

Crimping technology for insulated terminals

Made as: ring terminals, spade terminals, pin terminals, blade terminals, butt connectors (KOI, KWI, KII, LOI, LWI, KPI, KLI type acc. to Ergom).

Material:

KOI, KWI, KII, LOI, LWI, KPI: E-Cu sheet cooper with thickness of 0,8 to 4 [mm] acc. to DIN40500 or DIN 1787.

KLI, KLIT, ZPI: M1E or E-Cu copper tube acc. to DIN 40500 Teil. 2,3 or DIN 1787.

Insulation: PVC, PA (polyamide, nylon), PC, (polycarbonate).

Working temperature up to 130 °C (according to material).

Surface: tin-plated. 4 µm.

Design:

made of copper sheet, hard soldered. Can also be unsoldered (LOI, LWI) – not in conformity with DIN.

Ring terminals, KOI, LOI type (unsoldered): DIN 46237.

Spade terminals, KWI, LWI type (unsoldered): DIN 46237 (ref. to tubular part of terminal).

Pin terminals, KII type: DIN 46231.

Blade terminals, KPI type: DIN 46237 – ref. to tubular part of terminal.

Butt connectors, KLI type: no.

Rated sizes:

KOI, LOI, KWI, LWI, KII terminals: cross-section of 0,5 to 6 [mm²] (acc. to standard), also existing 10 to 120 mm².

KLI, KPI, KLIT, ZPI, LP, LPO butt connector: cross-section 0,5 to 6 [mm²]

Terminals with rated sizes up to 0,5÷6 mm² are designed in principle for a particular wire cross-sections, e.g. 6 mm² terminal can be used for the wires with a cross-section of 4 to 6 [mm²]. Terminal with a cross-section over 6 mm² can be used only for defined wire cross-section. There is a code stamped on every terminal, e.g. 4-2,5, to indicate the joint size for which the terminal is designed (in this case M4) and rated terminal cross-section (2,5 mm²).

Application:

These terminals are used for connecting wire by means of a screw joint to: bus-bar, switchgear housing, electric device and apparatus, etc. Butt connectors are used to join two wires "to butt" (KLI, KLIT type).

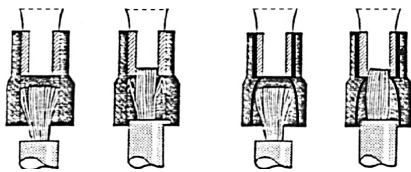


Fig. 1

Fig. 2

The insulation used may be:

– in the form of PVC tube (see fig. 1) pulled on the tubular part of the terminal (the insulation can be widened on its end to facilitate inserting of wire)

– in the form of PA or PC tube (see fig. 2) pulled on the tubular part of the terminal and having a conical inside surface. Such construction enables the entry of the wire to be easier and considerably advances the mounting compared with the terminal having PVC insulation. It is often called "easy entry".

Crimping technology:

The terminals are crimped by means of crimping tools with the dies compressing to so called "oval" (see fig. 3). In this crimping technology not only the material of the terminal and wire, but also the material of insulating sleeve which is pressed on the terminal part to be crimped, is deformed. If for the compressed joint the insulated terminals are used in which before pressing-on insulation the seam of terminal is soldered, the position of the terminal seam in the crimping die is of no importance (see fig. 4). The solder used is so hard that it resists pressures and deformations when crimping.

When the insulated terminals with an unsoldered seam (LOI, LWI) are crimped, the position of the terminal seam in the crimping die is of vital importance for the joint quality (see fig. 5).

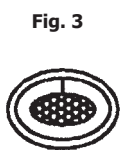


Fig. 3

