

ELCOTERM TIS - 1282/E ÷ 3682/E

Installation instruction


**HEAT SHRINKABLE
INDOOR TERMINATION**

for
single core
plastic or rubber insulated cable
without armour and
with wire or tape shield

Highest Voltage 12 to 36 kV

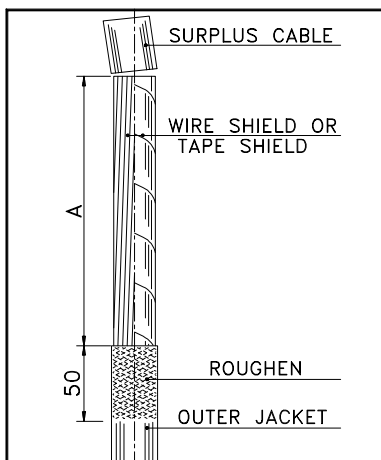
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		Signature	C.I.	G.D.	M.M.

GENERAL INFORMATION

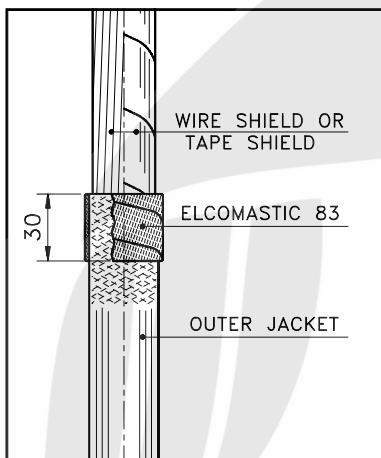
- Check if all the components listed on the bill of material are present in the kit.
- Carefully read the installation instructions before starting the cable preparation.



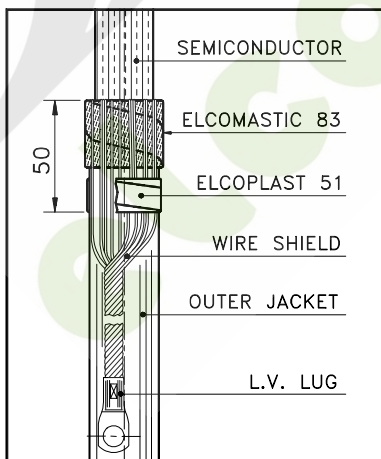
1. CABLE PREPARATION

- 1.1 Prepare the cable in such a way to simulate the final position, find the point where it must be cut then remove the exceeding length.
- 1.2 Remove, from the head of a cable, the **outer jacket** for a dimension " A " (shown on the table).
- 1.3 Roughen, by abrasive cloth contained in the kit, the outer jacket for about **50 mm**, starting from the edge.

KIT CODE	HIGHEST VOLTAGE (kV)	DIMENSION (mm)
		A
ELCOTERM TIS - 1282/E	12	300
ELCOTERM TIS - 1782/E	17,5	300
ELCOTERM TIS - 2482/E	24	350
ELCOTERM TIS - 3682/E	36	450

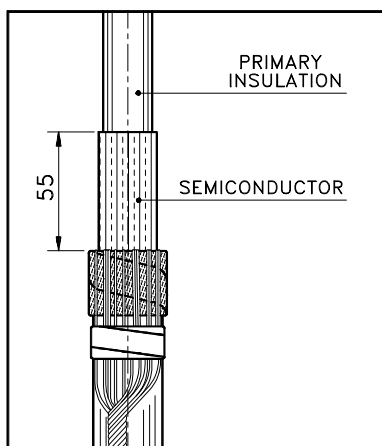


- 1.4 **WARNING:** The **ELCOMASTIC 83** tape must be applied stretching up to reduce the original width to the half approximately and with 50% overlapped. Apply two half-lapped layers of **ELCOMASTIC 83** on the outer jacket edge for a tract of **30 mm** starting from the edge.

