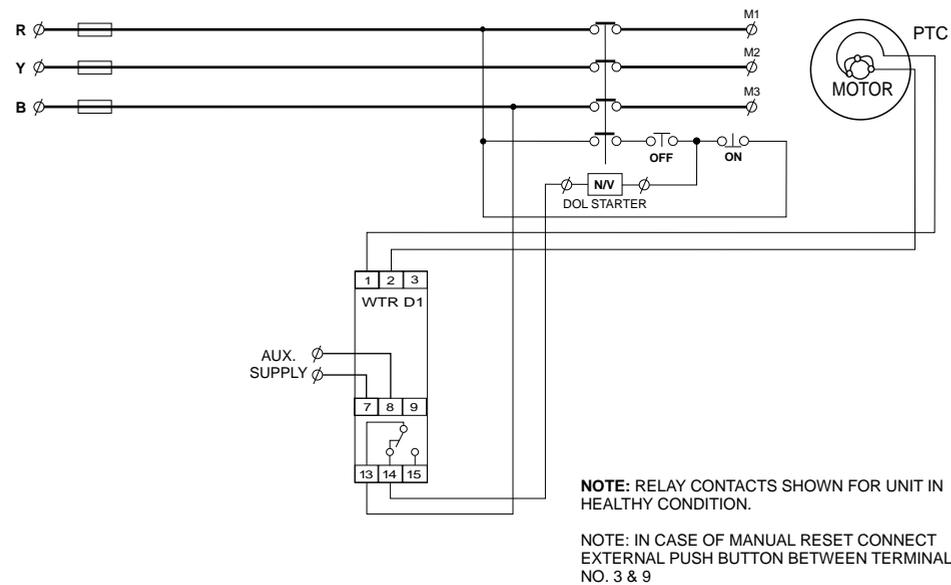


ELECTRICAL CONNECTIONS IN POWER AND CONTROL WIRING

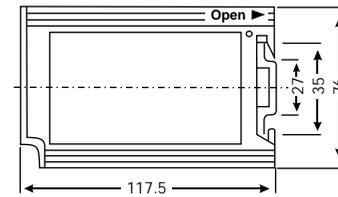
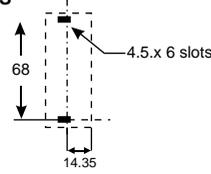
Figure 3



