

TRANSDUCERS

ELECTRONIC MEASURING RELAYS

- ◆ Monitor and regulate electrical and non-electrical quantities
- ◆ Short response time
- ◆ Maintenance-free operation



Figure 1 - K540 Enclosure

These electronic relays are intended to be used for the monitoring and controlling of standard electrical quantities, ie. AC or DC voltage and current signals. When used in conjunction with transducers virtually any process variable can be monitored.

The output, which in the standard version consists of a change-over contact, may operate in a normally energised or de-energised mode.

The baseplate has nine in-line gold-plated contacts and is designed for chassis-mounting by means of two screws. The cover, which houses the PC board, is positively attached to the base by two screws.

Setpoint adjustment is by means of a single-turn potentiometer accessible from the top.

MODE OF OPERATION

Refer to Figure 2

The input signal is scaled and conditioned if necessary in (1) and compared to the setpoint (2) in the electronic comparator (3). The amplifier (4) controls the output relay (5). The auxiliary supply is transformed down in (6), rectified and smoothed in (7) and is used to power blocks (3), (4) and (5).

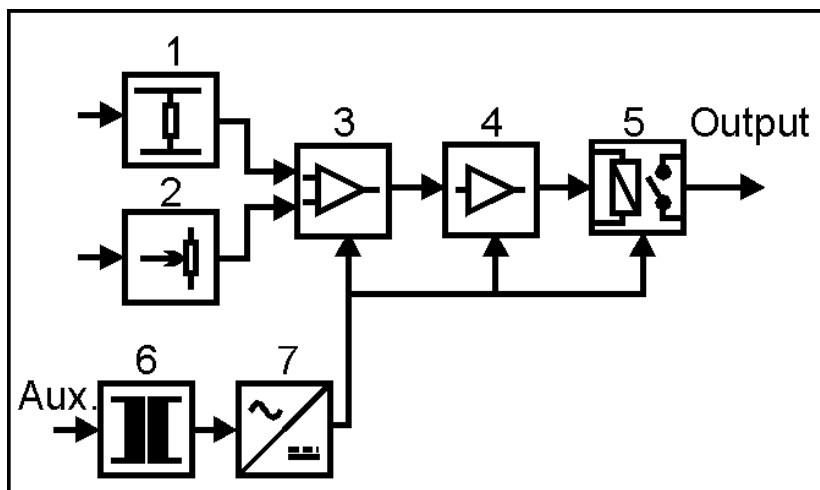


Figure 2 - Block Diagram

TECHNICAL DATA

1. Input

Input quantity:

0 - 1/ 5/ 10/ 20/ 100/ 1000 mA DC
0 - 10/ 100/ 500 V DC
0 - 1/ 5 A AC
0 - 150/ 500 V AC

2. Output

Standard values:

Response time :

1 only change-over contact rated 10A at 250V AC
< 0.2s

3. Auxiliary Power Supply

Voltage:

Burden:

110, 220V AC
(Other values and DC on request)
< 6.0 VA at rated load.

4. Accuracy

Repeatability error:

Long term drift:

Temperature shift:

Variation with auxiliary supply:

< 0.5%.
< 0.5%.
< 400ppm/°C.
< 0.05% for ±20% variation.

5. Protection

Impulse test between isolated sets of terminals:

Voltage withstand rating between isolated sets of terminals:

5 kV (0,5J; 1,2/50 wave)
(IEC Standard)
4 kV, 50 Hz A.C. for 1 minute

6. Physical Constraints

Working temperature:

Position:

-10°C to 55°C.
Surface mounting in any position indoors.

7. Enclosure

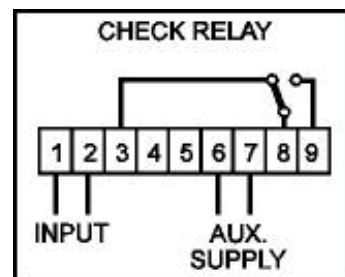
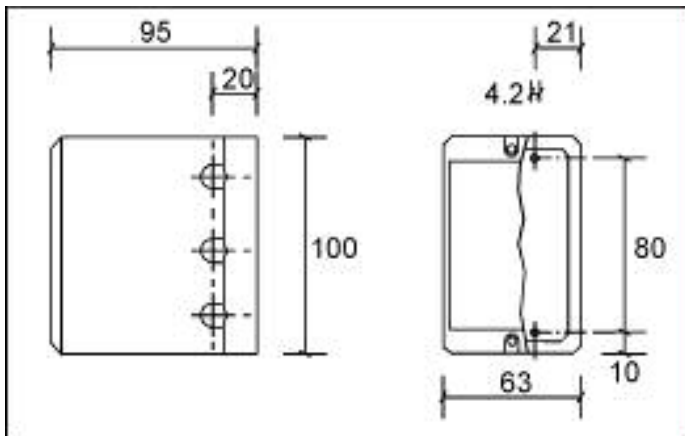
Type 540:

Material:

Terminals:

Cover - Polystyrene.
Base - Phenolic resin.
Plug-in type, rating 10A.9 x contacts, gold plated.

Dimension and Connection Diagrams



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