



# MICROTHERM

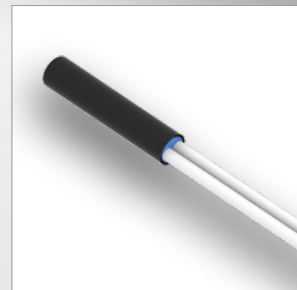
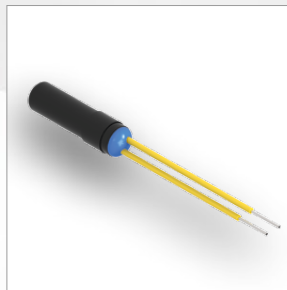
Temperature probe

Thermal cutout

Type

L10

L50



## Applications

- electronic applications
- E-car plug connectors
- Room ventilation and fire protection system sensor
- Heating elements protection

## Benefits

- Fully insulated solution
- Plug-in capable
- Direct or indirect shutdown of device
- Smallest and customized design

## Description

Thermal cutouts and probes of these types are universally applicable due to their small design and wide range of variations.

Basically, they are divided in the L10 series for applications in the area of signal currents up to max. 8A and the L50 series with up to max. 25A and 240°C. The elements are very easy to apply, characterized by their given constructive electrical insulation, the mechanical robustness and the already existing lead wire connection. When triggered by temperature – thanks to their small size – they react very quickly.

The internal structure of the elements is based on a melting element, which will liquefy when reaching a certain temperature level. The internal contact spring will relax and thus separate the electric contact system.



## Standard wire

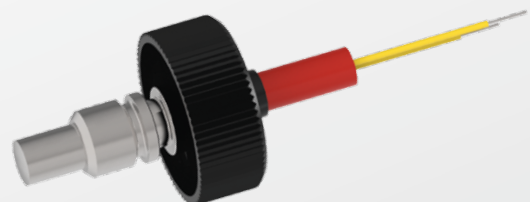
type	lead	code	temperature max.	operating voltage max.	approx. diameter insulation	approx. cross section / diameter	UL- Style
L10	stranded white	L360	200°C	600 V	1,20 mm	AWG24 / 0,25 mm <sup>2</sup>	10086
L10 G911		L370			1,60 mm	AWG20 / 0,50 mm <sup>2</sup>	
L50		L380			1,80 mm	AWG18 / 1,00 mm <sup>2</sup>	
L50	solid yellow	L440		300 V	1,54 mm	AWG20 / 0,80 mm	1332

L50: Standard length 240mm, stripped 6 ± 1mm

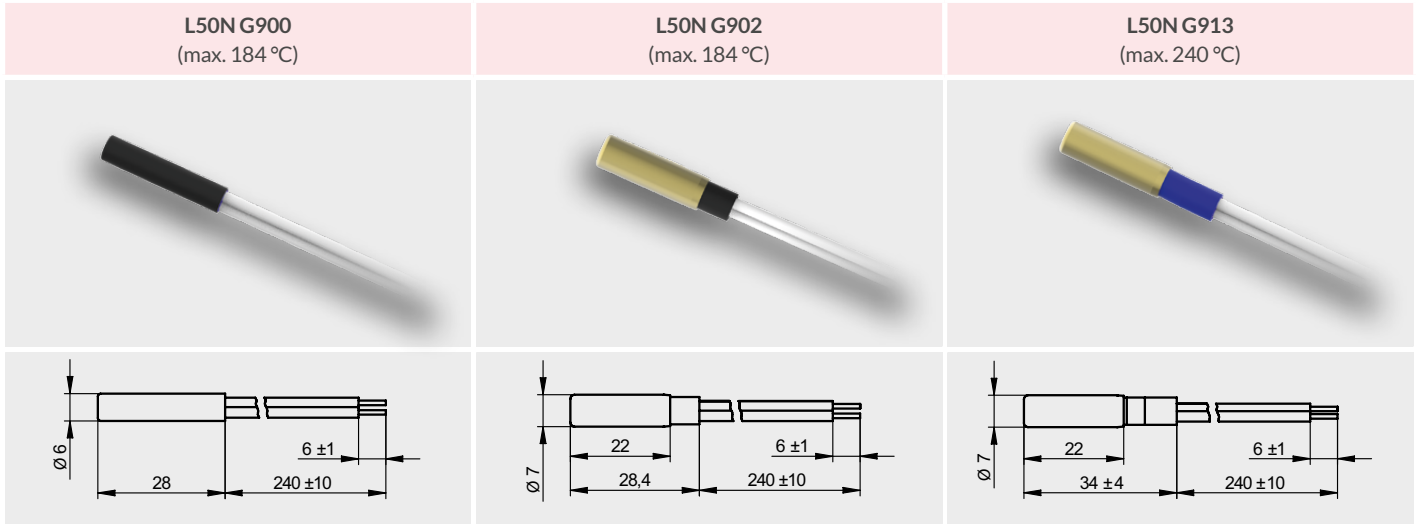
L10: Standard length 40mm, stripped 6 ± 1mm

