



- Switching voltage up to 400 V
- Minimum operating temperature -55 °C for all standard variants for use all over the world without restrictions
- Wide regulating range from -20 °C to +500 °C, depending on the switch insert

BSTW II

fail-safe safety temperature monitor

- Falling calibration to maintain the temperature during the process
- Turns on and off automatically whenever the temperature exceeds or drops below the setpoint value

BTB II

fail-safe temperature limiter

- Rising calibration to limit temperature during the process
- Switches off and remains switched off once the limit temperatures are reached

BSTB II

fail-safe safety temperature limiter

- The BSTB II functions in the same manner as the BTB II temperature limiter, whereby the setting range is limited here to 0 °C to 130 °C or 130 °C to 190 °C based on the temperature classes T3 and T4.

Explosion protection

Marking	Ex II 2G Ex de IIC T6, T5, T4, T3
Certification	EPS 11 ATEX 1356 X
Other approvals and certificates, see www.bartec.de	

BSTW II temperature monitors and BTB II/BSTB II temperature limiters are ON/OFF thermostats in Ex e certified polyester enclosures. In addition to the use of conventional power cables, BSTW II and BTB II/BSTB II are approved for the direct connection of self-limiting BARTEC heating circuits in the enclosure terminals. A verification of thermal safety and a further approval by any third party authority is not necessary. The benefit to the customer is obvious. Any directly connected self-limiting heating circuit considerably reduces the number of junction boxes and installation cost. BSTW II and BTB II/BSTB II monitor ambient temperatures as well as different surface temperatures. In accordance with EN 60079-30-1, BTB II and BSTB II fail-safe temperature limiters are designed to switch off and remain switched off when the preset limit temperature is reached. The restart lockout requires manual resetting directly at the device.

Function

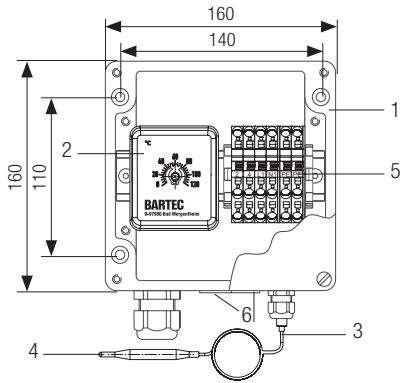
Any change in temperature in the sensor causes a change in the volume in the liquid-filled measuring system, which in turn results in a movement of the diaphragm membrane, which is connected to a transmission mechanism, and this opens a microswitch. If the sensor temperature exceeds the set value, the contacts 1 and 2 remain continuously open. The contacts in the BTB II/BSTB II remain continuously open until there is a manual intervention.

Technical data

Protection class	IP 65/EN 60529
Min. ambient temperature	-55 °C (Standard)
Max. ambient temperature	depends on the type of heating cable connection
Storage temperature	-55 °C to +65 °C
Capillary tube	Length: 1000 mm, up to 5000 mm on request OD sensor line: 1.5 mm Min. bend radius: 5 mm Sensor bulb diameter: 6 mm Sensor material: SS 1.4571
Contacts 1 SPDT	Contact decks 1 to 2: AC 400 V/16 A, AC 230 V/25 A Contact decks 1 to 4: AC 400 V/6.3 A, AC 230 V/6.3 A
Switching hysteresis	depending on type, see ordering informations
Switching accuracy	depending on type, see ordering informations

Device for 1 heating circuit

(Heating cable connection direct via sheathed cable/Plexo or cold lead)

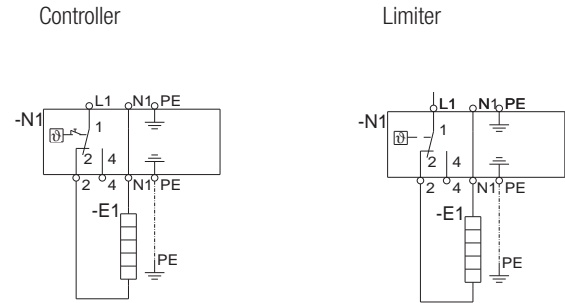


- 1 Enclosure
- 2 Switch insert
- 3 Capillaries
- 4 Sensor
- 5 Rail-mounted terminals
- 6 Blind plug M20

