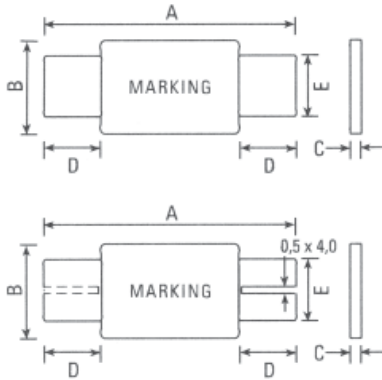


VTD



Dimensions (mm)



S: one slot
SS: two slots

Strap Type, 16 V

Standard

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

Approvals

cULus Recognition
TÜV

Features

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

Specifications

Packaging

A small pack
D standard

Materials

Insulating material: Polyester Tape
Terminals: Nickel

Max. Device Surface Temperature in Tripped State
110 °C

Operating / Storage Temperature

-40 °C to +85 °C (consider derating)

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



Dimensions (mm)													
Model	Fig	A		B		C		D	E		F	packaging quantity	
		Min	Max	Min	Max	Min	Max		Min	Max		Min	Max
VTD170	1	15.4	17.5	7.0	7.4	0.5	0.8	4.0	3.9	4.1		500	10,000
VTD170XS	2	20.9	22.9	4.9	5.3	0.5	0.8	4.0	3.9	4.1		500	10,000
VTD175	1	20.9	22.2	3.5	3.8	0.5	0.7	4.0	2.9	3.1		500	10,000
VTD175S	2	20.9	22.2	3.5	3.8	0.5	0.7	4.0	2.9	3.1		500	10,000
VTD175L	1	26.0	28.0	3.5	3.8	0.5	0.8	6.5	2.9	3.1		500	10,000
VTD175XL	4	25.5	28.2	3.5	3.9	0.5	0.8	8.7	2.4	2.6	5.7	500	10,000
VTD200	1	20.9	23.1	3.8	4.3	0.6	0.7	4.0	2.9	3.1		500	10,000
VTD200S	2	20.9	23.1	3.8	4.3	0.6	0.7	4.0	2.9	3.1		500	10,000
VTD210	1	20.9	23.1	4.9	5.3	0.6	0.8	4.1	3.9	4.1		500	10,000
VTD210S	2	20.9	23.1	4.9	5.3	0.6	0.8	4.1	3.9	4.1		500	10,000
VTD210SS	3	20.9	23.1	4.9	5.3	0.6	0.8	4.1	3.9	4.1		500	10,000
VTD210L	1	24.0	26.0	4.9	5.3	0.6	0.8	5.0	3.9	4.1		500	10,000
VTD210LS	2	24.0	26.0	4.9	5.3	0.6	0.8	5.0	3.9	4.1		500	10,000
VTD240	1	24.2	26.2	4.9	5.3	0.6	0.8	5.0	3.9	4.1		500	10,000

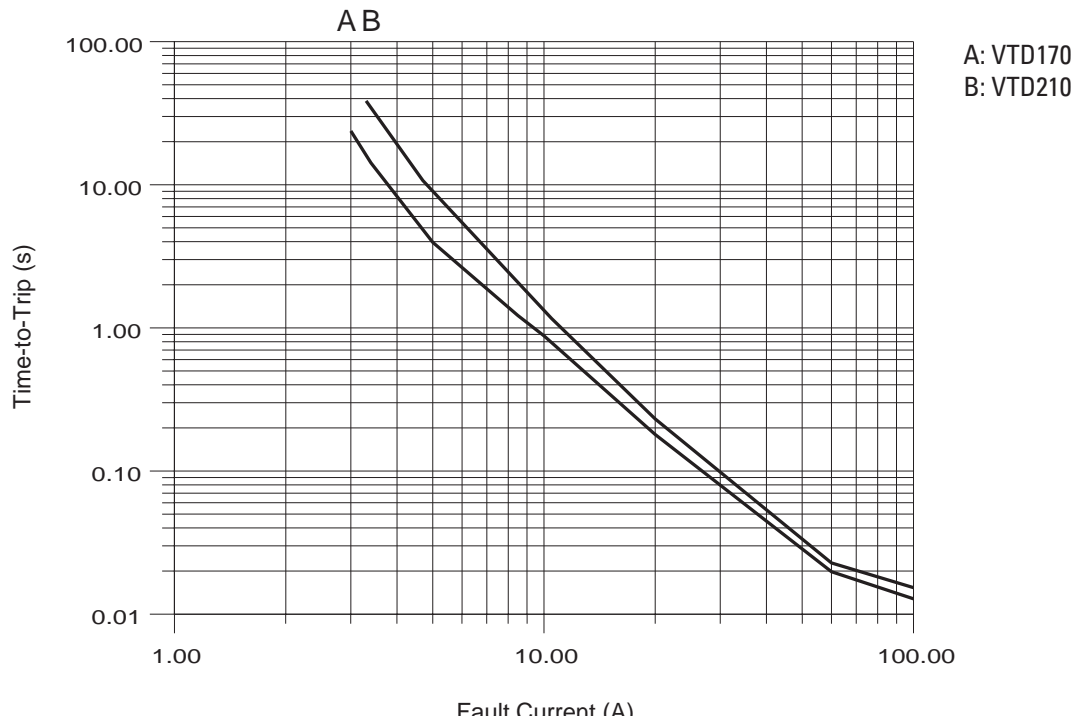
Permissible continuous operating current is ≤ 100 % at ambient temperature of 20 °C (68 °F).

