elmex econix

# cross currents

MAY, 2010 FOR PRIVATE CIRCULATION ONLY

## elmex Terminal Blocks for Photovoltaic Applications

With an ever increasing demand for power and continuing depletion of resources used to generate electricity through conventional means, it is clear that non-conventional and renewable sources of energy will play a significant role in meeting energy demands of the future. Solar energy is one such resource which has vast potentials to be tapped through the application of photovoltaic technology. The term photovoltaic technology relates to a system that converts solar energy into usable power, generating electricity from sunlight.

Depending on applications, a typical photovoltaic system basically comprises of photovoltaic arrays that convert solar energy into electrical energy, inverter that converts DC voltage into AC and other associated components such as circuit breakers, isolation transformers, surge protecting devices and terminal blocks for connections.

**elmex offers a wide range of terminal blocks from 2.5 to 95 sq mm, tested and approved for 1000 V DC suitable for use in photovoltaic systems. Electrical ratings of these terminal blocks are given below. These terminal blocks have conductor termination by well proven screw-clamp technology and are manufactured using Polyamide 6.6 insulation housing.**

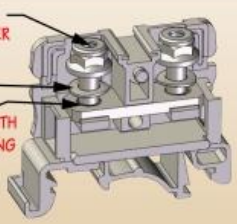
| TERMINAL TYPE | SPECIFICATIONS |
|---|---|
| KUT 2.5 N | 1000 V DC/24 A/2.5 sq mm/0.5 Nm |
| KUT 4 N | 1000 V DC/32 A/4 sq mm/0.6 Nm |
| KUT 6 N | 1000 V DC/41 A/6 sq mm/0.8 Nm |
| KUT 10 N | 1000 V DC/63 A/10 sq mm/1.2 Nm |
| KUT 25 | 1000 V DC/101 A/25 sq mm/2.3 Nm |
| KUT 35 | 1000 V DC/125 A/35 sq mm/3 Nm |
| KUT 50 | 1000 V DC/150 A/50 sq mm/8 Nm |
| KUT 95 | 1000 V DC/232 A/95 sq mm/20 Nm |

## elmex & econix @ ELECRAMA 2010


**A panoramic view of our stall at ELECRAMA 2010, Mumbai.**

# RECENT DEVELOPMENTS : elmex RANGE OF TERMINALS

**KFT M6**




800 V/41 A/6 sq mm/1.2 Nm

**OAT 6T**

800 V/41 A/6 sq mm/0.8 Nm

A wide range of **elmex** stud type and **elmex** power terminal blocks for connection possibility ranging from 0.5 to 240 sq mm in its present polyamide and melamine series are available.

As an innovative solution **elmex** has introduced KFT M6, a stud type terminal block suitable for rated conductor size 6 sq mm and rated current 41 A. KFT M6 is particularly designed for application in areas/installations which are prone to vibrations. Salient features of this terminal block are as under :

✔ KFT M6 has a specially designed hexagonal nut containing a nylon washer within the nut and a curved washer conforming to standard DIN 137 Type A. When lugged cables are tightened, this specially designed nut provides anti-loosening strength to a termination which is further enhanced by use of curved washer made of spring steel. Thus this terminal block is an ideal choice for application in areas which are prone to vibrations.

✔ The studs are made of carbon steel with hardening for extra strength and have knurling at the bottom. These are press fitted into the copper alloy current bar which is provided with step holes within which knurled portion of the stud gets press fitted. The knurling provides better rigidity and locking for the terminal assembly.

✔ This terminal block is manufactured using Polyamide 6.6 housing.

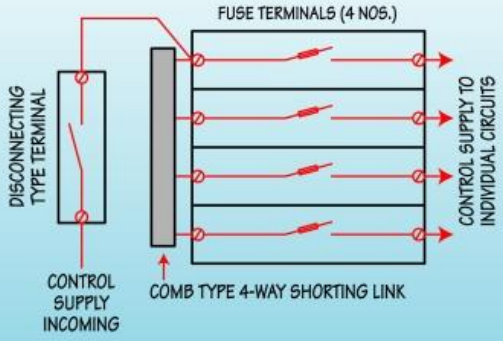
**elmex** has added a disconnect type of terminal block – OAT 6T, to its OAT series of terminal blocks.

**elmex** has a wide range of test disconnect terminal blocks for applications in areas such as CT secondary wiring, relay panels, SCADA applications etc. OAT 6T is suitable for conductor size from 0.5 to 6 sq mm and it employs disconnect operation by means of a sliding link. Construction features of OAT 6T are same as those of OAT 2.5 and OAT 6 with an additional feature of disconnect facility. (Refer Cross Currents October 2009 issue)

OAT series of terminal blocks are provided with hinged covers within which nuts remain captive. When the covers are opened up, carrying the captive nuts, the threaded bolts of the terminals are ready to receive the conductor prepared using ring/fork type lugs crimped with the conductor. When the covers are closed, the captive nut positions itself on the threaded bolt. The nuts are then tightened up, with a screw driver, to establish the connection. The covers fully shroud the live metal parts as well as the insulated lug in the conductor clamping area, thus ensuring safety against electric shock hazard.

As described above, since the nuts are captive in the hinged covers, (i.e. no need to open them up), this type of construction facilitates quick and convenient way of making connection.

