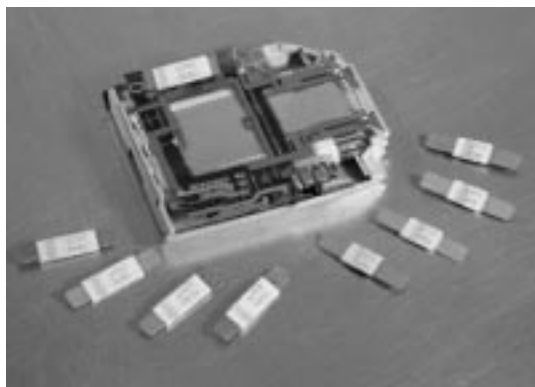


# VLR Series PolySwitch Battery Protectors

## Preliminary Data



### New VLR Low Resistance PolySwitch Resettable Strap Devices Enhance Thermal Protection for Li-Ion and NiMH Battery Packs

Tyco Electronics Corporation has developed the next generation in its popular line of PolySwitch® PPTC (Polymeric Positive Temperature Coefficient) resettable strap devices. The VLR230 and VLR170 devices provide very low series resistance and enhanced thermal protection for Lithium-Ion (Li-Ion) and Nickel Metal Hydride (NiMH) rechargeable battery packs typically used in cell phones, laptops, radios, camcorders, and other portable equipment. VLR devices are well suited for single-cell Li-Ion applications. The VLR device's narrow, low-profile form factor allows it to be welded directly onto battery cells, thus saving space and added installation costs. VLR devices lower trip temperature (~5°C lower compared to the VTP strap devices) and fast time-to-trip (typically 2.4 seconds or better at 10A) provide enhanced protection for rechargeable battery applications, while allowing longer battery pack life and extended equipment operation time.

#### Target Applications:

- Mobile phone battery packs
- Cordless phone battery packs
- Mobile radio packs
- Computer battery packs
- Camcorder battery packs

#### Features:

- Broadest range of resettable fuses available in the industry
- Current rating of 100A
- Voltage rating of 12V
- Agency recognition pending
- Industry fastest time-to-trip
- Industry lowest resistance devices

#### Benefits:

- Provides overcurrent and overtemperature protection
- Ideal protection for single cell Li-Ion battery packs
- Compatible with high volume electronics assembly
- Assists in meeting regulatory requirements

#### Electrical Characteristics

Electrical Rating  
Voltage: 12 V MAX  
Current: 100A MAX

	I Hold	Current Trip Limits						Time to Trip			Reference Resistance		One-Hour Post-Trip Resistance		Tripped-State Power Dissipation	
		AMPS AT 0°C		AMPS AT 25°C		AMPS AT 60°C		SECONDS AT 25°C			OHMS AT 25°C		OHMS AT 25°C		WATTS AT 25°C, 12V	
PART #	HOLD	HOLD	TRIP	HOLD	TRIP	HOLD	TRIP	A	TYP	MAX	MIN	MAX	MIN	MAX	TYP	MAX
VLR170	1.7	2.4	5.6	1.7	4.1	0.7	1.9	8.5	—	5.0	0.018	0.032	0.018	0.064	-	1.4
VLR230	2.3	3.4	6.6	2.3	5.0	0.9	2.3	10.0	2.4	5.0	0.012	0.018	0.012	0.036	1.4	2.5

#### Reference Documents:

PS300

#### Precedence:

This specification takes precedence over documents referenced herein.

#### Effectivity:

Reference documents shall be the issue in effect on the date of invitation for bid.

#### CAUTION:

Operation beyond the rated voltage or current may result in rupture, electrical arcing or flame.

