



Self-limiting parallel heating cable PSB

Features

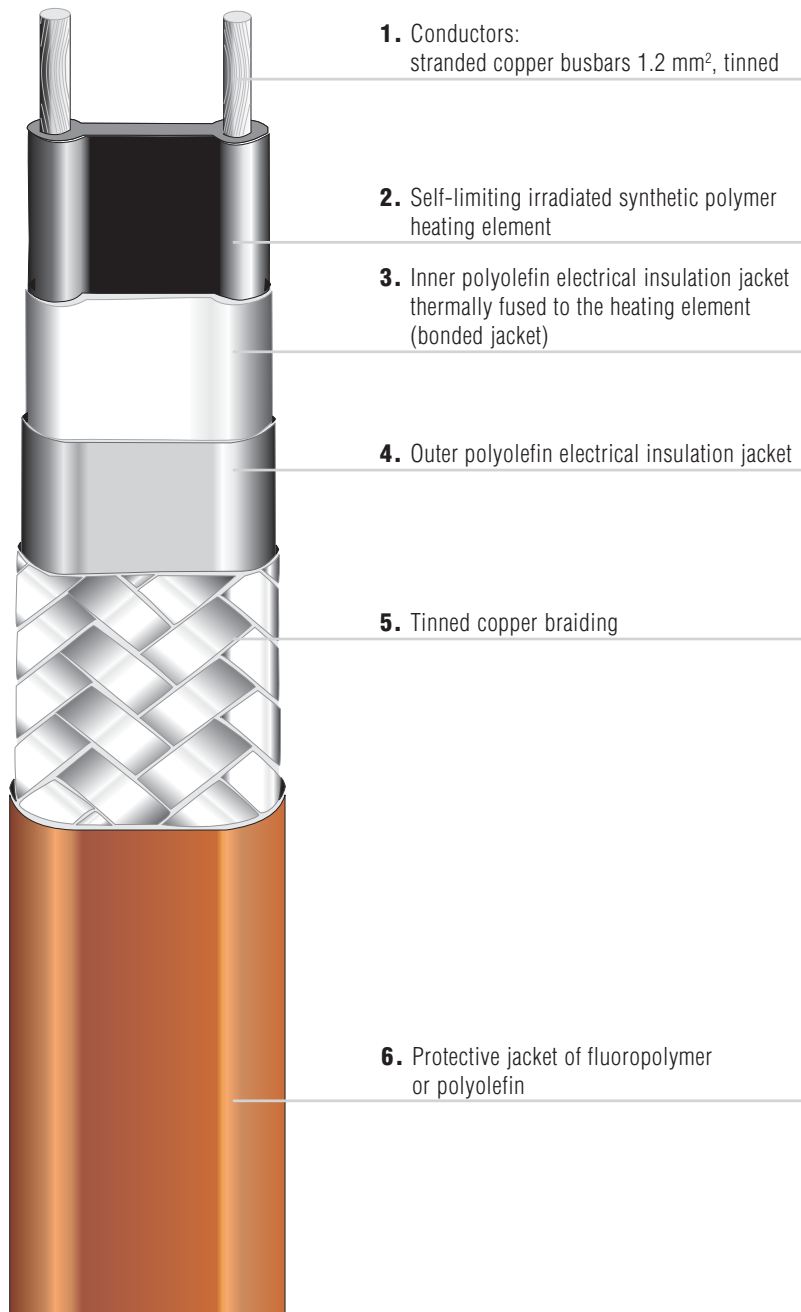
- Self-limiting
- Can be used in explosive atmospheres without temperature limiter (subject to 'T' class)
- Can be cut at random length thanks to its parallel circuit configuration
- Corrosion-proof and resistant to effects of chemicals thanks to its protective outer sheath
- Electrically and mechanically protected by a tinned copper braid
- Simple installation thanks to its high flexibility and favourable dimensions
- Easy on-site cutting and terminating, even in Ex areas

Description

A temperature-dependant resistive element between two parallel copper conductors regulates and limits the heat output of the heating cable according to the ambient temperature. If the ambient temperature rises, the heat output of the heating cable is reduced. This self-limiting property prevents overheating even when the cables are overlapped. A temperature limiter is not generally necessary not even for Ex areas (also not in explosion hazard zones).