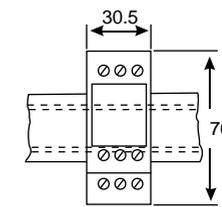
MOUNTING DIMENSIONS

Figure 2

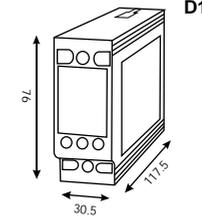
DRILLING DETAILS MOUNTING DIMENSIONS



D1 TYPE BOX



D1 TYPE BOX

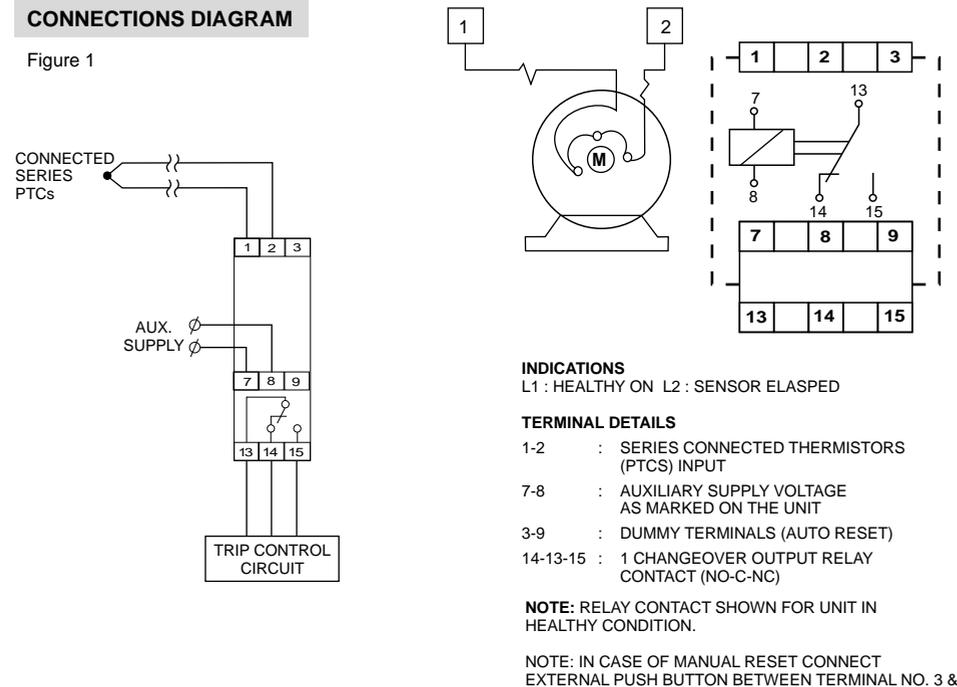


INSTALLATION INSTRUCTION MANUAL FOR WINDING PROTECTION RELAY WTR D1



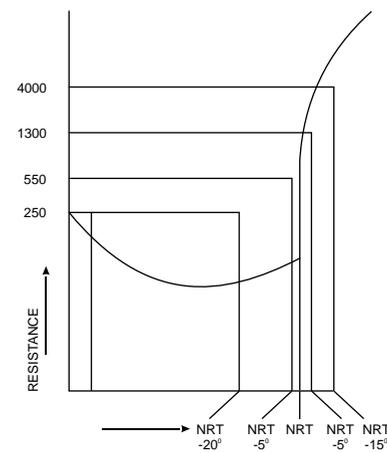
CONNECTIONS DIAGRAM

Figure 1



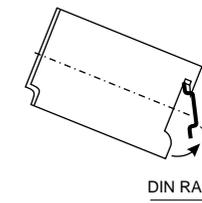
TEMPERATURE VS RESISTANCE CHART

Figure 5



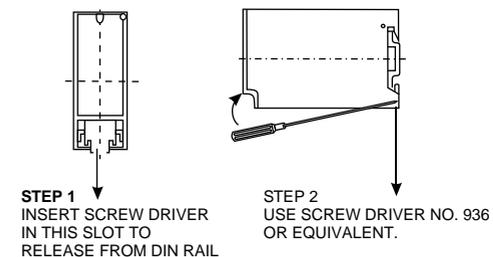
MOUNTING ON DIN RAIL

Figure 4A



RELEASING FROM DIN RAIL

Figure 4B



WARRANTY
AGAINST
ALL MANUFACTURING DEFECTS
FOR 18 MONTHS
FROM DATE OF SUPPLY
OR 12 MONTHS FROM
INSTALLATION
WHICHEVER IS EARLIER

Manufactured by:

minilec[®]

S. No. 1073/1-2-3, Pirangoot,
Tal. Mulshi, Dist. Pune - 412 111 (India)

VERSION 03
(12/ 04 / 99)

INSTALLATION INSTRUCTIONS FOR WTR D1

INTRODUCTION

It's the Company pleasure to enlist you as one of our esteemed user customers. Thank you for selecting and purchasing **MINILEC** make protection relay **WTR D1**

The following installation instruction would guide you in installing your **WTR D1** and making the best use of it.

Your **WTR D1** is a protection relay based on the mistor(PTC) input for monitoring the excessive temperature. It offers 1 changover Relay output contact of 5A 240 VAC rating. One for Alarm and one for Tripping. It also offers 1 changover contact for ON time delay (optional)

Your **WTR D1** is an auxilliary relay and it is to be using in the control circuit only.

