Features

- Self-limiting
- Can be used in explosive atmospheres without temperature limiter
- Can be cut at random length thanks to its parallel current supply
- Corrosion-proof and resistant to effects of chemicals thanks to its outer sheath
- Electrically and mechanically protected by a tinned copper braiding
- Simple installation thanks to its high flexibility and favourable dimensions

Self-limiting parallel heating tape PSB

1. Conductors: stranded copper wire 1.2 mm², tinned
2. Self-limiting, irradiated polymer heating element
3. Inner polyolefin electrical insulation jacket thermally fused to the heating element (bonded jacket)
4. Outer polyolefin electrical insulation jacket
5. Tinned copper braiding
6. Polyolefin or fluoropolymer protective jacket

Description

A temperature-dependant resistive element between two parallel copper conductors regulates and limits the heat output of the heating tape according to the ambient temperature. If the ambient temperature rises, the power output of the heating tape is reduced. This self-limiting property prevents overheating even when the tapes are crossed. A temperature limiter is not necessary (also not in hazardous areas).

Thanks to the parallel design the heating tape can be cut and installed to any required length. The self-limiting heating tape is available with different power outputs and protective jackets. The protective outer jacket of either fluoropolymer or polyolefin protects the copper braiding from corrosion and chemical impact.

Two jackets under the protective braiding provide electrical insulation. The inner one of the two jackets is thermally fused to the heating element (bonded jacket).

The heating system must be designed to ensure that the maximum operating temperature of 65 °C will not be exceeded when it is energized.

When it is switched off, the heating tape can be exposed to a temperature of 85 °C, not more than 1,000 hours cumulated.

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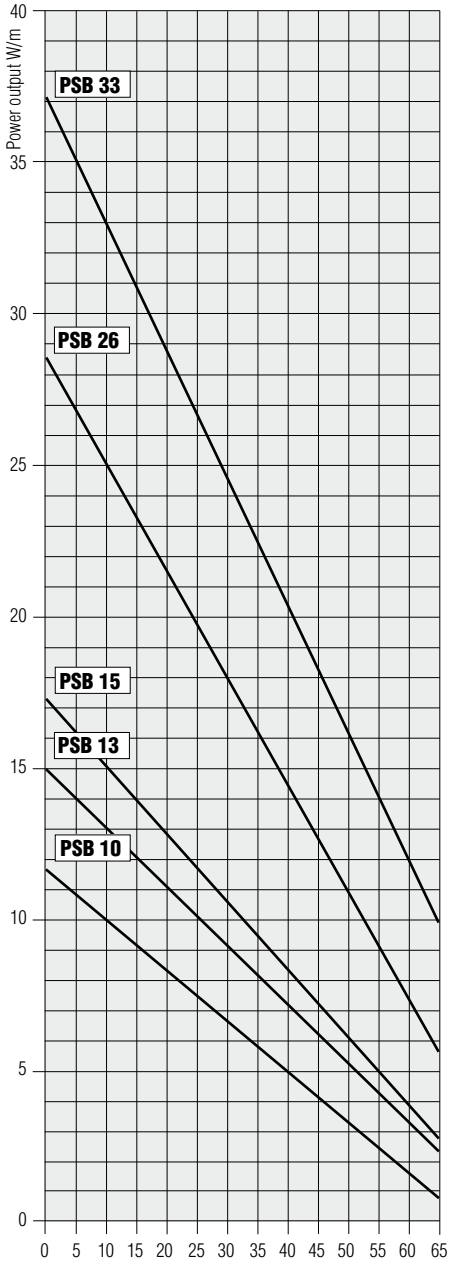
PSB characteristics



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

Areas of application

The PSB heating tape is suitable for electric trace heating for frost protection of pipelines and vessels.

While the polyolefin protective jacket is used where there are aqueous, inorganic chemicals, the fluoropolymer outer jacket is suitable for organic chemicals.

For questions regarding the chemical resistance please contact your BARTEC sales representative.

