

RAYCHEM PLUG-IN TERMINATIONS RPIT

INNER CONE SYSTEMS FOR SWITCHGEARS AND TRANSFORMERS
UP TO 1000 MM² CABLE CROSS SECTION AND VOLTAGE UP TO 52 kV

CONNECTION TO MEET THE INCREASING ELECTRICAL PERFORMANCE WITH RAYCHEM RPIT

In 2030, 20% of our global energy will rely on renewable power. Your success depends on reliable, high-performing connections. Connections that last as long as your project lifetime and can withstand the harshest environments - with no maintenance.

To tackle this challenge, we engineered Raychem RPIT — our inner cone plug-in terminations size 2 (800 A) and 3 (1250 A). Our Raychem RPIT is available for system voltages from 12 kV to 52 kV. Our Raychem RPIT portfolio is designed in accordance with IEC 60228 and are compatible with inner cone bushings size 2 (800 A) and size 3 (1250 A) as per EN 50180/EN 50181.



TE Connectivity has decades of experience in the field of hermetically insulated termination systems for medium voltage networks and offers an inner cone termination product series that ensure reliable cable connection for switchgear and transformers up to 52 kV.

Our Raychem Plug-in Terminations RPIT separable connectors are compliant with CENELEC HD 629.1.S2:2006-A1:2008 (up to 42 kV) and IEC 60840 (52 kV).

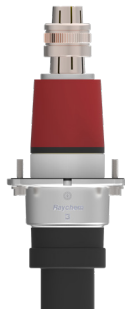
The terminations incorporate a high-quality contact system, ensuring a reliable current transmission from the cable conductors to the busbars. The electrical interfaces between the silicone stress relief cone to the cable and bushing are kept permanently sealed using a pressure component. This element is housed in the protection cover, which is sealed with heat shrink tubing.

The installation and plug-in of the inner cone terminations is simple, using a silicone component which is compatible with industry-wide standards. TE also offers a full line of other RPIT accessories such as bushings, insulating caps and up-to-date testing tools to meet the needs of our customers.

RPIT PRODUCT PORTFOLIO



Size 2
Rated current max.
800 A



Size 3
Rated current max.
1250 A



Size 3XL
Rated current max.
1250 A



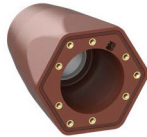
Size 2 and Size 3 with Kries CAPDIS voltage and Partial discharge detection system

ACCESSORIES

Raychem Plug-in Sockets RPIS



Size 2 (800 A)



Size 3 (1250 A)

Raychem Plug-in Caps RPIC



Size 2



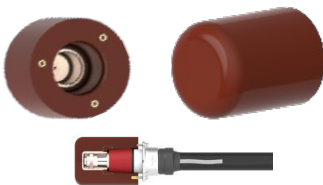
Size 3

Raychem Plug-in Test Leads MVTL



Size 2 & 3

Raychem Plug-in Insulating Sockets RPIT-IS



Size 2 & 3

Raychem Plug-in Testing Sockets



Size 2 & 3

Raychem Plug-in Protection Covers



Size 2 & 3

CUSTOMIZABLE WITH AN OPTIONAL VOLTAGE DETECTION POINT AND A SPECIAL MATERIAL COMPOSITION FOR HARSH ENVIRONMENTS

APPLICATIONS

- Training your installers on new cables and products
- Solar Energy Solutions
- Wind Energy Solutions
- Battery Energy Storage
- Data Centres
- Rail & Metro Power Solutions
- Oil and Gas Solutions
- Underground Power Networks

RELEVANT STANDARDS



- Designed in accordance to CENELEC HD 6291.S2:2006 - A1:2008 (up to 42 kV) and IEC 60840 (52 kV)
- Compatible with inner cone bushings as per EN 50180/ EN 50181
- Compliant to cable conductors in accordance to IEC 60228

FEATURES & BENEFITS

- New extended application range to cover 800 mm² and 1000 mm² cable up to 42 kV with size 3 bushing
- Shielded inline connection for gas insulated switchgear and transformers up to 52 kV
- Metal-enclosed, hermetically insulated, and suitable outdoor use
- Designed to be used for different conductor types in accordance with IEC 60228
- Optional voltage detection point
- Fully compatible with EN 50180 and EN 50181 standardised inner cone bushings



RAYCHEM RPIT CONNECTORS TESTING DATA (ACCORDING TO CENELEC HD629.1. S2)

