

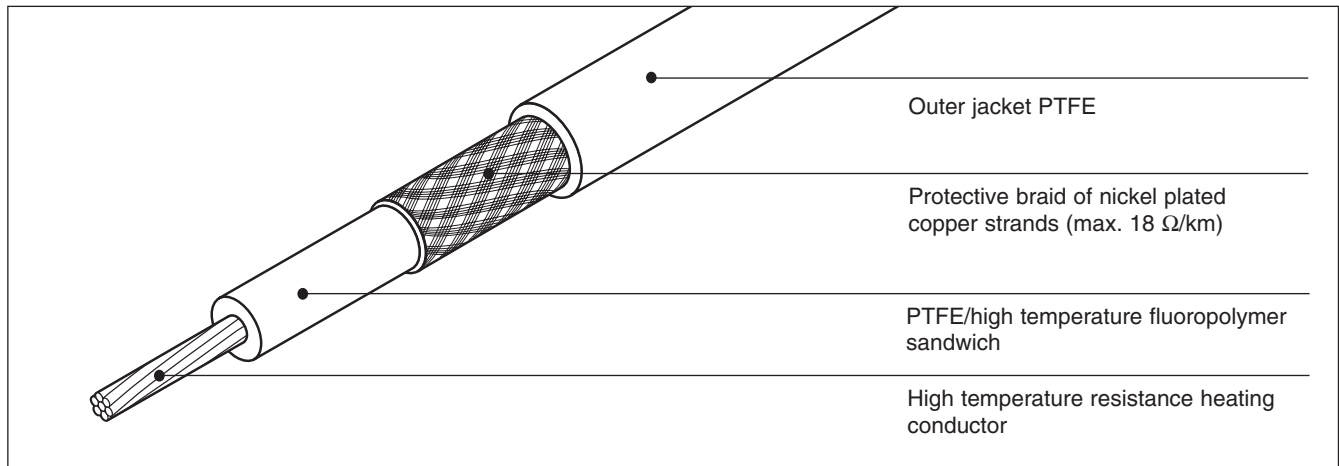
Polymer insulated (PI) series resistance heating cable

XPI-S is a polymer insulated (PI) series heating cable, suitable for use in hazardous areas (ATEX, for gas and dust atmosphere). It has been designed for use in freeze protection and temperature maintenance applications of pipes, tanks and other equipment. XPI-S is a re-enforced version of XPI, particularly suitable for areas with high demands on mechanical abuse of the heating cable. XPI-S offers an economical solution for a wide variety of heat-tracing applications, in particular for pipe lengths beyond the

maximum circuit lengths of parallel heating cables (e.g. 250 m). The inner insulation is a sandwich construction of high temperature fluoropolymer and PTFE, the outer insulation is made of PTFE. This unique construction is very easy to terminate, highly flexible and makes XPI a very safe and reliable product. It provides highest chemical withstand and most excellent mechanical strength, in particular at elevated temperatures.

XPI-S heating cables can be used for temperatures up to 260°C (continuous) and 300°C (intermittent short-term exposure). XPI-S is easy to install and has printed meter-marks. Tyco Thermal Controls offers XPI-S heating cables in a very wide range of resistances, starting from 0.8 Ω/km up to 8000 Ω/km as well as a complete range of components for connection and splicing of the cables.



Heating cable construction



Application

Area classification	Hazardous area, Zone 1 or Zone 2 (Gas) or Zone 21 or Zone 22 (Dust) Ordinary
Chemical resistance	Organic and inorganic corrosives

Approvals

System (heating units)	PTB 03 ATEX 1218X  II 2 G/D EEx e II T6 to T2 IP 65 T 80°C...T 290°C
Bulk cable	PTB 05 ATEX 1060 U  II 2 G/D EEx e II T _p 260°C
Temperature classification (T-rating) has to be established by using the principles of stabilised design or the use of a temperature limiting device. Use TraceCalc design software or contact Tyco Thermal Controls.	

