

IAL/IUL/IEL



General Description

- IEL versions meet IEC spacing requirements for installation in equipment that must comply with IEC 601 and 950 and VDE 0730, 0804 and 0805
- Multi-pole options with multi or single handle
- Auxiliary switch options
- Snap-in mounting option
- Mid-trip handle option
- Various actuator options
- Dual frequency delay options

Max. Poles

- 6

Current and Voltage Rating

- 0.05 to 100 amps at 65 VDC
- 0.05 to 70 amps at 80 VDC
- 0.05 to 50 amps at 250VDC
- 0.05 to 50 amps at 300VDC
- 0.05 to 70 amps at 240 VAC, 50/60 Hz
- 0.05 to 50 amps at 277 VAC, 50/60 Hz
- 0.05 to 50 amps at 277/480 VAC, 50/60 Hz
- 0.05 to 50 amps at 250 VAC, 400 Hz

Interrupting Capacity

- 5000 amps, 240 VAC, 50/60 Hz
- 1500 amps, 250 VAC, 400 Hz
- 7500 amps, 80 VDC
- 2000 amps, 240 VAC, 50/60 Hz (VDE)
- 2000 amps, 415 VAC, 50/60 Hz (VDE)
- 4000 amps, 80 VDC (VDE)
- 1200 amps, 277/480 VAC, 50/60 Hz
- 5000 amps, 250VDC
- 1000 amps, 300VDC

Approvals*

- UL recognized
- CSA certified
- VDE approved (IEL)
- CE compliant (IEL)
- CCC approved
- UL 1500 certified
- QPL to MIL-PRF- 55629

LEL



General Description

- LEL versions meet IEC spacing requirements for installation in equipment that must comply with IEC 601 and 950 and VDE 0730, 0804 and 0805
- Multi-pole options with multi or single handle
- Auxiliary switch options
- Snap-in mounting option
- Mid-trip handle option
- Various actuator options
- Dual frequency delay options

Max. Poles

- 3

Current and Voltage Rating

- 0.05 to 100 amps at 80 VDC
- 0.05 to 50 amps at 125 VAC, 50/60 Hz
- 0.05 to 80 amps at 120/240 VAC, 50/60 Hz
- 0.05 to 100 amps at 80 VDC (VDE)
- 0.05 to 50 amps at 250 VAC (VDE)

Interrupting Capacity

- 50000 amps 80 VDC
- 50000 amps, 125 VAC, 120/240 VAC 50/60 Hz
- 2000 amps, 80 VDC
- 2000 amps, 250 VAC, 50/60 Hz (VDE)
- 10000 amps, 120/240VAC, 50/60 Hz

Approvals*

- UL 489 listed
- CSA certified
- VDE approved
- CE compliant
- CCC approved

IULP/LELP/CELP



General Description

- Unique, parallel current sensing design
- Compact size, high current capacity
- Auxiliary switch options
- Mid-trip handle option

Max. Poles

- 1

Current and Voltage Rating

- 125 amps at 80 VDC[†]
- 150 amps at 80 VDC[†]
- 175 amps at 80 VDC[†]
- 200 amps at 80 VDC[†]
- 250 amps at 80 VDC[†]
- 251 - 300 amps at 80 VDC^{††}

[†] Two paralleled poles
^{††} Three paralleled poles

Interrupting Capacity

- 10000 amps, 80 VDC
- 50000 amps, 65 VDC (up to 150 amps)
- 10000 amps, 80 VDC (> 150 amps)

Approvals*

- UL 489 listed
- UL 489A listed
- CSA certified

APL/UPL



General Description

- Circuit protection with ON-OFF switching
- Multi-pole assemblies available with mixed current ratings, delays and configurations
- QPL to MIL-PRF-55629

Max. Poles

- 9

Current and Voltage Rating

- .050 to 20 amps at 277 VAC
- .050 to 50 amps at 250 VAC
- .050 to 100 amps at 65 VDC

Interrupting Capacity

- 5000 amps, 65 VDC (50 amp max rating)
- 5000 amps, 250 VAC (50 amps max. rating)
- 5000 amps, 277 VAC (20 amps max. rating)

