

## 2 ELEMENT

For unbalanced load three phase three wire or two phase four wire measurement.

The units have two current inputs and two voltage inputs.

Unless specified calibration will be 1000 WATTS or VARS.

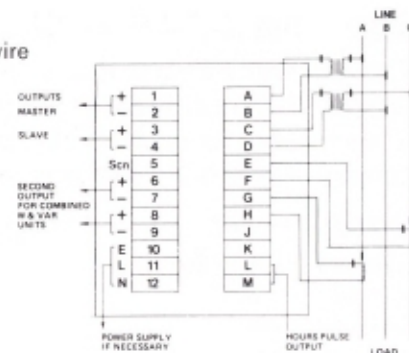
### MODEL APT 414

Watts Transducer

### MODEL APT 424

Var Transducer

Output positive for lagging P.F.



2 Element 3 Phase 3 Wire  
Unbalanced Load  
(PF Lagging)

## 2 1/2 ELEMENT

For three phase four wire measurement where the line/neutral voltages are balanced.

The units have two voltage inputs and three current inputs.

Requires one less VT than 3 element system. Unless specified the calibration will be 1500 WATTS or VARS.

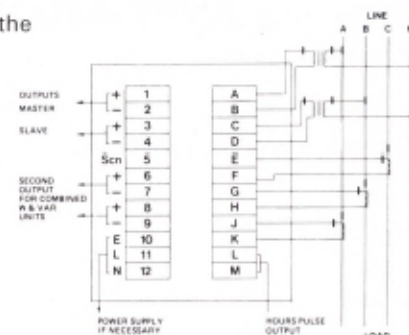
### MODEL APT 415

Watt Transducer

### MODEL APT 425

Var Transducer

Output positive for lagging P.F.



2 1/2 Element 3 Phase 4 Wire  
Balanced Load  
(PF Lagging)

## 3 ELEMENT

For three phase four wire unbalanced loads/voltages measurement.

The units have three voltage and three current inputs all fully isolated. Unless specified calibration will be 1500 WATTS or VARS.

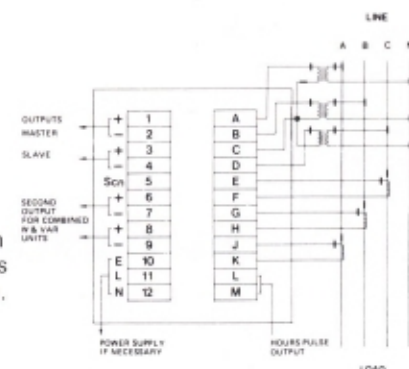
### MODEL APT 416

Watt Transducer

### MODEL APT 426

Var Transducer

Output positive for lagging P.F.



3 Element 3 Phase 4 Wire  
Unbalanced Load  
(PF Lagging)

## KILOWATT HOURS

Any watt transducer can be fitted with an integrator to give an additional output of kWh. The output is in the form of 24V DC pulses with 30ms duration. Scaling of pulses to suit your application. To order this unit add Suffix H to unit.

### 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

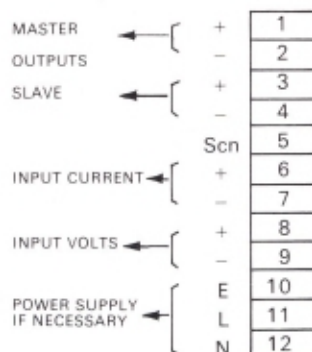
Accuracy Class 0.5%

Linearity  $\pm 0.25\%$

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

### Termination

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



Model Nos.  
APT 440  
APT 450  
APT 460  
APT 470

### Mountings

Weight

Position

Types of Mounting

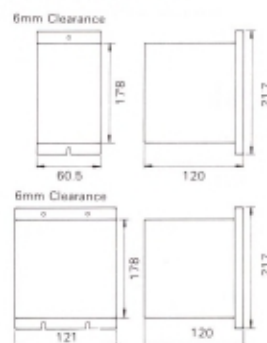
Typical 1.5kg

Any Position

Free Standing

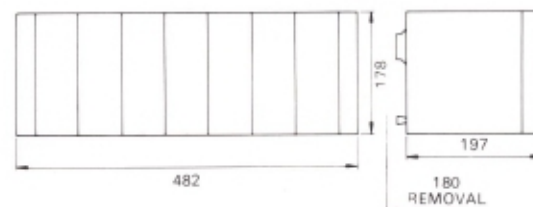
19" International Rack

### Surface Mounting



### 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.