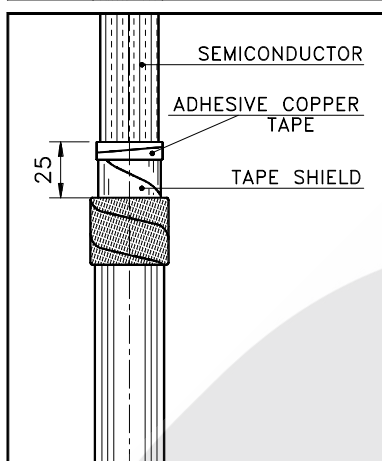


2. WIRE SHIELD CABLE

- 2.1 Remove eventual containing tape, the equalizer copper tape too. Don't cut the wires of the metallic shield, but turn back completely on the outer jacket and fix them on to the cable at **50 mm** (lower tape edge) from the outer jacket edge, by some laps of pvc tape **ELCOPLAST 51**.
- 2.2 Joint and twist the wires of the metallic shield together in order to obtain a strand-shape conductor, trim the wires edge, and apply to the end the **low voltage LUG** available in the kit and crimp it with a suitable tools.

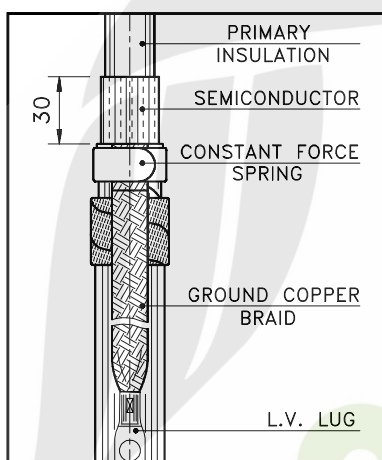


- 2.3** Remove the cable semiconductor (if necessary use appropriate tool) leaving exposed **55 mm** from the outer jacket edge.

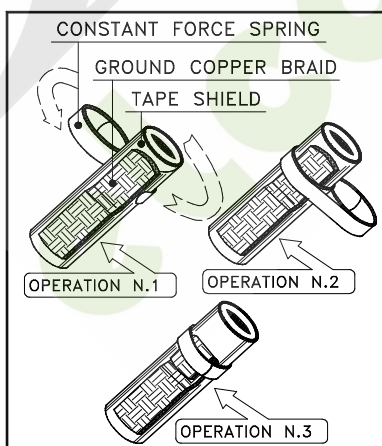


3. TAPE SHIELD CABLE

- 3.1** Fix the **tape shield**, with the **adhesive copper tape**, to the distance of **25 mm** from outer jacket edge.
- 3.2** Cut and remove the **tape shield** from the cable end on the adhesive copper tape edge.

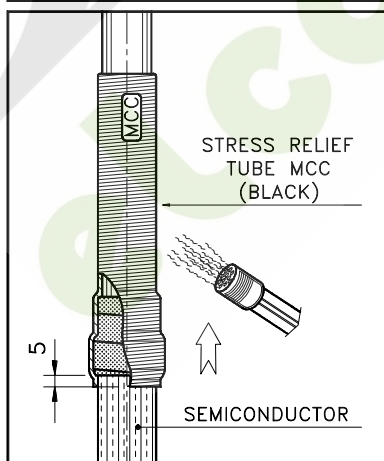
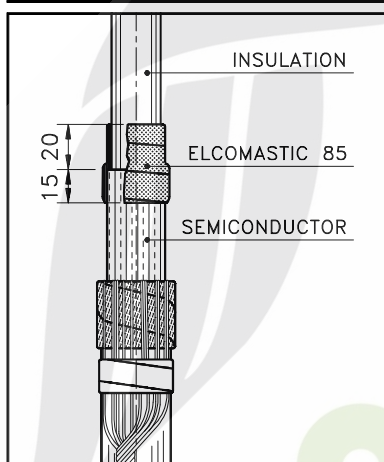
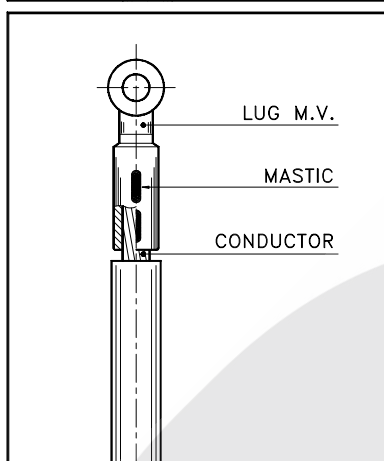
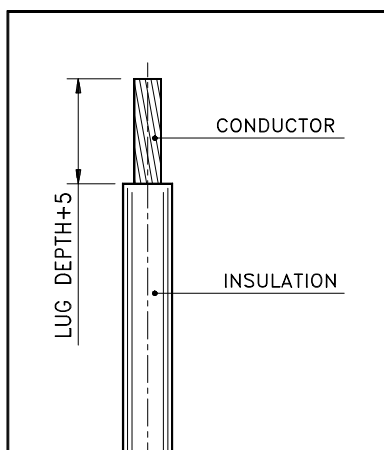