Approvals*

- UL recognized
- CSA certified
- QPL to MIL-PRF-55629

205/295/205D



General Description

- Dust proof enclosure sensing design
- Compact size, high current capacity
- Auxiliary switch options
- Mid-trip handle option

Max. Poles

- 9

Current and Voltage Rating

- .050 to 30 amps at 277/480 VAC
- .050 to 60 amps at 250 VAC
- .050 to 100 amps at 65 VDC

Interrupting Capacity

- 5000 amps, 250 VAC, 65 VDC
- 3000 amps, 65 VDC
- 1500 amps, 277/480 VAC (30 amps max. rating)
- 5000 amps, 277.480 VAC with 125 amp series fuse

Approvals*

- UL recognized
- CSA certified

IALR/IULR/IELR



General Description

- Meets IEC spacing requirements for installation in equipment that must comply with IEC 601 and 950, and VDE 0730, 0804 and 0805
- Designed to mount on standard 35mm DIN rails

Max. Poles

- 4

Current and Voltage Rating

- .050 to 70 amps at 80 VDC
- .050 to 70 amps at 250 VAC, 50/60 Hz
- .100 to 50 amps at 80 VDC (VDE)
- .100 to 50 amps at 250 VAC, 50/60 Hz (VDE)
- .100 to 30 amps at 415 VAC, 50/60 Hz (VDE)

Interrupting Capacity

- 7500 amps, 80 VDC
- 5000 amps, 250 VAC, 50/60 Hz
- 2000 amps, 277 VAC, 50/60 Hz
- 2000 amps at 250 VAC, 50/60 Hz (VDE)
- 2000 amps at 415 VAC, 50/60 Hz (VDE)
- 4000 amps at 80 VDC (VDE)

Approvals*

- UL recognized
- CSA certified
- VDE approved (IELR)
- CE compliant

209/219/229/279



General Description

- Front or back connected terminal styles
- E-frame style model complies with UL 489
- 249 Power Selector Breaker system is listed as a branch circuit breaker per UL 489
- Complies with international requirements
- 279 complies with UL 489A

Max. Poles

- 6

Current and Voltage Rating

- .100 to 100 amps at 160 VDC
- .100 to 125 amps at 125 VDC
- .100 to 77 amps at 600 VAC
- .100 to 100 amps at 347/600 VAC
- .100 to 100 amps at 120, 240, 277, 480 VAC
- .100 to 100 amps, 125 VDC, 240/415 VAC (VDE)

Interrupting Capacity

- 5000 amps
- 10000 amps
- 4000 amps (VDE)

Approvals*

- UL 489 listed
- UL 489A listed (279)
- UL recognized
- CSA certified
- VDE approved
- UL1500 certified
- CCC approved
- CE compliant

JAE/JRE/JTE/JLE



General Description

- F-frame style complies with UL 489
- Various terminal options for design flexibility
- Reduced voltage drop through the circuit breaker compared to other protective devices
- Auxiliary switch options
- Mid-trip handle options

Max. Poles

- 6

Current and Voltage Rating

- UL489
- 100 to 250 amps at 160 VDC
- 100 to 250 amps at 65 VDC
- 100 to 250 amps at 125/250 VDC
- 100 to 250 amps at 240 VAC

UL489A

- 275 to 800 amps at 160 VDC
- 275 to 1200 amps at 65 VDC

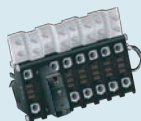
Interrupting Capacity

- 10000 amps, 160 VDC
- 10000 amps, 125/250 VDC
- 65000 amps, 65 VDC
- 10000 amps, 240 VAC
- 18000 amps, 240 VAC
- 100000 amps, 65VDC (UL489A up to 800 amps)

Approvals*

- UL 489 listed
- UL 489A listed
- UL recognized
- CSA certified
- VDE approved
- CCC approved
- CE compliant

MDS



General Description

- Modular Distribution System provides unprecedented flexibility
- "Hot Plug" modules allow for equipment expansion without power shutdown
- Unique alarm conductors simplify signal wiring
- Modular load terminals available with front or rear access

