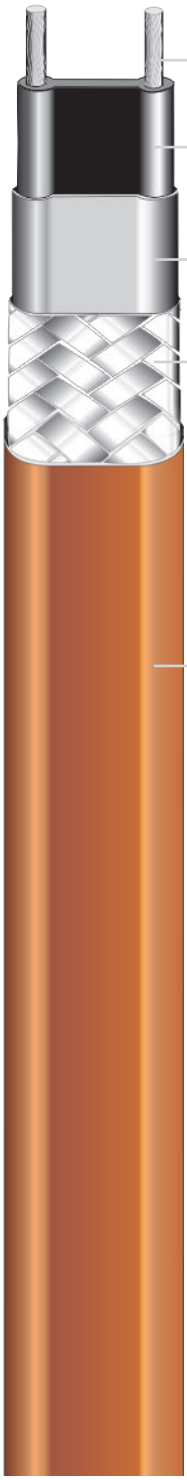
- Can be cut at random length thanks to its parallel current supply
- Electrically and mechanically protected by a tinned copper braiding
- Simple installation thanks to its high flexibility and favourable dimensions

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



1. Conductors: stranded copper wire 1.2 mm^2, nickel plated

2. Self-limiting polymer heating element

3. Insulation jacket, polyolefin

4. Tinned copper braiding

5. Polyolefin or fluoropolymer protective jacket

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 protective jacket is suitable for organic chemicals. For questions regarding the chemical resistance please contact your BARTEC sales representative.

Explosion protection

Marking	Ⓔx II 2G Ex 60079-30-1 IIC T5, T6 Gb Ⓔx II 2D Ex 60079-30-1 IIIC T95 °C, T 80 °C Db
Certification	DEKRA 17ATEX0007 U IECEx DEK 17.0004U

Other approvals and certificates, see www.bartec.de

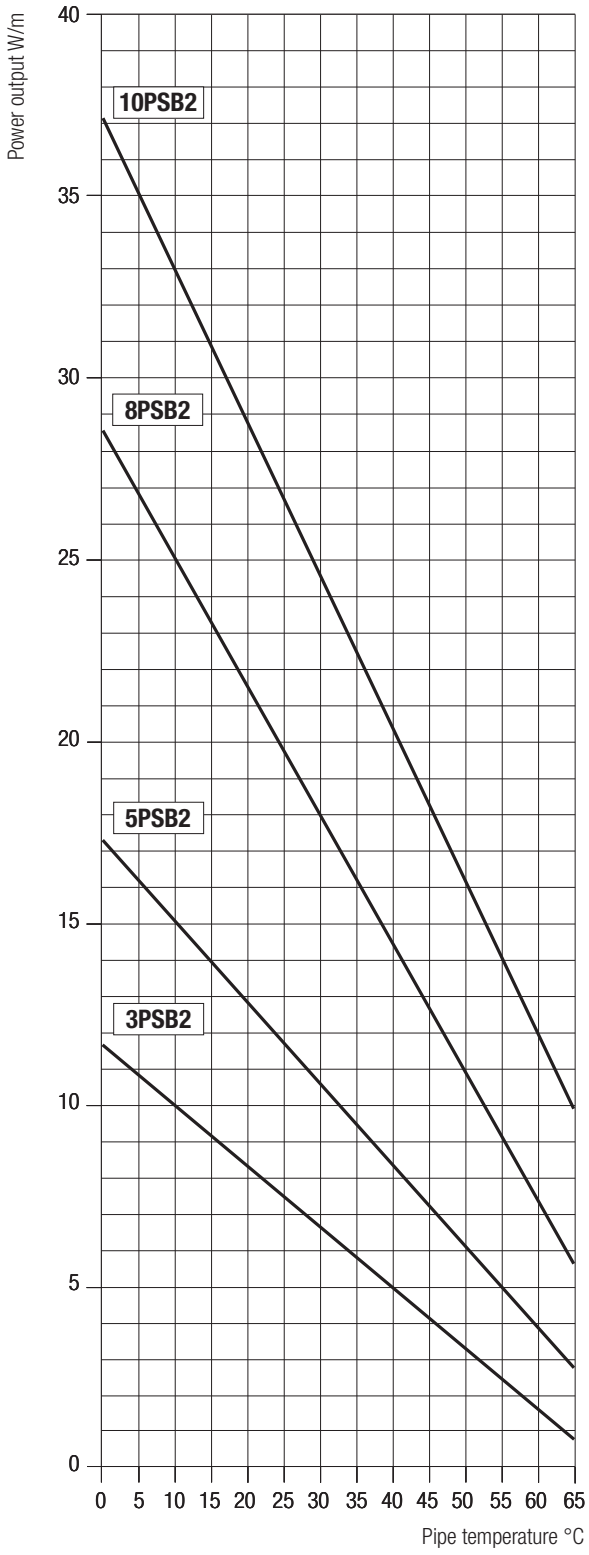
Technical data

Nominal voltage	AC 208 V to 277 V, 120V on request
Max. continuous operating temperature, energized	+65 °C
Max. continuous exposure temperature, de-energized	+85 °C
Min. installation temperature	-55 °C
Min. start-up temperature	-55 °C
Temperature Class	T6: 3PSB2, 5PSB2
	T5: 8PSB2, 10PSB2
Max. braid resistance	<18.2 Ω/km
Dimensions with braiding and jacket	11.8 x 5.8 mm with polyolefin protective jacket 11.6 x 5.6 mm with fluoropolymer protective jacket
Min. bending radius	25 mm

Power setting at +10 °C

Power output	3PSB2	5PSB2	8PSB2	10PSB2
bei AC 230 V	10 W/m	15 W/m	25 W/m	33 W/m

PSB characteristics



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

Max. length of heating circuit at 230 V for automatic circuit-breakers with C characteristic

Circuit breaker size	start-up temperature	3PSB2	5PSB2	8PSB2	10PSB2
16 A	+10 °C	202 m	153 m	91 m	57 m
	0 °C	202 m	144 m	86 m	54 m
	-20 °C	163 m	115 m	70 m	44 m
20 A	+10 °C	202 m	165 m	120 m	76 m
	0 °C	202 m	165 m	107 m	67 m
	-20 °C	202 m	144 m	87 m	55 m
25 A	+10 °C	202 m	165 m	128 m	95 m
	0 °C	202 m	165 m	128 m	84 m
	-20 °C	202 m	165 m	109 m	69 m
32 A	+10 °C	202 m	165 m	128 m	97 m
	0 °C	202 m	165 m	128 m	97 m
	-20 °C	202 m	165 m	128 m	88 m

These circuit lengths maybe exceeded dependat on specific design parameters.

Ordering information

PSB parallel heating tape	Protective jacket	Typ	Heating output	Order no.
AC 230 V self-limiting Ⓔx explosion protected Ⓜ media protected	fluorpolymer	3PSB2-CT	10 W/m	**07-5853-710F**
		5PSB2-CT	15 W/m	**07-5853-715F**
		8PSB2-CT	25 W/m	**07-5853-725F**
		10PSB2-CT	33 W/m	**07-5853-733F**
	polyolefin	3PSB2-CR	10 W/m	**07-5853-710P**
		5PSB2-CR	15 W/m	**07-5853-715P**
		8PSB2-CR	25 W/m	**07-5853-725P**
		10PSB2-CR	33 W/m	**07-5853-733P**

Technical data subject to change without notice