Parameters	Size 2	Size 3 / Size 3XL	
Product Image			
U ₀ / U	20.8/36	20.8/36	-
U _m	42	42	-
DC withstand voltage 15 min (kV)	125	125	No breakdown or flash over
AC withstand voltage 5 min (kV)	93.5	93.5	No breakdown or flash over
PD at ambient temp (kV)	< 2 pC	< 2 pC	Max 10 pC at 2 U ₀
Impulse voltage at elevated temp (kV)	200	200	10 impulses of each polarity; no breakdown
Heating cycle voltage in air (kV)	52	52	63 cycles at 2.5 U ₀ ; no breakdown
Heating cycle voltage in water (kV)	52	52	63 cycles at 2.5 U ₀ ; no breakdown
Thermal short circuit conductor (kA)	31.8/2.93 sec	34.93/4.75 sec	2 short circuits to raise conductor to 250 deg C; no breakdown
Dynamic short circuit (kA)	125	125	1 short circuit at I _d ; no breakdown
Disconnection/Connection	5 x pass	5 x pass	5 complete operations; no visible damage to contact
Partial discharge at elevated and ambient temp (kV)	< 2 pC	< 2 pC	Max 10pC at 2 U ₀
Impulse voltage at ambient temp (kV)	200	200	10 impulses of each polarity; no breakdown
AC withstand voltage 15 min (kV)	52	52	No breakdown or flash over

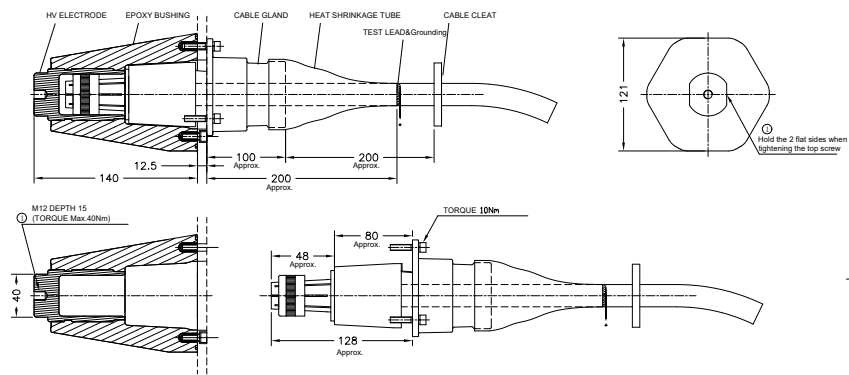
RAYCHEM RPIT CONNECTORS TECHNICAL DATA

Description	Size	Nominal Current (A)	System Voltage (kV)	Cross Section (mm ²)	Diameter over conductor (mm)	Diameter over insulation (mm)
RPIT - 321x	2	800	12	120 - 400	12.0 - 24.6	21.0 - 33.0
RPIT- 421x	2	800	17.5	95 - 400	11.0 - 24.6	21.0 - 34.2
RPIT - 521x	2	800	24	50 - 400	7.6 - 24.6	21.0 - 39.0
RPIT - 621x	2	800	42	50 - 400	7.6 - 24.6	23.5 - 42.0
RPIT - 331x	3	1250	12	240 - 1000	17.0 - 39.2	26.0 - 47.6
RPIT - 431x	3	1250	17.5	185 - 1000	15.5 - 39.2	26.0 - 49.4
RPIT - 531x	3	1250	24	150 - 1000	13.0 - 39.2	26.0 - 53.2
RPIT - 631x	3	1250	42	70 - 1000	7.6 - 39.2	26.0 - 58.8
RPIT - 831x	3	1250	52	50 - 500	7.6 - 27.6	26.0 - 55.0

TE's Raychem RPIT are available with and without voltage detection up to 42 kV 630 mm². For over insulation diameters greater than 50 mm, RPIT voltage detection is not available. One kit contains a set of 3 plug-in terminations.

