

1. Description

The sensor for measurement of power was created to allow monitoring of electrical networks single-phase, two-phase or three-phase, with phase voltage of 10 [Vac] to 260 [Vac].

The TME-220 can be used alone to monitor AC voltage or, mainly, it can be incorporated into telemetry and remote control systems to measure this important electrical quantity.

The voltage to be monitored is converted to an industrial standard value from 0 to 5 [Vdc], and can be directly connected to the TSDA telemetry system. Its ease of installation and configuration is another important feature.



2. Product Features

- Extended operating range (10 [Vac] to 260 [Vac]);
- Measurement of single-phase networks, two-phase or three-phase;
- Galvanic Isolation;
- DIN Standard.

3. Technical Specifications

Specifications	Minimum	Typical	Maximum
AC consumption (per phase)	-	216 [mW] (127 [V])	860 [mW] (250 [V])
Input impedance		>50 [KΩ]	
Input Range	0 [Vac]	-	260 [Vac]
Output Range	0 [Vdc]	-	5 [Vdc]
Output impedance		<10 [Ω]	

4. Transfer Curve

The table below presents the measurement information of the AC input voltage and the respective DC output voltage of the sensor.

Vin (AC)	Vout (DC)	Vin (AC)	Vout (DC)
10	0,02	140	2,25
40	0,37	160	2,70
60	0,07	200	3,70
80	1,05	220	4,20
100	1,40	240	4,60
120	1,85	260	5,00

5. Flex Series Remote Unit Configuration

For correct visualization of the voltage of each phase on the remote unit(s) of the Flex series, it is necessary to configure the analog input, according to the parameters specified below; keeping in mind that an analog input is used for each measured phase.

	FLEX-FX	FLEX-LITE / FLEX-GW
Minimum value	0	0
Maximum value	260	260
Unity	Vca	Vca
Offset	0	0
Curve	$(8.53 \cdot 10^{-6}) \cdot x^3 - 0.004674 \cdot x^2 + 1.6235 \cdot x + 0.23$	$(1.14 \cdot 10^{-6}) \cdot x^3 - 0.001539 \cdot x^2 + 1.286 \cdot x + 11.5$

The scale of the analog meter must be adjusted with the following parameters described above, considering respectively the remote unit models of the Flex series. It is important to remember that each analog input must be configured separately, repeating the process.

The above equations must be inserted in the remote unit configuration page, according to the model shown above.

An alternative scale should be created in order to obtain the maximum accuracy of the sensor for the entire working range, between 10 [Vac] and 260 [Vac].