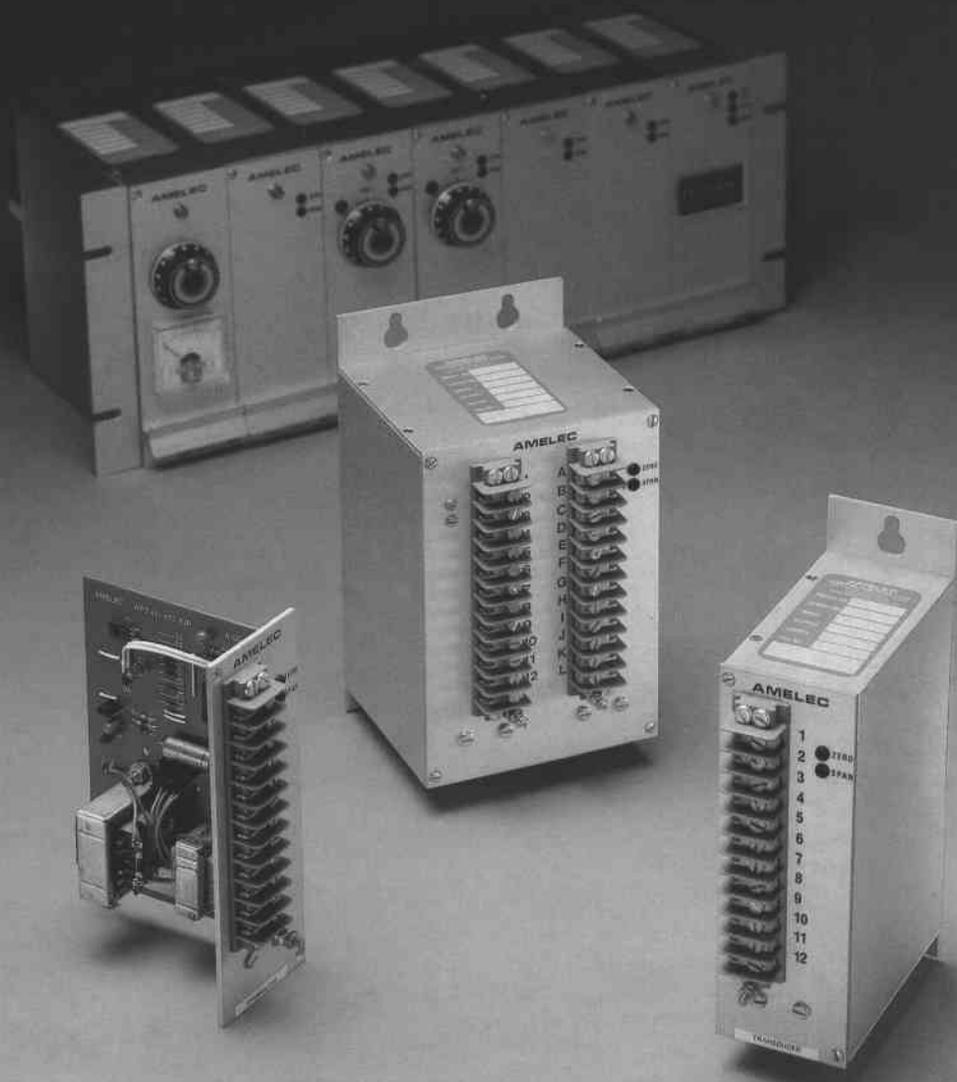


# AMELEC instruments

## APT POWER TRANSDUCERS



**ACCURACY**  $\pm 0.5\%$

**HIGH LEVEL OUTPUTS**

**RACK OR FREE STANDING**

**CONTINUOUS OVERLOAD** 200% current

**SOLID STATE** Non potted assembly

**SELF POWERED** Down to 80V

# power transducers

## Series APT 440-Power Factor

The APT 441 transducer gives an output signal linear with the phase angle. To obtain a signal linear with Power Factor a lineariser must be fitted and this is APT 442. Burden on the inputs is very low. To achieve the stated accuracy both inputs must have the same harmonic content. Models are self powered if the voltage is always above 80V use suffix SP.

