

# ***High-Tech Range***

**FF1 - PT Fuse Failure Relay**

**CSPC**



# FF1- PT Fuse Failure relay

## 1. Introduction & Application

The relay **FF1**, three phase fuse failure relay, is used for monitoring the fuse continuously against blowing out or rupturing and inadvertent removals of the potential transformer secondary fuses. It is suitable for 3 phase, 3 wire or 3 phase, 4 wire application. This works at a phase voltage of 110V.

This relay can be used for supervision of the VT fuses, so as to give blocking signals to secondary voltage operated protection schemes, which otherwise may mal-operate due to blowing of VT secondary fuses.

## 2. Features

- High Speed operation
- Static Design
- Self powered relay
- Less burden on PT
- Separate LED indications for all the 3 phases.
- Compact robust construction
- Draw out assembly

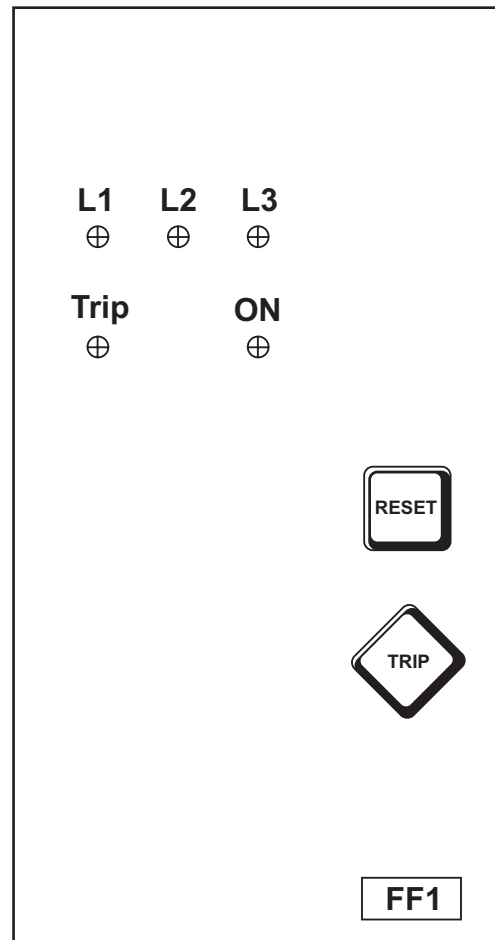
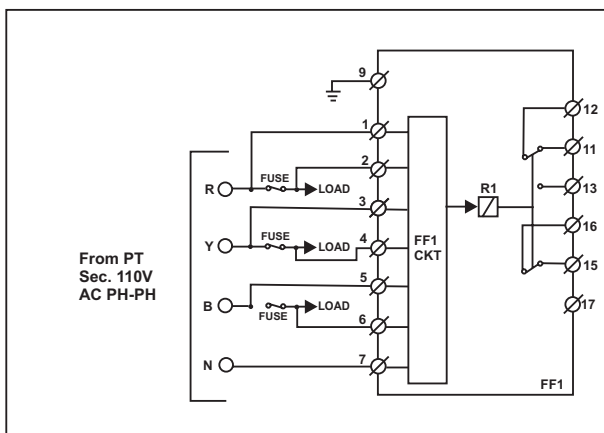
## 3. Design

The loss of voltage due to blowing or removal of fuse is detected by sensitive device which inturn initiates D.C. auxiliary output relays to operation.

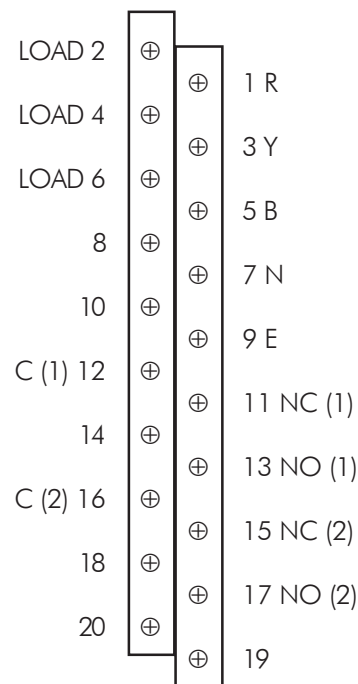
## 4. Operation

During the normal operation of **FF1** only power ON LED will be glowing. If there is any fuse failure in any phase, it trips and indicates that in which phase the fuse has failed. After tripping if there is any further fuse failures, the corresponding LED will glow. Only after replacing all faulty fuses, the relay will come back to its normal position till then it will remain in tripped condition.