Technical data

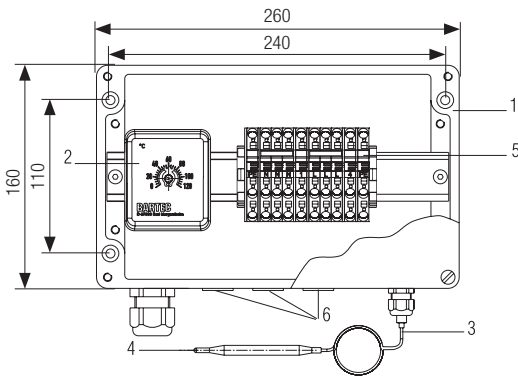
Dimensions	160 mm x 160 mm x 90 mm
Terminals	4 x 6 mm ² + 2 x PE
Heating cable connections	2 x M20, closed with blind plug

Heating circuit connection



Device for 1 to 3 heating circuits

(Heating cable connection direct, via sheathed cable/Plexo or cold lead)

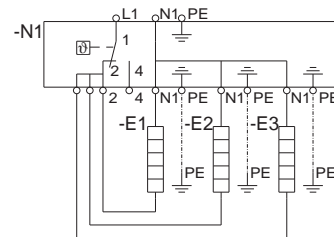


- 1 Enclosure
- 2 Switch insert
- 3 Capillaries
- 4 Sensor
- 5 Rail-mounted terminals
- 6 Blind plug M20

Technical data

Dimensions	260 mm x 160 mm x 90 mm
Terminals	8 x 6 mm ² + 3 x PE
Heating cable connections	3 x M20, closed with blind plug

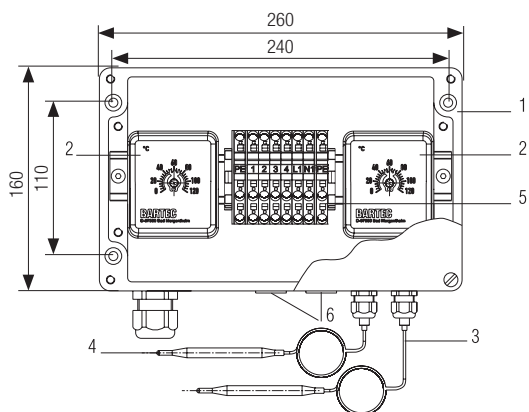
Heating circuit connection



System-dependent conditions

Load side connection variant heating circuits	Circuit breaker, (C characteristics)	Ambient temperature	Temperature class
PSBL system 27-1580-.910/....	1 x 16 A	-55 °C to +50 °C	T5
PSB system 27-1680-.910/....	1 x 25 A	-55 °C to +40 °C	T6
	1 x 25 A	-55 °C to +50 °C	T5
MSB system 27-1980-.910/....	1 x 25 A	-55 °C to +50 °C	T4
HSB system 27-1780-.910/....	1 x 25 A	-55 °C to +50 °C	T3
Sheathed cable/PLEXO or cold lead	1 x 16 A	-55 °C to +50 °C	T5
	1 x 20 A	-55 °C to +40 °C	T5
	1 x 25 A	-55 °C to +40 °C	T4

Combination unit Safety temperature monitor and limiter
(Heating cable connection direct via sheathed cable/Plexo or cold lead)

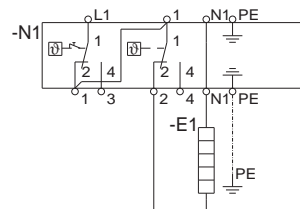


- 1 Enclosure
- 2 Switch insert
- 3 Capillaries
- 4 Sensor
- 5 Rail-mounted terminals
- 6 Blind plug M20

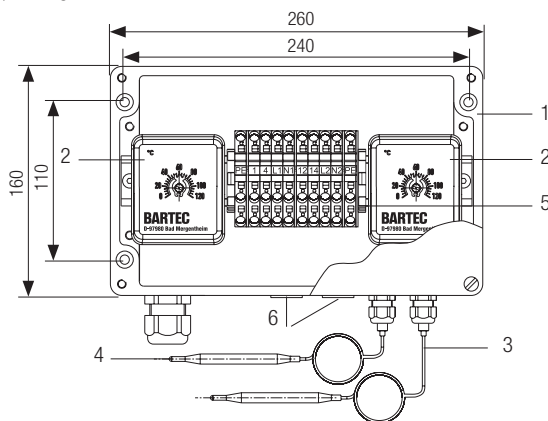
Technical data

Dimensions	260 mm x 160 mm x 90 mm
Terminals	6 x 6 mm ² + 3 x PE
Heating cable connections	2 x M20, closed with blind plug

Heating circuit connection



Combination unit Safety temperature monitor
(Heating cable connection direct, via sheathed cable/Plexo or cold lead)