### MODEL APT 441

Input  $\pm 30^\circ \pm 45^\circ \pm 60^\circ \pm 90^\circ$   
Voltage 0 to 150V  
Current 0 to 5A  
Accuracy  $\pm 0.5\%$   
Output  $\pm 1\text{mA} \pm 5\text{mA} \pm 10\text{mA}$   
0 to 10, 4 to 20, 1 to 5mA DC  
0 to 1, 0 to 10, 1 to 5V DC  
Linearity  $\pm 0.25\%$  at unity

### MODEL APT 442

As model 441 but with output linearised  
with power factor  
Accuracy  $\pm 1\%$

## Series APT 450-AC Volts/Current

The 450 series accepts inputs from voltage or current transformers.

Units can be self powered if volts are above 80V use suffix SP.

Output signals available as 0 to 10, 4 to 20, 0 to 1, 1 to 5mA DC or 0 to 1, 0 to 10, 2 to 10, 1 to 5V DC.

### MODEL APT 451

Input 1.0 or 5.0A, 40 to 500Hz  
Overrange  $\times 4$  continuous  
Accuracy  $\pm 0.5\%$   
Linearity  $\pm 0.25\%$

### MODEL APT 452

Input 0 to 150V 40 to 500Hz  
Overrange 200V continuous  
Accuracy  $\pm 0.5\%$   
Linearity  $\pm 0.25\%$

## Series APT 460-Frequency

The 460 series accepts voltage input and gives DC output signal linear with frequency. Unit can be self powered if voltage is above 80V use suffix SP. Output any standard signal.

### MODEL APT 461

Input 45 to 55Hz or  
55 to 65Hz  
Input Voltage 0 to 150V  
Accuracy  $\pm 0.5\%$   
Linearity  $\pm 0.2\%$  at mid point

## Series APT 470-Hours Run

Accepts input from clean contact closure and gives an accurate output of 24V DC 30ms pulse for each hour of operation. Can be used in planning the routine maintenance of heavy electrical machinery.

### MODEL APT 471

Input—Contact closure  
Output—24V DC Pulses 30ms duration  
Power Supply—110V or 240V  $\pm 20\%$  50/60Hz 24V DC  $\pm 2.5\text{V}$

Full specification on Page 65

Prices on Page 72

# specifications

## 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

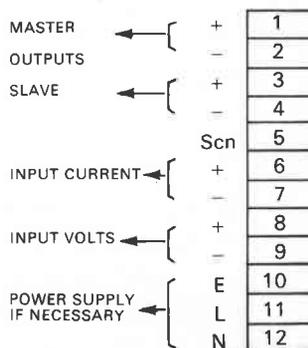
Accuracy Class 0.5%

Linearity  $\pm 0.25\%$

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

## Termination

Termination Spade type for conductors up to  $4\text{mm}^2$



Model Nos.  
APT 440  
APT 450  
APT 460  
APT 470

## Mountings

Weight

Position

Types of Mounting

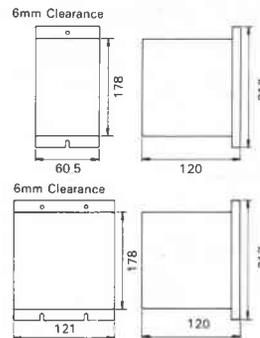
Typical 1.5kg

Any Position

Free Standing

19" International Rack

## Surface Mounting

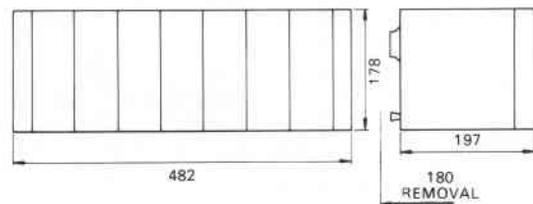


Models APT 412  
422  
440  
450  
460  
470

Models APT 413  
423  
414  
424  
415  
425  
416  
426

## 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.