



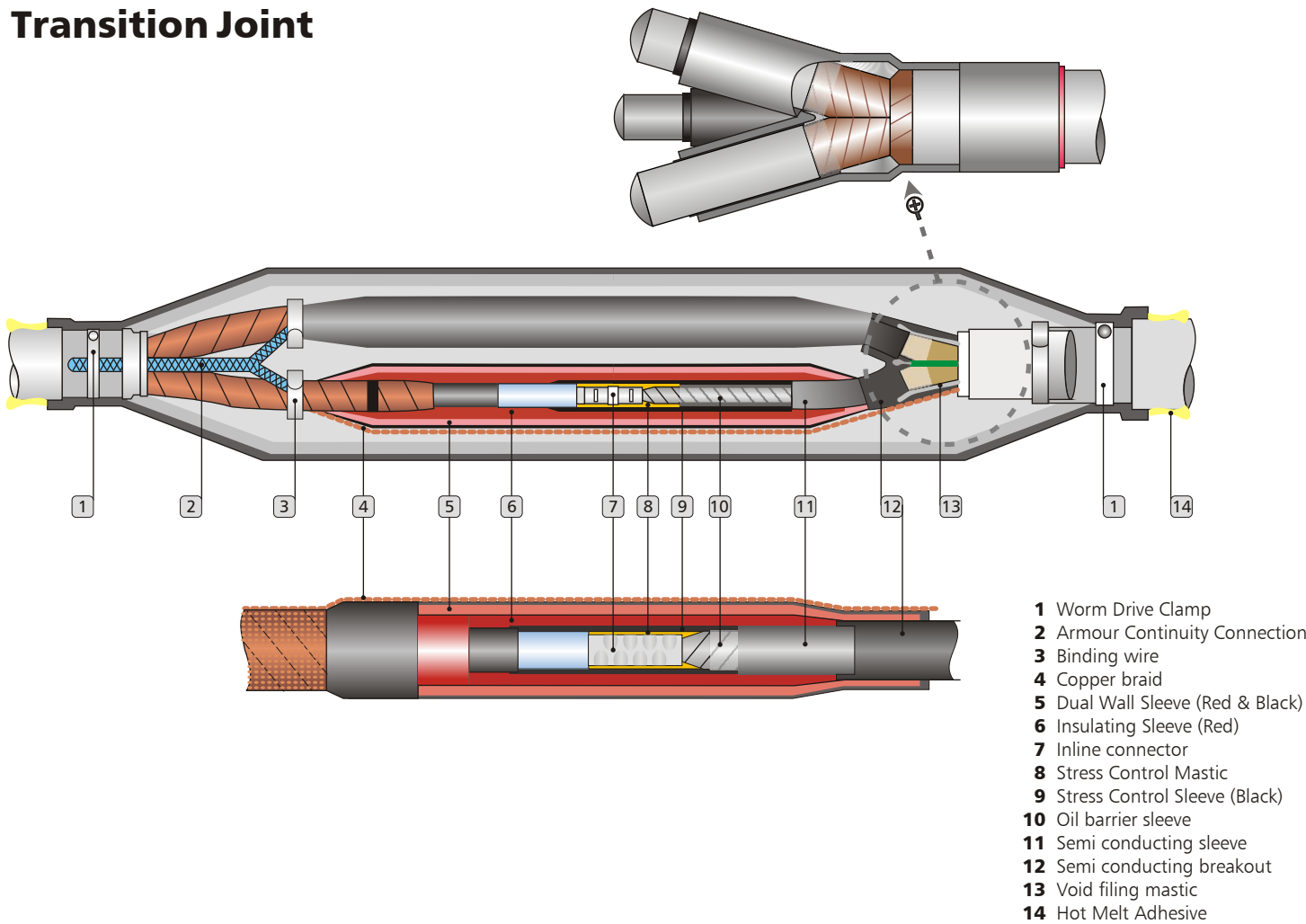
Transition Joint



Today's power cable networks are an intrinsic mix of PILC and XLPE cables. M-Seals Heat Shrink (HS) transition joints offer the reliability and flexibility to meet the demands of power cable network operators. M-Seal HS kits provide a lightweight, compact, and environmentally sealed system for jointing PILC and XLPE power cables. These features allow the installation of this jointing system in ducts, vaults and direct-burial applications. The design concept takes care of the sealing of the PILC cable and maintains a continuity in its shield. On the PILC cable end, the insulation provided by the belted paper over each core is reinforced with a heat shrinkable transparent tube which also acts as an oil barrier while providing the required insulation. To protect the three cores from electrical stresses, heatshrinkable semi conducting tubings are shrunk over the oil barrier tube over each core. Insulating void filler is applied around the crutch of three cores over which a semi conducting breakout is shrunk. An electrical connection to the lead sheath at earth potential is made through this conducting breakout. Now the core conductors of both the cables are connected. A stress grading mastic is applied over the same and which is then covered by a stress control tubing. The conductor insulation is restored by heat shrinking a high voltage insulating tubing. To enhance the insulation screen a dual wall tube having an outer semi conductive layer is further shrunk on to the insulation. Copper braid is used to interconnect the metal shield of the plastic cable to the lead sheath of the PILC cable. The joint is then covered using an insulating, high abrasion resistant tubing or wrap around sleeve. Additional strength is provided by a light weight composite joint case with galvanized steel liner or encapsulation by polyurethane compound can be provided.

- Quick cable preparation
- High electrical insulation values
- No moisture ingress
- Good mechanical strength
- Good resistance against UV-radiation, alkaline earths, chemical agents and subsoil effects
- Compact dimensions
- Immediate energisation possible
- Due to short installation time outages are kept to a minimum in repair situations
- Suitable for all conductor shapes/ materials and connectors

Transition Joint



All components required for the joints are included in a single kit, which has a prolonged storage life under normal storage conditions. A few sizes of the kits cover the entire range of cables, helping in reducing inventories. The heat shrinkable components are light in weight and are made of specially formulated cross-linked polymeric material with excellent tracking and erosion resistance characteristics. The kits have been designed to meet various international standards like IS, HD, IEEE, IEC and BS. Our state-of-the-art manufacturing facility, in-house testing laboratories and accreditation to the ISO 9001 quality assurance standard, guarantees the performance of our materials to meet customer requirements.

Minimum Performance Of M-Seal Transition Joint for MULTI-CORE PILC-XLPE Cables for 12 KV			
Tests	Standards	Test Voltage	Value
Impact	4 kg Wedge dropped 6 times from 2 meter height		No visible damage
AC high voltage test	5 minutes	25	No breakdown or flashover
Impulse withstand test	10 +ve & 10-ve ,1.2 micro second between conductor & screen grounded	75	No breakdown or flashover
Load cycling test	63 cycles,5h heating,3h cooling with cond.temp.as per cable specification	2.5 U ₀	No breakdown or flashover
DC withstand test	5 minutes	18	No breakdown or flashover

Important Notice

Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use.

Warranty; Limited Remedy; Limited Liability.

This product will be free from defects in material and manufacture at the time of purchase. **3M MAKES NO OTHER WARRANTIES**



Electrical Markets Division
Concorde Block, UB City,
24, Vittal Mallya Road,
Bangalore - 560 001.
Ph: 080 - 2223 1414
Fax: 080 - 22232373

INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. If this product is defective within the warranty period stated above, your exclusive remedy shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product. **Except where prohibited by law, 3M will not be liable for any indirect, special, incidental or consequential loss or damage arising from this 3M product, regardless of the legal theory asserted.**

Website :
www.3m.com/electrical
www.3m.com/in