# elmex FUSE TERMINAL BLOCKS FOR POWER CONTROL & AUTOMATION




Various types of accessories like terminal block marker, end plate, shorting link etc are available for all these terminal blocks and can be used for different applications. As an example, the schematic diagram given below shows four number of fuse terminal blocks shorted on one side by **elmex** four-way comb type shorting link to facilitate control supply to four individual circuits.

# elmex FUSE TERMINAL BLOCKS FOR POWER CONTROL & AUTOMATION




In control and automation applications, miniature glass cartridge fuses are often used for protection of individual circuits. **elmex** range of fuse terminals and fuse feed through terminal blocks described in this issue offer solutions for various applications depending on circuit voltage, space available for wiring, fuse size and also conductor clamping mechanism.

All the **elmex** fuse terminal blocks are available with option of indication of blown fuse by LED, for AC as well DC control voltages. Present range covers (for "fuse blown" indication) AC voltages 110V and 220V and DC voltages 12V, 24V, 48V, 110V and 220V. Provision of LED for "fuse blown" indication enables quick and ready identification of faulty circuit which can be quickly isolated by opening the hinged lever or the fuse holder cap depending on the terminal block type.

**KUDF 4**

KUDF 4 is a single deck fuse terminal block, designed with a hinged lever to accommodate a glass cartridge fuse of size Ø5 x 20 mm or Ø5 x 25 mm. The fuse holders are made of Phosphor Bronze which offers a very low contact resistance. The hinged lever feature facilitates quick isolation of faulty circuit as well as fuse replacement.

KUDF 4 is compact in size; its height being 42.5 mm and width 58 mm, making it an ideal choice where space is a constraint. KUDF 4 is rated for conductor size 4 sq mm/6.3 A.

KUDDF 4 is a double deck fuse feed through terminal block. As this is a two pole terminal block with its upper deck designed as a fuse terminal block and lower deck a feed through terminal block, it becomes a convenient and economical choice for wiring control loads through upper deck having their own fuse and neutral wires through lower deck, thus serving the purpose of two terminal blocks by single terminal block.

**KUDDF 4**

**UBDF 4**

UBDF 4 is a specially designed fuse terminal block for applications in corrosive environment that requires use of non-ferrous terminal assembly parts i.e. terminal clamp, screw and current bar. UBDF 4 comes with all brass (copper alloy) components which are nickel plated with tin under coat.

Special feature of UBDF 4 is "modular fitment" of LED kits that can be mounted in the hinged lever. These LED kits for different AC and DC voltage ratings are available and can be separately ordered and fixed into hinged lever. This feature allows users to separately order fuse terminal UBDF 4 and LED kits as per actual application.

UBDF 4 with fuse blown indication for DC voltage ratings have two LEDs connected back to back in the 'blown fuse indication' circuitry, thus giving flexibility for mounting in either direction on the DIN rail irrespective of voltage polarity.

**KUFH 4**

KUFH 4 is designed to accommodate glass fuse size Ø6.32 x 32 mm (quarter by one and quarter inch)

KUFH 4 employs hinged lever which accommodates the fuse. There is also provision to mount a spare fuse in the hinged lever. KUFH 4 is rated for 4 sq mm/12 A.

**KUF 10**

KUF 10 is a fuse terminal block provided with screw-in fuse holder with a fuse cap. The fuse cap serves to hold the fuse in place for insertion and removal. KUF 10 is rated for conductor size 10 sq mm / 12 A

KUF 10 is also available in indicating versions for AC as well as DC voltages.

***For detailed information/specifications about our products please refer to our composite catalogue or an e-catalogue on www.elmex.net***

**elmex Fuse Termination Solutions : An unbeatable range**
**protecting installations across the nation for more than three decades...**

**FUSE TERMINALS :**

- ✔ Shrouded Design, Fuse Failure Indication
- ✔ Suitable for 5x20mm, 5x25mm, 6x32mm
- ✔ Available in Non-Ferrous Version (optional)
- ✔ Screw Clamp, Spring Clamp, Double Deck, Screw-capped Fuse

## elmex & econix Participation at Exhibitions

**elmex** and **econix** participated recently at **Middle East Electricity Exhibition & Conference, Dubai, U.A.E.**, held between February 9 to 11, 2010, where a number of new and innovative products were displayed.

**elmex** and **econix** will be participating actively at the 2nd **POWER SRI LANKA 2010** - Sri Lanka's premier International Exhibition on Power Generation & Transmission, PV Power, Energy & Renewable Energy going to be held at Sri Lanka Exhibition & Convention Centre, Colombo, Sri Lanka from June 3 to 5, 2010.

VISIT US AT 2ND POWER SRI LANKA 2010

*We welcome your suggestions and queries regarding our products and feedback about CROSS CURRENTS. Write to us at ask@elmex.net*

**Elmex Controls Pvt. Ltd.**
**Econix Hi-Tech Components Pvt. Ltd.**
12 GIDC Estate, Makarpura Road, Vadodara 390 010, India
Telephones : +91-265-2642021, 2642023 ❖ Facsimile : +91-265-2638646
e-mail : marketing@elmex.net ❖ URL : www.elmex.net

ISO 9001