



Industrial heating & heat-tracing cables

Series Resistance Heating Cable

450/750 V & 0.6/1 kV fluoropolymer series trace heating cable up to +260 °C

0.0018–1.8 Ω /m Series

450/750 V · 0.6/1 kV

200–3,500 m · Max +260 °C

Application

Long-line series resistance heating cable to IEC/IEEE 60079-30-1, IEC 62395-1 and IEEE 515 in 1-, 2- and 3-core designs (0.0018–1.8 Ω /m), combining PTFE/PFA insulation, tinned-copper earth braid and PFA sheath for single-feed pipeline.

Typical uses: Long-distance crude, fuel-oil & chemical transfer lines, Tank-farm to marine jetty loading & bunkering pipelines, Steam-condensate return & cross-plant utility headers, Bitumen, molten sulphur & heavy-residue pipe racks, Sub-zero water supply & tailings transport pipelines, LNG / petrochemical complex interconnect corridors

Construction



Cross-section, not to scale

1	Calibrated series resistance conductor(s)	IEC 60079-30-1 / IEEE 515
2	PTFE / PFA fluoropolymer core insulation	IEC 60079-30-1
3	PTFE / glass-fibre thermal bedding tape	IEC 60079-30-1
4	Tinned / nickel-plated copper earth braid	IEC 60079-30-1 Clause 4.4
5	Extruded PFA / FEP fluoropolymer outer sheath	IEC 60079-30-1 / IEEE 515

Technical data

Typical values

Rated voltage grade	450/750 V & 0.6/1 kV (up to 600/690 Vac)	Conductor resistance	0.0018 to 1.8 Ω/m (1.8–1,800 Ω/km @ 20 °C)
Resistance tolerance	±5 % (alloys) or per IEC 60228 Class 2/5 Cu	Dielectric withstand	2.5 kV to 3.5 kV AC for 1 min (core-to-braid)
Max. exposure temp.	+260 °C continuous (PTFE / PFA fluoropolymer)	Max. maintain temp.	Up to +200 °C (depending on W/m & T-class)
Max. linear output	Up to 30–40 W/m (circuit-specific design)	Min. installation T	–60 °C (fluoropolymer PTFE / PFA jacket)
Core configurations	Single-core (1C), twin (2C) & 3-core (3C)	Min. bending radius	5 × OD (or 25 mm minimum, fixed routing)
Impact & crush test	7 J / 2 J impact & 1,500 N deformation load	Length alteration	Do not cut to length; cutting alters Ω & W/m
Flame retardance	IEC 60332-1-2 & UL VW-1 flame retardant	Chemicals & oils	Inert to acids, alkalis, solvents & sour oil
Steam-purge resilience	Withstands +260 °C saturated steam purging	Moisture & UV	Non-hygroscopic (< 0.01 %) & UV immune
Standards	IEC/IEEE 60079-30-1, IEC 62395-1 & IEEE 515		

Sizes

16 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

Model · Resistance code	Voltage grade	Cores count	Res. @ 20°C Ω/m	Res. @ 20°C Ω/km	Conductor alloy / CSA	Max exp. °C	Nominal OD mm	Mass ≈ kg/km
☐ SRQ-1C-00018 · 10 mm ² Cu	0.6/1 kV	1C	0.0018	1.8	NiCu 10 mm ²	260	7.8	148
☐ SRQ-1C-00031 · 6.0 mm ² Cu	0.6/1 kV	1C	0.0031	3.1	NiCu 6.0 mm ²	260	6.6	102
☐ SRQ-1C-00046 · 4.0 mm ² Cu	0.6/1 kV	1C	0.0046	4.6	NiCu 4.0 mm ²	260	5.8	76
☐ SRQ-1C-00074 · 2.5 mm ² Cu	450/750 V	1C	0.0074	7.4	NiCu 2.5 mm ²	260	5.2	58
☐ SRQ-1C-0012 · 1.5 mm ² Cu	450/750 V	1C	0.0121	12.1	NiCu 1.5 mm ²	260	4.7	45
☐ SRQ-1C-0025 · CuNi Alloy	450/750 V	1C	0.0250	25.0	CuNi2 2.5 mm ²	260	5.2	57
☐ SRQ-1C-0050 · CuNi Alloy	450/750 V	1C	0.0500	50.0	CuNi6 2.0 mm ²	260	5.0	52
☐ SRQ-1C-0100 · CuNi Alloy	450/750 V	1C	0.1000	100.0	CuNi10 1.5 mm ²	260	4.7	46
☐ SRQ-1C-0250 · CuNi23 Alloy	450/750 V	1C	0.2500	250.0	CuNi23 1.5 mm ²	260	4.7	45
☐ SRQ-1C-0500 · CuNi44 Alloy	450/750 V	1C	0.5000	500.0	CuNi44 1.0 mm ²	260	4.4	39
☐ SRQ-1C-1000 · NiCr Alloy	450/750 V	1C	1.0000	1,000.0	NiCr 1.1 mm ²	260	4.5	40
☐ SRQ-1C-1800 · NiCr Alloy	450/750 V	1C	1.8000	1,800.0	NiCr 0.6 mm ²	260	4.2	34
☐ SRQ-2C-0015 · Twin Loop	450/750 V	2C	0.0148	14.8	2×2.5 mm ² NiCu	260	8.6	118
☐ SRQ-2C-0200 · Twin Loop	450/750 V	2C	0.2000	200.0	2×1.5 mm ² CuNi	260	8.0	96
☐ SRQ-3C-00031 · 3-Phase Star	0.6/1 kV	3C	0.0031	3.1	3×6.0 mm ² NiCu	260	12.8	310
☐ SRQ-3C-00074 · 3-Phase Star	0.6/1 kV	3C	0.0074	7.4	3×2.5 mm ² NiCu	260	10.2	175

– For 2C twin-core cables, resistance values represent loop resistance per metre of cable; for 3C three-phase cables, resistance is stated per core per metre.

Typical single-feed pipeline circuit lengths

6 sizes

Cable configuration	Core res. Ω/km	400V @ 15 W/m circuitm	400V @ 25 W/m circuitm	690V @ 15 W/m circuitm	690V @ 25 W/m circuitm
3 × SRQ-1C-00018 (10 mm ² Cu)	1.8	2,430	1,880	3,500	3,240
SRQ-3C-00031 (3×6.0 mm ² Cu)	3.1	1,850	1,430	3,190	2,470
3 × SRQ-1C-00046 (4.0 mm ² Cu)	4.6	1,520	1,180	2,620	2,030
SRQ-3C-00074 (3×2.5 mm ² Cu)	7.4	1,200	930	2,070	1,600
3 × SRQ-1C-0012 (1.5 mm ² Cu)	12.1	940	725	1,620	1,250

Cable configuration	Core res. Ω/km	400V @ 15 W/m circuit m	400V @ 25 W/m circuit m	690V @ 15 W/m circuit m	690V @ 25 W/m circuit m
3 × SRQ-1C-0050 (CuNi6 Alloy)	50.0	460	355	795	615

– Three-phase star (wye) connection at the far end of the pipeline balances phase currents and eliminates a separate return power cable.

Standards and approvals

Certifications



Management systems: ISO 9001, ISO 14001, ISO 45001

Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

WhatsApp / phone

+86 185 9591 3361

Email

info@tebaoflex.com

Web

tebaoflex.com/cables/series-resistance-heating-cable



Typical values for this cable type, based on IEC/IEEE 60079-30-1 & IEEE 515. Values for your order are confirmed in the quotation. Subject to change without notice.
Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.