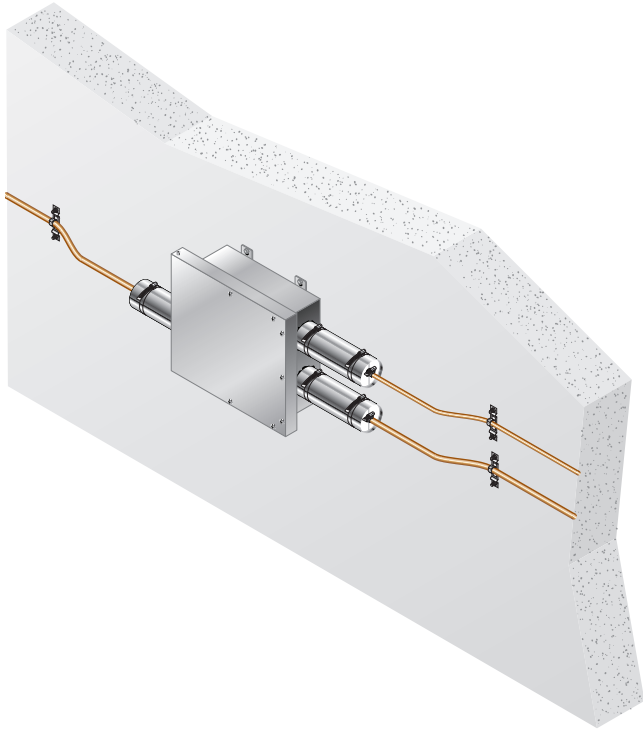


1-HOUR FIRE-RATED THREE-WAY SPLICE (FTS)

For Critical Life Safety Circuit Protection During a Fire in a Tunnel



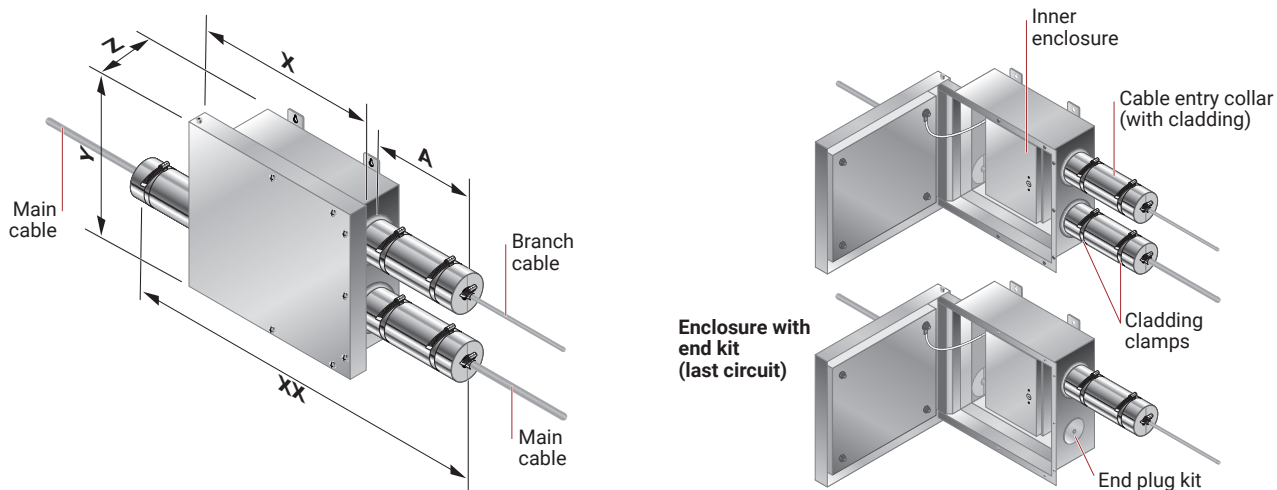
PRODUCT OVERVIEW

The nVent PYROTENAX Fire-Rated Three-Way Splice (FTS) is a UL Classified/ULC Listed 1-hour fire-rated splice system tested and approved to the UL 2196/ULC S-139 Standards as a fused, three-way splice system designed for road and tunnel lighting applications. A complete UL/ULC 1-hour fire-rated System listing is achieved when the FTS Enclosure is installed in conjunction with nVent PYROTENAX System 1850 MI Cable per the installation manuals. Listing details can be found in Electrical Circuit Integrity System (FHIT and FHIT7) System No. 1850 of the UL/ULC Fire Resistance Directory.

The FTS splice system is designed to ensure that the Emergency lighting system within road and rail tunnels will remain functional during a fire event as per the requirements of NFPA 130 and 502 standards. The product protects the primary main power line leading to and from the fire zone, and due to the fused design, will not be interrupted due to a failure in the branch circuit. The inner electrical enclosure is Type 4X rated to resist moisture inside of underground tunnels and potential corrosion from long term exposure.

The FTS system is offered as a pre-assembled system with pre-terminated cables for both the main power and branch circuits, but can also be supplied in bulk configuration where the installer would field terminate the cables. The pre-assembled system is designed to optimize the installation time and minimize both labor costs and tunnel down time during retrofit operations.

For additional information, contact your nVent sales representative or call (800) 545-6258.



