PRE-ENGINEERED SOLUTIONS
FUSED COORDINATION PANEL AND
SHUNT TRIP DISCONNECT SWITCH


Selective Coordination Panel

Description
The Littelfuse® Coordination Panel provides a simple, time-saving solution for circuits that require selective coordination. This UL Listed product saves time and money, and increases safety by minimizing system downtime.

Applications
• Elevators
• Hospitals
• Hotel and Entertainment Industry
• Amusement Parks and Stadiums

Code Requirements
Systems required by the NEC* to be selectively coordinated include:
• Health Care Essential Electrical Systems (NEC 517.26)
• Elevators (NEC 620.62)
• Emergency Systems (NEC 700.32 in 2017) (NEC 700.28 in 2014)
• Legally Required Standby Systems (NEC 701.18)
• Critical Operations Power Systems (NEC 708.54)

Features/Benefits
• Meets NEC requirements
• Class CC and J fuse holders have built-in open-circuit indication
• Fast-acting UL Listed fuses protect against short circuits
• Feed through/sub feed lugs and 84-circuit configuration available
• Ground and neutral bars
• Copper bus standard

Advanced Design Options
• MLO, Main Circuit Breaker, or Main Fused Pullout device
• Fused Class T branch circuit pullout
• Spare fuse cabinet accessory (holds six spare fuses)
• SPD overvoltage protection
• Any NEMA enclosure required
• High amperage sub-fed branch breakers (J60A)

Specifications
Voltage Ratings: 120/208, 120/240, 277/480 V ac
Main Bus Rating: 100 A - 400 A Standard
Conductor Terminals: 6 AWG - 300 kcmil
UL Listed: UL 67 Panel boards and UL 50 Enclosures
SCCR: 100 kA Max**

Web Resources
For more information, visit: Littelfuse.com/lcp

*NEC is a trademark of its respective owner.
** The following current-limiting fuses must be used directly upstream for 100 kA SCCR.
1. 120/208 Volt Panels – LLNRK 100 A max, JTD_ID 200 A max, or JLLN 200 A max
2. 120/240 Volt Panels – LLSRK_ID 200 A max, JTD_ID 200 A max, or JLLS 200 A max
3. 277/480 Volt Panels – LLSRK_ID 200 A max, JTD_ID 200 A max, or JLLS 200 A max

Customizable Options (select one from each column)

<table>
<thead>
<tr>
<th>NUMBER OF CIRCUITS</th>
<th>VOLTAGE</th>
<th>MAIN DEVICES</th>
<th>NEUTRAL RATING</th>
<th>PANEL MOUNTING</th>
<th>PANEL DOOR</th>
<th>FUSE HOLDERS</th>
<th>BRANCH CIRCUIT PROTECTION DEVICES (1-3 POLE)*</th>
<th>PANEL FEED</th>
<th>OPTIONAL LUGS</th>
<th>STANDARD ENCLOSURE RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 - 42</td>
<td>120/208 V 3P, 4 W</td>
<td>125, 225, 400 or 600 A MLO or Main Fuse Pullout</td>
<td>100%</td>
<td>Surface</td>
<td>Standard</td>
<td>30 A Class CC</td>
<td>10 A - 60 A fused circuit breaker</td>
<td>Top</td>
<td>None</td>
<td>NEMA 1</td>
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<tr>
<td></td>
<td>277/480 V 3P, 4 W</td>
<td>Up to 600 A MCB or Main Fuse Pullout</td>
<td>200%</td>
<td>Flush</td>
<td>Door-in-door</td>
<td>60 A Class J</td>
<td>70 A - 200 A fused pullouts</td>
<td>Bottom</td>
<td>Sub-Fed (MLO panels)</td>
<td>NEMA 3R</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&gt;100A Class T</td>
<td>Sub-fed circuit breakers &gt;60 A (not fused)</td>
<td>Feed-Through</td>
<td></td>
<td>NEMA 4X</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>NEMA 12</td>
</tr>
</tbody>
</table>

*Fuses quoted separately to meet panel specifications. Coordination for breakers >60 A depends on upstream and downstream devices. More specialized configurations are also available. Contact factory for more information.
Selective Coordination Panel

