



'Jyoti'
RE-400 Series
Mini Auxiliary Relay
(Voltage Operated
Plug-in type)

Preferred by Control Panel & Switchgear Manufacturers as economic option for Control Contactors



'Jyoti'

RE - 400

Mini Auxiliary Relay (voltage operated plug-in type)



Fig. 1 RE 400 Relay with Plug-in-base

JYOTI's New Mini-Auxiliary Relay type RE-400 offer economy of contactors and at the same time advantages like low coil burden, adequate contact ratings and dust-proof enclosed construction. RE-400 relays are ideal for use in control panels for critical applications in thermal power plants, and in industries like chemical, cement etc.

APPLICATIONS

- Auxiliary Relay Panels
- Contact Multiplication
- Voltage Selection
- Anti-pumping
- Output Stage for PLC Systems

DESCRIPTION

'Jyoti' relays type RE-400 are voltage operated mini-auxiliary relays. The relays have simple attracted armature construction which offers high reliability. The armature carries moving contact arms and the fixed contact reeds of the four change-over contacts held in the moulded base-plate of the relay.

The moving contacts are made of silver and specially shaped to give low resistance contact. The fixed contacts are of copper-silver. The moving contact fingers are made of specially heat-treated material which preserve the required elasticity during the long service life of the relay.

The relay generally conform to IS:3231 (Part 2 / Sec. 1): 1987

OPERATION INDICATOR

The Relay is supplied with LED indicator.

PLUG-IN BASE

Front connection base type FRC-400 (Fig. 2)

The plug-in base is provided with screw-in type terminals which are specially partitioned to prevent short circuit between adjacent terminals. The plug-in base is suitable for projection mounting by two screws. Arrangement for DIN Rail mounting is also provided to facilitate fast assembly. The terminals are suitable for accepting 1.5 Sq. mm. wire.

STANDARD COIL RATINGS

RE-400/410

DC:6,12,18,24,30,48,50,75,110,115,220 V

AC:6,12,18,24,30,48,50,63.5,110,115,127,220,230,240 V @ 50 Hz

RE-402

DC:12,24,30,48,110 V

Non-standard coil voltages within the range of 6V to 220 V DC or upto 240 V AC, 50 Hz can be supplied against specific requirements.

TECHNICAL SPECIFICATIONS

RE-400/410/402

Limits of Operating Range : 80% to 110% of the rated Voltage (as per Clause 1 of IS : 3231)

Drop-out Voltage : $\geq 15\%$ of rated voltage for AC
 $\geq 5\%$ of rated voltage for DC

COIL CONSUMPTION

RE-400/410: AC-3.5VA, DC-2.3W

RE-402: DC-1.2W

Ambient Temperature : -5° to $+45^{\circ}$ C

Contact Arrangement : Four Nos. Change-over contacts (self-re set)

MAKE & CARRY CONTINUOUSLY :

RE-400/402: 1250VA WITH A MAXIMA OF 5A OR 250VAC
 250W WITH A MAXIMA OF 5A OR 110VDC

RE-410: 2500VA WITH A MAXIMA OF 10A OR 250VAC
 250W WITH A MAXIMA OF 5A OR 110VDC

BREAK DUTY RESISTIVE:

RE-400/402: 1000VA WITH A MAXIMA OF 5A OR 250VAC
 75W WITH A MAXIMA OF 5A OR 110VDC

RE-410: 1250VA WITH A MAXIMA OF 10A OR 250VAC
 100W WITH A MAXIMA OF 5A OR 110 VDC



Fig. 2 Plug-in-base type FRC-400



Fig. 3 Relays mounted on DIN channel

Operating Time (Typical)	: 20mSecs during Energisation 10mSecs during De-energisation
Mechanical Endurance	: 20 million operations with a maximum switching frequency of 3600 operations / hour
Electrical Endurance	: The relays are capable of withstanding 1 million operation with a maximum switching frequency of 300 operation / hour at rated contact capacity
Insulation	: The relay shall withstand 2 kV, AC (RMS), 50 Hz for one minute between all terminals connected together and earth. The N/O contacts of the relay in open position shall withstand 1 kV AC (RMS), 50 Hz for one minute as per IS : 3231

CASE & MOUNTING

The relay is fitted with a snap-type transparent cover and is suitable for projection mounting with front connection plug-in base. A holding clamp is provided for holding the relay firmly with the base.

The relay shall be mounted on a vertical plate and the inclination shall be preferably within $\pm 15^\circ$.

INSTRUCTIONS FOR HANDLING AND STORAGE

The relays are supplied in boxes which can sustain reasonable shocks during transportation. Upon receipt of the relays, it is advisable to examine them. Damages, if any should be reported quoting order number. If the relays are not to be installed immediately, they should be stored in boxes in which they have been sent. The storage place should be free from acid fumes, corrosive chemicals, excessive moisture and dust.

DIMENSIONS (mm)

Relay	Base
36 (W) x 39 (H) x 50 (D)	44 (W) x 70 (H) x 28 (D)

WEIGHT (gms.)

