

VLD

Strap Type, 12 V

Standard

UL 1434 1st Edition
 CSA C22.2 No. 0 CSA TIL No. CA-3A

Approvals

cULus Recognition
 TÜV

Features

The new VLD product series feature a slim, low profile and low resistance design. These devices are ideal to install directly onto the latest generation batteries including cylindrical and prismatic cells. The VLD product offers protection against both overcurrent and overtemperature fault conditions.

Specifications

Packaging

A small pack
 D standard

Materials

Insulating material: Polyester Tape
 Terminals: Nickel

Operating / Storage Temperature

-40 °C to +85 °C (consider de-rating)

Humidity Ageing

+60 °C, 95 % R.H., 1000 hours, ± 10 % typical resistance change

Vibration

MIL-STD-883C, Condition A, no change

Thermal Shock

MIL-STD-202F, Method 107G
 +85 °C to -40 °C 10 times ±5 % typical resistance change

Marking

"P", Part Code, identification, lot number

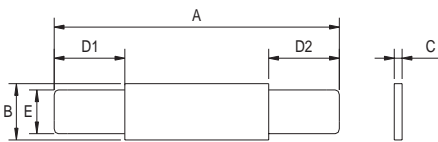
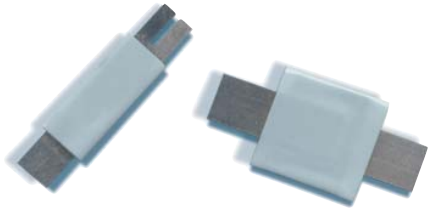


Figure 1

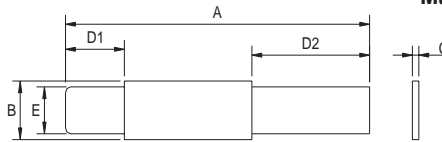


Figure 2

Dimensions (mm)

| Model | Fig | A | | B | | C | D1 | | D2 | | E | | packaging quantity | |
|----------|-----|------|------|-----|-----|-----|-----|------|------|------|-----|-----|--------------------|----------|
| | | Min | Max | Min | Max | | Min | Max | Min | Max | Min | Max | small pack | standard |
| VLD170 | 1 | 20.8 | 23.2 | 3.5 | 3.9 | 0.8 | 4.5 | 6.5 | 4.5 | 6.5 | 2.4 | 2.6 | 500 | 10,000 |
| VLD175L | 2 | 29.3 | 31.7 | 2.9 | 3.3 | 0.8 | 5.2 | 6.8 | 10.0 | 12.5 | 2.4 | 2.6 | 500 | 10,000 |
| VLD175XL | 2 | 25.5 | 28.2 | 3.5 | 3.9 | 0.8 | 8.7 | 10.3 | 5.7 | 7.3 | 2.4 | 2.6 | 500 | 10,000 |
| VLD230 | 1 | 20.9 | 23.1 | 4.9 | 5.3 | 0.8 | 4.1 | 5.8 | 4.1 | 5.8 | 3.9 | 4.1 | 500 | 10,000 |

Permissible continuous operating current is ≤ 100 % at ambient temperature of 25 °C (77 °F).

| Model | I _{hold} (A) | I _{Trip} (A) | V _{max. dc} (V) | I _{max.} (A) | max. time to trip (s @ A) | P _{d max} (W) | Resistance | | | Approvals |
|----------|--------------------------|--------------------------|-----------------------------|--------------------------|------------------------------|---------------------------|-----------------------|-------------------------|-------------------------|--------------|
| | | | | | | | R _{min.} () | R _{I max.} () | R _{I max.} () | |
| VLD170 | 1.70 | 4.10 | 12 | 100 | 5.0 @ 8.50 | 1.40 | 0.018 | 0.032 | 0.064 | cULus TÜV |
| VLD175L | 1.75 | 4.20 | 12 | 100 | 5.0 @ 8.75 | 1.40 | 0.017 | 0.031 | 0.062 | • • |
| VLD175XL | 1.75 | 4.20 | 12 | 100 | 5.0 @ 8.75 | 1.40 | 0.017 | 0.031 | 0.062 | • • |
| VLD230 | 2.30 | 5.00 | 12 | 100 | 5.0 @ 10.0 | 2.50 | 0.012 | 0.018 | 0.036 | • • |