TRIP SETTING

You can use any PTC (thermistor) with the desired Normal Response Temperature (NRT) value ranging between 70°C to 180°C eg. If you intend to control the temperature above 80°C then select PTCS with 80°C NRT. Your WTR D1 deactuates the relay output contact at NRT + 5°C of the PTC (thermistor) in use.

Your WTR D1 is factor set to actuate the relay at a total loop resistance of the series connected thermistors of 4K ohms and above at NRT value.

TRIP TIME DELAY

Your WTR D1 trips instantaneously (less than 1 SEC at NRT+5°C

RESETTING : (AUTO)

Your WTR D1 will reset automatically when the total loop resistance of the series connected thermistors drop below 1.65 k ohms ± 10%

INPUT SENSORS :

Your WTR D1 is suitable for Positive Temperature Coefficient thermistors with the typical characteristics as shown in Fig.5

The thermistors are to be connected in series only You may use either single thermistor or max. 3 thermistors provided the total loop resistance of such series connected to thermistors does not exceed 1.65 K ohms at 25°C temperature

The thermistors are to be embedded at the hot spot locations in the motor windings.

MOUNTING

The **WTR D1** can be RAIL mounted or panel mounted (See Fig 4A and 4B for mounting it on RAIL and releasing it from RAIL respectively.) They are suitable for 35 mm RAIL (For panel mounting and drilling details see Fig.2)

ELECTRICAL CONNECTIONS :

See F.g. 1 for electrical connection details of **WTR D1**.

Auxillary voltage should be as marked on the front plate of **WTR D1**. Connect the series connected thermistors at 1 and 2 of **WTR D1** relay. The output relay contact at 13 and 14 are to be connected in series with the no-volt coil of the contactor. (load) In case of manual reset, connect external push button between terminal No.3 & 9.

RESETTING (MANUAL) :

Your **WTR D1** will reset manually (by pressing externally connected push button between terminal No.3 & 9) when the total loop resistance of the series connected thermistors drops below 1.65 K ohms ± 10%.

TECHNICAL SPECIFICATIONS OF WTR D1

- AUX. SUPPLY VOLTAGE :**
110 / 220 / 230 / 240 / 380 / 415 / 440 VAC
± 20% / 24 VAC ± 10%
- FREQUENCY FOR AC SUPPLY :**
50 / 60 Hz ± 3%
- POWER CONSUMPTION :** 3 VA max.
- LIFE EXPECTANCY :**
0.5 X 10⁶ operations at 100% rating.
- OUTPUT RELAY CONTACT :** 1 Changeover
- OUTPUT CONTACT RATING (RESISTIVE) :**
5 A mp. 240 VAC
- SETTINGS :**
SENSOR SHORT : 0 - 39 ohm
SENER HEALTHY : 40 ohm - 4k ohm
SENER TRIP : 4. 1k ohm -5.5k ohm
SENER OPEN : 5.6 k ohm & above
SENER CUTIN : 1.5 k ohm - 1.8 ohm
(for 1/3 PTC)
2.2 k ohm - 2. 8k ohm
(for 6/9 PTC)
- TEMP. RANGE FOR THERMISTORS :**
70°C 180°C
- TRIP TIME DELAY :** Less than 2 Sec.
- RESETTING :** Auto / (Manual)
- INDICATIONS :**
L1 Green : Healthy On
L2 Red : Sensor Faulty
- ENCLOSURE :** ABS
- DIMENSIONS (mm) :**
Overall : 76 x 30.5 x 117.5
Mounting : 68 center to center
- MOUNTING**
35 mm Rail Mounting & Panel Mounting
- WEIGHT (gms) :** 300
- NO OF THERMISTORS :** 1/3 (6/9)
- OPERATING CONDITIONS :**
Temperature : -5°C TO + 60°C
Humidity : Upto 95% Rh

TESTING PROCEDURE

TESTING : After making the electrical connections as per the connection diagram automatic functioning of the unit can be checked as per the following flow chart.

