JSL INDUSTRIES LTD

'JYOTI' THERMAL OVERLOAD RELAY

Introduction

Features & Technical Specification

Dimensional Details

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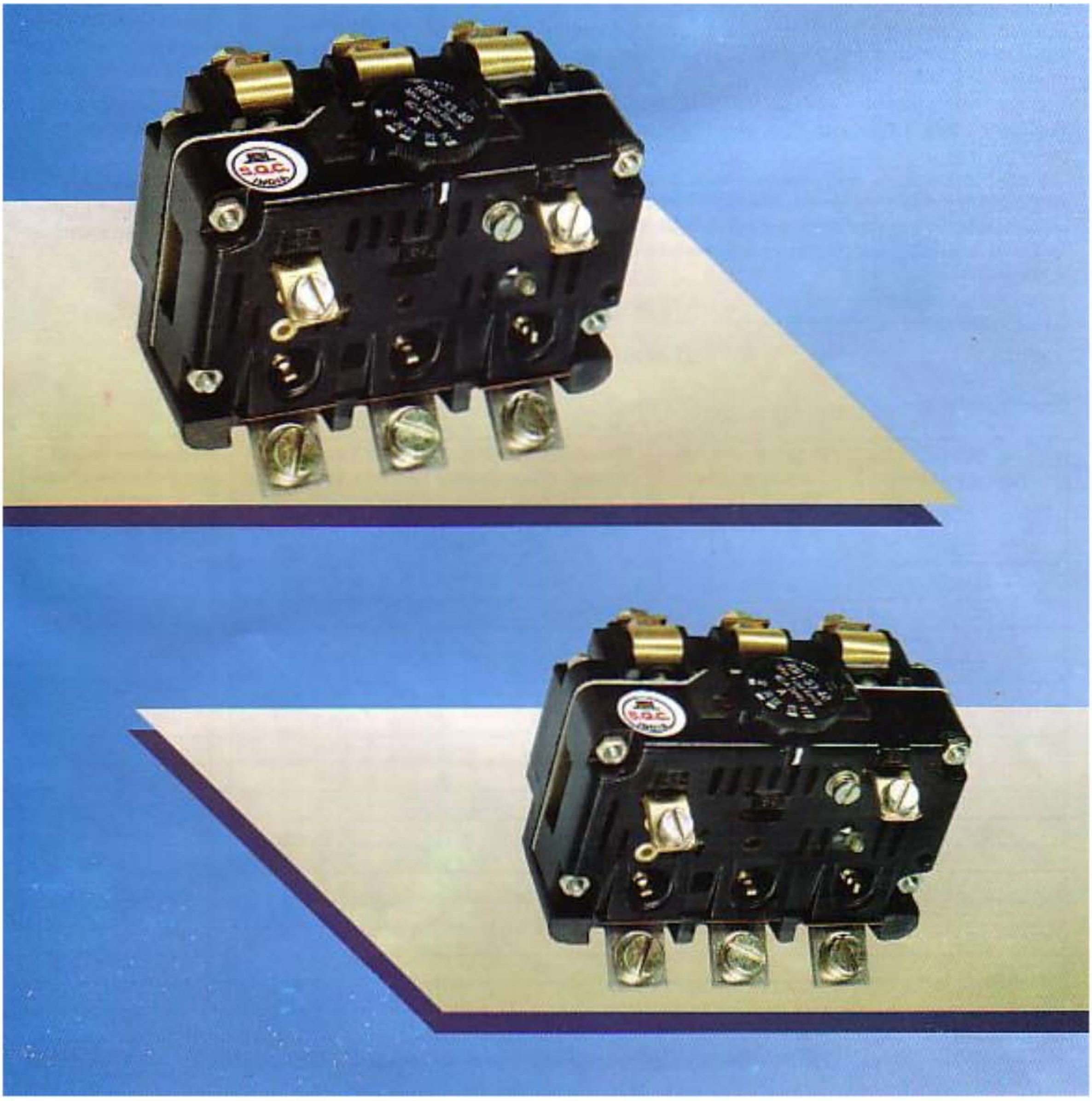
JSL INDUSTRIES LTD.

