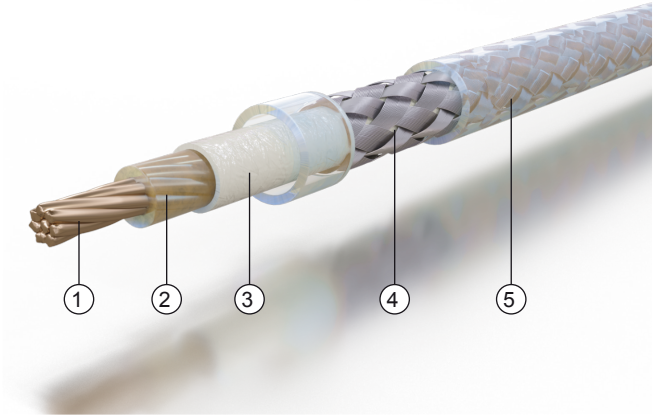
# PRODUCT DATASHEET
# TESH™
## SERIES CONSTANT WATT HEAT TRACING




## APPLICATION

TESH series resistance constant Watt heat tracing is used where circuit lengths exceed the limitations of parallel resistance heat tracing. TESH withstands the temperature exposures associated with steam purging.

The series circuitry of TESH provides consistent Watt-per-meter power output along the entire length of the heat tracing with no voltage drop. A glassceramic tape layer adds additional protection to TESH, and a fluoropolymer overjacket provides chemical resistance while maintaining maximum flexibility. The construction of TESH meets the 7 Joule impact test per EN50019.

TESH is approved for use in ordinary (nonclassified) areas and Categories 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 | -60°C |
| Minimum bend radius | 5 x cable O.D. |
| T-rating [1] | T2 to T6 |
| (using the principles of stabilized design or limiters) [2] | |

**Notes**

1. T-rating per internationally recognized testing agency guidelines.
2. Thermon heating cables are approved for the listed T-ratings using the stabilized design method. This enables the cable to operate in hazardous areas without limiting thermostats. The T-rating may be determined using CompuTrace® Electric Heat Tracing Design Software or contact TC-E for design assistance.

## CERTIFICATIONS/APPROVALS

ISSeP 10ATEX 015X
II 2 G / Ex e IIC T2 to T6 Gb
II 2 D / Ex tb IIIC IP6X T260° to T80° Db

TESH has additional hazardous area approvals including:

- GGTN • Kazakhstan • TR CU • Gospromnadzor • CQST
- FSETAN • RS • TCCExEE

Contact TC-E for additional approvals and specific information.

## CONSTRUCTION

1 Heating conductor
2 Fluoropolymer dielectric insulation
3 Glassceramic tape
4 Nickel-plated copper braid (BN)
5 Fluoropolymer overjacket

## STABILIZED DESIGN

The Watt density limitation for TESH is directly related to the desired maintain temperature. Thermon is able to ensure the T-rating based on a stabilized design that enables series constant Watt heat tracing to operate in hazardous areas without limiting thermostats. TESH output and T-rating are dependent upon supply voltage, resistance, temperature conditions, and additional variables. Contact TC-E for design assistance.

## BASIC ACCESSORIES

Thermon offers system accessories designed specifically for rapid, trouble-free installation of Thermon heat tracing.

All heat tracing requires a connection kit to comply with approval requirements. Information on accessories to complete a heater circuit installation can be found in the “Heating Tracing Systems Accessories” product specification sheet (Form TEP0010U).

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SERIES CONSTANT WATT HEAT TRACING

## AVAILABLE HEAT TRACING

| Product Type | Resistance Ohm/m at 20°C | Conductor Size mm² | Max. Length [1] m (with 30 mA earth-fault protection) | Cable Diameter mm |
|---|---|---|---|---|
| TESH 2.9 | 0.0029 | 6.00 | 1435 | 7.0 |
| TESH 4.4 | 0.0044 | 4.00 | 1525 | 6.3 |
| TESH 7 | 0.0072 | 2.50 | 1855 | 5.5 |
| TESH 10 | 0.010 | 1.79 | 1775 | 5.1 |
| TESH 11.7 | 0.0117 | 1.50 | 2025 | 4.9 |
| TESH 15 | 0.015 | 1.20 | 2090 | 4.7 |
| TESH 17.8 | 0.0178 | 1.00 | 2275 | 4.6 |
| TESH 25 | 0.025 | 1.11 | 2525 | 4.6 |
| TESH 31.5 | 0.0315 | 1.60 | 2400 | 4.9 |
| TESH 50 | 0.050 | 1.02 | 2335 | 4.7 |
| TESH 65 | 0.065 | 0.75 | 1890 | 4.4 |
| TESH 80 | 0.080 | 1.21 | 2190 | 4.3 |
| TESH 100 | 0.100 | 1.50 | 2025 | 4.9 |
| TESH 150 | 0.150 | 1.02 | 2335 | 4.6 |
| TESH 200 | 0.200 | 0.75 | 2605 | 4.4 |
| TESH 320 | 0.320 | 0.92 | 2420 | 4.5 |
| TESH 380 | 0.380 | 0.79 | 2555 | 4.4 |
| TESH 480 | 0.480 | 0.64 | 2765 | 4.3 |
| TESH 600 | 0.600 | 0.49 | 3010 | 4.2 |
| TESH 700 | 0.700 | 0.43 | 3155 | 4.1 |
| TESH 810 | 0.810 | 0.62 | 2780 | 4.3 |
| TESH 1000 | 1.000 | 0.49 | 3010 | 4.2 |
| TESH 1440 | 1.440 | 0.34 | 3395 | 4.1 |
| TESH 1750 | 1.750 | 0.29 | 3615 | 4.1 |
| TESH 2000 | 2.000 | 0.55 | 2900 | 4.2 |
| TESH 3000 | 3.000 | 0.34 | 3395 | 4.1 |
| TESH 8000 | 8.000 | 0.14 | 4455 | 3.8 |

**Note**

1. Longer circuit lengths are possible based on earth-fault protection with higher earth-fault ratings; contact TC-E.

## CIRCUIT BREAKER SIZING AND TYPE

Maximum circuit lengths for various circuit breaker amperages are shown on the left. Circuit breaker sizing and earth-fault protection should be based on applicable local codes. For information on design and performance on other voltages, contact TC-E.

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