**Dimensions mm (inches)**

**Standard Coordination Panel Board (up to 30 circuits)**

- GND Bus
- Inner Line
- Neutral Detail
- (6 AWG - 300 kcmil) Cu/Al Incoming Main Lugs
- Cutler Hammer GHB (480 V) or BAB (208 V) Circuit Breakers (or Pullouts)
- LPS001ID POWR-Safe Dead front Class CC 600 V AC Fuseholder for use with Littelfuse CCMR, KLKR or KLDR Class CC fuses or POWR-Safe LPFSJ holders for use the Class J fuses. (Fuses not included)

**Standard Coordination Panel Board (31-42 circuits)**

- GND Bus
- Inner Line
- Neutral Detail
- (6 AWG - 300 kcmil) Cu/Al Incoming Main Lugs
- Cutler Hammer GHB (480 V) or BAB (208 V) Circuit Breakers (or Pullouts)
- LPS001ID POWR-Safe Dead front Class CC 600 V AC Fuseholder for use with Littelfuse CCMR, KLKR or KLDR Class CC fuses or POWR-Safe LPFSJ holders for use the Class J fuses. (Fuses not included)

**Note:** The Littelfuse LCP Series products are custom designed products that fall outside standard specifications.

Dimensions may change depending on panel components.
More specialized configurations are also available.
Contact factory for more information.
Description
The Littelfuse® LPS Series provides a simple and economical solution for applications that require selective coordination and shunt trip capabilities.

Utilizes Class J time-delay fuses that are easily coordinated with other system overcurrent devices. The shunt trip capability allows the LPS Series to meet the ANSI/ASME standard that requires power to be automatically disconnected before water is turned on by the fire safety system.

Applications
- Elevator circuits
- Data processing rooms
- Building emergency systems

Web Resources
Download technical information: littelfuse.com/lps

Specifications (Disconnect Switch)
Supply Voltage Rating* 208 V, 240 V, 480 V
Ampere Range 30 A, 60 A, 100 A, 200 A, 400 A
Enclosures NEMA 1 (standard)
NEMA 3R, NEMA 4, NEMA 12 (optional)
Approvals UL Listed (File: E219511)
*Contact factory for 600 V options.

Specifications (Shunt Trip)
Voltage Rating 120 V, 60 Hz
Max Inrush 4 A
Max On time 1.5 cycles
Momentary Inrush 140 VA
SCCR 200 kA

Features/Benefits
- Pre-engineered single unit, which makes procurement easier than systems with multiple components
- Reduces labor costs up to 66% and total installation costs by over 30%
- Pre-installed UL Listed Class J fuse holder – unique Class J size eliminates the need for any rejection type fuse clips
- Optional features offer flexibility for a variety of applications
- Color coded control power terminal blocks
- UL Listed package
- Cu and Al wire rated
- Pre-wired control circuits lower installation time
- Lockable operating handle meets all code and safety requirements (accepts up to 3 locks)
- Every unit is fully tested before delivery

Options
- Control power transformer with fuses and blocks
- Fire safety interface relay
- Key to test switch
- Pilot light "On"
- Isolated neutral lug
- Mechanical interlock auxiliary contact for hydraulic elevators with automatic recall (5 amp 120 Vac rated)
- Fire alarm voltage monitoring relay
- Option to bypass alarm when performing maintenance (-AZ option)
- XPress-Ship™ service offers 48 hours direct shipment service on select fully loaded LPS Series Shunt Trip Disconnect Switches

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Ordering Information
Complete catalog numbers consist of switch catalog numbers and the desired options. See example below.

Example Catalog Number from Desired Options

LPS1 T20 R1 K G N1 B F3 U – AZ = Littelfuse Catalog Number LPS1T20R1KGN1BF3U-AZ

Example:

