TES™
Series Constant Watt Heating Cable

Application . . .

Long Line Temperature Maintenance or Freeze Protection
TES series resistance constant Watt heating cables are used where circuit lengths exceed the limitations of parallel resistance heating cables. TES withstands the temperature exposures associated with steam purging.

The series circuitry of TES provides consistent Watt-per-metre power output along the entire length of the cable with no voltage drop. A PTFE overjacket provides chemical resistance for the heating cable while maintaining maximum flexibility.

TES cables are approved for use in ordinary (nonclassified) areas and Catagories 2 and 3 ATEX classified areas.

Ratings . . .

Maximum Watt density .... 25 W/m
Maximum supply voltage .... 750 Vac
Maximum continuous exposure temperature
    Power-off .... 260°C
Minimum installation temperature .... -55°C
Minimum bend radius .... 5 x cable O.D.
T-rating[2] .... T2 to T6 (based on stabilised design)

Stabilised Design . . .

The Watt density limitation for TES cables is directly related to the desired maintain temperature. Thermon is able to ensure the T-rating based on a stabilised design that enables series constant Watt heating cables to operate in hazardous areas without limiting thermostats. TES cable output and T-rating are dependent upon supply voltage, cable resistance, temperature conditions as well as additional variables. Contact Thermon for design assistance.

Basic Accessories[3] . . .

Power Connection: TES cables typically require nonheating terminations at each end of the circuit before connecting to power. Contact Thermon for complete information.

Notes . . .

1. T-rating per internationally recognised testing agency guidelines.

2. Information on additional accessories to complete a heater circuit installation and to comply with approval requirements can be found in the "TES Cables Systems Accessories" product specification sheet (Form TEP0064U).
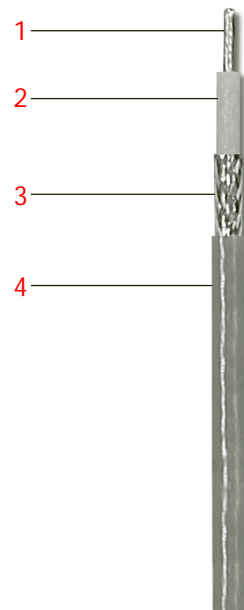
Construction . . .

1 Heating Conductor
2 PTFE Dielectric Insulation
3 Nickel-Plated Copper Braid (BN)
4 PTFE Overjacket

Certification/Approval . . .

CENELEC
European Organisation for Electrotechnical Standardisation
Hazardous (Classified) Locations

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Available Cables . . .

Product Type	Resistance[1] Ohm/m at 20°C	Conductor Size mm²	Max. Cable Length[2] m (at 30 mA earth leakage)	Cable Diameter mm
TES 10	0.010	1.79	1775	4.90
TES 11.7	0.0117	1.50	1880	4.60
TES 15	0.015	1.20	2090	4.54
TES 17.8	0.0178	1.00	2275	4.35
TES 25	0.025	1.11	2525	4.20
TES 31.5	0.0315	1.60	2400	4.80
TES 50	0.050	1.02	2335	4.33
TES 65	0.065	0.75	1890	4.15
TES 80	0.080	1.21	2190	4.45
TES 100	0.100	1.50	2025	4.60
TES 150	0.150	1.02	2335	4.33
TES 200	0.200	0.75	2605	4.15
TES 320	0.320	0.92	2420	4.27
TES 380	0.380	0.79	2555	4.18
TES 480	0.480	0.64	2765	4.06
TES 600	0.600	0.49	3010	3.94
TES 700	0.700	0.43	3155	3.88
TES 810	0.810	0.62	2780	4.05
TES 1000	1.000	0.49	3010	3.94
TES 1440	1.440	0.34	3395	3.79
TES 1750	1.750	0.29	3615	3.72

Notes . . .

1. Consult factory for higher or lower resistance conductor options.

2. Longer circuit lengths are possible based on greater earth leakage; contact Thermon.

Circuit Breaker Sizing and Type . . .

Maximum circuit lengths for TES heating cables will be a function of cable resistance, circuit length and operating voltage. Circuit length, breaker sizing and earth-fault protection should be based on applicable local codes.

Earth-fault protection of equipment should be provided for each branch circuit supplying electric heating equipment.