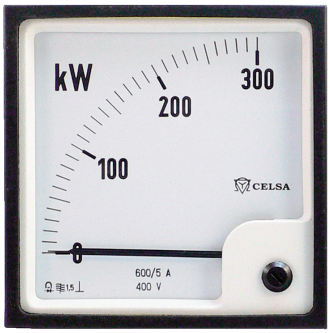
DQ...n - Electronic Active Power Instrument (Wattmeter)



- For alternating current 50-60 Hz
- Class 1.5
- Scale 90°

Description

The system consists of a moving coil meter with installed transducers which measures the active power in a sinusoildal or not sinusoidal current circuit and which transformes it into an analogue signal. This is then passed to the moving coil movement. The standardized scale final values are 1 - 1,2 - 1,5 - 2 - 2,5 - 3 - 4 - 5 - 6 - 8 and respectively the decimal multiples of those. Other values on request.

Consumption

The consumption per current path is < 0.2 VA

The current consumption in the voltage path amounts to: < 3.9 VA

When ordering power instruments please indicate

1. Kind of current as for example an one-phase alternating current or three-phase current with or without zero conductor, equally or unequally loaded.
2. The voltage between phases and between phase and zero conductor.

When using voltage transformers please indicate the operating voltage, ratio and the switching of transformers (At more than 500V voltage transformers are required).

3. The current (max. 5 A directly). When using current transformers also indicate the ratio.
4. Indication of scale end-value at active power:

If not indicated we proceed as follows:

a) for one-phase alternating current net

P (W) = U (V) x I (A)

b) for three-phase net

P (W) = U (V) x I (A) x Ã3 x cos. φ.

If the cos. φ. is unknown, we use the value 1 for our calculations.

Technically realizable scale end-values: : P* 0.5 up to 1.2

Indication of scale end-value at reactive power:

a) for one-phase alternating current net

Q (var) = U (V) x I (A) x sin. φ.

b) for three-phase net

Q (var) = U (V) x I (A) x Ã3 x cos. φ.

If the cos. φ. is unknown, we use the value 1 for our calculations.

Technically realizable scale end-values: Q* 0.5 up to 1.2

If the zero point shouldn't be at the beginning of the scale but within the scale-range (wattmeter for the simultaneous capture of import and export) the required on the left and right of the zero point have to be indicated to.

Active power instruments indicate with the needle's deflection to the right of the zero point the import of active power and on the left of the zero point the export of active power, for example,100-0-100 kW. The same is valid for reactive power instruments.

Overload capacity according to DIN 43780

Current and voltage paths can be continuously overloaded for 20 %.

Technical Features

Front frame	(mm)		96 x 96	144 x 144
Scale length	(mm)		97	146
Weight (g)			a = 650 b = 650 c = 750 d = 900	a = 900 b = 950 c = 1000 d = 1100
Measuring range	U (V)	I (A)	Type	Type
One phase alternating current			**DQ 96n/1w**	**DQ 144n/1w**
a ~	57,7 - 63,5 100 - 110 - 127	5	●	●
	230 - 400	1	●	●
Three-phase current balanced load			**DQ 96n/1d**	**DQ 144n/1d**
b ≋	100 - 110 - 230 400	5	●	●
	440 - 500	1	●	●
Three-phase current unbalanced load			**DQ 96n/2**	**DQ 144n/2**
c ≋	100 - 110 - 230 400	5	●	●
	440 - 500	1	●	●
Three-phase 4-wire current balanced load			**DQ 96n/1**	**DQ 144n/1**
d ≋	100 - 110 - 230 400	5	●	●
	440 - 500	1	●	●
Three-phase 4-wire current unbalanced load			**DQ 96n/3**	**DQ 144n/3**
e ≋	100 - 110 - 230 400	5	●	●
	440 - 500	1	●	●

● available ❍ on request

Connection diagrams see page 4/19.

Dimension diagrams at DQ..n/b. (see page 4/16)