Board 3**
- **Control Board 4**

**DMX CONTROL POWER or SEQUENCER POWER**

10A supplied installed

**225A Copper Bus**

- **Control Board 1**
- **Control Board 2**
- **Control Board 3**
- **Control Board 4**

**SQUARE D**

**CATALOG NUMBER**

- **Maximum System Voltage**
- **Main Ampere Rating**
- **Spaces**
- **Maximum Number of Available Single Pole Circuits**
- **Main Wire Size AWG AL/CU**

<table>
<thead>
<tr>
<th><strong>SQUARE D CATALOG NUMBER</strong></th>
<th><strong>Maximum System Voltage</strong></th>
<th><strong>Main Ampere Rating</strong></th>
<th><strong>Spaces</strong></th>
<th><strong>Maximum Number of Available Single Pole Circuits</strong></th>
<th><strong>Main Wire Size AWG AL/CU</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>QQ342MQ225</td>
<td>208V/120 Vac 3Ø, 4W</td>
<td>225</td>
<td>42</td>
<td>38</td>
<td>#4-250</td>
</tr>
</tbody>
</table>

139-0314-04 LCLC & MSLC 338 & 341 Mech. 06/14/10
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>2-pole, 240 Vac</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70</td>
<td>1000</td>
<td>1800</td>
<td>QGL22070</td>
</tr>
<tr>
<td>80</td>
<td>1000</td>
<td>1800</td>
<td>QGL22080</td>
</tr>
<tr>
<td>90</td>
<td>1000</td>
<td>1800</td>
<td>QGL22090</td>
</tr>
<tr>
<td>100</td>
<td>1200</td>
<td>2400</td>
<td>QGL22100</td>
</tr>
<tr>
<td>110</td>
<td>1200</td>
<td>2400</td>
<td>QGL22110</td>
</tr>
<tr>
<td>125</td>
<td>1200</td>
<td>2400</td>
<td>QGL22125</td>
</tr>
<tr>
<td>150</td>
<td>1200</td>
<td>2400</td>
<td>QGL22150</td>
</tr>
<tr>
<td>175</td>
<td>1200</td>
<td>2400</td>
<td>QGL22175</td>
</tr>
<tr>
<td>200</td>
<td>1200</td>
<td>2400</td>
<td>QGL22200</td>
</tr>
<tr>
<td>225</td>
<td>1200</td>
<td>2400</td>
<td>QGL22225</td>
</tr>
<tr>
<td>250</td>
<td>1200</td>
<td>2400</td>
<td></td>
</tr>
</tbody>
</table>

3-pole, 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>QGL22070</td>
</tr>
<tr>
<td>MSP 139</td>
<td></td>
<td></td>
<td>QGL22080</td>
</tr>
<tr>
<td>SCP 139</td>
<td></td>
<td></td>
<td>QGL22090</td>
</tr>
<tr>
<td>LynTec</td>
<td></td>
<td></td>
<td>QGL22100</td>
</tr>
<tr>
<td>LynTec</td>
<td></td>
<td></td>
<td>QGL22125</td>
</tr>
<tr>
<td>LynTec</td>
<td></td>
<td></td>
<td>QGL22150</td>
</tr>
<tr>
<td>LynTec</td>
<td></td>
<td></td>
<td>QGL22175</td>
</tr>
<tr>
<td>LynTec</td>
<td></td>
<td></td>
<td>QGL22200</td>
</tr>
<tr>
<td>LynTec</td>
<td></td>
<td></td>
<td>QGL22225</td>
</tr>
</tbody>
</table>

Interrupting Ratings (kA)

<table>
<thead>
<tr>
<th></th>
<th>QD</th>
<th>QQ</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

© 2004 Schneider Electric
All Rights Reserved
4/1/04
LynTec 139-0343-04 Q Frame Mains 09/27/11
Derived from Digest 173 — page 6-21
**Series Ratings**

For NQOD and NF Panelboards

<table>
<thead>
<tr>
<th>Class</th>
<th>Panelboard Type</th>
<th>Voltage Ratings</th>
<th>Branch Circuit Breaker Designations and Allowable Amperes Ranges</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSLC 326</td>
<td></td>
<td>480 V Nom.</td>
<td>15–70 A 15–125 A 15–100 A</td>
</tr>
<tr>
<td>SCLC 326</td>
<td></td>
<td>480 V Nom.</td>
<td>15–70 A 15–125 A 15–100 A</td>
</tr>
<tr>
<td>MSP139</td>
<td></td>
<td>480 V Nom.</td>
<td>15–70 A 15–125 A 15–100 A</td>
</tr>
<tr>
<td>MSLC 113</td>
<td></td>
<td>240 V Nom.</td>
<td>15–70 A 15–125 A 15–100 A</td>
</tr>
<tr>
<td>SCLC 326</td>
<td></td>
<td>240 V Nom.</td>
<td>15–70 A 15–125 A 15–100 A</td>
</tr>
<tr>
<td>MSP 141</td>
<td></td>
<td>240 V Nom.</td>
<td>15–70 A 15–125 A 15–100 A</td>
</tr>
<tr>
<td>MSLC 341</td>
<td></td>
<td>120 V Nom.</td>
<td>15–30 A 15–60 A 15–50 A</td>
</tr>
<tr>
<td>SCLC 341</td>
<td></td>
<td>120 V Nom.</td>
<td>15–30 A 15–60 A 15–50 A</td>
</tr>
<tr>
<td>LYNTEC</td>
<td></td>
<td>120 V Nom.</td>
<td>15–30 A 15–60 A 15–50 A</td>
</tr>
</tbody>
</table>

**LYNTEC Models**

- LCLC 326
- MSLC 326
- SCLC 326
- MSP139
- LCLC 341
- MSLC 341
- SCLC 341

**QOBPLxxx-5393 = MB series**

- BMB, BMB-15, BMB-20, BMB-30
- BMB-215, BMB-220, BMB-230
- BMB-315, BMB-320, BMB-330

**QOBxxx (B) = BUMB series**

- BUMB-15, BUMB-20, BUMB-30
- BUMB-215, BUMB-220, BUMB-230
- BUMB-315, BUMB-320, BUMB-330

**OQxxx = USB series**

- USB-15, USB-20, USB-30
- USB-215, USB-220, USB-230
- USB-315, USB-320, USB-330

**All 15 & 20 A breakers are HM (High Magnetic)***

---

*For most current version see http://www.lyntec.com/139-0407_Series_Ratings.pdf*

---

*Page 8-2*
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."

See page 2 for LynTec part number explanation

LynTec overprint document # 139-0216-08.1

See page 2 for LynTec part number explanation
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**

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.

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 QOBPLPS (bolt-on).

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

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.

Electrical equipment should be installed, operated, serviced and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

© 1991-2003 Schneider Electric All Rights Reserved