For Reliable and Efficient Protection

'Jyoti Thermal Overload Relay



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'JYOTI' THERMAL OVERLOAD RELAY FOR MOTOR PROTECTION

For reliable and efficient protection of electric motor, JYOTI provides a range of thermal overload relays type RB1-33. These are available in several overlaping ranges (see selection table below) right from 0.6A to 46A. These are triple pole, adjustable relays (with a change over contact) conforming to the requirements of IS:13947 Part4. Setting range, in general, is from 60% to 100% (of the maximum range setting).

It has inverse time - current trip characteristic which is in line with protection requirements of Motor windings. It has the capacity to provide protection against locked rotor currents which are up to 8 times the rated current but for protection against short circuit, back up HRC fuses are required Current adjustment disc of the relay is marked with the maximum recommended back up fuse rating (see selection table below)

Trip class of this relay is 10A as per IS:13947 Par 4.

Tripping Time - Current Characteristic Curve : (refer fig.1)

The band indicates the response time while starting from cold. Starting from hot (when the relay has reached a state of thermal equilibrium after rated current has flown through it for a sufficiently long time), the response time will be reduced to about 25%

This curve indicates the general behavior of the relay over the complete range.

Other Features :

The stabilised relay mechanism is enclosed in a compact housing.

All 3 poles of relay are individually calibrated providing adequate response even under conditions of unsymmetrical overloading in any 2 phases. The relay will have positive tripping on account of overloads caused by **Single Phasing or Locked Rotor** conditions.

Both Auto Reset as well as Manual Reset options are available. Relays with 'Manual Reset' can be converted into 'Auto Reset' at site.

Suitable connecting links can be supplied to mount these relays directly on Air Break or Oil Immersed Contactors of JYOTI make. For independent mounting, a phenolic moulded mounting block can be supplied (shown in fig.2)

The relay is provided with a changeover contact which can be used for trip/alarm/signalling purpose. It is rated at 1.5A a t 500V AC.

