

### PolySwitch® PTC Devices

**Overcurrent Protection Device** 

PRODUCT: LVR005NK

DOCUMENT: SCD27271 REV LETTER: F

**REV DATE: JULY 26, 2016** 

PAGE NO.: 1 OF 3

### **Specification Status: Released**

Rated Operating Voltage at 20 °C (AC/DC):

240 V

Maximum Interrupt Voltage / Current at 20 °C (AC/DC):

265 V, 1.0 A 135 V, 20 A

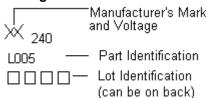
**Insulating Material:** 

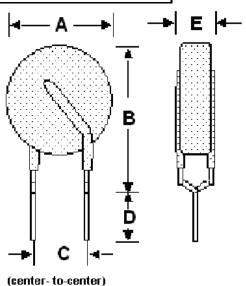
Cured, Flame Retardant Epoxy Polymer

**Lead Material:** 

24 AWG Sn-Plated Copper (0.52mm/0.020" nominal diameter)

#### Marking:





#### **TABLE I. DIMENSIONS:**

	Α		В		С		D		E	
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
mm:		6.9	-	12.1	4.3	5.8	7.6	-	-	4.6
in:*		(0.27)	1	(0.48)	(0.17)	(0.23)	(0.30)	ŀ	ŀ	(0.18)

<sup>\*</sup>Rounded off approximation

#### TABLE II. PERFORMANCE RATINGS @ 20 °C (as measured in Loranger P/N 02901-032-6218A):

HOLD CURRENT (A)	TRIP CURRENT (A)	RESISTANCE (Ω)		TIME TO TRIP(SEC) @ 0.25 A	POST-TRIP RESISTANCE (Ω)	TRIPPED-STATE POWER DISSIPATION @ 265 V (W)	
		R MIN	R MAX	MAX	MAX	NOM	MAX
0.05	0.12	18.5	31.0	10.0	65.0	0.9	1.1

<sup>\*</sup>Post Trip Resistance measured after one hour.

Agency Recognitions: UL (File #E74889), CSA (File #78165), TUV, CQC

Reference Documents: PS300

Precedence: This specification takes precedence over documents referenced herein Reference documents shall be the issue in effect on the date of invitation for bid

Warning: Refer to Page 2 of this document for application limitations

**Materials Information** 

ROHS Compliant ELV Compliant Pb-Free

Directive 2002/95/EC Compliant

Directive 2000/53/EC Compliant





# PolySwitch® PTC Devices

**Overcurrent Protection Device** 

PRODUCT: LVR005NK

DOCUMENT: SCD27271 REV LETTER: F

**REV DATE: JULY 26, 2016** 

PAGE NO.: 2 OF 3



### Warning: Application Limitations for the LVR Product Line

- 1. Users should independently evaluate the suitability of and test each product selected for their own application.
- 2. This product should not be used in an application where the maximum interrupt voltage or maximum interrupt current can be exceeded in a fault condition. Operation beyond the maximum ratings or improper use may result in device damage and possible electrical arcing and flame.
- 3. A PTC device is not a fuse it is a nonlinear thermistor that limits current. Because under a fault condition all PTC devices go into a high resistance state but not open circuit, hazardous voltage may be present at PTC locations.
- The devices are intended for protection against occasional overcurrent or overtemperature fault conditions and should not be used when repeated fault conditions or prolonged trip events are anticipated.
- 5. In most applications, power must be removed and the fault condition cleared in order to reset a PTC device. However, under certain unusual conditions, a PTC device may automatically reset. Accordingly, PTC devices should not be used in an application where an automatic reset could create a safety hazard, such as garbage disposals and blenders.
- It is the responsibility of the user to determine the need for back up or fail safe protection to prevent damage that may occur in the event of abnormal function or failure of the PTC device.
- 7. Operation in circuits with a large inductance can generate a circuit voltage (Ldi/dt) above the rated voltage of a PTC device.
- 8. Devices are not recommended for reflow soldering.
- Device performance can be impacted negatively if devices are handled in a manner inconsistent with recommended electronic, thermal, or mechanical procedures for electronic components.
- PTC devices are not recommended to be installed in applications where the device is constrained such that its PTC properties are inhibited, for example in rigid potting materials
  - or in rigid housings which lack adequate clearance to accommodate device expansion.
- 11. Contamination of the PTC material with certain silicone-based oils or some aggressive solvents can adversely impact the performance of the devices.



## PolySwitch® PTC Devices

**Overcurrent Protection Device** 

PRODUCT: LVR005NK

DOCUMENT: SCD27271 REV LETTER: F

**REV DATE: JULY 26, 2016** 

PAGE NO.: 3 OF 3

Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and shall not be used for, any purpose (including, without limitation, military, aerospace, medical, lifesaving, life-sustaining or nuclear facility applications, devices intended for surgical implant into the body, or any other application in which the failure or lack of desired operation of the product may result in personal injury, death, or property damage) other than those expressly set forth in applicable Littelfuse product documentation Warranties granted by Littelfuse shall be deemed void for products used for any purpose not expressly set forth in applicable Littelfuse documentation. Littelfuse shallnot be liable for any claims or damages arising out of products used in applications not expressly intended by Littelfuse as set forth in applicable Littelfuse documentation The sale and use of Littelfuse products is subject to Littelfuse Terms and Conditions of Sale, unless otherwise agreed by Littelfuse.