FP
Parallel Constant Watt Heating Cable

Product Specifications

Application . . .

Freeze Protection or Process Temperature Maintenance
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 oversizing power distribution equipment is eliminated.

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

Ratings . . .

Maximum Watt density [2] ..... 33 W/m
Maximum supply voltage [3] ..... 575 Vac
Maximum maintenance temperature [4] ..... 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

Basic Accessories [5] . . .

Power Connection: All FP cables require a TBX-4L power connection kit for terminating the circuit before connecting to power.

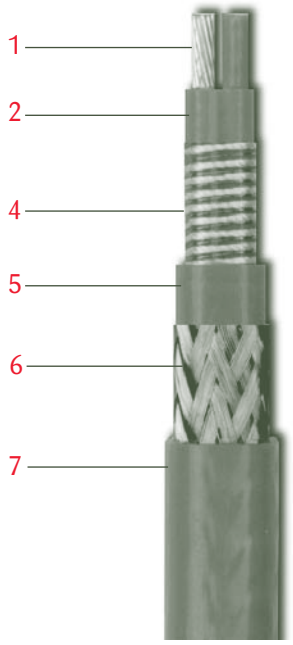
End-of-Circuit Termination: FP cables with overjacket require the ET-8 end cap and ET-80 over cap for terminating at the end of the circuit.

Product Features . . .

- Withstands Continuous Flammability Testing According to IEC 60332-1: 1993
- Can be Installed at Temperatures to -60°C
- Low In-Rush Current

Notes . . .

1. Contact Thermon for assistance with stabilized designs for hazardous areas.
2. Additional power outputs are shown on page 2.
3. Additional operating voltages are shown on page 2.
4. Higher maintenance temperatures may be possible; contact Thermon for design assistance.
5. Information on additional accessories to complete a heater circuit installation and to comply with approval requirements is available, contact Thermon.



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.

Certifications/Approvals . . .

CENELEC — **European Organisation for Electrotechnical Standardisation**
Ordinary and Hazardous (Classified) Locations

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

IEC Ex — **International Electrotechnical Commission**
IEC Certification Scheme for Explosive Atmospheres FMG 06.0008

FM Approved — **FM Approvals**
Ordinary and Hazardous (Classified) Locations

UL LISTED — **Underwriters Laboratories Inc.**
Hazardous (Classified) Locations

FP has additional hazardous area approvals including:
- CCE/CMRS

Contact Thermon for additional approvals and specific information.

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www.thermon.com

ISO 9001 REGISTERED

European Headquarters
Boezemweg 25 • PO Box 205
2640 AE Pijnacker • The Netherlands
Phone: +31 (0) 15-36 15 370

Corporate Headquarters
100 Thermon Dr. • PO Box 609
San Marcos, TX 78667-0609 • USA
Phone: +1 512-396-5801

For the Thermon office nearest you visit us at . . .
www.thermon.com

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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	Service 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

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	Service 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

Note . . .

1. Circuit length is dependant on ampacity 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.

