| MELEC<br>嘉盟电力设备有限公司 | 包材印字图 | 物料代码 | ZGSM-MZDWK/MZDNK-3-10-P/872 | 文件编号    | GSM-MZDWK/MZDNK-3-10-P/872 |
|---------------------|-------|------|-----------------------------|---------|----------------------------|
|                     |       | 物料名称 | 10KV终端说明书PILC/872           | 配套包材图图号 | T2GSM-Fxxx-01              |
|                     |       |      |                             | 配套包材图编号 | GSM-FD1A4S1                |

### 印刷要求:

- 1、 印刷页面数: 6;
- 2、 印刷颜色: 彩色全部转为灰度;
- 3、 印字清晰完整。

| 版本标记 | 2 |    | 次发行<br>「 <b>內 容</b> | 朱国梁2023/2/28<br><b>变更人</b> | 唐张杰2023/2/28<br><b>审批</b> |
|------|---|----|---------------------|----------------------------|---------------------------|
|      | / | 第一 | 次发行                 | 朱国梁2023/2/28               | 唐张杰2023/2/28              |
| A1 / |   |    |                     |                            |                           |
| B1 / | / | 转批 | 赵周薇2023/4/10        |                            |                           |
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### **MELEC** Installation Instruction

10kV HEAT SHRINKABLE OUTDOOR/INDOOR TERMINATION ACCESSORIES FOR 3 CORE PILC INSULATED CABLE(ARMOUR)

#### **Diagrammatic**



| No.   | Description                              |
|-------|------------------------------------------|
| 1     | HEAT SHRINKABLE SEMI-CONDUCTIVE BREAKOUT |
| 2/3   | HEAT SHRINKABLE TRACK-RESISTANT TUBING   |
| 4     | HEAT SHRINKABLE SKIRT                    |
| 5     | HEAT SHRINKABLE OIL RESISTANT TUBING     |
| 6     | OIL RESISTANT MASTIC                     |
| 7     | WATERPROOF SEALING MASTIC                |
| 8     | GROUND WIRE                              |
| 9     | CABLE LUG FOR GROUNDING WIRE             |
| 10    | TIN PLATING COPPER BINDING-WIRE          |
| 11    | CONSTANT FORCE SPRING                    |
| 12    | HEAT SHRINKABLE TUBING                   |
| 13    | PVC TAPE                                 |
| 14    | PHASE TUBING (RED)                       |
| 15    | PHASE TUBING (YELLOW)                    |
| 16    | PHASE TUBING (GREEN)                     |
| 17/18 | EMERY CLOTH                              |
| 19    | NYLON ROPE                               |
| 20/21 | CLEANING KIT/CLEANING TISSUE             |
| 22    | PE GLOVES                                |
| 23    | UNDERSHIRT CLOTH GLOVES                  |
| 24    | INSTALLATION INSTRUCTIONS                |
| 25    | PACKAGE LIST                             |

#### CAUTION:

Working around energized high voltage systems may cause serious injury or death. Installation should be performed by personnel familiar with good safety practice in handling high voltage electrical equipment. Deenergize and ground all electrical systems before installing this product.

Please dispose of all waste according to environmental regulations.

#### **General Instructions:**

- 1. This product should be installed by competent personnel familiar with cables, accessories and safe operating practices. Parts contained in this kit should be installed in accordance with the following instructions. These instructions are intended to be a guideline for a proper installation and not a substitute for a adequate training and experience in good safety practices.
- 2. Check to ensure that the kit you are going to use is for the correct cable (refer to the kit label and the title of the installation instruction). Carefully read and follow the steps in the installation instruction.
- 3. Inspect cable for presence of water or moisture and ensure that the cable is in good condition for termination. Keep the cable outer sheath clean and free from dust, oil and mud.
- 4. Use a propane (preferred) or butane gas torch in a properly ventilated and safe environment.
- 5. Use the yellow portion of the flame for shrinking. Avoid pencil-like blue flames.
- 6. Direct the gas torch flame in the shrink direction.
- 7. Keep the flame moving continuously to avoid scorching the sleeves and other shrinkable parts.
- 8. Ensure that the heat shrinkable components are shrunk uniformly and free of wrinkles and air bubbles.
- 9. Allow shrunk components to cool before applying mechanical fixtures.