$T_f$	<b>Rated Functioning Temperature:</b> The maximum temperature at which the thermal cutoff changes its state of conductivity to open circuit with sensing current as the only load. The rated functioning temperature is measured during a temperature rise of approximately 0.5°C per minute.
$T_h$	<b>Holding Temperature:</b> Maximum temperature of the TCO measured at the case end of the thermal cutoff at which the thermal cutoff can be maintained for a period of 168 hours without opening. General note: It is advised that TCOs are not exposed to continuous operating temperatures in excess of higher than $T_f - 25^\circ\text{C}$ .
$T_m$	<b>Maximum Overshoot Temperature:</b> The maximum temperature at which the thermal cutoff, having changed its state of conductivity, can be maintained at twice rated voltage for a specified period of time, during which its mechanical and electrical properties will not be affected.

In addition to the executions shown below, many other customized solutions are available, e.g. with clip or screw-in housings. Please contact us.



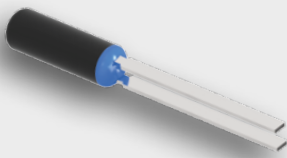
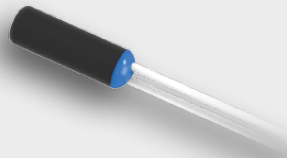
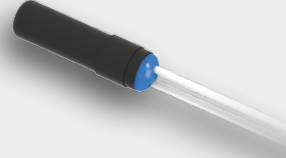
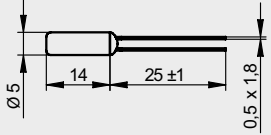
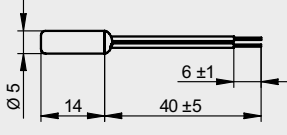
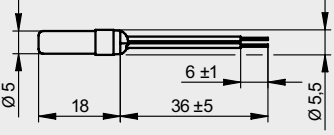
## L50 Series



$T_f$ (Tolerance +0 / -10°C)	L50N 10A (Standard)		L50N 20A	
	$T_h$	$T_m$	$T_h$	$T_m$
70	55	130	55	175
72	57	100	57	175
77	62	125	62	200
84	69	125	69	200
91	-	-	-	-
93	78	140	78	215
98	83	140	83	215
100	85	140	85	215
104	89	150	89	225
110	95	150	95	225
117	102	160	102	235
119	-	-	-	-
121	106	160	106	235
128	113	205	113	235
141	-	-	-	-
144	129	240	129	250
152	137	205	137	250
167	154	240	152	285
170	-	-	-	-
172	157	240	157	350
184	169	210	169	350
190	175	310	175	350
192	177	210	177	350
205	189	310	189	375
216	200	375	200	375
228	-	-	-	-
229	200	375	200	375
240	200	450	200	375

**Note:** For the technical selection of temperature cutouts in the L50 series, especially in applications with high currents, it is necessary to consider the self-heating of the components. This self-heating effect depends on the thermal connection of the cutout to the environment. The inner cutout elements are UL and VDE approved. Details on request.

## L10 Series

L10N (Lead frame terminals, 8A)	L10N (Leads or solid wires, 3A)	L10N G911 (Add. mechan. support, leads or solid wires, 8A)
		
		

$T_f$ (Tolerance +0 / -10°C)	L10N 3A, 8A	
	$T_h$	$T_m$
71	55	175
77	55	175
85	55	175
90	60	175
100	70	175
108	78	175
118	88	175
130	100	175
140	110	175
150	120	175

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