

# QUALITROL® 900/910 RPRR

Rapid pressure rise relays



## Detection and protection of potentially catastrophic sudden pressure changes

- **NEW!** - Universal mounting IP65 design
- Different mounting and calibration options for gas or oil applications
- The original mechanical sudden pressure relay with over 50 years of protecting transformers and other electrical equipment

### Product Summary

**Description** Patented mechanical device for detection of sudden pressure events based on the rate of pressure rise and safe limits established by transformer manufacturers. When a dangerous pressure rise has been detected, the QUALITROL rapid pressure rise relay (RPRR) will change state. This can be used as an alarm or trip signal to minimize the potential of transformer tank damage.

**Application** For transformer and other electrical apparatus protection. Can be used in both oil (QUALITROL 900) or gas (QUALITROL 910) space of a transformer.



**QUALITROL®**  
Defining Reliability

# QUALITROL® 900/910 RPRR rapid pressure rise relays

## Protection and detection of dangerous sudden pressure changes

- Devices calibrated to quickly alarm or trip during rapid pressure rise changes (see response curves below)
- Actuation only occurs based on rate of pressure rise and will not occur under normal pressure variations caused by temperature change and vibration
- Can be subjected to full vacuum or 20 PSI positive pressure without damage

## 100% factory calibrated and tested to ensure performance

- Units are serialized and calibration records are maintained
- Factory tested for switch (contact) performance and response time
- Field test kit available for simple GO/NO-GO test to assure proper functionality of the device

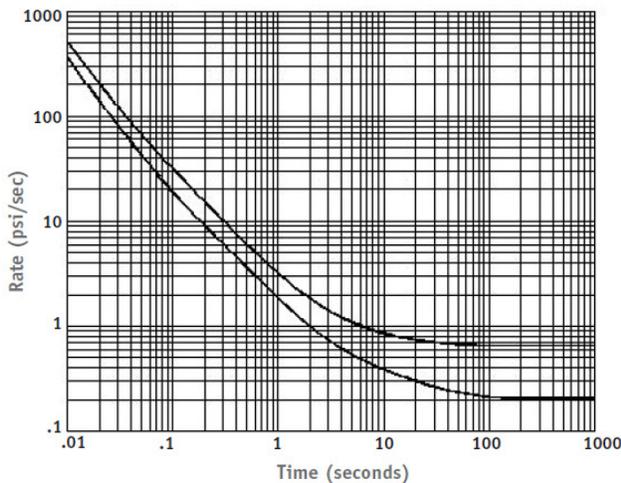
## Multiple mounting and calibration options for gas or oil applications

- Flange or thread mounting options available for both vertical or horizontal mounting
- Models calibrated for proper response in gas or oil space applications (see response curves below)

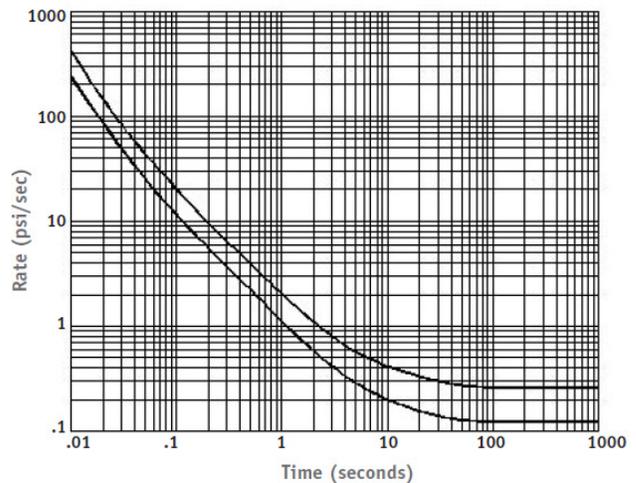
## From the original creator of mechanical rapid pressure rise relays

