

PFTRP - POWER FACTOR TRIP RELAY

The *Kinetics* type **PFTRP** Power Factor Trip Relay provides a means of monitoring the power factor of an electrical circuit and trips when the power factor goes lagging with respect to a preset power factor set point. It can be utilized to protect a synchronous motor from loss of field, pull-out-of-synchronization from heavy loads or line voltage dips and failure to synchronize on start. The **PFTRP** is provided in a convenient DIN rail mounted plastic enclosure for ease of installation

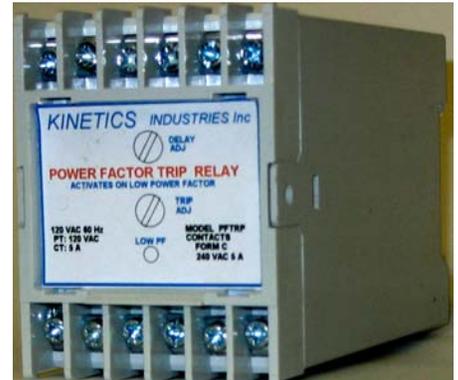
The relay utilizes 120 VAC, 60 Hz input control power. Power factor sensing requires a CT and a PT signal, which are in quadrature at 1.0 P.F. (In a 3 phase circuit this would be usually the PT from phases A-B and the CT from phase C or PT from phases C-B and the CT from phase A).

The circuit is normally arranged to accept a 5A CT secondary and 120 v PT secondary. The relay has form C contacts and is activated when the power factor drops below the preset level.

An adjustable time delay to activate upon reaching its activation level is provided, as is the ability to set the trip point by front panel analog potentiometers. An LED indicator indicates when the relay is tripped or activated.

Principal of Operation

120 VAC control power must be provided for the relay electronics. The input CT and PT signals are run through signal conditioning circuits and are then put into a multiplying IC where their in-phase components are multiplied. The output is adjusted by the preset adjuster and then applied to the input of a voltage comparator which in turn energizes the interposing relay when the preset operating level is exceeded and illuminates the indicating LED. Both the relay and LED de-activate when the power factor regains the non-activating level.



Specifications:

Type: **PFTRP**

Input:

CT - nom 5a fl sec

PT - 120 vac sec

Quadrature signals at 1.0 pf

Control power – 120vac, 60hz

Set Points

Time Delay 1 – 20 sec

PF - .6 lag to .8 lead

Output Relay

Form C SPDT

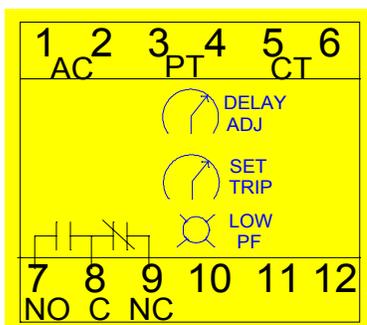
240VAC 5A

Operating Ambient 40°C

Wgt approx. 18 oz.

Dim: 2.2”w x 2.9”h x 4.4”d

Din Rail Mount



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