- 3.3** Remove the cable semiconductor (if necessary use appropriate tool) leaving exposed **30 mm** from the tape shield edge.
- 3.4** Position the **ground copper braid** to the tape shield and fix with **constant force spring**. Apply to the end of the ground copper braid the **low voltage LUG** available in the kit and crimp it with a suitable tools.



CONSTANT FORCE SPRING APPLICATION

- 1) Apply the *ground copper braid* on the tape shield; fasten the *constant force spring* edge on the tape shield.
- 2) Fix the *ground copper braid* by two laps of *constant force spring* in such a way as the extremity comes out for several mm, to make, successively, a lapel on the same to be applied.
- 3) Refold the *ground copper braid* and wrap the rest of the *constant force spring* on it.



4. COMMON OPERATION

4.1 Remove the primary insulation in such a way to expose the conductor of a cable for a length corresponding to the **lug depth + 5 mm**. Pay attention do not damage the conductor.

4.2 Apply a suitable **M.V. lug**, orient it correctly, and crimp it with a suitable tools, remove sharp or point of a crimping product and, at last fill up by a mastic eventual hole, for further information see instructions supplied with lug.

4.3 If necessary, smooth the insulation surface, to be sure that all semiconducting traces are removed, using the supplied abrasive cloth without touching the semiconductive layer.

4.4 Clean the cable insulation by the **cleaning tissue**, starting from the top end toward the semiconductor, if necessary clean also the cable semiconductor without touching the primary insulation previously cleaned.