Max. Poles

- 24

Current and Voltage Rating

- Maximum load bus rating per position is 100 amps, 125VDC

JPBD/LPBD



General Description

- Ideal for disconnecting system batteries in emergency/maintenance situations
- Disconnect and overcurrent protection
- Completely front accessible enclosure
- Manual or remote disconnect capability
- Wall, rack or battery stand mounting
- Optional LED indication of power ON, OFF and/or tripped condition
- Optional alarm circuit

Max. Poles

- 6

Current and Voltage Rating

- JPBD Ratings
- 100 to 1200 amps, 65 VDC
 - 100 to 800 amps, 160 VDC
- LPBD Ratings
- 50 to 100 amps, 80 VDC
 - 125 to 200 amps, 65 VDC

Interrupting Capacity

- JPBD Ratings
- 50000 amps, 65 VDC
 - 10000 amps, 160 VDC
- LPBD Ratings
- 50000 amps, 80 VDC
 - 50000 amps, 65 VDC

Approvals*

- UL listed under UL file #220375 (JPBD only)

PGFM



General Description

- GFCI sensing module designed to operate in tandem with the LEL series circuit breaker with a shunt voltage trip and auxiliary switch
- Manufactured by North Shore Safety, Ltd., a leader in innovative safety products
- Automatic and manual reset configurations
- Power and fault status indicators
- Double insulated user interface

Max. Poles[†]

- 3

[†] Number of circuit breaker poles

Ground Trip Current

- 4 to 6 mA

Trip Time, Combined Assembly

- ≤ 25 mS

Rated Voltage

- 120 VAC or 240 VAC, 50/60 Hz

Let-Go Voltage

- 60% of supply voltage

Interrupting Capacity

- As per rating of Airpax™ LEL series

Approvals*

- UL 943, Class A or
- UL 1053 Compliant

!5 Amp PGFP Plug Series



General Description

- 15 amp plug cordset GFCI series
- Manufactured by North Shore Safety, Ltd., a leader in innovative safety products
- Automatic and manual reset configurations
- Available as a field wireable plug or with attached cords and outlets
- Plug assembly with power single or tri-tap outlet
- Electro-magnetically latched contacts

Rated Current

- Up to 15 amps at 120 VAC, 50/60 Hz

Ground Trip Current

- 4 to 6 mA

Insulation Voltage

- 1500 VRMS - 1 minute

Endurance Operations

- 3000 operations

Construction

- NEMA 3R rated

Approvals*

- cULus 943, Class A or
- UL recognized

15 Amp PGFI In-line Series



General Description

- 15 amp in-line cordset GFCI series
- Manufactured by North Shore Safety, Ltd., a leader in innovative safety products
- Automatic and manual reset configurations
- Available as a field wireable plug or with attached cords and outlets
- Plug assembly with power single or tri-tap outlet
- Electro-magnetically latched contacts

Rated Current

- Up to 15 amps at 120 VAC, 50/60 Hz

Ground Trip Current

- 4 to 6 mA

Insulation Voltage

- 1500 VRMS - 1 minute

Endurance Operations

- 3000 operations

Construction

- NEMA 3R rated

Approvals*

- cULus 943, Class A
- cCSAus certified to CSA-C22.2 No. 144 or
- UL recognized

20 Amp PGFI Portable Series



General Description

- 20 amp in-line cordset GFCI series
- Manufactured by North Shore Safety, Ltd., a leader in innovative safety products
- Automatic and manual reset configurations
- Available with locking connectors / plugs or flying leads
- Electro-magnetically latched contacts

Rated Current

- Up to 20 amps

Rated Voltage

- 120 VAC, 208 VAC, 240 VAC, 277 VAC

Operating Voltage Range

- 85% to 110% of rating

Ground Trip Current

- 4 to 6 mA

Construction

- NEMA 4X wet location rated

Approvals*

- cULus 943, Class A
- cCSAus certified to CSA-C22.2 No. 144

30 Amp PGFI Portable Series



General Description

- 30 amp in-line cordset GFCI series
- Manufactured by North Shore Safety, Ltd., a leader in innovative safety products
- Automatic and manual reset configurations
- Available with locking connectors / plugs or flying leads
- Electro-magnetically latched contacts