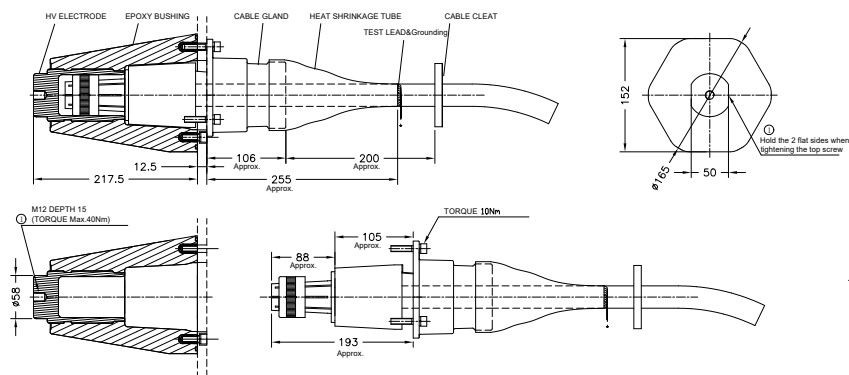
For installation of RPIT on cable conductor cross section 800 and 1000 mm² Al/Cu TE RPIT crimping tool IT-1000-036-XL is needed.

RAYCHEM RPIT 2D DRAWINGS



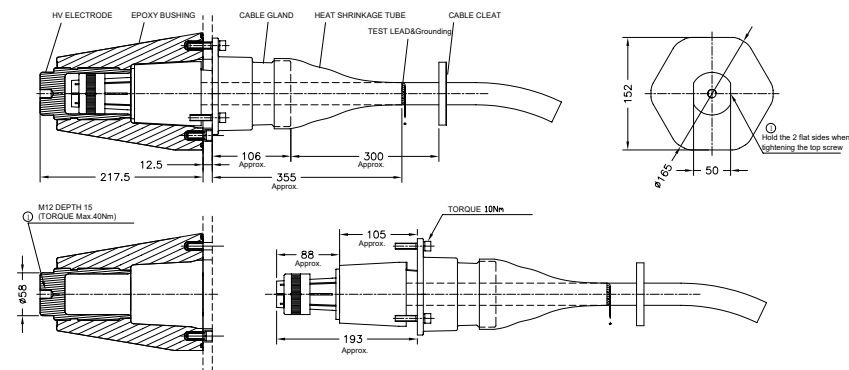
RPIT Inner Cone Size 2

Technical Data	
MAX. voltage Um (kV)	42
AC withstand (kV)	93.5
Lighting impulse voltage (kV)	200
Max. insulation dia. (mm)	42
Rated current (A)	Max.800
Weight (kg)	1.5



RPIT Inner Cone Size 3

Technical Data	
MAX. voltage Um (kV)	42
AC withstand (kV)	93.5
Lighting impulse voltage (kV)	200
Max. insulation dia. (mm)	50
Rated current (A)	Max.1250
Weight (kg)	2.5



RPIT Inner Cone Size 3XL 800-1000 mm²

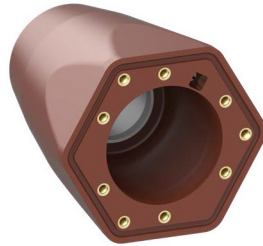
Technical Data	
MAX. voltage Um (kV)	42
AC withstand (kV)	93.5
Lighting impulse voltage (kV)	200
Max. insulation dia. (mm)	58.8
Rated current (A)	Max.1250
Weight (kg)	2.5

RAYCHEM PLUG-IN SOCKETS

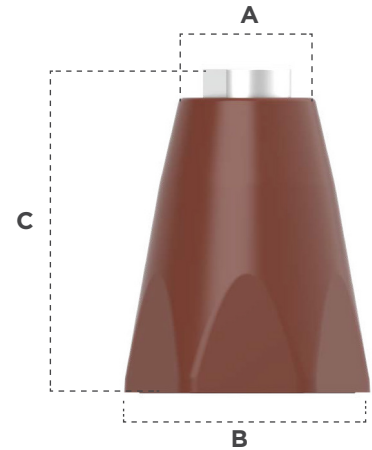
According to EN 50180/50181



Size 2 (800 A)



Size 3 (1250 A)

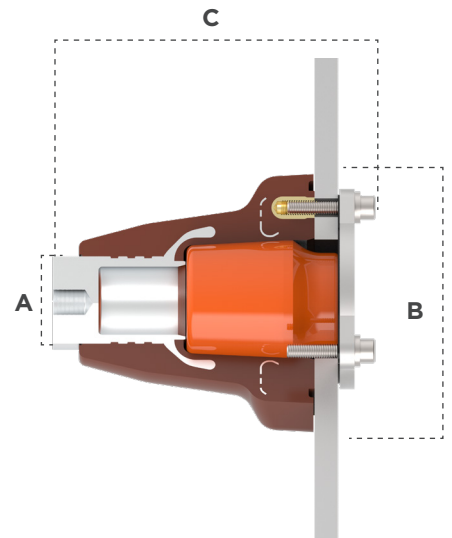
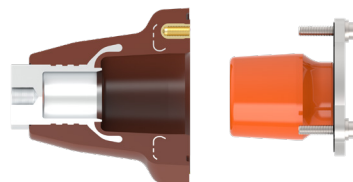