Explosion protection

Ex protection type

Ⓔx II 2G Ex e IIC T5, T6 Gb
Ⓔx II 2D Ex tb IIIC T95 °C, T 80 °C Db

Certification

System

KEMA 08 ATEX 0111 X
IECEx KEM 09.0084X
TC RU C-DE.ГБ06.B.00230
CSA 1862457

Heating tape

KEMA 02 ATEX 2326 U
IECEx KEM 07.0047 U

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Technical data

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

Power setting at +10 °C					
Power 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

Max. exposure temperature
switched on +65 °C
switched off +85 °C

Min. installation temperature -55 °C

Min. start-up temperature -40 °C

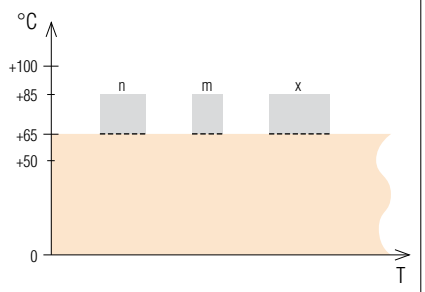
Max. braid resistance < 18.2 Ohm/km

Dimensions
with braiding and Fluoropolymer jacket 11.6 x 5.6 mm

with braiding and Polyolefin jacket 11.8 x 5.8 mm

Min. bending radius 25 mm

Maximum exposure temperature



Continuous operation, switched on heating tape
Period of time in switched-off state , n + m + x ... ≤ 1000 h
(n, m, x... ≤ 48 hours, breaks in between at least 4 weeks)

Max. length of heating circuit at 254 V (for automatic circuit-breakers with C characteristic)					
Circuit breaker size	**PSB 10**	**PSB 13**	**PSB 15**	**PSB 26**	**PSB 33**
16 A, start-up temperature +10 °C	205 m	169 m	145 m	88 m	70 m
16 A, start-up temperature -15 °C	139 m	111 m	93 m	58 m	49 m
16 A, start-up temperature -30 °C	120 m	94 m	77 m	45 m	43 m
20 A, start-up temperature +10 °C	205 m	179 m	162 m	117 m	90 m
20 A, start-up temperature -15 °C	186 m	149 m	125 m	75 m	64 m
20 A, start-up temperature -30 °C	150 m	124 m	106 m	64 m	52 m
25 A, start-up temperature +10 °C	205 m	179 m	162 m	120 m	98 m
25 A, start-up temperature -15 °C	190 m	160 m	142 m	95 m	80 m
25 A, start-up temperature -30 °C	170 m	150 m	135 m	82 m	65 m
32 A, start-up temperature +10 °C	205 m	179 m	162 m	126 m	108 m
32 A, start-up temperature -15 °C	195 m	174 m	160 m	117 m	95 m
32 A, start-up 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)					
Circuit breaker size	**PSB 10**	**PSB 13**	**PSB 15**	**PSB 26**	**PSB 33**
16 A, start-up temperature +10 °C	95 m	78 m	67 m	43 m	33 m
16 A, start-up temperature -15 °C	69 m	55 m	45 m	30 m	25 m
16 A, start-up temperature -30 °C	58 m	47 m	39 m	26 m	21 m
20 A, start-up temperature +10 °C	95 m	86 m	80 m	58 m	45 m
20 A, start-up temperature -15 °C	90 m	72 m	60 m	38 m	32 m
20 A, start-up temperature -30 °C	75 m	59 m	49 m	31 m	26 m
25 A, start-up temperature +10 °C	95 m	86 m	80 m	60 m	50 m
25 A, start-up temperature -15 °C	92 m	80 m	70 m	45 m	38 m
25 A, start-up temperature -30 °C	85 m	72 m	65 m	42 m	34 m
32 A, start-up temperature +10 °C	95 m	86 m	80 m	63 m	54 m
32 A, start-up temperature -15 °C	95 m	86 m	80 m	55 m	45 m
32 A, start-up 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 tape AC 254 V - self-limiting - Ex explosion protected - Ⓜ media protected	Fluorpolymer	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 tape AC 120 V - self-limiting - Ex explosion protected - Ⓜ media protected	Fluorpolymer	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**

Technical data subject to change without notice.

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