Rated Current

- Up to 30 amps

Rated Voltage

- 120 VAC, 208 VAC, 240 VAC, 277 VAC

Operating Voltage Range

- 85% to 110% of rating

Ground Trip Current

- 4 to 6 mA

Construction

- NEMA 4X and 6P wet location rated

Approvals*

- cULus 943, Class A
- cCSAus certified to CSA-C22.2 No. 144

30 Amp PGFI Multi-Phase Portable Series



General Description

- 30 amp multi-phase cordset GFCI series
- Manufactured by North Shore Safety, Ltd., a leader in innovative safety products
- Automatic and manual reset configurations
- Dual indication lights displaying power and fault status
- Grounded and open neutral protected
- Electro-magnetically latched contacts

Rated Current

- Up to 30 amps

Rated Voltage

- 120/240 VAC dual voltage, 120/208 VAC 3Ø, 240 VAC 3Ø, 208 VAC 3Ø, 277 VAC 3Ø (non-UL or CSA)

Operating Voltage Range

- 85% to 110% of rating

Ground Trip Current

- 4 to 6 mA

Construction

- NEMA 4X and 6P wet location rated

Approvals*

- cULus 943, Class A
- cCSAus certified to CSA-C22.2 No. 144

40, 50 & 60 Amp PGFI Portable Series



General Description

- 40, 50 & 60 amp in-line ELCI series
- Manufactured by North Shore Safety, Ltd., a leader in innovative safety products
- Automatic and manual reset key switch selector
- Fault threshold key switch selector
- Available with locking connectors/ plugs or flying leads
- Electro-magnetically latched contacts

Rated Current

- 40, 50 or 60 amps

Rated Voltage

- 120 VAC, 240 VAC, 208 VAC, 277 VAC, 120/240 VAC, 3Ø 240 VAC, 3Ø 208 VAC, 3Ø 277 VAC, 3Ø 480 VAC, 3Ø 600 VAC

Operating Voltage Range

- 85% to 110% of rating

Ground Trip Current Threshold

- Key switch selectable: 6, 10 and 30mA

Construction

- NEMA 4X wet location rated

Approvals*

- UL 1053 compliant

30 Amp PGFS Permanent Series



General Description

- 30 amp splice-in GFCI series
- Manufactured by North Shore Safety, Ltd., a leader in innovative safety products
- Automatic and manual reset configurations
- Fault output options available
- Grounded and open neutral protected
- Electro-magnetically latched contacts

Rated Current

- Up to 30 amps

Rated Voltage

- 120 VAC, 208 VAC, 240 VAC, 120/240 VAC, 277 VAC (non-UL)

Operating Voltage Range

- 85% to 110% of rating

Ground Trip Current

- 4 to 6 mA

Construction

- NEMA 4X and 6P wet location rated

Approvals*

- cULus 943, Class A
- cCSAus certified to CSA-C22.2 No. 144

30 Amp PGFS Multi-Phase Permanent Series



General Description

- 30 amp multi-phase splice-in GFCI series
- Manufactured by North Shore Safety, Ltd., a leader in innovative safety products
- Automatic and manual reset configurations
- Dual indication lights displaying power and fault status
- Grounded and open neutral protected
- Electro-magnetically latched contacts

Rated Current

- Up to 30 amps

Rated Voltage

- 120/240 VAC dual voltage, 120/208 VAC 3Ø, 240 VAC 3Ø, 208 VAC 3Ø, 277 VAC 3Ø (non-UL or CSA)

Operating Voltage Range

- 85% to 110% of rating

Ground Trip Current

- 4 to 6 mA

Construction

- NEMA 4X and 6P wet location rated

Approvals*

- cULus 943, Class A
- cCSAus certified to CSA-C22.2 No. 144

40, 50 & 60 Amp PGFS Permanent Series



General Description

- 40, 50 & 60 amp splice-in ELCI series
- Manufactured by North Shore Safety, Ltd., a leader in innovative safety products
- Automatic / manual reset key switch
- Fault trip level key switch
- Keyed power switch
- Dual indication lights displaying power and fault status
- Grounded and open neutral protected
- Electro-magnetically latched contacts

