APPLICATION FREEZE PROTECTION AND PROCESS TEMPERATURE MAINTENANCE

The following information relates to power connection kits, end termination kits and common installation accessories used with Thermon BSX™, RSX™, KSX™, HTSX™, VSX-HT™, USX™, FP, HPT, MIS, MIQ and TEK heating cables.



Terminator ZP... is designed to fabricate power connections, in-line/T-splice connections or for making end terminations. The Terminator ZP-XP is suitable for use in hazardous areas (Ex e T6/ T4), harsh industrial environments and has a IP66 rating. The up front positioning of the terminal block permits easy access during termination and for future routine maintenance.

The Terminator ZP kit includes; Pipe-mounted expediter with suitable grommet, Junction box with two M25 entries and one M25-B-Exe blind plug, Four 6 mm² line/load terminals, Two 6 mm² earth terminals, Terminals rated to 22 amps (T6 85°C) or 46 amps (T4 135°C), Maximum voltage rating of 750 Vac. Wall mount version is available.

Product Reference Legend:

ZP-XP and ZP-WPRS	SX, VSX-HT, BSX, HTSX,
	KSX, USX, FP, HPT
ZP-R-XP and ZP-R-WP	TESH
ZP-MI-WP	MIS, MIQ
ZP-M-XP	TEK



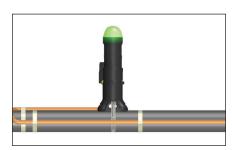


Terminator ZL... is designed to provide visual indication of an energized heating circuit. The kit may be utilized as a power connection or an end termination kit. Electrical connections are made in terminal blocks utilizing nickel-plated copper terminals to ensure corrosion-free electrical

The Terminator ZL kit includes; IP66 rated junction box, yellow LED indicating lamp, four 6 mm² line/ load terminals, two 6 mm² earth terminal, pipemounted fitting, heater cable grommet.

Product Reference Legend:

ZL-XP and ZL-WPRSX, VSX-HT, BSX, HTSX, KSX, USX, FP, HPT



Terminator Beacon... end-of-circuit light kits are designed specifically for rapid, trouble-free installation of Thermon self-regulating and powerlimiting, parallel resistance polymer insulated heating cables. The Terminator Beacon utilizes a high intensity green LED assembly for superior day or night visibility.

Product Reference Legend:

ZE-BBSX, RSX, HTSX, KSX, VSX-HT, USX, FP, HPT



Terminator ZS/ZE...designed to fabricate accessible outside-the-insulation splices or end terminations of Thermon Heating Cables. Electrical connections are made using wire fasteners (for applications requiring terminations to be made with terminal block connections, the Terminator ZP kit may be used).

Product Reference Legend:

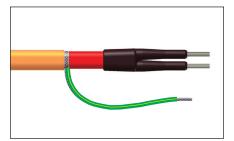
ZS/ZE-XPBSX, RSX, HTSX, KSX, VSX-HT, USX,



PETK...circuit fabrication kits are required for use with all Thermon Parallel Heating Cables Connection Kits. Kits for termination of SX cables include a power connection boot, end cap, RTV adhesive and a caution label. Kits for termination of HPT and FP cables also include tape strip and a distinct grommet.

Product Reference Legend:

PETK-1	BSX, RSX, VSX-HT
PETK-2	KSX, HTSX, USX
PETK-3	FP, HPT
PETK-3-ECM	FP, HPT
PETK-3-ZT	FP, HPT
PFTK-4	HDT > 240°C



SCTK...splice connection termination kits are required when preparing outside-the-insulation splices with all Thermon Parallel Heating Cables Connection Kits. Kits for terminations of SX cables include 2 splice connection boots, assorted wire nuts and RTV adhesive. Kits for termination of HPT and FP cables also include a distinct grommet.