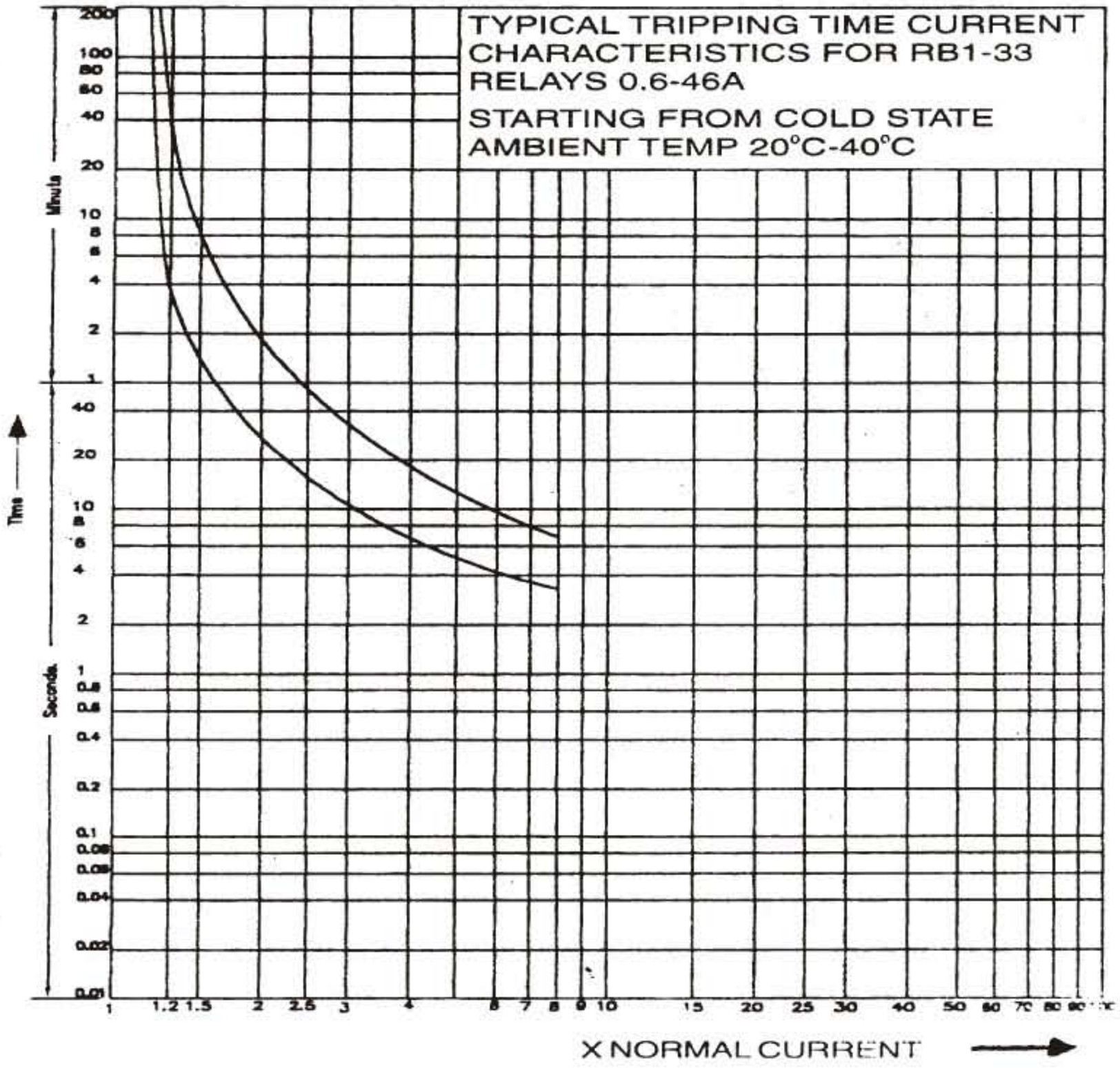
For current ranges beyond 46A, the same relays are supplied with saturated current transformers as one unit

[Contact our works for further details]

RB1-33 THERMAL OVERLOAD RELAY

SELECTION TABLE

Motor Rating (kW/HP)	For D.O.L. Starting Relay In Line Circuit (Amps.) (Relay Range)	Recommended HRC Delayed Action Fuse (Amps)	For Star Delta Starting when Relay is connected in Phase Circuit (Amps) (Relay Range)	Recommended HRC Delayed Action Fuse (Amps)
0.3 / 0.4	0.6 - 1	4	–	–
0.37 / 0.5	0.9-1.5	4	–	–
0.55 / 0.75	1.2 - 2	4	–	–
0.75 / 1	1.8 - 3	6	0.9-1.5	6
1.5 / 2	2.4 - 4	10	1.2 - 2	10
2.2 / 3	3.6 - 6	10	1.8 - 3	10
3.7 / 5	6 -10	16	3.6 - 6	16
5.5 / 7.5	9 -15	20	6 -10	20
7.5 / 10	12 - 20	25	6 -10	25
9.3 / 12.5	15 - 25	25	9 -15	25
11 / 15	15 - 25	35	9 -15	35
12.50 / 17.0	18 - 30	35	12 - 20	35
15 / 20	18 - 30	50	12 - 20	35
18.5 / 25	24 - 40	63	15 - 25	50
22 / 30	30 - 46	63	18 - 30	50
30 / 40	–	–	24 - 40	63
37.5 / 50	–	–	30 - 46	80