Rated Current

- 40, 50 or 60 amps

Rated Voltage

- 120 VAC, 240 VAC, 208 VAC, 277 VAC, 120/240 VAC, 3Ø 240 VAC, 3Ø 208 VAC, 3Ø 277 VAC, 3Ø 480 VAC, 3Ø 600 VAC

Operating Voltage Range

- 85% to 110% of rating

Ground Trip Current

- 6 mA, 10 mA and 30mA

Construction

- NEMA 4X wet location rated

Approvals*

- UL 1053 compliant

PGFR & PGFU Duplex Receptacle Series



General Description

- 15 / 20 amp duplex receptacle GFCI series
- PGFR model - standard wall receptacle
- PGFU model - utility panel receptacle with internal and external receptacles and lockable outside cover
- All models have:
 - Standard power indicator light
 - Manual reset configuration
 - TEST and RESET buttons

Rated Current

- 15 / 20 amps

Rated Voltage

- 120 VAC

Operating Voltage Range

- 85% to 110% of rating

Ground Trip Current

- 4 to 6 mA

Construction

- PGFU - NEMA 4X or NEMA 4 wet location rated

Approvals*

- UL recognized for use under cULus 943, Class A
- cCSAus certified to CSA-C22.2 No. 144

ASP2 Plastic 22.5mm Non-Illuminated Pushbuttons



General Description

- Non-illuminated actuator series designed for 22.5mm mounting
- Black plastic bezel and functionally interchangeable with different contact elements
- Optional contact elements are double break and have self-wiping contacts
- Operator types available as flush, booted flush, projecting mushroom, selector and twin

Ratings

- Insulation voltage: 500 V
- Thermal current: 10 amps
- As per IEC 947 - 5 - 1 1990:
 - AC15: 4A, 415VAC
 - DC13: 0.5A, 110VDC
- Mechanical life: > 1 million operations

Approvals*

- UL508
- CSA-C22.2 No. 14-95
- VDE 0660

ASP2 Plastic 22.5mm Illuminated Pushbuttons



General Description

- Illuminated actuator series designed for 22.5mm mounting
- Black plastic bezel and functionally interchangeable with different contact elements
- Optional contact elements are double break and have self-wiping contacts
- Operator types available as flush, projecting and twin
- Available illumination options include filament, integral LED and LED bulb

Ratings

- Insulation voltage: 500 V
- Thermal current: 10 amps
- As per IEC 947 - 5 - 1 1990:
 - AC15: 4A, 415VAC
 - DC13: 0.5A, 110VDC
- Mechanical life: > 1 million operations

Approvals*

- UL508
- CSA-C22.2 No. 14-95
- VDE 0660

ASP2 Plastic 22.5mm Pilot Lights



General Description

- Pilots lights designed for 22.5mm mounting
- Black plastic bezel
- Available options include pilot light transformer, filament bulb, integral LED and LED bulb
- Economy pilot available with integral LED
- Available in eight lense colors

Ratings

- Filament bulbs are available with:
 - Direct connect 6V - 130V
 - Through series resistor 12V - 415V
 - Through series resistor and diode 230VAC
- Integral LED are available in 6V, 12V, 24V, 30V, 48V, 63.5V, 110V, 125V, 230V AC or DC and 415VAC
- LED bulb are available in 24V, 110V and 230V

Approvals*

- UL508
- CSA-C22.2 No. 14-95
- VDE 0660

AS2 Metal 22.5mm Non-Illuminated Pushbuttons



General Description

- Non-illuminated actuator series designed for 22.5mm mounting
- Chrome plated metal bezel, functionally interchangeable with different contact elements
- Optional contact elements are double break and have self-wiping contacts
- Operator types available as flush, projecting, mushroom, selector and twin

Ratings

- Insulation voltage: 500 V
- Thermal current: 10 amps
- As per IEC 947 - 5 - 1 1990:
 - AC15: 4A, 415VAC
 - DC13: 0.5A, 110VDC
- Mechanical life: > 1 million operations

Approvals*

- UL508
- CSA-C22.2 No. 14-95
- VDE 0660

AS2 Metal 22.5mm Illuminated Pushbuttons



General Description

- Illuminated actuator series designed for 22.5mm mounting
- Chrome plated metal bezel, functionally interchangeable with different contact elements
- Optional contact elements are double break and have self-wiping contacts
- Operator types available as flush, projecting, selector and twin
- Available illumination options include filament, integral LED and LED bulb

