



- ▶ **Very high cut off temperature (max. 450°C)**
- ▶ **Ceramic housing**
- ▶ **Good heat transfer due to homogeneous construction**
- ▶ **High temperature sensitivity**
- ▶ **Fast response time**
- ▶ **High contact rating**

The TB 97 is based on reliable bimetal snap-disc technology and is specially designed for applications where high temperature is needed, with a maximum switching temperature of 450°C.

Even if the operating temperature is more than 400°C, the operating temperature is within a tolerance of ± 5%. When temperature rises and will reach the fixed operating temperature, a contact system will open (NC) or close (NO) the electrical current circuit. After cooling down, the contact system will return to its original position (automatically reset function). Within its nominal power condition, the limiter TB 97 works independent from any current supply.

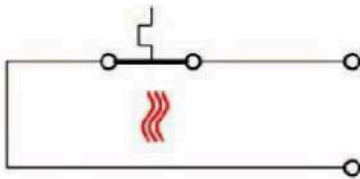
Typical applications:

- ▶ Electrical oven
- ▶ Heating elements
- ▶ Barbecue equipment
- ▶ Irons
- ▶ Industrial usage
- ▶ Welding machines
- ▶ Soldering machines

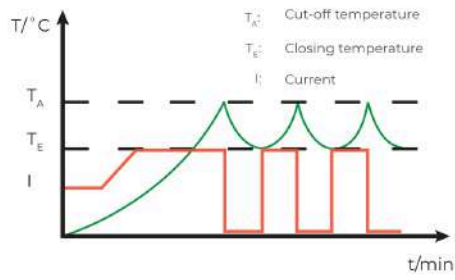
Technical Specifications		
Switching temperature	180°C - 450°C	180°C - 350°C
Power capacity	10A (230VAC); 6A (400VAC)	13A (120VAC)
Dielectric strenght	3.000 V	2.500 V
Switching cycles	10.000	10.000
Contact resistance	≤ 50 mΩ	≤ 50 mΩ
T off	in 5 Kelvin steps, ±5%, Differential 50...200°K, ±20k, depending on T off, special hysteresis on request	
Indication of purpose	operating temperature limiter	
Device type	Electrical control device to be built into an end product	
Features of automatic action	1B according to VDE standard 60730	
Pollution degree	2	
Max. Ambient temperature	450°C	
Dimensions	L 27,5mm x B15,5mm x T 12,5mm	
Approvals	Standard 60730-1; 2 - 9, VDE certificate 131955, conform to RoHS/REACH UL File E96862 - Switching temperature limited to 180 °C - 350 °C	



