

RAPID PRESSURE RISE RELAY



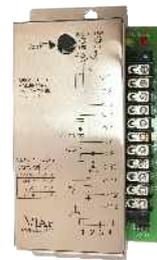
**Flanged Type
Plug-in Connection**



**Threaded Type
Plug-in Connection**



**Terminal Box
Type**



970 Latching Relay

FEATURES

- Fast and accurate response with consistent operation in response to sudden increase in pressure.
- Consistent performance over wide temperature variations.
- Shock and vibration resistant.
- Flange mounted or thread mounting makes installation easy.
- Very fast response time type models also available.
- Models for both gas and oil application.
- Same model can now be mounted vertically or horizontally.
- Each relay individually calibrated using sophisticated electronic set-up.
- Recommended to use for alarm signal in standalone operation and trip signal in conjunction with other fast response protective devices in transformer.
- C5-M models also available on request.

VIAT

INSTRUMENTS

VI-C09(R1)

**A House of
Transformer
Accessories**

Why put an RPRR on a Transformers?

A severe fault or arcing causes gas to be generated, which in turn starts to build up pressure inside a transformer. Other protection systems like PRD would allow the arcing to increase pressure till the operating pressure of the PRD is reached. This extended period of arcing causes damage to the transformer.

The VIAT Rapid Pressure Rise Relay (RPRR) gives dynamic protection to oil filled power transformer because it initiates action when the pressure is rising and before it has reached the point where the PRD operates. So the duration of arcing is reduced significantly due to the ultrafast response of the Rapid Pressure Response Relay.

The VIAT RPRR, when mounted on the transformer, minimizes the possibility of such occurrences by detecting rates of pressure increase in excess of the safe limits established by the transformer manufacturer.

How to get the best out of RPRR ?

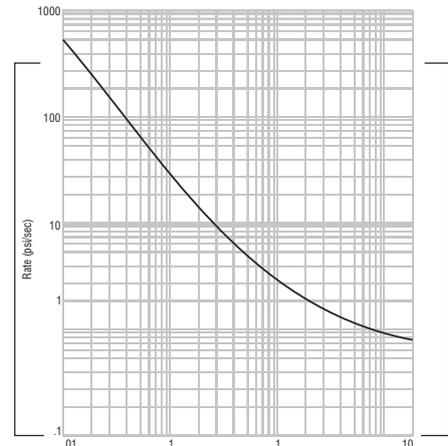
A RPRR can be mounted in gas (Model 960), under oil (Model 950) and can be mounted both vertically and horizontally. The choice is made by the transformer designer of what to use, how to mount depending on the design, application and availability of space on the transformer.

A bleed valve is provided with the device which allows the air to be released so that the oil reaches the sensing bellows after the RPRR is securely mounted on the transformer. A few teaspoons of oil should be allowed to flow out of the bleed valve before letting the bleed valve to reset. This will ensure that all air is released from around the bellow and the bellow is in contact with only the insulation liquid. For 960 series (mounted on gas space) this procedure is not necessary.

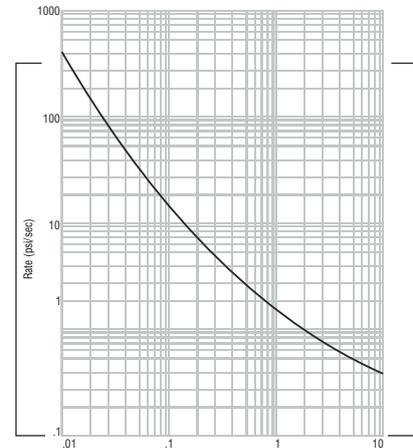
An Electronic Seal in Relay with reset push button is available separately to latch the signal from the RPRR. This relay by default would provide two normally open and closed contacts.

Please contact us for ordering form/drawings and any further details

RESPONSE TIME CURVES FOR RPRR



950 Response Limits



960 Response Limits

| Technical Specifications | | |
|--------------------------|--|--|
| Mounting | Flange Mount | Four one-half inch diameter bolt slots equally spaced on a 4-inch bolt circle |
| | Thread Mount | 2½ - 8 NPT tapered pipe male thread with 3 inch hex wrench flat |
| Technical Specifications | Standard Operating Temp. | -40° to 180°F (-40 to 82°C) |
| | Switch Ratings | 15 Amp @ 125, 250 480 VAC 0.5 Amp @ 125 VDC (Non-inductive) 0.25 Amp @ 250 VDC (Non-inductive) |
| | Connector Options | Circular 3 pin ANSI Circular pin STANDARD Flying Leads Terminal Box |
| | Housing | External chamber is vented to maintain atmospheric pressure |
| | Resistance to Vibration | Switch operation not affected when subjected to 50/60 Hz, or whole multiples thereof. NOTE : Vibration amplitude of installed relay should be minimized. The natural frequency of the mounted relay must not be 50/60 Hz, or whole multiples thereof. |
| | Maximum Rated Pressure (Sensing Bellows) | -14.7 to 20 PSIG |

Due to our policy of continuous product improvement, dimensions and designs are subject to change.



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