PRODUCT SPECIFICATIONS

FP PARALLEL CONSTANT WATT HEATING CABLE

APPLICATION

FP parallel resistance constant watt heating cables are designed to provide freeze protection or process temperature maintenance to piping, tanks and equipment. The parallel resistance configuration allows the cable to be cut to length and terminated in the field with easy-to-use Thermon supplied kits.

FP cables provide consistent and reliable heat outputs regardless of circuit length. Because FP cables are not subject to the inrush current associated with self-regulating heating cables, the need for over sizing power distribution equipment is eliminated.

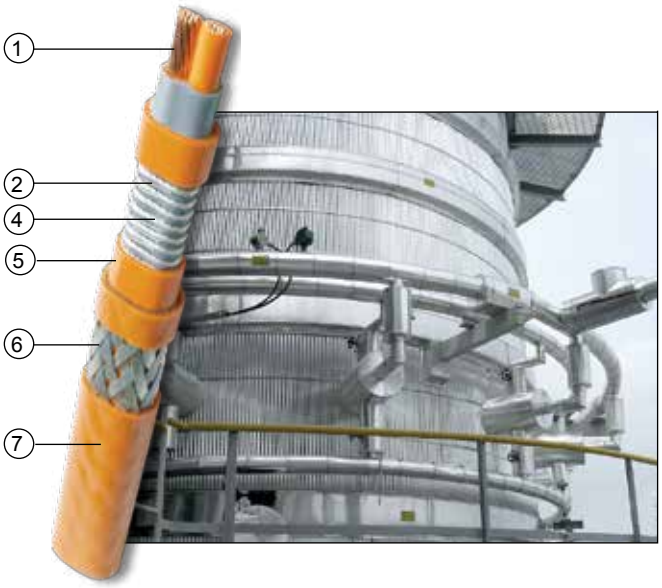
FP cables are certified for use in ordinary (nonclassified) areas and in potentially explosive atmospheres in accordance with the ATEX Directive and the IEC Ex Scheme.

RATINGS

Maximum watt density	33 W/m
Maximum operating voltage [1]	690 Vac
Maximum maintenance temperature	65°C
Maximum continuous exposure temperature	
Power-off	200°C
Minimum installation temperature	-60°C
Minimum bend radius	
@ -15°C	10 mm
@ -60°C	19 mm
T-rating [2]	
Based on stabilized design [3]	T3 to T6

Notes

1. The 690 Vac maximum operating voltage applies to IEC Ex only. Max operating voltage for all other certifications is 575 Vac.
2. T-rating per internationally recognized testing agency guidelines.
3. 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 Thermon for design assistance.



CONSTRUCTION

1 Copper bus wires (3,3 mm²)
2 Nichrome heating element
3 Heater bus connection (not shown)
4 Fiberglass overlay
5 Fluoropolymer dielectric insulation
6 Tinned copper braid
7 Fluoropolymer overjacket provides additional protection to cable and braid where exposure to chemicals or corrosives is expected.

BASIC ACCESSORIES

Thermon offers system accessories designed specifically for rapid, trouble-free installation of Thermon heating cables.

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

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PRODUCT SPECIFICATIONS

FP PARALLEL CONSTANT WATT HEATING CABLE

POWER OUTPUT

The rated power output of FP cables is shown in the table below for the voltages indicated. The heating zone length is the distance between bus connections and represents the minimum circuit length for this type of cable. For maximum possible circuit lengths, see Circuit Breaker Sizing to the right. Contact Thermon before connecting cable to voltages other than those shown in this chart.

Product Type	Operating Voltage	Zone Length cm	Power Output W(m)
FP 2.5-2	230	137	8
FP 5-2	230	102	15
FP 8-2	230	102	24
FP 10-2	230	76	30
FP 8-4	400	152	18
FP 10-4	400	137	23
FP 10-5	575	168	33

CERTIFICATIONS/APPROVALS

II 2 G Ex e II T3 to T6, II 2 D Ex tD A21 IP66/IP67
T200°C to T85°C FM 07ATEX0016

International Electrotechnical Commission
IEC Certification Scheme for Explosive Atmospheres
FMG 06.0008

FM Approvals
Ordinary and Hazardous (Classified) Locations

Underwriters Laboratories Inc.
Hazardous (Classified) Locations

FP has additional hazardous area approvals including:

- CCE/CSIR

Contact Thermon for additional approvals and specific information.

CIRCUIT BREAKER SIZING AND TYPE

Maximum circuit lengths for FP cables at rated voltages are shown below. Circuit breaker sizing should be based on local codes. For information on design and performance on other voltages, contact Thermon.

Ground-fault protection of equipment shall be provided for each branch circuit supplying electric heating equipment.

Product Type	Operating Voltage	Absolute Max. Circuit Length [1] m	Current Draw A/m
FP 2.5-2	230	375	0.035
FP 5-2	230	257	0.065
FP 8-2	230	195	0.130
FP 10-2	230	170	0.130
FP 8-4	400	370	0.045
FP 10-4	400	351	0.058
FP 10-5	575	393	0.056

Notes

1. Circuit length is dependant on capacity of the circuit breaker. To determine the maximum circuit length for a circuit breaker, multiply the current draw of the cable (A/m) by 1.10 and divide this value into the current rating (A) of the circuit breaker.