- Original creator of patented bellows technology for mechanical rapid pressure rise detection
- Over 50 years of experience and refinement in rapid pressure rise protection

## Rapid Pressure Rise Relay Response Curves



900 Series Response Limits



910 Series Response Limits

## Components and accessories

### Seal-in relay (909-300)



- Latching relay to “seal-in” momentary switch actuations common with detection of rapid pressure rise events
- Configurable for VAC or VDC
- Two output relays
- LED lights to indicate active status and actuation
- Low profile
- Redundant make/break circuit requirement protects against false trips due to damaged wiring
- UL certified for use in hazardous locations (Class 1, Div 2)

### Factory test fixture (FIX-601)



- Mimics the calibration and verification testing performed at the factory for all QUALITROL RPRRs
- Designed for use in repair shops and transformer manufacturing plants
- Built in LED indicator lamps show test status and results

### Field test kit (KIT-013-1)



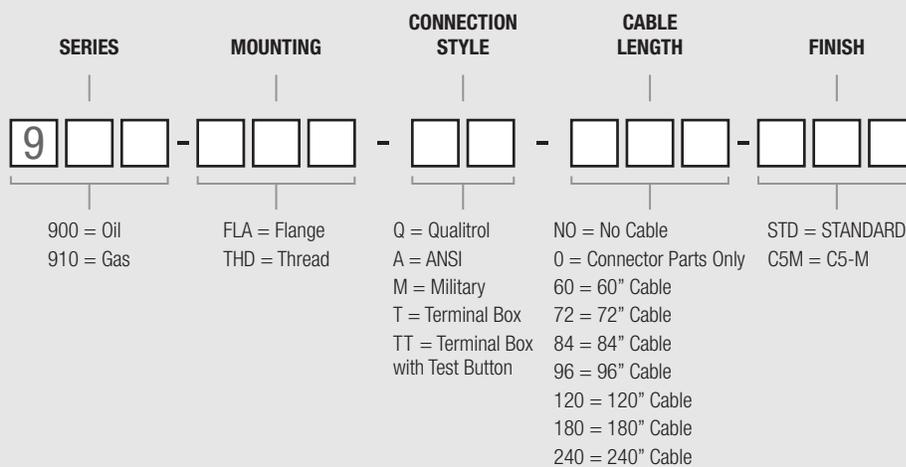
- Easy field test kit for “go/no-go” testing of all QUALITROL RPRRs
- Rugged carrying case
- Setup and test instructions in case
- Power supply and other required components provided in kit



**TECHNICAL SPECIFICATIONS**

<b>Mechanical</b>	Mounting	Vertical or horizontal (universal) in gas or oil space
	Mounting style	Flange mount or thread mount
<b>Dimensions</b>	Flange mount	Four ½” diameter bolt slots equally spaced on a 4” bolt circle
	Thread mount	2 ½” - 8 NPT tapered pipe male thread with 3” hex wrench flat
<b>Materials</b>	Bleed valve	Nickel plated brass
	Finish	ANSI #70 Powder Coat (standard). C5M Powder Coat (option)
	Hardware	Stainless steel
	Housing and cover	Die cast aluminum
	O-ring seal	Viton
	<b>Environmental</b>	Ingress Protection
	Ambient operating temperatures	-40°F to 180°F (-40°C to 82°C) standard -67°F (-55°C) option
	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
	Min/max pressure (sensing bellows)	-14.7 to 20 PSIG
<b>Electrical</b>	Switch type	Snap action, SPDT
	Switch rating (AC)	10 A @ 120, 240 & 480 VAC
	Inductive power factor (AC)	0.75
	Switch rating (DC)	½ A @ 125 VDC - resistive
		¼ A @ 250 VDC - resistive
	Electrical connection	QUALITROL, ANSI or military style connector Direct wiring terminal box

**Ordering code**



**Need more information?**

For more information on protecting your on-load tap changer from low temperature operation or over pressure please reach out to one of our Application Engineers.

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