

RHTI/RHTO – X1 For Single Core Polymeric Insulated Cables (XLPE/EPR) up to 42kV

REPL Heat Shrink Cable Termination Kits are extensively tested and used worldwide for reliable cable junctions in the voltage range from 7.2kV to 42kV. The kits are designed for either indoor or outdoor applications for cables with polymeric (XLPE or EPR) insulation and can be used with both compression or mechanical type lugs (which can be supplied in the kit if specified).

The termination kits combine the anti-tracking external tubing for excellent weathering and electrical properties together with an internal stress control tube for field control at the insulation screen cut.

Where applicable, sheds are included for extending the creepage distance – kits can be tailored with extra sheds for areas with high pollution or for coastal installations.

For cables with armouring, a solderless earth kit is included to create a consistent connection from the cable screen and armour.

All kits come with adequate mastic tapes for sealing and easy to follow installation instructions.

The termination kits can be used in conjunction with other REPL accessories such as insulating boot kits, gland plates and pole top mounting brackets and insulators.

Kit Contents:

Standard Kits for un-armoured cables:

1. Cable Phase Lug (optional – supplied only if specified)
2. Red Sealing Mastic for Top Seal
3. Anti-Tracking Heat Shrink Tube
4. Creepage Extension Sheds – based on voltage/type
5. Stress Control Heat Shrink Tube
6. Stress Control / Void Filling Yellow Mastic
7. Sealant Mastic for Metallic Screen

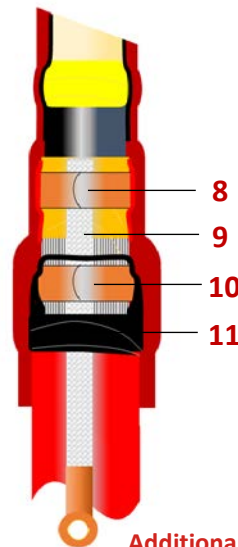
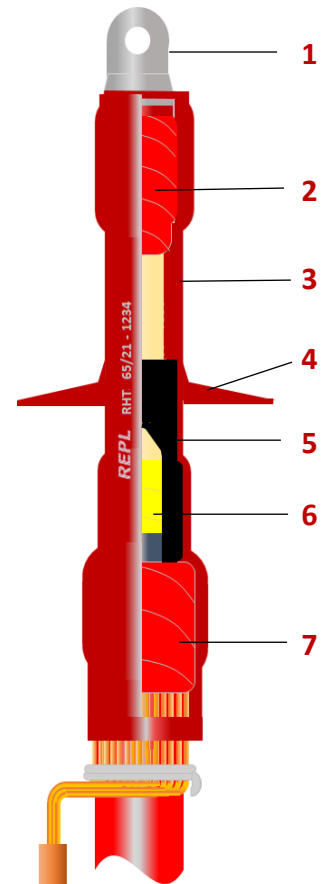
Additional screen earthing components for armoured cables (specify - /e at end of termination kit part number)

8. Constant Force Spring for Copper Tape Screen
9. Tinned Copper Braid
10. Constant Force Spring for armour
11. Black Sealing Mastic for armours

(Kits are normally supplied as sets of 3 phases)

Technical Properties:

Voltage Class >	7.2kV	12kV	17.5kV	24kV	36kV	42kV
Cross Section Range (mm ²)	25-630	35-1000	35-1000	35-1000	50-1000	50-1000
Cable Insulation Diameter (mm)	13.5-36	14.6-46	17.7-48	18-50	24-55	24-55
Voltage Rating U ₀ /U (U _m) kV	3.8/6.6 (7.2)	6.35/11 (12)	8.7/15 (17.5)	12.7/22 (24)	19/33 (36)	20.8/36 (42)
Basic Impulse Level (BIL) kV	60	95	95	125	194	200
Partial Discharge at 2U ⁰ (pC)	<2	<2	<2	<2	<2	<2
AC Voltage Withstand , 1 min (kV)	15	25.5	35	51	76	83
AC Voltage Withstand , 5 min (kV)	17	28.5	39	57	85.5	93.5
DC Voltage Withstand , 15 min (kV)	23	38	52	76	114	125



Termination for cable with copper wire screen (no armouring)

Additional earthing for copper tape screen and wire armouring

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RHTI/RHTO – X1 Cable Termination Selection Chart