Jiangsu Jiameng Electrical Equipment Co., Ltd.
Sales Dept. Add: Room 4F, No. 58 Xinjinqiao Road,Pudong
New Area , Shanghai , China
Tel: +86-21-6156998-865
Fax: +86-21-61656995

Factory Add: No. 5, Zhongli Road, Binhai Industrial Zone, Qidong ,Jiangsu , China Tel: +86-513-8390000 Fax:, +86-513-83601898



#### **Preparation**

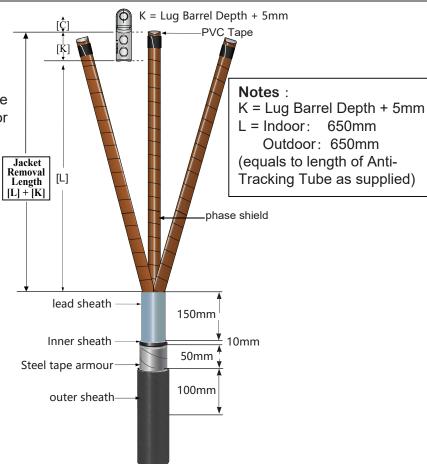
- 1. Check if the content of kits is same with the packing list.
- 2. Check if the installation tools are ready.

#### Step 2

#### Strip cable sheath and steel armor

- 1) Straighten the cable;
- 2) Align the cable;
- 3) Measure the dimensions according to the right picture, Peel the outer sheath, armor layer, inner sheath and lead sheath;
- 4) Use nylon rope to fix phase shield layer at the top of each core;
- 5) Fix the end of steel armor by copper binding wire;
- 6) Use cleaner to clean the steel armor lead sheath and outer sheath

Note: this value is calculated, the actual length should be determined according to the requirements of the installation space

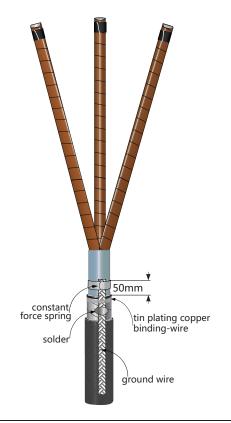


#### Step 3

#### Install ground wire

According to the right picture, use constant force spring MTH to fix ground wire MDX the lead sheath

The steel armor is bound with tinned copper wire and soldered





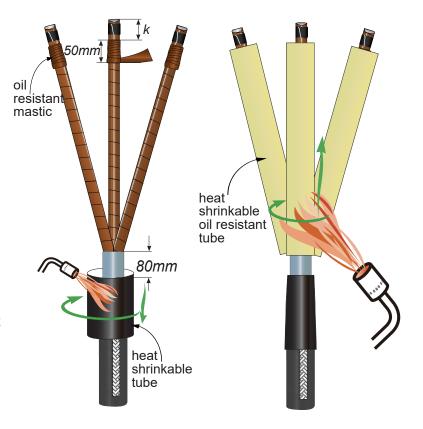
### Install heat shrinkable tubing wind oil resistant mastic

- 1) As shown on the right, wind heat shrinkable medium wall tubing;
- 2) As shown Stretch the oil resistant mastic tape MGYJ to 50% of original width. Wrap the paper insulation.

### Install heat shrinkable oil resistant tube

- Place an heat shrinkable oil resistant Tube over each phase, butted to the lead sheath (or belt paper) cutback;
- Shrink the three heat shrinkable oil resistant Tube in place starting at the lead sheath cutback

**PS:** To achieve a smooth,wrinklefree installation,use a reduced flame to install the thin-walled MOR



#### Step 5

#### Install oil resistant mastic

- Spread the oil resistant mastic into the root of the cable as shown;
- 2) As shown mark and strip 25mm lead sheath.