Ratings

- Insulation voltage: 500 V
- Thermal current: 10 amps
- As per IEC 947 - 5 - 1 1990:
 - AC15: 4A, 415VAC
 - DC13: 0.5A, 110VDC
- Mechanical life: > 1 million operations

Approvals*

- UL508
- CSA-C22.2 No. 14-95
- VDE 0660

AS2 Metal 22.5mm Pilot Lights



General Description

- Pilots lights designed for 22.5mm mounting
- Metal mounting bezel
- Available options include pilot light transformer, filament bulb, integral LED and LED bulb
- Available in eight lense colors

Ratings

- Filament bulbs are available with:
 - Direct connect 6V - 130V
 - Through series resistor 12V - 415V
 - Through series resistor and diode 230VAC
- Integral LED are available in 6V, 12V, 24V, 30V, 48V, 63.5V, 110V, 125V, 230V AC or DC and 415VAC
- LED bulb are available in 24V, 110V and 230V

Approvals*

- UL508
- CSA-C22.2 No. 14-95
- VDE 0660

SAS/SUS/SES



General Description

- Ultra-compact and ultra-light hydraulic-magnetic circuit protector
- Trip-free function
- Wiping-action, self-cleaning contacts
- Slide actuator
- PCB terminals

Max. Poles

- 1

Current and Voltage Rating

- 0.100 to 15.0 amps at 125 VAC, 50/60 Hz
- 0.100 to 15 amps at 250 VAC, 50/60 Hz
- 0.100 to 15 amps at 32 VDC
- 0.100 to 15 amps at 50 VDC

Interrupting Capacity

- 500 amps

Approvals*

- UL recognized
- CSA certified
- VDE approved

SAR/SUR/SER



General Description

- Ultra-compact and ultra-light hydraulic-magnetic circuit protector
- Trip-free function
- Wiping-action, self-cleaning contacts
- Rocker actuator
- .250" quick-connect or PCB terminals

Max. Poles

- 2

Current and Voltage Rating

- 0.100 to 20.0 amps at 125 VAC, 50/60 Hz
- 0.100 to 15 amps at 250 VAC, 50/60 Hz
- 0.100 to 15 amps at 32 VDC
- 0.100 to 30 amps at 50 VDC**

Interrupting Capacity

- 500 amps

Approvals*

- UL recognized
- CSA certified
- VDE approved

** Agency Approvals Pending

HVS



General Description

- High voltage switch
- Compact design
- Available options include remote signal disconnect and auxiliary switch

Max. Poles

- 3

Current and Voltage Rating

- Up to 30 amps at 300VDC, open voltage 450VDC
- > 5000cycles at 2x per minute, at nominal current

SARPV



General Description

- High voltage DC power switch
- Compact design
- Available options include remote signal disconnect and auxiliary switch

Max. Poles

- 2

Current and Voltage Rating

- Up to 10 amps at 300VDC, open voltage 450VDC
- > 5000cycles at 2x per minute, at nominal current

QAS/QAL/QFS/QFL



General Description

- Silver-link quick-action fuses
- L-type terminals construction for easy installation
- Resistive to repetitive currents
- Low power loss
- Excellent current-limiting characteristics
- Available options include fuse holder indicator fuse, microswitch

Current and Voltage Rating

- QAS25
- 20 to 100 amps at 250VAC, 300VDC
- QAL25
- 75 to 300 amps at 250VAC, 300VDC
- QAS60
- 20 to 75 amps at 600VAC, 500VDC
- QAL60
- 100 to 300 amps at 600VAC, 500VDC
- QFS25
- 10 to 100 amps at 250VAC, 400VDC
- QFL25
- 75 to 300 amps at 250VAC, 400VDC

Interrupting Capacity

- QAS25
- 10KA at 250VAC, 300VDC
- QAL25
- 10KA at 250VAC, 300VDC
- QAS60
- 100KA at 600VAC, 10KA at 500VDC
- QAL60
- 100KA at 600VAC, 10KA at 500VDC
- QFS25
- 10KA at 250VAC, 400VDC
- QFL25
- 10KA at 250VAC, 400VDC

Approvals*

- QFS25: CSA certified
- UL recognized, TUV