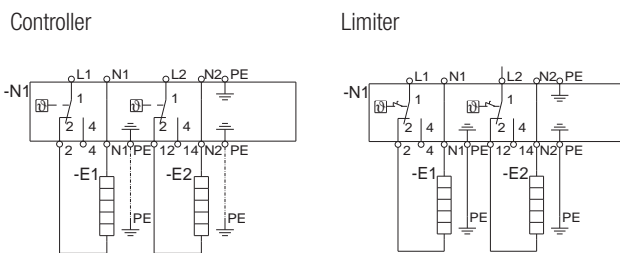


- 1 Enclosure
- 2 Switch insert
- 3 Capillaries
- 4 Sensor
- 5 Rail-mounted terminals
- 6 Blind plug M20

Technical data

Dimensions	260 mm x 160 mm x 90 mm
Terminals	8 x 6 mm ² + 3 x PE
Heating cable connections	2 x M20, closed with blind plug

Heating circuit connection



System-dependent conditions

Load side connection variant heating circuits	Circuit breaker, (C characteristics)	Ambient temperature	Temperature class	Fuse (C characteristics)	Ambient temperature	Temperature class
PSBL system 27-1580-.910/....	1 x 16 A	-55 °C to +50 °C	T5	2 x 16 A	-55 °C to +50 °C	T5
PSB system 27-1680-.910/....	1 x 25 A	-55 °C to +40 °C	T6	2 x 25 A	-55 °C to +40 °C	T6
	1 x 25 A	-55 °C to +50 °C	T5	2 x 25 A	-55 °C to +40 °C	T5
MSB system 27-1980-.910/....	1 x 25 A	-55 °C to +50 °C	T4	2 x 25 A	-55 °C to +40 °C	T4
HSB system 27-1780-.910/....	1 x 25 A	-55 °C to +50 °C	T3	2 x 25 A	-55 °C to +40 °C	T3
Sheathed cable/PLEXO or cold lead	1 x 16 A	-55 °C to +50 °C	T5	2 x 16 A	-55 °C to +50 °C	T5
	1 x 20 A	-55 °C to +40 °C	T5	-	-	-
	1 x 25 A	-55 °C to +40 °C	T4	-	-	-



Ordering information Device for 1 heating circuit

Designation	Switching temperature	Switching point deviation	Hysteresis	Order no.
BSTW II	-20 °C to +50 °C	+5 K/-0 K	5 K	27-6DF2-5232/1200
	0 °C to +190 °C	+16 K/-0 K	14 K	27-6DF2-5232/1C00
	+60 °C to +300 °C	+36 K/-0 K	17 K	27-6DF2-5232/1G00
BTB II	+70 °C to +190 °C	+0 K/-16 K	14 K	27-6DJ2-5232/1D00
	+150 °C to +300 °C	+0 K/-36 K	17 K	27-6DJ2-5232/1J00

Ordering information Device for 3 heating circuits

Designation	Switching temperature	Switching point deviation	Hysteresis	Order no.
BSTW II	-20 °C to +50 °C	+5 K/-0 K	5 K	27-6DF2-5243/1200
	0 °C to +190 °C	+16 K/-0 K	14 K	27-6DF2-5243/1C00
	+60 °C to +300 °C	+36 K/-0 K	17 K	27-6DF2-5243/1G00

Ordering information Combination unit

Designation	Switching temperature	Switching point deviation	Hysteresis	Order no.
BSTW II/BTB II	-20 °C to +50 °C	+5 K/-0 K	5 K	27-6DU2-5242/1220
		+0 K/-5 K	5 K	
	0 °C to +190 °C	+16 K/-0 K	14 K	27-6DU2-5242/1C00
		+70 °C to +190 °C	+0 K/-16 K	
	+60 °C to +300 °C	+36 K/-0 K	17 K	27-6DU2-5242/1G00
		+150 °C to +300 °C	+0 K/-36 K	
-20 °C to +50 °C	+5 K/-0 K	5 K	27-6DU2-5242/12J0	
	+150 °C to +300 °C	+0 K/-36 K		17 K
0 °C to +190 °C	+16 K/-0 K	14 K	27-6DU2-5242/1CJ0	
	+150 °C to +300 °C	+0 K/-36 K		17 K

Ordering information Combination unit

Designation	Switching temperature	Switching point deviation	Hysteresis	Order no.
BSTW II/BSTW II	-20 °C to +50 °C	each +5 K/-0 K	5 K	27-6DT2-5242/1220
		0 °C to +190 °C	each +16 K/-0 K	

For mounting plates and mounting material, see assembly accessories.

Technical data subject to change without notice.

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