## 5. Connection



## 6. Terminal Configuration



## 7. Technical Data

### Rating :

PT secondary rating 110V, 50Hz  $\pm$  10%  
 Operating Time Less than or equal to 7 msec between failure or removal of PT secondary fuse and operating of relay.

FF1 Relay Burden PT Less than 0.5 VA per phase.

Min. Load Burden Greater than or equal to  
 required on PT for 0.5 VA per phase  
 proper Operation  
 of Relay

**Operation Indicators** Separate LED indication for each three phase PT fuse status (Auto reset type)  
 Relay status (Manual reset type)

### Alarm Contacts :

Configuration 2 pairs of C/O contacts, self reset

### Contact Rating

Rated Voltage 250 V AC/30V DC  
 Max. Switching Voltage 440 V AC/300 V DC  
 Rated Current 8 Amps.  
 Max. Switching Current 14 Amps.  
 Max. Breaking Capacity 2000 VA/240 W Resistive

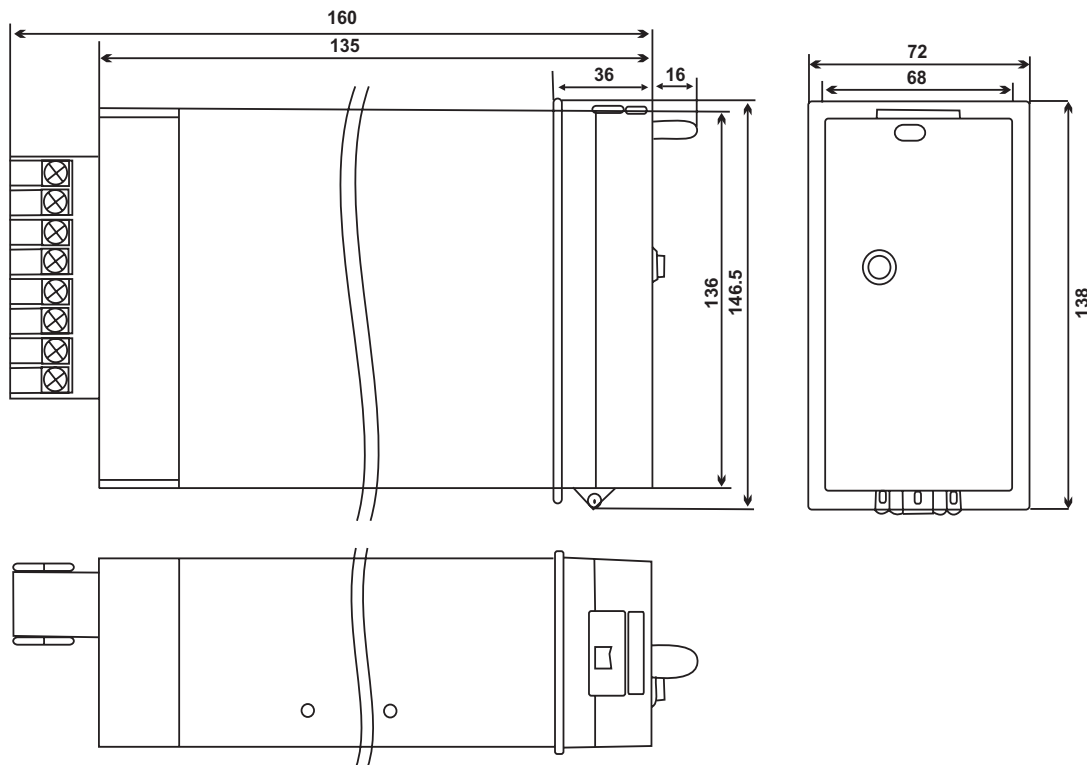
### Case

Draw-out, suitable for flush mounting

### Weight

Approx. 1.0 Kg.

## 8. Dimensional Details :



## 9. Order Form

P.T. fuse failure relay	<b>FF1-</b>	<input type="text"/>
Rated Voltage	<b>110</b>	<input type="text"/>



## **BASIC RANGE**

- Micro-controller based compact economical design
- DIN rail mounted
- Status indication via LED
- Step-less settings through front potentiometer



## **FUNCTIONAL RANGE**

- Genset Supervision & Control
- Auto Synchroniser
- Load Balancing & Control
- Related Protection



## **INTEGRATED RANGE**

- Complete numeric protection, solution for sub-station in association with TEAM-ARTECHE, Spain
- Distance protection
- Comprehensive transformer protection –
  - a. Three winding transformer
  - b. Two winding transformer
- Multi-functional relay: variety of protection combination

For further information, please contact :



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