Thanks to the parallel power-supply over the entire heating circuit the heating cable can be cut and installed to any required length. BARTEC self-limiting heating cable is available with different power output range and protective insulation. The protective outer jacket of either fluoropolymer or polyolefin protects the inner copper braiding from corrosion and chemical attack.

The copper braiding serves as an earth conductor in accordance with VDE 0100 and also increases the mechanical stability of the cable. Under the protective braiding are two synthetic jackets providing electrical insulation. The inner of the two jackets is thermally fused to the heating element (bonded jacket).





Areas of application

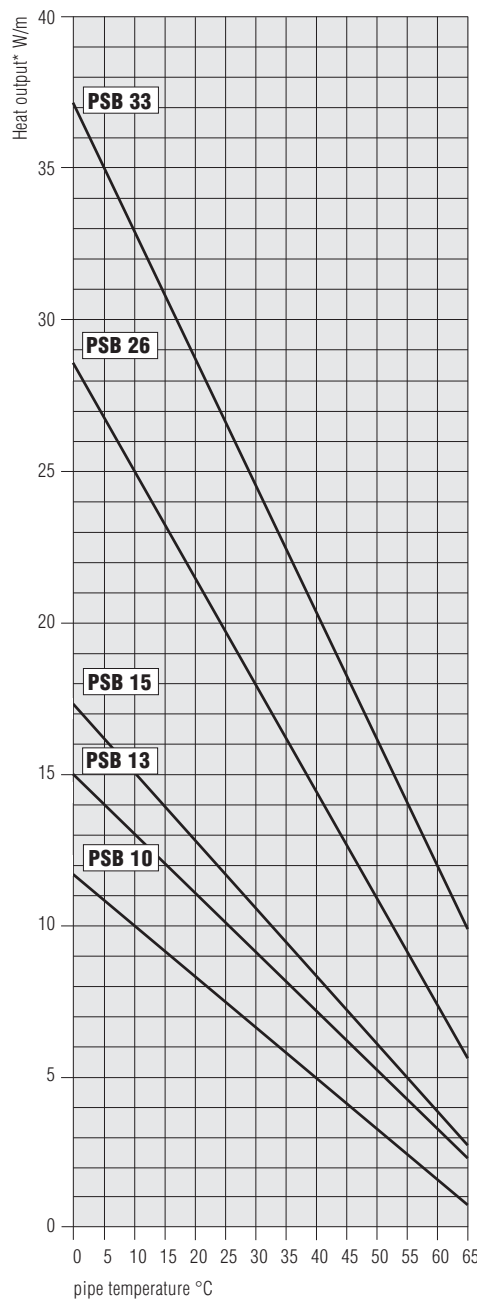
PSB with polyolefin insulation jacket

- if the heating cable is exposed to aqueous, inorganic chemicals.
- if high mechanical requirements are set for the cable.

PSB with fluoropolymer protective jacket

- if the heating cable is exposed to high levels of humidity organic chemicals such as hydrocarbons or solvents.
- where the cable must meet high mechanical requirements.

PSB characteristics



* Heat output on insulated steel pipes at 230 V under nominal conditions.

