

RAYCHEM DRY HV PLUG-IN INNER CONE JOINTS PHVJ

DESIGNED FOR UP TO 145 kV VOLTAGE AND SUITABLE FOR OFFSHORE AND ONSHORE APPLICATIONS



WORKS SEAMLESSLY WITH KRIES VOLTAGE AND PARTIAL DISCHARGE DETECTION SYSTEM

APPLICATIONS

- Underground Power Networks
- Wind Power Generation
- Electrical Substations
- Energy Storage Solutions

RELEVANT STANDARDS AND TESTING

- IEC 60840
- IEC 63026
- IEC 62271-209

KEY FEATURES

- Corrosion and touch-proof
- Engineered for 145 kV wind farms
- Torque-controlled, multi-contact conductor bolt
- Sectionalization possible
- Easy installation with no special tools required

TE Connectivity's (TE) Raychem Dry High Voltage Plug-in Inner Cone Joints PHVJ are designed for up to 145 kV voltage offshore and onshore applications. Our Raychem PHVJ joints are compatible with EPR and XLPE cables, independent of the manufacturer, and can be adapted to the grounding required for various cable constructions. The complete system consists of the epoxy insulator part and the plug-in parts.

Our Raychem PHVJ Joints can be installed horizontally or vertically and are equipped with fixation points to mount on a rack or wall. The back-to-back design allows different types of cables to connect in a transition joint and can be assembled and disassembled quickly for testing purposes.

The plug-in parts consist of a pre-molded silicone body for stress control and a mechanical cable lug for fast and reliable installation. For testing and maintenance, accessories and add-on kits can be provided. Standard or integrated voltage tap versions are available.

TECHNICAL SPECIFICATIONS

Mechanical Data		
Construction Length	1800 mm	
Earth Connection	4 × M12	
Approximate Weight		
PHVJ (Insulator)	40 kg	
PHVX (Plug-in)	40 kg	
Packaging Information		
PHVJ (Insulator)	1000 × 430 × 480 mm	
PHVX (Plug-in)	700 × 390 × 650 mm	



DESIGN DATA

Parameters		
Diameter Over Prepared Insulation	30 - 78 mm	
Diameter Over Sheath	Up to 120 mm	
Cross Section (Cu / Al)	Up to 2000 mm^2 for 72 kV/up to 1200 mm^2 for 145 kV	
Conductor Connection	Mechanical (shear off bolts)	
Material of Housing	Epoxy resin	
Material of Connection Bolt	Aluminium / Copper	
Method of Stress Control	Geometric	
Type of Stress Cone	Pre-fabricated silicone rubber	
Max. Permissible Dielectric Stress	4 kV/mm (at insulation screen of cable)	
Installation Temperature	0°C to +40°C	
Operation Temperature	As per equipment	
Storage Temperature	0°C to +40°C	

TESTING STANDARDS

AC Withstand Voltage

Partial Discharge Test

Electrical Type Test IEC 60840	PHVJ 72	PHVJ 145
Highest Voltage For Equipment (Um)	72,5 kV	145 kV
Heating Cycle Voltage	72 kV	152 kV
Partial Discharge at Ambient and Elevated Temperatures	<5pC at 54 kV	<5pC at 114 kV
Lightning Impulse Voltage 1.2µs/50µs	325 kV	650 kV
Electrical Routine Test IEC 60840	PHVJ 72	PHVJ 145

90 kV

54 kV

Learn more: TE.com/energy

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190 kV

114 kV



