



## TE'S RAYCHEM RPIT PLUG-IN TERMINATIONS UP TO 42 KV FOR GAS INSULATED SWITCHGEAR

### KEY FEATURES

- Separable inline connection for high current, gas insulated switchgears up to 42 kV
- Termination mates interfaces in accordance to EN50180 and EN50181 for inner cone connections
- The contact parts are designed for stranded circular aluminium or copper conductors in accordance to IEC-60228

The increasing popularity of gas insulated switchgear called for the development of appropriate connection systems to standardised bushings in accordance to EN50181.

TE Connectivity (TE) has developed two systems, one is related to the outer cone and another to the inner cone system. Later is used in power switchgear and power transformers.

TE has several decades of experience in the field of hermetically insulated termination systems for medium voltage applications. Thus the bushings designed for gas insulated switchgear meet the standard EN50181 for connection type size 2 (800 A) and size 3 (1250 A) at operating voltage 12 kV up to 36 (42) kV.

The basic construction of the mating termination follows well known design principles and incorporates a lamellate contact system which ensures reliable current transmission via a cone clamp to the conductor. The interface between silicone body of the termination and the bushing is kept permanently sealed via the pressure of a spring between the insulator and the flange of the termination cover. The termination cover is sealed at the flange area with well known sealing methods and at the cable side with heat-shrinkable tubing against ingress of moisture.

**Customers can count on consistent, high quality products, driven by TE's proven innovation and backed by our extraordinary customer support.**



**TECHNICAL DATA AND ORDERING INFORMATION**

Testing methods according to CENELEC HD629.1 S2 or S3

Product size	2	2	3	
Cross section (mm <sup>2</sup> )	300	185	630	
Diameter over insulation (mm)	max. 36.6	max. 36.6	max. 50.0	
	<b>Testing values for rated voltage</b>			<b>Results</b>
U <sub>0</sub> / U <sub>m</sub>	12.7 / 22	19 / 33	20.8 / 36	
DC withstand voltage 15 min (kV)	76	114	125	no breakdown or flashover
AC withstand voltage 5 min (kV)	57	85.5	93.5	no breakdown or flashover
PD at ambient temperature (kV)	< 2 pC	< 2 pC	< 2 pC	max. 10 pC at 2 U <sub>0</sub>
Impulse voltage at elevated temperature (kV)	150	200	200	10 impulses of each polarity; No breakdown
Heating cycle voltage in air (kV)	32	48	52	63 cycles at 2.5 U <sub>0</sub> ; no breakdown
Heating cycle voltage in water (kV)	32	48	52	63 cycles at 2.5 U <sub>0</sub> ; no breakdown
Thermal short circuit (conductor) (kA)	31.5 / 3 sec	31.5 / 1 sec	33.8 / 5 sec	2 short circuits to raise conductor to 250°C; no breakdown
Dynamic short circuit (kA)	125	125	125	1 short circuit at I <sub>sc</sub> ; no breakdown
Disconnection / Connection	5 x pass	5 x pass	5 x pass	5 complete operations; no visible damage to contact
Partial discharge at elevated and ambient temperature (kV)	< 2 pC	< 2 pC	< 2 pC	max. 10 pC at 2 U <sub>0</sub>
Impulse voltage at ambient temperature (kV)	150	200	200	10 impulses of each polarity; no breakdown
AC withstand voltage 15 min (kV)	32	48	52	no breakdown or flashover

**CABLE TERMINATIONS**

Type	Size	Nominal Current (A)	System Voltage (kV)	Cross Section (mm <sup>2</sup> )	Dia over Conductor (mm)	Dia over Insulation (mm)
RPIT-1-32XX	2	800	12	150-400	13.0-24.6	21.0-33.0
RPIT-1-52XX	2	800	24	70-400	9.0-24.6	21.0-36.0
RPIT-1-62XX	2	800	36	50-300	7.0-21.6	23.5-39.0
RPIT-1-72XX	2	800	42	50-300	7.0-21.6	26.5-42.0
RPIT-1-33XX	3	1250	12	240-1000	17.0-40.0	26.0-50.0
RPIT-1-53XX	3	1250	24	150-1000	13.0-40.0	26.0-53.0
RPIT-1-63XX	3	1250	36	70-1000	7.0-40.0	26.0-58.8
RPIT-1-73XX	3	1250	42	50-1000	7.0-40.0	26.0-58.8



Note: Product is available as default without voltage detection in one phase per set. Please contact us for other options, ex. RPIT-3-83XX-VD for 52kV size 3 with voltage detection in 3 phases per set.

**BUSHING PARTS**

Size	Modification	Reference Number
Size 2 (800 A)	Without test point	RPIS-2
Size 2 (800 A)	With test point	RPIS-2-VD
Size 3 (1250 A)	Without test point	RPIS-3
Size 3 (1250 A)	With test point	RPIS-3-VD



**INSULATING CAP**

Size	Reference Number
Size 2	RPIC-2
Size 3	RPIC-3



## TE'S Raychem RPIT Plug-in Terminations



### ORDER DETAILS

Description	TCPN
IT-1000-036-XL	ER0972-000

### CONTENTS OF TOOL BOX

Item	Description
1	Compression tool (for size 2 and size 3)
2	Insert lever
3	Support chain
4	Impact device for size 1
5	Impact device for size 2
6	Impact device for size 3
7	Hexagon screw driver SW6
8	Hexagon screw driver SW4
9	Single head wrench SW36



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