7.2 kV	Cross Section (mm ²)	Kit Number Indoor	Kit Number Outdoor	*Diameter over Insulation (mm)
	35-95	RHTI 7X 35-95-1	RHTO 7X 35-95-1	13.5-16.8
95-185	RHTI 7X 95-185-1	RHTO 7X 95-185-1	16.8-21.3	
185-300	RHTI 7X 185-300-1	RHTO 7X 185-300-1	21.3-25.8	
300-630	RHTI 7X 300-630-1	RHTO 7X 300-630-1	25.8-35.8	



12 kV	Cross Section (mm ²)	Kit Number Indoor	Kit Number Outdoor	*Diameter over Insulation (mm)
	35-95	RHTI 12X 35-95-1	RHTO 12X 35-95-1	14.6-18.6
95-185	RHTI 12X 95-185-1	RHTO 12X 95-185-1	18.6-23.1	
185-300	RHTI 12X 185-300-1	RHTO 12X 185-300-1	23.1-27.6	
300-630	RHTI 12X 300-630-1	RHTO 12X 300-630-1	27.6-37.6	
630-1000	RHTI 12X 630-1000-1	RHTO 12X 630-1000-1	37.6-45.6	



17.5 kV	Cross Section (mm ²)	Kit Number Indoor	Kit Number Outdoor	*Diameter over Insulation (mm)
	35-95	RHTI 17X 35-95-1	RHTO 17X 35-95-1	17.7-22.1
95-185	RHTI 17X 95-185-1	RHTO 17X 95-185-1	22.1-26.5	
185-300	RHTI 17X 185-300-1	RHTO 17X 185-300-1	26.5-31.1	
300-630	RHTI 17X 300-630-1	RHTO 17X 300-630-1	31.1-41.0	
630-1000	RHTI 17X 630-1000-1	RHTO 17X 630-1000-1	41.0-47.1	



24 kV	Cross Section (mm ²)	Kit Number Indoor	Kit Number Outdoor	*Diameter over Insulation (mm)
	35-95	RHTI 24X 35-95-1	RHTO 24X 35-95-1	18.0-22.8
95-185	RHTI 24X 95-185-1	RHTO 24X 95-185-1	22.8-27.3	
185-300	RHTI 24X 185-300-1	RHTO 24X 185-300-1	27.3-31.8	
300-630	RHTI 24X 300-630-1	RHTO 24X 300-630-1	31.8-41.8	
630-1000	RHTI 24X 630-1000-1	RHTO 24X 630-1000-1	41.8-49.8	



36 kV	Cross Section (mm ²)	Kit Number Indoor	Kit Number Outdoor	*Diameter over Insulation (mm)
	35-95	RHTI 36X 35-95-1	RHTO 36X 35-95-1	24.0-27.8
95-185	RHTI 36X 95-185-1	RHTO 36X 95-185-1	27.8-32.3	
185-300	RHTI 36X 185-300-1	RHTO 36X 185-300-1	32.3-36.8	
300-630	RHTI 36X 300-630-1	RHTO 36X 300-630-1	36.8-46.8	
630-1000	RHTI 36X 630-1000-1	RHTO 36X 630-1000-1	46.8-54.8	



42 kV	Cross Section (mm ²)	Kit Number Indoor	Kit Number Outdoor	*Diameter over Insulation (mm)
	95-185	RHTI 42X 95-185-1	RHTO 42X 95-185-1	27.8-32.3
185-300	RHTI 42X 185-300-1	RHTO 42X 185-300-1	32.3-36.8	
300-630	RHTI 42X 300-630-1	RHTO 42X 300-630-1	36.8-46.8	
630-1000	RHTI 42X 630-1000-1	RHTO 42X 630-1000-1	46.8-54.8	

Notes

*the diameter of insulation values are based on typical designs – due to manufacturing tolerances and conductor construction, the range of cables sizes suitable for each kit may change dependent upon actual cable to be terminated.

For cables with copper tape screens/armouring, additional earthing kit can be supplied with the kit – specify suffix -/e after kit number, i.e. RHTI 12X 95-185-1/e

A full range of cable insulating boots, cable glands, earthing kits for special cable constructions and pole mounting brackets are available – please see relevant data sheets

For special applications not covered by standard kits, please consult your local REPL sales office.

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