Technical data

Max. exposure temperature	260°C (continuous power off), 300°C (intermittent power off, max 1000 h)
Min. installation temperature	-70°C
Min. bending radius at -70°C	2.5 x cable diameter for cable diameter ≤ 6 mm 6 x cable diameter for cable diameter > 6 mm
Max. power output	30 W/m (typical value, depending on application)
Nominal voltage	Up to 450/ 750 V AC (U ₀ / U)
Min. impact resistance	7 Joule (as per EN 50019)
Min. clearance	20 mm between heating cables

XPI-S heating cable references

Order Reference	Nominal resistance [Ω /km @ 20°C]	Temp. coefficient [x 10 ⁻³ /K]	Outer diameter [mm nom.]	Nom. weight [kg/km]	Part Number PN
XPI-S-0.8	0.8	4.3	11.9	405	1244-003047
XPI-S-1.1	1.1	4.3	10.1	307	1244-003048
XPI-S-1.8	1.8	4.3	8.6	209	1244-003049
XPI-S-2.9	2.9	4.3	7.1	149	1244-003050
XPI-S-4.4	4.4	4.3	6.5	116	1244-003051
XPI-S-7	7.0	4.3	5.9	88	1244-003052
XPI-S-10	10.0	4.3	5.8	84	1244-003053
XPI-S-11.7	11.7	4.3	5.6	76	1244-003054
XPI-S-15	15.0	4.3	5.5	71	1244-003055
XPI-S-17.8	17.8	4.3	5.3	68	1244-003056
XPI-S-25	25.0	3.0	5.5	72	1244-003057
XPI-S-31.5	31.5	1.3	5.9	82	1244-003058
XPI-S-50	50	1.3	5.5	72	1244-003059
XPI-S-65	65	1.3	5.4	66	1244-003060
XPI-S-80	80	0.7	5.7	75	1244-003061
XPI-S-100	100	0.4	5.8	79	1244-003062
XPI-S-150	150	0.4	5.8	78	1244-003063
XPI-S-180	180	0.33	5.6	71	1244-003064
XPI-S-200	200	0.40	5.7	72	1244-003065
XPI-S-320	320	0.18	5.8	76	1244-003066
XPI-S-380	380	0.18	5.7	73	1244-003067
XPI-S-480	480	0.18	5.6	70	1244-003068
XPI-S-600	600	0.18	5.4	67	1244-003069
XPI-S-700	700	0.18	5.4	65	1244-003070
XPI-S-810	810	0.04	5.5	69	1244-003071
XPI-S-1000	1000	0.04	5.4	67	1244-003072
XPI-S-1440	1440	0.04	5.6	69	1244-003073
XPI-S-1750	1750	0.04	5.5	67	1244-003074
XPI-S-2000	2000	0.35	5.8	74	1244-003075
XPI-S-3000	3000	0.35	5.6	69	1244-003076
XPI-S-4000	4000	0.35	5.4	65	1244-003077
XPI-S-4400	4400	0.1	5.5	66	1244-003078
XPI-S-5160	5160	0.1	5.5	66	1244-003079
XPI-S-5600	5600	0.1	5.4	63	1244-003080
XPI-S-7000	7000	0.1	5.4	61	1244-003081
XPI-S-8000	8000	0.1	5.3	60	1244-003082

Resistance tolerance: +10/-5%.

In particular for cables < 31.5 Ω /km the resistance of the conductor materials is a function of temperature and the change must be considered for design purposes.

Recommended cold lead cables for XPI-S

Nom. cross section [mm ²]	Current rating [A]	Outer diameter [mm nom.]	Nominal resistance [Ω /km @ 20°C]	Temperature coefficient [x 10 ⁻³ /K]	Order reference	Part number PN
2.5	32	5.9	7.0	4.3	XPI-S-7	1244-003052
4	42	6.5	4.4	4.3	XPI-S-4.4	1244-003051
6	54	7.1	2.9	4.3	XPI-S-2.9	1244-003050
10	73	8.6	1.8	4.3	XPI-S-1.8	1244-003049
16	98	10.1	1.1	4.3	XPI-S-1.1	1244-003048
25	129	11.9	0.8	4.3	XPI-S-0.8	1244-003047

Notes: Delivery length depends on type of resistance and is limited by max. weight of 120 kg/spool, respectively 1000 m/run. Not all resistances are standard items and as such may not be in stock. Contact Tyco Thermal Controls to confirm lead time. Tyco Thermal Controls requires the use of a 30 mA residual current device to provide maximum safety and protection from fire. Where design results in a higher leakage current, a maximum 300 mA residual current device may be used. All safety aspects need to be proven.