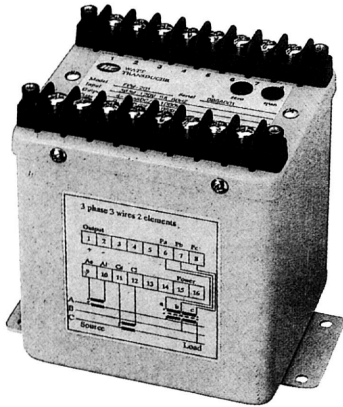


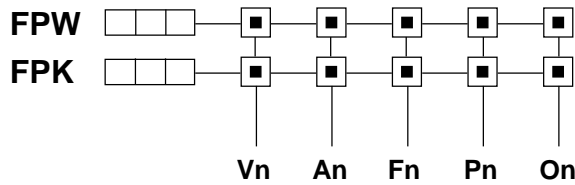
WATT & VAR TRANSDUCER



Applied Standards & Rules

| | |
|--------------------------|----------------------------------|
| Measuring and conversion | IEC 688 / 1992 - 04 |
| Dielectrical strength | IEC 688 2KVac / 1 min. |
| Surge and Impulse test | ANSI C37.90 / 1989 |
| | IEC 255-3 (1989) 4KV 1.2 x 50 us |

Order form



Example : FPW201-V1-A2-F2-P1-O3

Input & Output parameters

| Vn : Voltage input | Vn rating range | V1 | V2 | V3 | Vy Specified | On : Output | | |
|----------------------|-----------------------|-------------------------|-------------------------|----------------------|-----------------|--|-----------------|-----------------|
| | | 120 V 75 - 150 V | 240 V 150 - 300 V | 480 V 300 - 600 V | | O1 0 - 1 mA | O2 0 - 20 mA | O3 4 - 20 mA |
| An : Current input | An rating range | A1 | A2 | A3 | Ay Specified | O4 | O5 | O6 |
| | | 1 A 0 - 1.5 A | 5A 0 - 7.5 A | 10A 0 - 15 A | | 0 - 1 V | 0 - 5 V | 0 - 10 V |
| Fn : Frequency input | Fn rating range | F1 | F2 | | Fy Specified | O7 | Oy | |
| | | 50 Hz 48 - 52 Hz | 60 Hz 58 - 62 Hz | | | 2 - 10 V | Specified | |
| Pn : Auxiliary power | Pn rating range | P1 | P2 | Ps | Py Specified | Py : DC24 / 48 / 125 V ± 15% or other range under specified | | |
| | | AC 120 V 120 V ± 15% | AC 240 V 240 V ± 15% | Internal Powered | | | | |

| Model | | Application system | | Std. calibration vs output full span (Watt / Var) = D | | | | | | | | |
|--------|--------|-----------------------|----------------------------|---|------|-----|------------|----|-----|------------|----|-----|
| Watt | Var | Elements - Connection | | V1 = 120 V | | | V2 = 240 V | | | V3 = 480 V | | |
| | | | | 1A | 5A | 10A | 1A | 5A | 10A | 1A | 5A | 10A |
| FPW101 | FPK101 | 1E | 1 phase 2 wires | 100 | 500 | 1K | 200 | 1K | 2K | 400 | 2K | 4K |
| FPW111 | FPK111 | 1.5E | 1 phase 3 wires, unbalance | 200 | 1K | 2K | 400 | 2K | 4K | 800 | 4K | 8K |
| FPW201 | FPK201 | 2E | 3 phase 3 wires, unbalance | 200 | 1K | 2K | 400 | 2K | 4K | 800 | 4K | 8K |
| FPW211 | FPK211 | 2.5E | 3 phase 4 wires, unbalance | 300 | 1.5K | 3K | 600 | 3K | 6K | 1.2K | 6K | 12K |
| FPW301 | FPK301 | 3E | 3 phase 4 wires, unbalance | 300 | 1.5K | 3K | 600 | 3K | 6K | 1.2K | 6K | 12K |

Note

- Standard output calibration
bipolar 0 to ± 1mA for 0 to ± D Watts or Vars
4-12-20mA for -D to 0 to +D Watts or Vars
- External power mode suitably for all output types
Internal power mode, only suitably for 0-1mA / 0-20mA / 0-1V / 0-5V / 0-10V output

Specification

Accuracy (23±3°C)

0.2% reading / PF ± 0.05% RO

Maximum output load

DC current mode : maximum 10V drop

DC voltage mode : maximum 5mA drive

Dielectric strength

AC 2KV 1 minute between terminals; AC 2.6KV 1 minute / terminals to case

Surge and impulse test

ANSI C37.90 / 1989, IEC 255-3 (1989) 4 KV 1.2 x 50 us

Maximum input over

Current related input

Voltage related input

1A / 5A

10A

4 x rated / continuous

2 x rated / continuous

1.5 x rated / continuous

10 x rated / 10 seconds

25 x rated / 1 second

2 x rated / 10 seconds

50 x rated / 1 second

50 x rated / 0.5 second

80 x rated / 0.5 second

Input burden

Current less 0.2 VA; voltage less 0.1 VA

Response time & ripple

≤ 400 ms for step change 0-99% ripple less 0.5% ro peak to peak

Frequency

50 ± 2 Hz; 60 ± 2 Hz; 400 ± 5 Hz (Watt only)

Waveform

Watt - 2% 3rd, Var - sinusoidal

Stability

Temperature range (20 to 26°C) long term stability / year

Maximum 60 ppm / °C less 0.2% draft / year typically FPW

Maximum 70 ppm / °C less 0.2% draft / year typically FPK

Storage condition

Temperature range -25 to 70°C, RH 20 to 95% non condensed

Operating condition

Temperature range -20 to 65°C, RH 0 to 99% non condensed

Magnetic field effect

< 0.01% under 100 ampere turns at 1M center

Power dissipation

< 3.5 VA

Terminal Connection