Part Number	Part Description	Second Description	Gross Weight	Packaging Dimension (cm)	Packing
2298377-2	RPIS-2	Size 2 without VD function	12.48 kg	64 X 24 X 30	6 pcs weight, 6 pcs/box MOQ 6
2298377-1	RPIS-2 VD	Size 2 with VD function	12.15 kg	64 X 24 X 30	6 pcs weight, 6 pcs/box MOQ 6
2298376-2	RPIS-3	Size 3 without VD function	16.16 kg	47 X 32 X 23	3 pcs weight, 3 pcs/box MOQ 3
2298376-1	RPIS-3 VD	Size 3 with VD function	16.45 kg	47 X 32 X 23	3 pcs weight, 3 pcs/box MOQ 3

DIM (mm)	Size 2	Size 3
ØA	68	97
B	124	148
C	140	217

RAYCHEM PLUG-IN CAPS

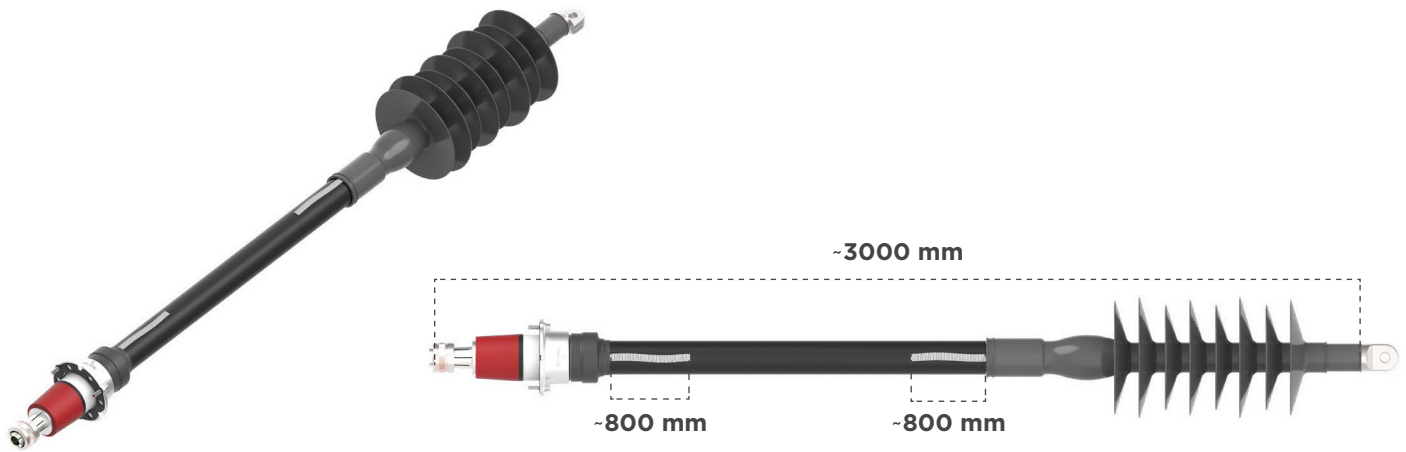
For inner-cone bushing types according to EN 50180/50181



Part Number	Part Description	Size	Partial Discharge	AC Withstand	Gross Weight	Packaging Dimension (cm)	Packing	ØA (mm)	B (mm)	C (mm)
2197061-1	52KV-RPIC-3	3#	<10 pC (48 kV)	124 kV, 5 min	1.27 kg	18 X 15 X 16	1 pc	97	148	160
2197061-2	35KV-RPIC-2	2#	<10 pC (45 kV)	117 kV, 5 min	0.80 kg	18 X 15 X 16	1 pc	68	124	237

RAYCHEM PLUG-IN TEST LEADS

For inner-cone bushing types according to EN 50180/50181



Part Number	Part Description	Size	Partial Discharge	AC Withstand (kV/5 min)	Bill (kV)	Cable size (mm ²)	Cable length (m)	Packaging Dimension (cm)	Gross Weight	Packing
2197010-1	MVTL-2-120-3	2#	<10 pC (45 kV)	117	200	120	3	152*152*41.5	41 kg	1 pc
2197010-2	MVTL-3-120-3	3#	<10 pC (45 kV)	124	200	120	3	152*152*41.5	41 kg	1 pc

* Cable length is variable on customer's request.