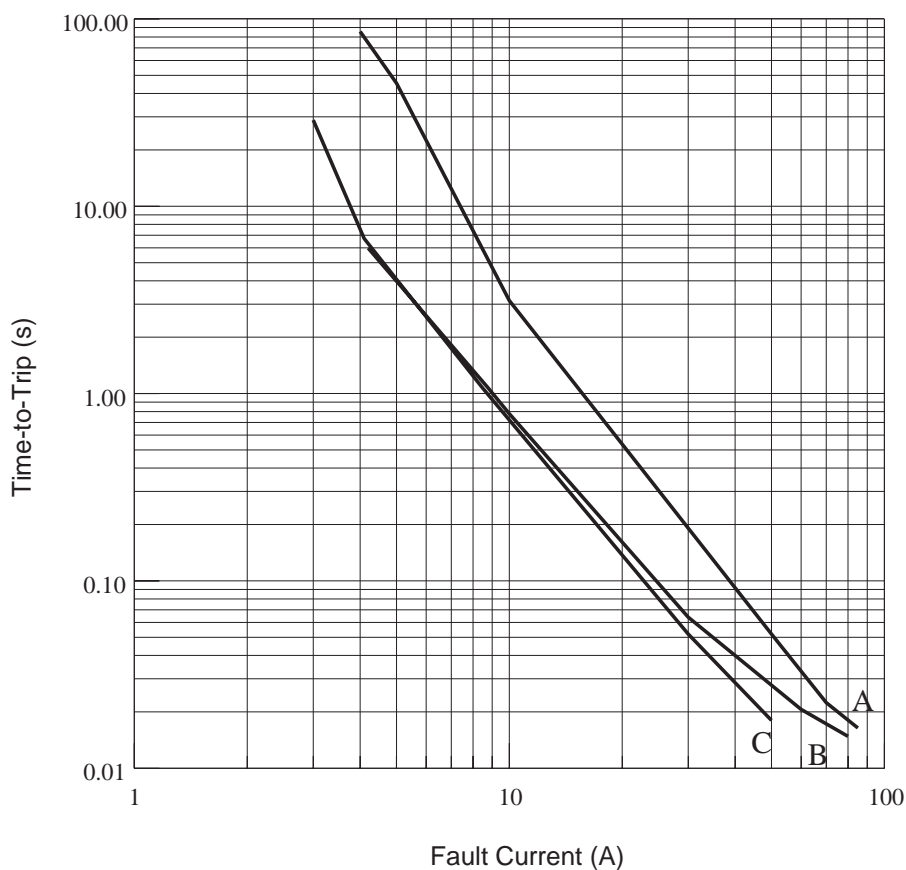
NOTE:
 I_{hold} = Hold current: maximum current device will pass without tripping in 25 °C still air.
 I_{Trip} = Trip current: minimum current at which the device will trip in 25 °C still air.
 V_{max} = Maximum voltage device can withstand without damage at rated current (I_{max}).
 I_{max} = Maximum fault current device can withstand without damage at rated voltage (V_{max}).

P_d = Power dissipated from device when in the tripped state at 25 °C still air.
 R_{min} = Minimum resistance of device in initial (un-soldered) state.
 R_{I max} = Maximum resistance of device at 25 °C measured one hour after tripping for 20 s.
 Caution: Operation beyond the specified rating may result in damage and possible arcing and flame.
Specifications are subject to change without notice

Order Information

| Qty. | Order-Number | Model | Packaging |
|------|--------------|-------|-----------|
|------|--------------|-------|-----------|

VLD



Thermal Derating Chart

| Model | Ambient Operation Temperature - I_{hold} (A) | | | | | | | |
|----------|--|--------|------|-------|-------|-------|-------|-------|
| | -40 °C | -20 °C | 0 °C | 25 °C | 40 °C | 50 °C | 60 °C | 70 °C |
| VLD170 | 3.50 | 2.90 | 2.40 | 1.70 | 1.20 | 1.00 | 0.70 | 0.30 |
| VLD175L | 3.50 | 2.90 | 2.40 | 1.75 | 1.30 | 1.00 | 0.80 | 0.30 |
| VLD175XL | 3.50 | 2.90 | 2.40 | 1.75 | 1.30 | 1.00 | 0.80 | 0.30 |
| VLD230 | 5.00 | 4.20 | 3.40 | 2.30 | 1.70 | 1.30 | 0.90 | 0.40 |