Product Reference Legend:

SCTK-1	BSX, RSX, VSX-HT
SCTK-2	KSX, HTSX, USX
SCTK-3	FP, HPT

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CABLE END TERMINATION KITS, ATTACHMENT TAPES AND MISCELLANEOUS ITEMS



CS-L-*-Ex.... Circuit switch with lamp to be used as an in-line isolation switch for single phase, phase-phase and 3-phase heat tracing circuits. Available in 16 A, 25 A and 40 A versions.



B-4, B-10, B-21...stainless steel attachment bands for securing Thermon nonmetallic kits to pipes.
B-4...for pipes up to 100 mm diameter
B-10...for pipes up to 250 mm diameter
B-21...for pipes up to 530 mm diameter
ABA-25...for pipes up to 25 mm diameter
ABA-40... for pipes up to 40 mm diameter

Terminator-LN-Tool...for tightening the locnuts of the Terminator kits. Tool is recommended to ensure enclosure is properly secured to the pipe-mounted expediter.



Insulation Entry Kits (IEK)... are used for inserting permanent circular and noncircular cables into the insulation. The kit protects and seals the cable while penetrating the insulation cladding.

Item Description	Cable	Torque Value (Nm)
IEK-14	HTSX, KSX, USX, FP	4,5
IEK-18	HPT, KSR	5,5
IEK-19	BSX, FLX	8,0
IEK-20	VSX-HT, RSX	8,0
IEK-TES-1LT	TESH / PT100	1,5



Tracer Cable Glands non-metallic... These polyamide cable glands are used for inserting permanent circular and non-circular cables into the enclosure. The glands are certified for use in ordinary (nonclassified) areas and in potentially explosive atmospheres in accordance with the ATEX Directive and the IECEX Scheme.

Item Name	Cable	Torque Value (Nm)
M25-14-EXE	HTSX, KSX, USX, FP	4,5
M25-18-EXE	HPT, KSR	5,5
M25-19-EXE	BSX, FLX	8,0
M25-20-EXE	VSX-HT, RSX	8,0
M20 EXE + PT100	TESH, also for	1,5
+ TESH (8161 7-13)	PT100 / Power	



Power Cable Glands non-metallic...These polyamide glands are used for inserting power cables into the enclosure. The glands are certified for use in ordinary (nonclassified) areas and in potentially explosive atmospheres in accordance with the ATEX Directive and the IECEX Scheme.

Item Name	Dia. (mm) min - max	Torque Value (Nm)	Ambient Temp.
M20 EXE + PT100 + TESH (8161 7-13)	4,0- 13,0 7,0- 17,0	1,5 2,0	-60° to 75°C -60° to 75°C
M25 EXE (8161 10-17)	7,0- 17,0	2,0	-60° to 75°C



FT-1L, FT-1H... fixing tape for attaching heating cable to piping every 300 mm or as required by code or specification.

AL-20H, AL-30H... aluminium tapes for continuous (longitudinal) covering cable to piping and/or equipment.

Item Number	Max. Temp. (Exposure)	Min. Temp. (Installation)	Size (mm x m
FT-1L	93 °C	5 °C	12 x 33
FT-1H	260 °C	-40 °C	12 x 33
AL-20H	150 °C	-5 °C	50 x 55
AL-30H	150 °C	-5 °C	76 x 55



SK-SX-OJ...Ex e approved under-the-insulation repair and splice kit for overjacketed SX cables. Kit includes stainless steel shells, screws, grommets, RTV adhesive/sealant, insulation tape and the necessary wire pins/lugs.



CL...vinyl-based peel-and-stick caution labels are intended for direct exposure to industrial environments. Electrically heated pipelines and vessels should be clearly identified at frequent intervals along the pipeline or vessel. Caution labels should be placed at 3 to 6-m intervals or as required by code or specification. Additional languages or other texts are available; contact Thermon.



XP-1-... predrilled stainless steel (type 304) mounting bracket designed for mounting Thermon junction boxes and thermostats directly to the pipework. The bracket is easily secured to the pipe using B-4, B-10 or B-21 attachment bands. The XP-1 utilises a 110-mm standoff.

XP-1-140	X140	JB-K-0, JB-K-1, JB-K-2
XP-1-WP		Terminator WP