RAYCHEM PLUG-IN TERMINATION INSULATION SOCKETS

Protection against electric-shock hazard for live RPIT terminations



Part Number	Part Description	Size	Partial Discharge	AC Withstand (kV/5 min)	Bill (kV)	ØA (mm)	B (mm)	Packaging Dimension (cm)	Gross Weight	Packing
2197048-2	RPIT-2-IS	2#	<5 pC (45 kV)	81	170	136	200	19 X 19 X 28	7 kg	1 pc
2197048-1	RPIT-3-IS	3#	<5 pC (45 kV)	95	200	170	224	19 X 19 X 31	8 kg	1 pc

RAYCHEM PLUG-IN TERMINATION TESTING SOCKET

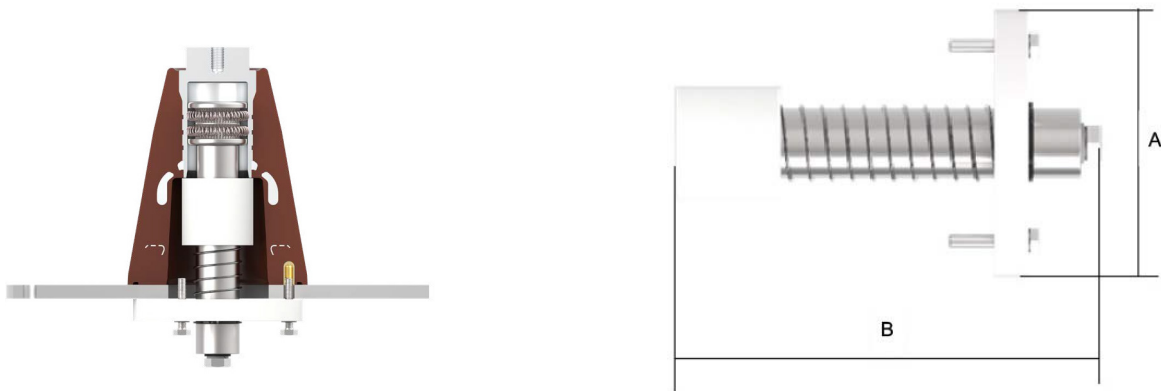
To be used when carrying out voltage tests on RPIT connector



Part Number	Part Description	Size	Partial Discharge	AC Withstand (kV/5 min)	Bill (kV)	ØA (mm)	B (mm)	Packaging Dimension (cm)	Gross Weight	Packing
2197049-2	RPIT-2-TS	2#	<5 pC (45 kV)	81	170	136	396	22 X 22 X 44	8 kg	1 pc
2197049-1	RPIT-3-TS	3#	<5 pC (45 kV)	95	200	156	396	22 X 22 X 44	9.5 kg	1 pc

RAYCHEM PLUG-IN CURRENT TESTING CONNECTORS

For inner-cone bushing types according to EN 50180/50181



TE Part Number	Part Description	Size	Rated Current (A)	Max. Testing Current (A)	Short Circuiting Current	Testing Voltage (kV)	ØA (mm)	B (mm)	Packaging Dimension cm	Gross Weight	Packing
2197066-2	RPIT-2-CTC	2#	800	2500	40 kA(1s)/ 25 kA(3s)	2 kV	138	193	18 X 15 X 16	1.17 kg	1 pc
2197066-1	RPIT-3-CTC	3#	1250	3150	50 kA(1s)/ 40 kA(3s)	2 kV	154	248	25.5 X 20.5 X 21	1.92 kg	1 pc

RAYCHEM PLUG-IN TERMINATION PROTECTION COVER

For protecting withdrawn RPIT connectors against damage and dirt



TE Part Number	Part Description	Size	ØA (mm)	B (mm)	Packaging Dimension (cm)	Gross Weight	Packing
2197047-2	RPIT-2-PC	2#	140	200	17 X 17 X 24	2.3 kg	1 pc
2197047-1	RPIT-3-PC	3#	165	215	30 X 30 X 20	2 kg	1 pc

INSTALLATION TOOLBOX (IT-100-036-XL CPN:ER0972-000)

- Compression tool for installation of conductor ring and conical wedge up to 1000 mm²
- Can also be used for disassembling
- Compatible to most inner cone connectors manufacturers using compression technology



Learn more: [TE.com/RPIT](https://www.te.com/rpit)

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