- LPS1
- T20
- R1
- K
- G
- N1
- B
- F3
- U
- AZ

Dimensions of Enclosure

<table>
<thead>
<tr>
<th>Catalog Series</th>
<th>AMPERE RATING</th>
<th>NEMA 1 Dimensions</th>
<th>NEMA 3R Dimensions</th>
<th>NEMA 4, 12 Dimensions</th>
<th>LUG SIZE</th>
<th>SHIPPING WEIGHT (LBS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LPS3</td>
<td>30</td>
<td>24&quot;H x 20&quot;W x 9&quot;D</td>
<td>24&quot;H x 20&quot;W x 8&quot;D</td>
<td>24&quot;H x 20&quot;W x 10&quot;D</td>
<td>#14 - #8 AL or CU</td>
<td>75</td>
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<tr>
<td>LPS6</td>
<td>60</td>
<td>24&quot;H x 20&quot;W x 9&quot;D</td>
<td>24&quot;H x 20&quot;W x 8&quot;D</td>
<td>24&quot;H x 20&quot;W x 10&quot;D</td>
<td>#14 - #2 AL or CU</td>
<td>75</td>
</tr>
<tr>
<td>LPS1</td>
<td>100</td>
<td>24&quot;H x 20&quot;W x 9&quot;D</td>
<td>24&quot;H x 20&quot;W x 8&quot;D</td>
<td>24&quot;H x 20&quot;W x 10&quot;D</td>
<td>#8 - 1/0 AL or CU</td>
<td>75</td>
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<tr>
<td>LPS2</td>
<td>200</td>
<td>30&quot;H x 20&quot;W x 9&quot;D</td>
<td>30&quot;H x 24&quot;W x 8&quot;D</td>
<td>30&quot;H x 20&quot;W x 10&quot;D</td>
<td>#6 - 250 kcmil AL or CU</td>
<td>85, 115*, 120**</td>
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<tr>
<td>LPS4</td>
<td>400</td>
<td>48&quot;H x 36&quot;W x 10&quot;D</td>
<td>48&quot;H x 36&quot;W x 12&quot;D</td>
<td>48&quot;H x 36&quot;W x 10&quot;D</td>
<td>(2) 3/0 - 250 kcmil AL or CU</td>
<td>225</td>
</tr>
</tbody>
</table>

* NEMA 3R
** NEMA 4 & NEMA 12

Note: Over-size enclosures used to accommodate control power transformer, interface relay and terminal blocks.

XPress-Ship™

Littelfuse XPress-Ship™ service offers 48 hours** direct-shipment service on select fully-loaded LPS Series Shunt Trip Disconnect Switches to meet your urgent system requirements on time.

XPress-Ship™ switches include three JTD_ID Series fuses rated at the device’s maximum ampacity.

*AZ option includes B & F3 options.

**XPress-Ship™ 48 hour service requires ordering from XPress-Ship™ Ordering Numbers shown above and is subject to a maximum of any combination of three switches per customer order. XPress-Ship™ service offers 48 hour shipment from the factory through standard ground transportation. For expedited delivery, contact your local Littelfuse Representative.
Shunt-Trip Operation
The disconnecting means is a shunt-trip operated switch. The control power source for the shunt-trip operator is a 120 V ac supply originating in the Littelfuse LPS Series disconnect. Current to the shunt-trip device is switched by an isolation relay, which is in turn controlled by the FACP (Fire Alarm Control Panel).

The control signal may be either 24 V dc from the FACP (option R2) or a "dry" contact closure in the FACP (option R1). In the case of a "dry" contact closure, the sensing voltage is 120 VAC originating in the Littelfuse LPS Series disconnect.

CAUTION: When using the "dry" contact closure, option R1, DO NOT supply 120 V ac from the FACP as equipment damage or personnel injury may occur.

A key test option (option K) is available to test the shunt-trip circuit.

Supervisory Indication
Additionally, an optional separate relay can be specified to monitor the 120 V ac control power source in the Littelfuse LPS Series disconnect. This relay (option FR) is used to provide supervisory indication of "Control Power Available" as required by NFPA 72 Section 6.15.4.4.

Fuse Table

<table>
<thead>
<tr>
<th>DISCONNECT SWITCH VOLTAGE/TRANSFORMER TYPE</th>
<th>PRIMARY FUSES (2)</th>
<th>SECONDARY FUSE (1)</th>
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<tbody>
<tr>
<td></td>
<td>FUSE TYPE</td>
<td>FUSE RATING (AMPS)</td>
</tr>
<tr>
<td>208/120 V ac</td>
<td>KLDR001</td>
<td>1</td>
</tr>
<tr>
<td>240/120 V ac</td>
<td>KLDR.500</td>
<td>1/2</td>
</tr>
<tr>
<td>480/120 V ac</td>
<td>KLDR.400</td>
<td>4/10</td>
</tr>
<tr>
<td>600/120 V ac</td>
<td>KLDR.250</td>
<td>1/4</td>
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</table>

All Littelfuse LPS series disconnect switches are UL Listed and designed for safe access by qualified personnel. When maintenance or shutdown service is required, no energized parts are exposed inside the enclosure when the disconnect switch is manually turned to the OFF position. For proper maintenance safety precautions, always turn off incoming power to the Littelfuse LPS series switch when possible. When servicing any live electrical equipment, always wear appropriate personal protective equipment.