Relay : 85	Base : 75
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MAINTENANCE

- The contacts should be periodically examined for cleanliness.
- The contacts can be cleaned with the help of painters' brush and Carbon Tetra-Chloride.
- Do not use emery paper on the contacts.
- Distance between the contacts should not be altered.

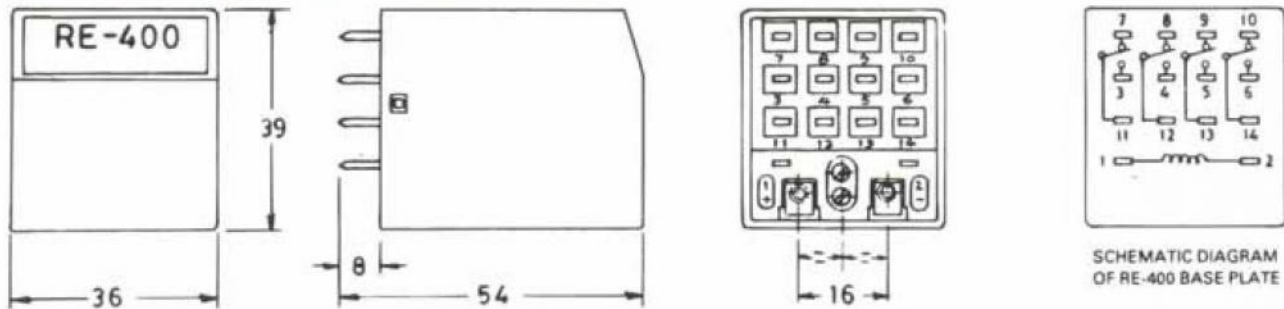
DETAILS REQUIRED WITH ORDER

- Coil Voltage
- DC or AC, 50 Hz

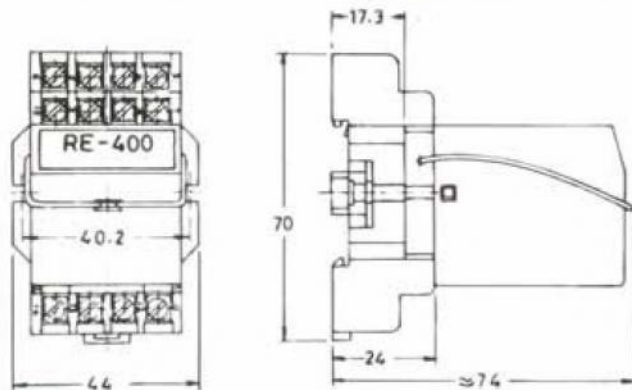
NOTE :

1. Contact ratings (make/break) are assigned to N/O contacts only. However, both N/O & N/C contacts will withstand thermal rating.
2. Plug-in base is suitable for Din Rail mounting type TH 35-15 as per IS : 11039-1983.

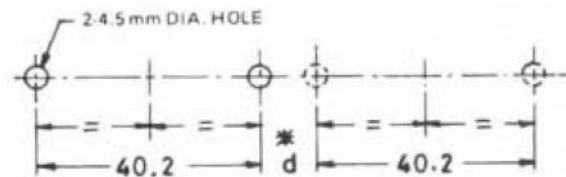
DIMENSIONAL DETAILS OF RE-400 RELAY WITHOUT PLUG-IN-BASE



DIMENSIONAL DETAILS OF RE-400 RELAY WITH PLUG-IN-BASE



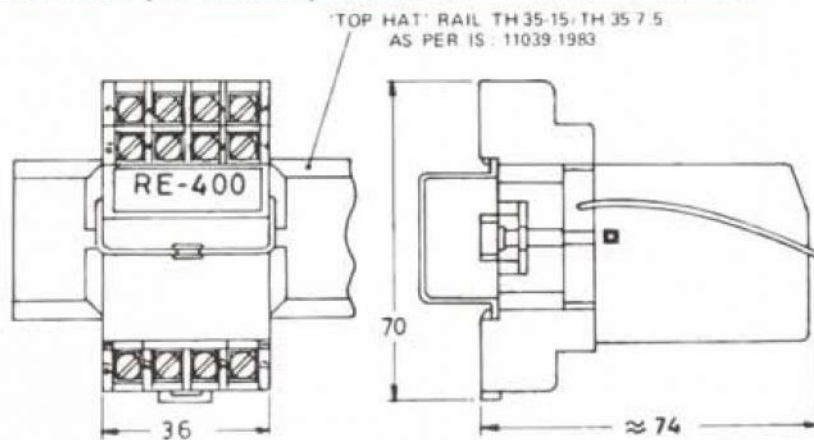
DRILLING DETAILS FOR PLUG-IN-BASE TYPE FRC-400



* KEEP d = 15mm. MINIMUM

(FOR BASE MOUNTING USE AM4 X 25 C.H. SCREWS AS PER IS : 1366)

DIN RAIL (CHANNEL) MOUNTING ARRANGEMENT



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