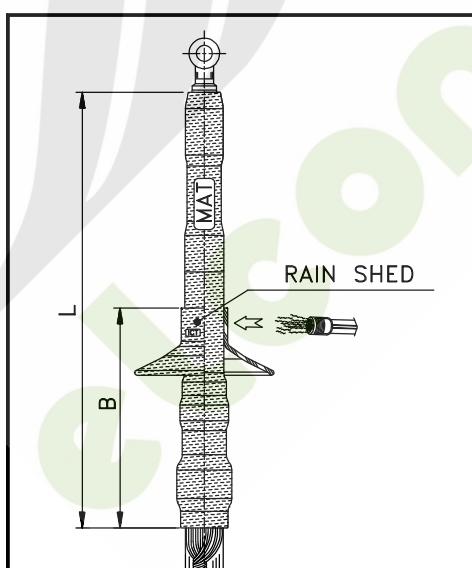
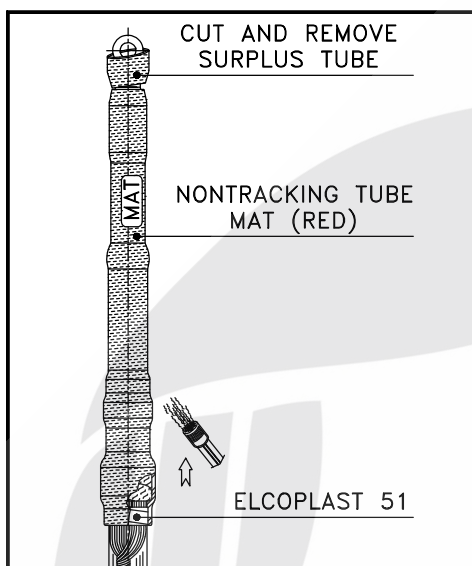
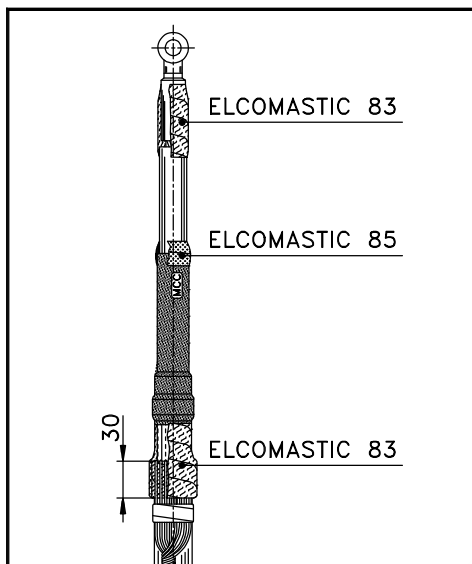
WARNING: The **ELCOMASTIC 85** tape must be applied stretching up to reduce the original width to the half approximately and with 50% overlapped.

4.5 Wrap two halfapped layers of **ELCOMASTIC 85** tape, on the semiconductor edge, start the taping on the semiconductor overlapping it for about **15 mm**, continue on the primary insulation as far as to overlap it for about **20 mm**.

4.6 Apply the **stress relief tube MCC** (black colour) in such a way to overlap the semiconductor for **5 mm**.

WARNING: is strongly recommended for all the heat shrink by don't use direct flame.

Heat shrink the tube by brings us heat from the edge locate on the semiconductor towards the top. Moving it all around and do not insist on the same parts, and stop when completely shrunk.



- 4.7 Apply the **ELCOMASTIC 83** on the exposed conductor, which is between primary insulation and the lug, in such a way to level these surfaces. Then continue to apply it with at least two half-lapped layers until to overlap the cylindrical part of the lug itself, or however, reaching the primary insulation's diameter.
- 4.8 Apply the **ELCOMASTIC 85** around the top edge of stress relief tube, in order to fill up and smooth off the gap between the tube and the insulation.
- 4.9 Apply, finally, two half-lapped layers of **ELCOMASTIC 83** on the exposed semiconductor as far as overlap the wire shield, turned on the outer jacket, for **30 mm**.

- 4.10 Apply the **nontracking tube MAT** (red colour) check that the lower edge of it corresponding with the lower edge of the **ELCOPLAST 51** taping, previously applied, on the outer jacket or to the distance of **50 mm** by outer jacket edge if the cable is with tape shield. Heat shrink with the same caution previously indicate. After the heat shrinking, cut eventually the exceeding tube in such a way to leave expose the lug hole.

5. RAIN SHED APPLICATION (36 kV OPERATION ONLY)

- 5.1 Apply the rain shed (36 kV only) just after the heat shrinking of the MAT tube locating the upper rain shed edge at "B" distance from the lower nontracking tube edge and heat shrink around the circumference orienting the heat only on the neck of the rain shed.
- 5.2 Connect the medium voltage lug to the electrical system and the low voltage lug to the ground station.
- 5.3 The termination is ready to withstand tension and current.

KIT CODE	HIGHEST VOLTAGE (kV)	DIMENSION (mm)		RAIN SHED FOR CORE (n°)
		B	L	
ELCOTERM TIS - 1282/E	12	-	350	0
ELCOTERM TIS - 1782/E	17,5	-	350	0
ELCOTERM TIS - 2482/E	24	-	400	0
ELCOTERM TIS - 3682/E	36	170	500	1

