

# VLD

## Strap Type, 12 V

### Standard

UL 1434 1<sup>st</sup> 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

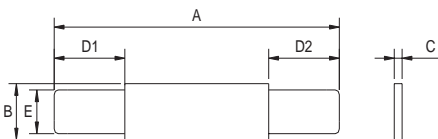
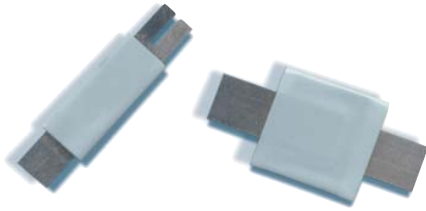


Figure 1

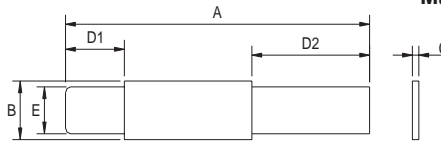


Figure 2

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 <sub>hold</sub> (A)	I <sub>Trip</sub> (A)	V <sub>max. dc</sub> (V)	I <sub>max.</sub> (A)	max. time to trip (s @ A)	P <sub>d max</sub> (W)	Resistance			Approvals	
							R <sub>min.</sub> ( )	R <sub>1 max.</sub> ( )	R <sub>1 max.</sub> ( )	cULus	TÜV
VLD170	1.70	4.10	12	100	5.0 @ 8.50	1.40	0.018	0.032	0.064	•	•
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	•	•

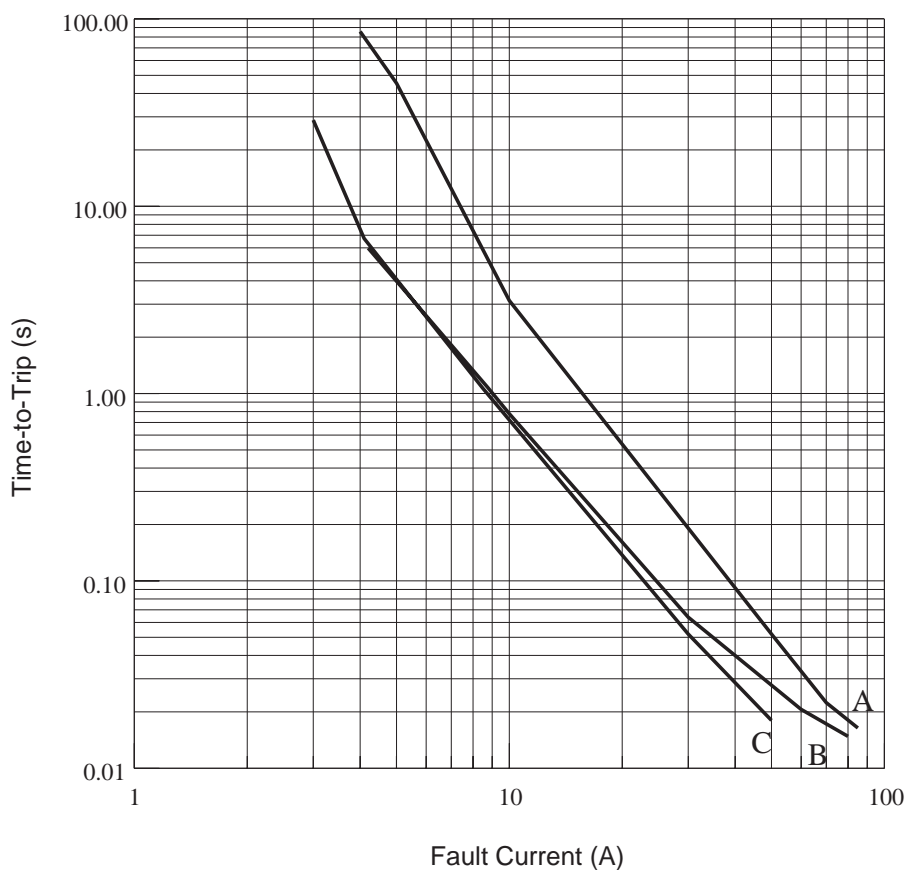
NOTE:  
 I<sub>hold</sub> = Hold current: maximum current device will pass without tripping in 25 °C still air.  
 I<sub>Trip</sub> = Trip current: minimum current at which the device will trip in 25 °C still air.  
 V<sub>max</sub> = Maximum voltage device can withstand without damage at rated current (I<sub>max</sub>).  
 I<sub>max</sub> = Maximum fault current device can withstand without damage at rated voltage (V<sub>max</sub>).

P<sub>d</sub> = Power dissipated from device when in the tripped state at 25 °C still air.  
 R<sub>min</sub> = Minimum resistance of device in initial (un-soldered) state.  
 R<sub>1 max</sub> = 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
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## VLD



A: VLD170  
 B: VLD175  
 C: VLD230

### 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