FIRE-RATED THREE-WAY SPLICE KIT FOR COPPER-SHEATHED CABLES (FTS)

Type	Field installed Fire-Rated Three-Way Splice
Continuous exposure temperature	105°C (221°F)
Maximum exposure temperature	927°C (1700°F) based on ASTM E119 time-temperature curve
Material	
Outer enclosure	Type 304 stainless steel with Inner insulation
Inner enclosure	Enclosure Type 4X, aluminum
Cable entry collars	Insulation with Type 304 stainless steel protective covers (cladding)
Wire insulation sleeving	Silicone rubber coated braided fiberglass (-55°C / +200°C)
Hose clamp (for cladding)	Type 304 stainless steel
Cable stop clamp	Type 316 stainless steel
End kit plug (outer enclosure)	Insulation with type 304 stainless steel protective plate and rod
End kit threaded plug (inner enclosure)	Brass
Dimensions (approx.)	
Enclosure	21.5" wide (X) x 19" high (Y) x 8.5" deep (Z)
Cable entry collars with cladding	12.5" long (A) by 5" diameter
Overall with collars/cladding	42.75" wide (XX) x 19" high (Y) x 8.5" deep (Z)
Weight (approx.)	
Enclosure	45 lbs
Enclosure without removable door	29 lbs
Cable entry collars (incl. cladding)	3.3 lbs
End kit plug (outer enclosure)	0.5 lbs
Insulation voltage rating	600 V
Cable jacket (optional)	Low-smoke, zero-halogen polyolefin – refer to system 1850Z datasheet
Number of conductors	2, 3, 4, or 7 standard ¹ (See Table 1 for details)
Maximum continuous current	60 Amp
Conductor size range	
Main	14 to 1 AWG (See Table 1 for details)
Branch	14 to 6 AWG (See Table 1 for details)
Fuses	
Type	ATMR
Amperage	0.1 Amp to 30 Amp. (See Table 2 for details)

¹ Contact nVent for custom configurations

TABLE 1

Cable Reference Number	NPT Gland Size Main	NPT Gland Size Branch	Cable Reference Number	NPT Gland Size Main	NPT Gland Size Branch
Two Conductor			Four Conductor		
2/14-371	3/4	3/4	4/14-465	3/4	N/A
2/12-402	3/4	3/4	4/12-465	3/4	N/A
2/10-449	3/4	3/4	4/10-590	3/4	N/A
2/8-512	3/4	3/4	4/8-590	1	N/A
2/6-590	1	1	4/6-730	1-1/4	N/A
2/4-684	1	N/A	Seven Conductor		
2/3-768	1-1/4	N/A	7/14-496	1	N/A
2/2-865	1-1/4	N/A	7/12-543	1	N/A
2/1-975	1-1/4	N/A	7/10-621	1-1/4	N/A
Three Conductor			7/8-710	1-1/4	N/A
3/14-387	3/4	3/4			
3/12-480	3/4	3/4			
3/10-480	3/4	3/4			
3/8-590	1	1			
3/6-621	1	1			
3/4-746	1-1/4	N/A			
3/3-834	1-1/4	N/A			

TABLE 2

Fuse Type	Rating	Minimum Branch Gauge	Fuse Type	Rating	Minimum Branch Gauge
ATMR1/10	0.1 A	14 AWG	ATMR4	4.0 A	14 AWG
ATMR1/8	0.125 A	14 AWG	ATMR5	5.0 A	14 AWG
ATMR2/10	0.2 A	14 AWG	ATMR6	6.0 A	14 AWG
ATMR1/4	0.25 A	14 AWG	ATMR7	7.0 A	14 AWG
ATMR3/10	0.3 A	14 AWG	ATMR8	8.0 A	14 AWG
ATMR1/2	0.5 A	14 AWG	ATMR9	9.0 A	14 AWG
ATMR3/4	0.75 A	14 AWG	ATMR10	10 A	14 AWG
ATMR1	1.0 A	14 AWG	ATMR12	12 A	14 AWG
ATMR1-1/4	1.25 A	14 AWG	ATMR15	15 A	14 AWG
ATMR1-1/2	1.5 A	14 AWG	ATMR20	20 A	12 AWG
ATMR2	2.0 A	14 AWG	ATMR25	25 A	10 AWG
ATMR2-1/2	2.5 A	14 AWG	ATMR30	30 A	10 AWG
ATMR3	3.0 A	14 AWG			
ATMR3-1/2	3.5 A	14 AWG			

APPROVALS

System 1850 Cables:



Terminations for System 1850 Cables:



Electrical Enclosure:



Completed Splice:

- Splice is part of the Electrical Circuit Integrity System (FHIT) System No. 1850 in the UL Fire Resistance Directory when used with UL Classified System No. 1850 cable (tested with hose stream)
- Splice is part of the Electrical Circuit Integrity System Certified for Canada (FHIT7) System No. 1850 in the ULC Fire Resistance Directory when used with ULC Listed System No. 1850 cable (tested with hose stream)



UL Classified, 1-hour fire-resistive cable, tested to UL 2196



ULC Listed, 1-hour fire-resistant cable, tested to ULC-S139

ORDERING INSTRUCTIONS

Order Reference

FTS_KIT	Field Installed Fire-Rated Three-Way splice
FTSENDKIT34	FTS end kit for 3/4 in NPT threaded entry
FTSENDKIT1	FTS end kit for 1 in NPT threaded entry
FTSENDKIT114	FTS end kit for 1-1/4 in NPT threaded entry

For ordering details, contact your nVent sales representative or call (800) 545-6258

The following information will be required prior to order entry:

Main cable	No. of conductors & AWG size (See Table 1 for details)
Branch cable	No. of conductors & AWG size (See Table 1 for Details)
FTS type	Factory (F) or Field (P)
Circuit type	Line to Line (LL) or Line to Neutral (LN)
Fuse amperage	See Table 2
Route lengths	(FTS Factory only) Main and branch

Note: One end kit required per circuit for the last enclosure in the line.

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