

Series APT 410-Watts APT 420-Vars APT 430-Watts & Vars

The 410, 420, 430 Series provides the many varieties of single and multi element power transducers to meet the needs of balanced and unbalanced, single and multiphase systems. Units are all self powered if one voltage never falls below 80V use suffix SP. Alternatively a separate power supply is required.

For applications where only a meter is to be driven by the output, units include for provision of suitable scaling resistor.

| | |
|----------------------|--|
| CALIBRATION ACCURACY | ±0.5% Span |
| POTENTIAL INPUT | 0 to 150V |
| OVERLOAD CONTINUOUS | 30% |
| CURRENT INPUT | 0 to 5A |
| OVERLOAD CONTINUOUS | 200% |
| SELF POWERED | With Voltage above 80V |
| OUTPUT SIGNAL | 0 to 10, 4 to 20, 1 to 5mA DC 0 to 1, 0 to 10, 1 to 5V DC |
| FREQUENCY RANGE | 45 to 65Hz |
| ADJUSTMENTS ZERO | ±10% |
| SPAN | ±50% |
| INSULATION TEST | 5000V |
| TEMPERATURE RANGE | -20 to +70°C Working |

SINGLE ELEMENT

For single phase measurement
Unless specified calibration will be 500 WATTS or VARS

MODEL APT 412

Watt Transducer

MODEL APT 422

Var Transducer

Output positive for lagging P.F.

1½ ELEMENT

For balanced three phase three wire measurement.
Units have two current inputs and one voltage input.
Requires one less VT than 2 element system.
Unless specified calibration will be 500 WATTS or VARS.

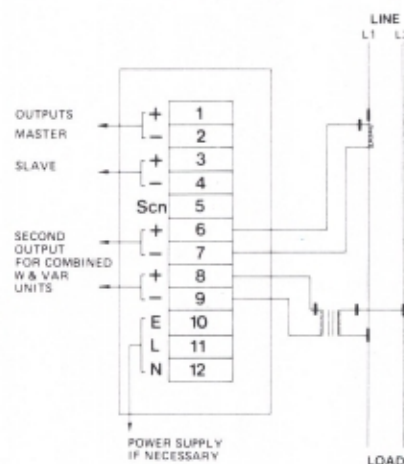
MODEL APT 413

Watt Transducer

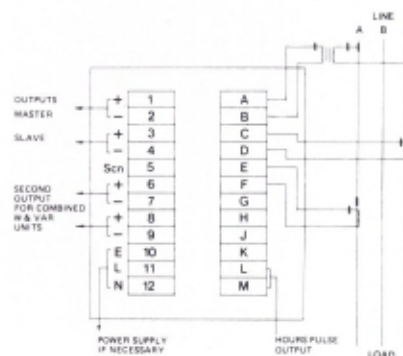
MODEL APT 423

Var Transducer

Output positive for lagging P.F.



Single Element
Single Phase
(PF Lagging)



1½ Element 3 Phase 3 Wire
Balanced Load
(PF Lagging)

ORDERING INFORMATION

| INSTRUMENT TYPE | POWER | POWER FACTOR | VOLTAGE | CURRENT | FREQUENCY | HOURS RUN or kWh |
|-----------------------------|-------|--------------|---------|---------|-----------|---------------------|
| No. of Elements | ● | | | | | |
| Inputs Volts Range & VT | ● | | ● | | | |
| Input current Range & CT | ● | | | ● | | |
| Output Signal | ● | ● | ● | ● | ● | |
| Frequency Range | | | | | ● | |
| Power Factor Range | | ● | | | | |
| Power Factor Scaling | | ● | | | | |
| Pulse Output Volts | | | | | | ● |
| Special Conditions | ● | ● | ● | ● | ● | ● |
| Two Outputs Option | ● | ● | ● | ● | ● | |

OPTIONAL EXTRAS

| Description | Suffix Code |
|--------------------|-------------|
| kWh | H |
| Dual Output | D |
| Self Powered | SP |

Inputs Data

| | UNITS | No of elements | | | P.F. | V | I | f |
|-----------------------------------|-------|----------------|--------|--------|-------|-------|----|-------|
| | | 1 | 2 | 3 | | | | |
| Nominal Calibration WATTS or VARS | | 500 | 1000 | 1500 | — | — | — | — |
| Potential Input Normal | V | 0–150 | 0–150 | 0–150 | 0–150 | 0–150 | — | 0–150 |
| O/L Cont. | V | 200 | 200 | 200 | 200 | 200 | — | 200 |
| Burden | VA | 4 | 4 | 4 | 2 | 1 | — | 1 |
| Current Input Normal | A | 0 to 5 | 0 to 5 | 0 to 5 | 5 | — | 5 | — |
| O/L Cont. | A | 15 | 15 | 15 | 15 | — | 20 | — |
| Burden | VA | 1 | 1 | 1 | 2 | — | 1 | — |

Output Data

Output load—maximum voltage 20V on external power

When self powered option SP is used maximum voltage output is 12V

Output open and short circuit has no effect

Output ripple 0.3% maximum

Zero and span controls by 15 turn potentiometers

Zero adjustment $\pm 10\%$

Span adjustment $\pm 50\%$

Response time 400ms

Conditions

Insulation Resistance 5.0kV

Impulse Test to BS 923, IEC 255–4 (1976)

Vibrations 15 to 150Hz 1g has no effect

Temperature Range -20 to $+70^{\circ}\text{C}$

Performance

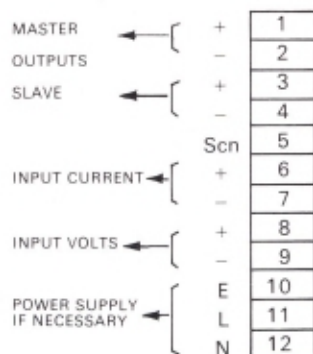
Accuracy Class 0.5%

Linearity $\pm 0.25\%$

Temperature Coefficient $\pm 0.01\%$ per $^{\circ}\text{C}$

Termination

Termination Spade type for conductors up to 4mm^2



Model Nos.
APT 440
APT 450
APT 460
APT 470

Mountings

Weight

Position

Types of Mounting

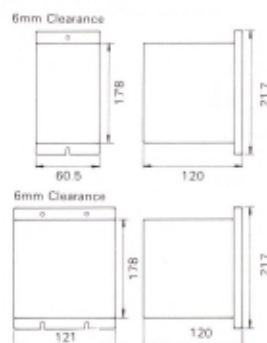
Typical 1.5kg

Any Position

Free Standing

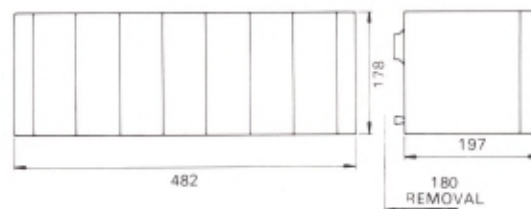
19" International Rack

Surface Mounting



International 19" Rack

Up to 7 Amelec units can be mounted in one 19" Rack section. The rack is made of precision extruded aluminium and fits any standard 19" Rack. Most Watt and Var transducers require two units space. All dimensions in mm.



OTHER ENCLOSURES

Enclosures are available for single and multiple units to meet IP65 and other requirements. For full details contact our Sales Office.