Explosion protection

Ex protection type

- Ex II 2G Ex e II T5, T6
- Ex II 2D Ex tD A21 T 95 °C, T 80 °C

Certification System

- KEMA 08 ATEX 0111
- IECEx KEM 09.0084

Certification Components

- KEMA 02 ATEX 2326 U
- IECEx KEM 07.0047 U
- CSA 1862457

Max. resistance of protective braid

< 18.2 Ω/km

Dimensions

with protective braid and protective outer jacket of fluoropolymer 11.6 x 5.6 mm

with protective braid and protective outer jacket of polyolefin 11.8 x 5.8 mm

Min. bending radius

25 mm



→ Technical data

Nominal voltage AC 208 V to 254 V
AC 110 V to 120 V

Power setting at +10 °C					
Heating output	PSB 10	PSB 13	PSB 15	PSB 26	PSB 33
at AC 230 V	10 W/m	13 W/m	15 W/m	25 W/m	33 W/m
at AC 120 V	10.6 W/m	13.7 W/m	15.8 W/m	25.8 W/m	33.6 W/m

Permissible ambient temperature
Cut-in heating cable +65 °C
Cut-off heating cable (cumulative 1000 h) +85 °C

Minimum installation temperature -55 °C





Minimum cut-in temperature -40 °C

Max. length of heating circuit at 254 V (for automatic circuit-breakers with C characteristic)					
Fuse	PSB 10	PSB 13	PSB 15	PSB 26	PSB 33
16 A, cut-in temperature +10 °C	205 m	169 m	145 m	88 m	70 m
16 A, cut-in temperature -15 °C	139 m	111 m	93 m	58 m	49 m
16 A, cut-in temperature -30 °C	120 m	94 m	77 m	45 m	43 m
20 A, cut-in temperature +10 °C	205 m	179 m	162 m	117 m	90 m
20 A, cut-in temperature -15 °C	186 m	149 m	125 m	75 m	64 m
20 A, cut-in temperature -30 °C	150 m	124 m	106 m	74 m	52 m
32 A, cut-in temperature +10 °C	195 m	174 m	160 m	126 m	108 m
32 A, cut-in temperature -15 °C	195 m	174 m	160 m	117 m	95 m
32 A, cut-in temperature -30 °C	195 m	174 m	160 m	100 m	82 m

Max. length of heating circuit at 120 V (for automatic circuit-breakers with C characteristic)					
Fuse	PSB 10	PSB 13	PSB 15	PSB 26	PSB 33
16 A, cut-in temperature +10 °C	95 m	78 m	67 m	43 m	33 m
16 A, cut-in temperature -15 °C	69 m	55 m	45 m	30 m	25 m
16 A, cut-in temperature -30 °C	58 m	47 m	39 m	26 m	21 m
20 A, cut-in temperature +10 °C	95 m	86 m	80 m	58 m	45 m
20 A, cut-in temperature -15 °C	90 m	72 m	60 m	38 m	32 m
20 A, cut-in temperature -30 °C	75 m	59 m	49 m	31 m	26 m
32 A, cut-in temperature +10 °C	95 m	86 m	80 m	63 m	54 m
32 A, cut-in temperature -15 °C	95 m	86 m	80 m	55 m	45 m
32 A, cut-in temperature -30 °C	95 m	86 m	80 m	53 m	43 m



Selection chart PSB

Description	Protective jacket	Type	➔ Order no.
PSB parallel heating cable AC 254 V - self-limiting - explosion protected  - media protected 	Fluoropolymer	PSB 10	07-5801-2105
		PSB 13	07-5801-2135
		PSB 15	07-5801-2155
		PSB 26	07-5801-2265
		PSB 33	07-5801-2335
	Polyolefin	PSB 10	07-5801-2106
		PSB 13	07-5801-2136
		PSB 15	07-5801-2156
		PSB 26	07-5801-2266
		PSB 33	07-5801-2336
PSB parallel heating cable AC 120 V - self-limiting - explosion protected  - media protected 	Fluoropolymer	PSB 10	07-5801-1105
		PSB 13	07-5801-1135
		PSB 15	07-5801-1155
		PSB 26	07-5801-1265
		PSB 33	07-5801-1335
	Polyolefin	PSB 10	07-5801-1106
		PSB 13	07-5801-1136
		PSB 15	07-5801-1156
		PSB 26	07-5801-1266
		PSB 33	07-5801-1336