



### MODELS OFFERED

|               |                           |
|---------------|---------------------------|
| <b>TV-1:</b>  | 1 Phase, Average sensing  |
| <b>TV-1T:</b> | 1 Phase, True rms sensing |
| <b>TV-3:</b>  | 3 Phase, Average sensing  |
| <b>TV-3T:</b> | 3 Phase, True rms sensing |

- True RMS sensing is recommended for input signals with distortion.
- Direct connect to the transducer for inputs  $\leq 600V$  AC.
- Connect using a Potential Transformer (P.T.) for inputs  $> 600V$  AC.

### FEATURES

- High accuracy  $\pm 0.2\%$  of Rated Output (R.O.)
- Super high accuracy  $\pm 0.1\%$  of Rated Output (R.O.) available as a special order.\*
- High immunity to external noise.
- Quick and easy mounting to 35mm DIN Rail (DIN46277)
- Many input and output signal combinations

### GENERAL SPECIFICATIONS

|                                    |                                                                                                                                                                                                                                        |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Accuracy</b> .....              | $\pm 0.2\%$ R.O. Standard for 10 to 100% of rated output<br>$\pm 0.1\%$ R.O. (Special Option)                                                                                                                                          |
| <b>Temp. coefficient</b> .....     | $\leq 100\text{ppm}/^\circ\text{C}$ of span<br>$\leq 60\text{ppm}/^\circ\text{C}$ for ambient temperature of $25^\circ\text{C} \pm 10^\circ\text{C}$                                                                                   |
| <b>Temp. range</b> .....           | Storage temperature range $-20^\circ\text{C}$ to $60^\circ\text{C}$ ( $-4^\circ\text{F}$ to $140^\circ\text{F}$ )<br>Operating temperature range $0^\circ\text{C}$ to $50^\circ\text{C}$ ( $32^\circ\text{F}$ to $122^\circ\text{F}$ ) |
| <b>Humidity range</b> .....        | Up to 95% RH non condensing                                                                                                                                                                                                            |
| <b>Isolation</b> .....             | Between Input/Output/Power/Case                                                                                                                                                                                                        |
| <b>Dielectric test</b> .....       | DIN-IEC 688<br>2K Vrms/1 min, Between terminal to terminal<br>2.8K Vrms/1 min, Between terminal to case                                                                                                                                |
| <b>Surge test</b> .....            | DIN-IEC 255-4, ANSI C37 90a/1974 5KV( $1.2 \times 50 \mu\text{s}$ )                                                                                                                                                                    |
| <b>Insulation Resistance</b> ..... | Greater than 100 M $\Omega$ at 500V DC                                                                                                                                                                                                 |
| <b>Housing material</b> .....      | ABS Resin(94V-0) or metal                                                                                                                                                                                                              |
| <b>Mounting</b> .....              | Screw mount on metal case or Plastic case DIN Rail 35mm                                                                                                                                                                                |
| <b>Auxiliary Power</b> .....       | AC 115/230V $\pm 15\%$ , 50/60Hz, 3VA<br>DC 24V $\pm 20\%$ (optional)<br>125V DC $\pm 20\%$ (optional)                                                                                                                                 |

|                                    |                                                                                                                                                                                                 |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>AC Input.....</b>               | 0 to 150V AC, 0 to 300V AC, 0 to 600V AC or custom input                                                                                                                                        |
| <b>Frequency .....</b>             | 45Hz to 65Hz or 400Hz                                                                                                                                                                           |
| <b>Burden .....</b>                | ≤0.1VA                                                                                                                                                                                          |
| <b>Response Sensitivity .....</b>  | ≤0.5% of measuring range to mazimum input range                                                                                                                                                 |
| <b>Input Overload Capacity....</b> | 1.25 times the rated input voltage continuously.<br>2 times the rated voltage for 10 seconds.<br>4 times the rated input voltage for 5 seconds.<br>Or 600V AC rms continuous.(absolute maximum) |

|                              |                                                                                                              |
|------------------------------|--------------------------------------------------------------------------------------------------------------|
| <b>Output Variables.....</b> | DC mA or DC Volts                                                                                            |
| <b>Ripple.....</b>           | < 0.5% of rated output. Peak to Peak (maximum)                                                               |
| <b>Response Time.....</b>    | < 400 milliseconds to go from 0 to 99% of output                                                             |
| <b>Zero Adjustment.....</b>  | ± 5% of rated output minimum                                                                                 |
| <b>Span Adjustment.....</b>  | ± 10% of rated output minimum                                                                                |
| <b>Load Resistance.....</b>  | 10K Ω maximum for 0 to 1mA output<br>500 Ω maximum for 4 to 20mA output<br>500 Ω minimum for 0 to 10V output |

The diagram illustrates a three-phase 4-wire system. At the top, three horizontal lines represent the input phases: L1 (blue), L2 (purple), and L3 (green), with a neutral line N (black) below them. These lines are connected to a transformer with three primary windings labeled P.T.1, P.T.2, and P.T.3. The secondary windings are connected in a star configuration, with their common point grounded to the neutral line N. The secondary terminals are numbered 1 through 18. The first six terminals (1-6) are grouped into three pairs, each with a corresponding output label: (1,2) for OUTPUT A (+, -), (3,4) for OUTPUT B (+, -), and (5,6) for OUTPUT C (+, -). The remaining six terminals (7-12) are grouped into three pairs, each with a corresponding output label: (7,8) for 1S, (9,10) for 1L, (11,12) for 2S, (13,14) for 2L, (15,16) for 3S, and (17,18) for 3L. The 15V AC POWER source is connected to terminals 15 and 16.

### Three Phase 4 wire