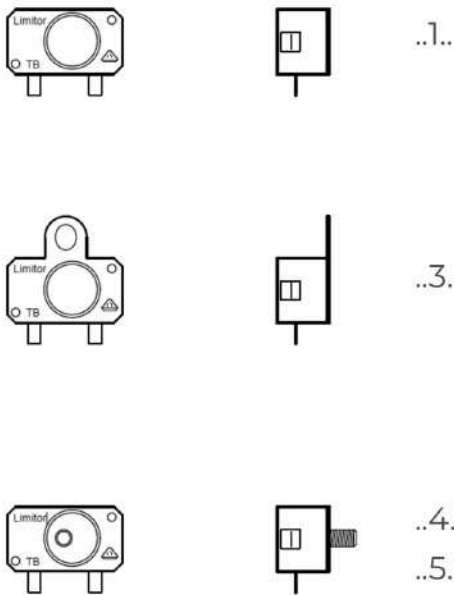
Circuit diagram



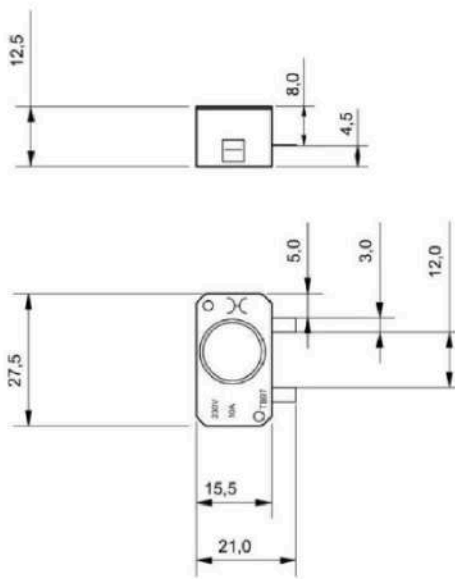
Functional diagram



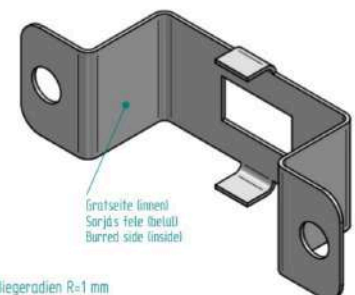
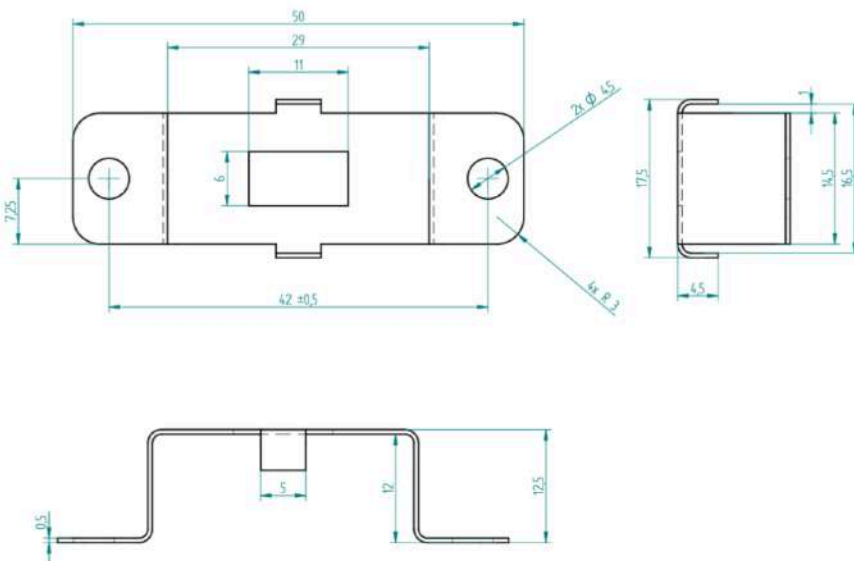
Attachment types



Dimension drawing (TB97 standard)



Accessories - Mounting bracket 506010



Alle Biegeradien R=1 mm



Ordering information

(Please use the characters in the chart below to construct your product code.)

Sample Code: TB97 - 200 - 5 - 65 - 1 - 200 - 10HA

Type/Function	<div style="border-bottom: 1px solid #ccc; padding: 5px;">TB</div> <div style="border-bottom: 1px solid #ccc; padding: 5px;">97 normally closed</div> <div style="border-bottom: 1px solid #ccc; padding: 5px;">98 normally open</div> <div style="border-bottom: 1px solid #ccc; padding: 5px;">Switching Temp</div> <div style="padding: 5px;">in °C</div> <div style="border-bottom: 1px solid #ccc; padding: 5px;">Tolerance in %</div> <div style="border-bottom: 1px solid #ccc; padding: 5px;">5 5 % (standard)</div> <div style="padding: 5px;">10 10 %</div> <div style="border-bottom: 1px solid #ccc; padding: 5px;">Connection type</div> <div style="padding: 5px;">see table below</div> <div style="padding: 5px;">15 = standard</div> <div style="border-bottom: 1px solid #ccc; padding: 5px;">Attachment type</div> <div style="border-bottom: 1px solid #ccc; padding: 5px;">1 without (standard)</div> <div style="border-bottom: 1px solid #ccc; padding: 5px;">3 fixed flange</div> <div style="border-bottom: 1px solid #ccc; padding: 5px;">4 screw M4 x 6</div> <div style="padding: 5px;">5 screw M5 x 6</div> <div style="border-bottom: 1px solid #ccc; padding: 5px;">Lead wire length in mm</div> <div style="padding: 5px;">Only with connection option "welded strands"</div> <div style="border-bottom: 1px solid #ccc; padding: 5px;">200 mm</div> <div style="border-bottom: 1px solid #ccc; padding: 5px;">500 mm</div> <div style="border-bottom: 1px solid #ccc; padding: 5px;">700 mm</div> <div style="padding: 5px;">Other lengths upon request</div> <div style="border-bottom: 1px solid #ccc; padding: 5px;">Lead specification</div> <div style="padding: 5px;">Only with connection option "welded strands"</div> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; padding: 5px;">10 mm (standard)</td> <td style="width: 10%; padding: 5px;">HA</td> <td style="padding: 5px;">Half stripped (standard)</td> </tr> <tr> <td style="padding: 5px;">Other lengths upon request</td> <td style="padding: 5px;">A</td> <td style="padding: 5px;">Fully stripped</td> </tr> </table>	10 mm (standard)	HA	Half stripped (standard)	Other lengths upon request	A	Fully stripped
10 mm (standard)		HA	Half stripped (standard)				
Other lengths upon request		A	Fully stripped				

Custom options on request.



Connection configuration

Connection orientation

Connection type		Connection orientation						
		1	2	3	4	5	6	7
Blank contact	1							
FS 6,3 x 0.8 straight	2							
FS 6,3 x 0.8 90° angle	3							
SA M3 straight	4							
SA M3 90° angle	5							
welded strands	6							

Connection type	Temperature limit
Blank contact (1)	to 450 °C
Flat connector (2, 3)	to 350 °C
Screw connector (4, 5)	to 350 °C
Welded strands (6)	to 450 °C