Power Wiring Torque Specifications

<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>LPS3</th>
<th>LPS6</th>
<th>LPS1</th>
<th>LPS2</th>
<th>LPS4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amps</td>
<td>30</td>
<td>60</td>
<td>100</td>
<td>200</td>
<td>400</td>
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<tr>
<td>MCS Wire Size</td>
<td>14 - 1/0</td>
<td>14 - 1/0</td>
<td>14 - 1/0</td>
<td>4 - 300 kcmil</td>
<td>(2) 3/0 - 250 kcmil</td>
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<tr>
<td>Molded Case Switch</td>
<td>ABB</td>
<td>ABB</td>
<td>ABB</td>
<td>ABB</td>
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<tr>
<td>(MCS) Mfr.</td>
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<tr>
<td>MCS Catalog No.</td>
<td>XT2HU3125DDF000XXX</td>
<td>XT2HU3125DDF000XXX</td>
<td>XT2HU3125DDF000XXX</td>
<td>XT4HU325DDF000XXX</td>
<td>T5H400DWS4</td>
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<tr>
<td>MCS Lug Type</td>
<td>KXT2CUAL1</td>
<td>KXT2CUAL1</td>
<td>KXT2CUAL1</td>
<td>KXT4CUAL1C</td>
<td>KTS400-3</td>
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<tr>
<td>MCS Lug Torque (in-lbs)</td>
<td>50 in-lb*</td>
<td>50 in-lb*</td>
<td>50 in-lb*</td>
<td>200 in-lb*</td>
<td>275 in-lb*</td>
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<tr>
<td>Fuse Block Mfr.</td>
<td>LITTELFUSE</td>
<td>LITTELFUSE</td>
<td>LITTELFUSE</td>
<td>LITTELFUSE</td>
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<td>Fuse Block Catalog</td>
<td>LFJ60030-3</td>
<td>LFJ60060-3</td>
<td>LFJ60100-3</td>
<td>LFJ60200-3</td>
<td>LFJ60400-3</td>
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<td>No.</td>
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<tr>
<td>Fuse Lug Torque (in-lbs)</td>
<td>25 in-lb†</td>
<td>45 in-lb†</td>
<td>120 in-lb†</td>
<td>275 in-lb†</td>
<td>275 in-lb†</td>
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<tr>
<td>Neutral Lug Mfr.</td>
<td>LITTELFUSE</td>
<td>LITTELFUSE</td>
<td>LITTELFUSE</td>
<td>LITTELFUSE</td>
<td>LITTELFUSE</td>
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<tr>
<td>Neutral Lug Catalog</td>
<td>LS2121</td>
<td>LS2121</td>
<td>LS2121</td>
<td>LS3123</td>
<td>LS455712</td>
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<td>No.</td>
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<tr>
<td>Neutral Lug Torque</td>
<td>35 in-lb†</td>
<td>45-120 in-lb†</td>
<td>120 in-lb†</td>
<td>275 in-lb†</td>
<td>500 in-lb†</td>
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<td>Ground Lug Mfr.</td>
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<td>PANDUIT</td>
<td>PANDUIT</td>
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<td>Ground Lug Catalog</td>
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<td>LAMA 1/0-14-Q</td>
<td>LAMA 1/0-14-Q</td>
<td>LAMA 250-56-Q</td>
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<tr>
<td>Ground Lug Torque</td>
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<td>45 in-lb†</td>
<td>120 in-lb†</td>
<td>275 in-lb†</td>
<td>275 in-lb†</td>
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</tbody>
</table>

Note: Torque specs apply only to wire compression screws. Other requirements may exist for attachment of lugs and accessories to these devices. See manufacturer data.

*Per ABB.com
† Littelfuse Device nameplate data.
‡ Panduit, "Torque Chart for Aluminum Mechanical Connectors".
Electrical contractors must manage the ups and downs of codes and standards — a task that is made more complicated by frequent changes and by standards that reference each other. Fortunately, many of these codes and standards contain quite similar provisions, and it’s possible to boil down the major ones into a fairly short list.
Protection Relays & Controls Catalog
The comprehensive line of electronic and microprocessor-based protection relays safeguard equipment and personnel to prevent expensive damage, downtime or injury due to electrical faults.

Fuses and Fuse Holders Catalog
Littelfuse offers a complete circuit protection portfolio of industrial power fuses, including time-saving indication products for an instant visual blown-fuse identification.

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