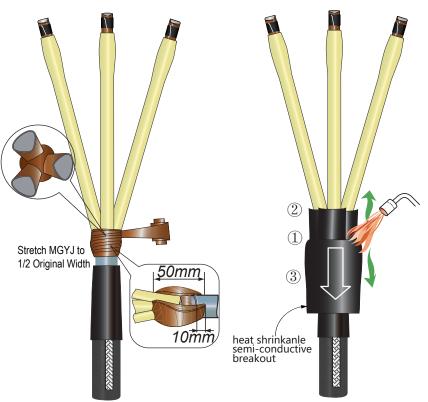


#### Wind oil resistant mastic

- 1) As shown Stretch the oil resistant mastic tape MGYJ to 50% of original width;
- 2) tightly wrap the oil resistant mastic from the mark on the lead sheath

### Shrink heat shrinkable semi-conductive breakout

- 1) Put heat shrinkable breakout MSCB well down into the cable crutch;
- 2) Shrink it in the order of 1,2,3



#### Step 7

#### Install cable lug

- Measure the length of the paper insulation and strip it in the picture below;
- 2) Install cable lug, If burr appears after lug crimped,polish it till smooth;
- 3) Clean finger and end of cable;
- 4) As shown Stretch the oil resistant mastic tape MGYJ to 50% of original width. Wrap the cover the lug body and heat shrinkable oil resistant tube.



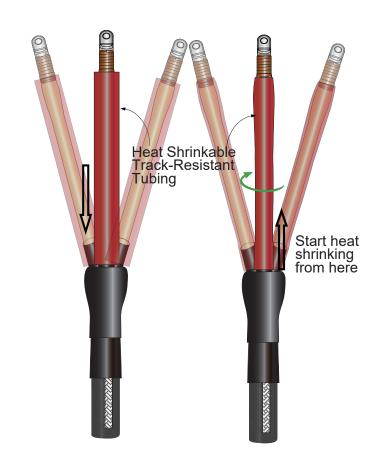


# **Shrink heat shrinkable track-resistant tubing MWNT**

- 1. According to the right picture, first polish the finger tip to heat shrinkable insulation breakout.
- 2. Clean finger and end of cable.
- 3. Place MWNT according to the right picture, leave 10mm length on breakout fingers before shrinking, then rotate the fire and shrink from the bottom.

Note: 1. Heat the whole part back and forth for 1 min after full shrinkage.

- 2. Carefully check the tube after shrinking to avoid unsmooth surface, cold-wall effect and incomplete shrinkage.
- 3. Please refer to step 4 for instruction about shrinking.



#### Step 9

#### Wrap Sealing mastic MMFJ

According to the right picture, wrap sealing mastic MMFJ, overlap heat shrinkable track resistant tubing MWNT 20mm downward, fully wrap the cable lug part except the palm of lug.





## Shrink heat shrinkable track-resistant tubing MWNT

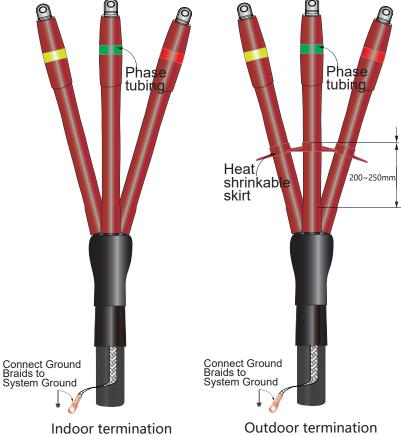
Place and shrink the heat shrinkable track resistant tubing MWNT to cover the cable lug (except the palm of lug)



#### Step 11

### Shrink phase tubing M1 Shrink heat shrinkable skirt MCES

- 1. Install phase tubing M1.
- 2. Position and shrink the heat shrinkable skirt MCES to each core according to the right picture, and shrink them.
- 3. Leave it until fully cool down, installation finished.



#### Note:

- 1. For indoor termination, phase/phase and phase/ground distance≥20mm, air gap≥30mm.
- 2. For outdoor temination, phase/phase distance≥15mm.
- 3. During installation, the minimum bend bending radius is equal to uter diameter of each core multiple 15, cable should be heated to  $70\,^\circ$ C.