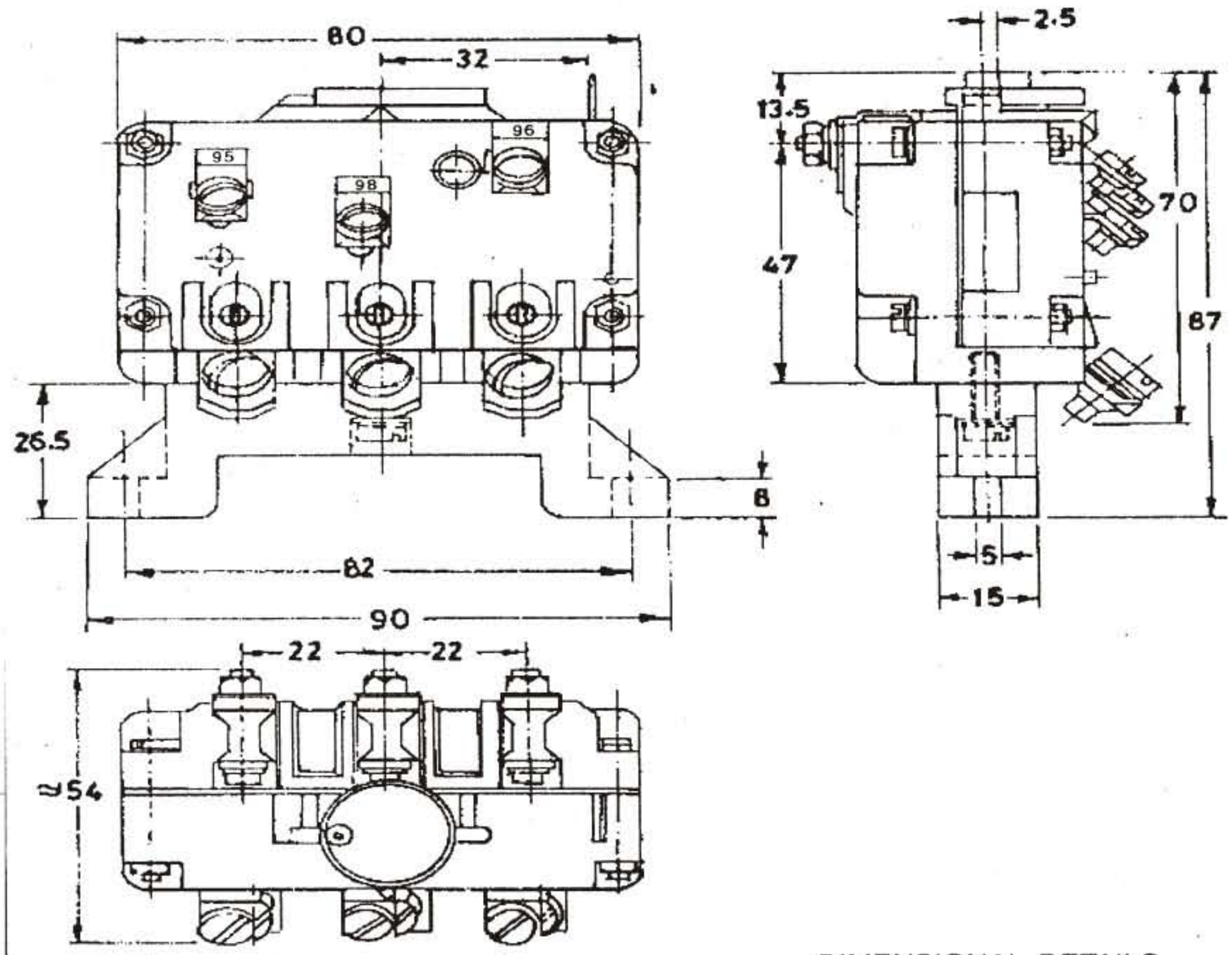


FIG 2

DIMENSIONAL DETAILS

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