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} (Ω)	R _{max} (Ω)	R _{I max} (Ω)	cULus	TÜV
VTD170	1.70	3.40	15	100	3.0 @ 8.5	1.40	0.030	0.052	0.105	•	•
VTD170XS	1.70	3.40	15	100	3.0 @ 8.5	1.40	0.030	0.052	0.105	•	•
VTD175	1.75	3.80	15	100	3.0 @ 8.5	1.40	0.025	0.045	0.045	•	•
VTD175S	1.75	3.80	15	100	3.0 @ 9.0	1.40	0.025	0.045	0.090	•	•
VTD175L	1.75	3.80	15	100	3.0 @ 9.0	1.40	0.025	0.045	0.090	•	•
VTD175XL	1.75	3.80	15	100	5.0 @ 8.75	1.40	0.029	0.051	0.102	•	•
VTD200	2.00	4.50	15	100	4.0 @ 10.0	1.50	0.021	0.039	0.080	•	•
VTD200	2.00	4.50	15	100	4.0 @ 10.0	1.50	0.021	0.039	0.080	•	•
VTD210	2.10	4.70	15	100	5.0 @ 10.0	1.50	0.018	0.030	0.060	•	•
VTD210S	2.10	4.70	15	100	5.0 @ 10.0	1.50	0.018	0.030	0.060	•	•
VTD210SS	2.10	4.70	15	100	5.0 @ 10.0	1.50	0.018	0.030	0.060	•	•
VTD210L	2.10	4.70	15	100	5.0 @ 10.0	1.50	0.018	0.030	0.060	•	•
VTD210LS	2.10	4.70	15	100	5.0 @ 10.0	1.50	0.018	0.030	0.060	•	•
VTD240	2.40	5.40	15	100	4.0 @ 12.0	1.50	0.015	0.026	0.052	•	•

NOTE:
 I_{hold} = Hold current: maximum current device will pass without tripping in 20 °C still air.
 I_{trip} = Trip current: minimum current at which the device will trip in 20 °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 20 °C still air.
 R_{min} = Minimum resistance of device in initial (un-soldered) state.
 R_{I max} = Maximum resistance of device at 20 °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

VTD



Further Time-Current-Curves on request

Thermal Derating Chart

Model	Ambient Operation Temperature - I_{hold} (A)								
	-40 °C	-20 °C	0 °C	23 °C	40 °C	50 °C	60 °C	70 °C	85 °C
VTD170	3.20	2.70	2.20	1.70	1.30	1.00	0.80	0.50	0.10
VTD170XS	3.20	2.70	2.20	1.70	1.30	1.00	0.80	0.50	0.10
VTD175	3.20	2.70	2.20	1.75	1.30	1.00	0.80	0.50	0.10
VTD175S	3.20	2.70	2.20	1.75	1.30	1.00	0.80	0.50	0.10
VTD175L	3.20	2.70	2.20	1.75	1.30	1.00	0.80	0.50	0.10
VTD175XL	3.20	2.70	2.20	1.75	1.30	1.00	0.80	0.50	0.10
VTD200	3.70	3.20	2.60	2.00	1.50	1.20	0.90	0.50	0.10
VTD200S	3.70	3.20	2.60	2.00	1.50	1.20	0.90	0.50	0.10
VTD210	4.10	3.50	2.90	2.10	1.60	1.30	1.00	0.70	0.10
VTD210S	4.10	3.50	2.90	2.10	1.60	1.30	1.00	0.70	0.10
VTD210SS	4.10	3.50	2.90	2.10	1.60	1.30	1.00	0.70	0.10
VTD210L	4.10	3.50	2.90	2.10	1.60	1.30	1.00	0.70	0.10
VTD210LS	4.10	3.50	2.90	2.10	1.60	1.30	1.00	0.70	0.10
VTD240	4.40	3.70	3.10	2.40	1.80	1.50	1.20	0.90	0.10