

Vishay BCcomponents

# 600 V / 1000 V PTC Thermistors for Overload Protection



QUICK REFERENCE DATA						
PARAMETER	VALUE	UNIT				
Maximum rated voltage	600 to 1000	V <sub>RMS</sub>				
Nominal holding current (Int)	10	mA				
Resistance at 25 °C (R <sub>25</sub> )	400 to 1600	Ω				
Tolerance on $R_{25}$ value	20 to 30	%				
Maximum overload current Iol	0.5 to 2.0	А				
Switching temperature	90 to 115	°C				
Operating temperature range at rated voltage	-20 to 85	°C				

#### **FEATURES**

- Fast response time for rapid protection
- · Automatic resetting once overload is removed
- Operates on DC or AC voltage
- UL approved types available (E148885)
- Material categorization:



for definitions of compliance please see www.vishay.com/doc?99912

#### **APPLICATIONS**

Over-temperature/over-load protection for metering, low current signal protection, digital signal protection against over-voltage

### DESCRIPTION

Test and measuring instruments, such as oscilloscopes and digital multimeters, can be easily damaged if excessive voltages are applied across their input terminals.

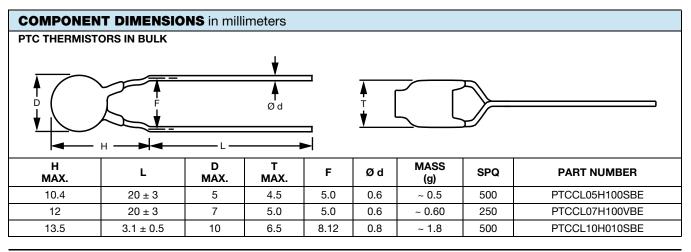
Simple and effective overload protection can be provided by connecting a high-voltage PTC thermistor in series with the instrument; see Typical Connection of the PTC Thermistor for Digital Multimeter Protection drawing. Under normal conditions, the resistance of the PTC thermistor is low, so the test voltage will be measured by the instrument. Under an overload condition, the PTC thermistor will switch to its high-resistance state, absorbing the overload current and protecting the instrument. When the overload is removed, the PTC thermistor will return to its low-resistance state, ready to resume its protective function.

ELECTRICAL DATA AND ORDERING INFROMATION						
INT MAX. at 25 °C (mA)	IT MIN. at 25 °C (mA)	<b>R<sub>25</sub> <sup>(2)</sup></b> (Ω)	MAXIMUM VOLTAGE <sup>(1)</sup> (V)	INSULATION VOLTAGE (V)	UL APPROVAL	ORDERING PART NUMBERS
10	20	$1600 \pm 300$	600	-	UL	PTCCL05H100SBE
10	25	1500 ± 450	1000	-	-	PTCCL07H100VBE
10	50	400 ± 100	600	> 1000	UL	PTCCL10H010SBE

Notes

<sup>(1)</sup> These PTCs can handle maximum voltage without series resistance

<sup>(2)</sup> Other resistance values and voltage levels on request



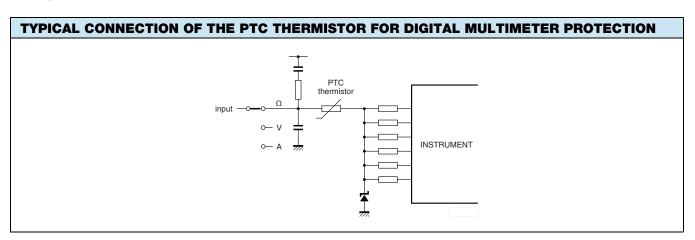
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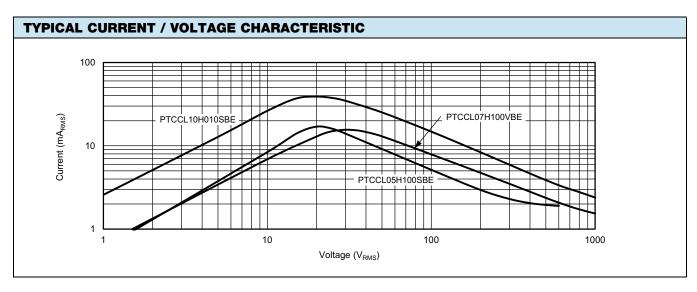
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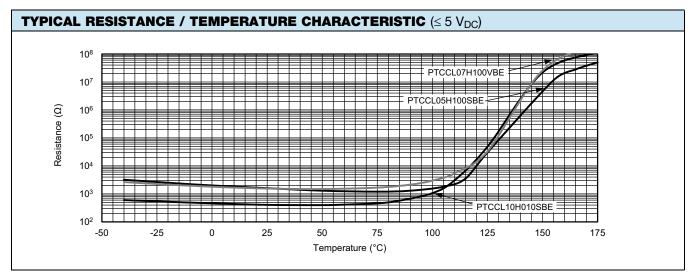
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