

POWER TRANSDUCER

Introduction

Power transducer is an electrical device used to measure, monitor, and transmit electrical parameters, typically be applied in power systems and industrial control applications.

The main function is to convert power parameters, such as voltage, current, frequency, power factor and active/reactive power, into standard voltage or current signals for monitoring, control and data collection.



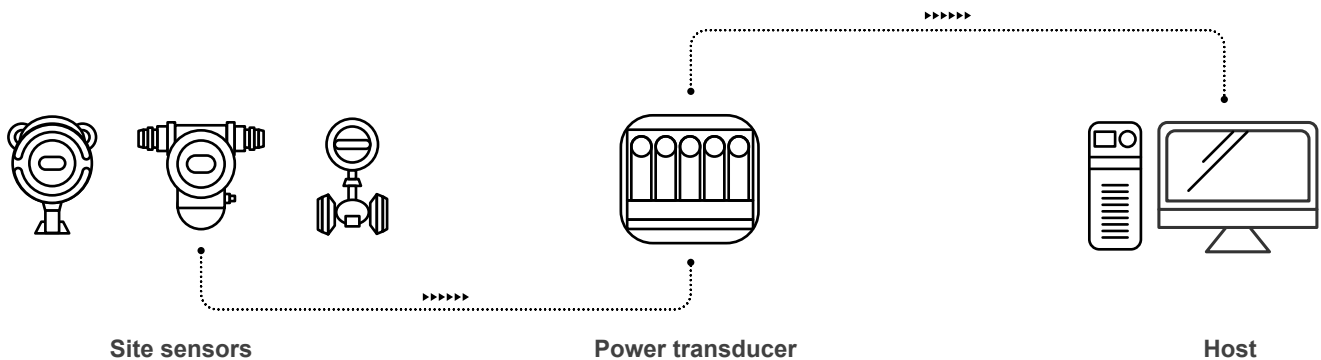
Application

- Power system monitoring and management.
- Industrial automation, motor control and protection.
- Data collection and reporting for power equipment.
- Lighting system control and energy saving.
- Battery management systems.

Main Features

- High-precision measures electrical parameters such as voltage, current, and power.
- Signal converts into standard voltage or current signals for easy transmission and processing.
- Features current isolation to safeguard against interference by isolating input and output circuits.
- RS485 remote monitoring and data analysis.
- Programmability: Offers configurability for various parameters and alarm settings.
- Real-time monitoring network performance and stability.

Working Principle



QPPX 3-PHASES PROGRAMMABLE POWER TRANSDUCER

POWER TRANSDUCER



Introduction

QPPX AC programmable transducer has 4 independent channels output, can be used to measure a wide range of electrical parameters and convert analog or digital signals to suitable for meters or PLC control systems. QPPX has signal isolation to ensure transmitted signal safety and accuracy.

Users can easily program, monitor and retrieve measurement data via panel buttons or PC interface. Users can freely configure up to 4 types of data out of 26 different electrical parameters for sampling and generating analog signal output.

Main Features

- 85~265VAC wide range voltage optional.
- 400ms response time, 2000V isolation protection.
- With RS485 port for remote control electrical data.
- Programmable settings, freely configurable parameters.
- Accuracy 0.5 class measurement and signal conversion.
- 35mm Din rail mounting, high-definition screen displays.
- 4 Channel output (max 26 types parameter for analog output).

Application

- SCADA system.
- Industrial automation applications.
- Instrumentation and control systems.
- Renewable energy systems.
- Power generation facilities.
- Utility and grid monitoring.

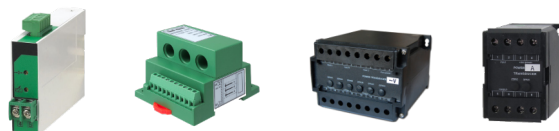
Technical Characteristics

Parameter	Value
Power supply	AC/DC 85~265VAC/DC
Input	Voltage: 110/220/400VAC (..Customer specified)
	Current: 1/5A AC (Customer specified)
	Frequency: 40-65Hz
Output	DC 4 ~ 20 mA / 0~20mV / 0-5V / 0-10V (..Customer specified)
Load resistance	$\leq 510\Omega$ in current output, $\geq 10K\Omega$ in voltage output
Accuracy	$\leq \pm 0.5\%$
Accuracy drift	Annual variation $< 0.2\%$
Response time	≤ 400 ms
Isolation	Input / output / power supply
Power consumption	AC < 3 VA
Case material	ABS fireproof materials
Insulation voltage	AC 2KV RMS / min
Weight	About 450g
Overload voltage	2 times 10 seconds(Instantaneous), 1.2 times in last.
Overload current	10 times 1 seconds(Instantaneous), 1.2 times in last.
Insulation resistance	When AC 500V , ≥ 100 M Ω
Dimension	87.3(W) X 132(H) X 35(D) mm
Installation	Fixed in a standard 35mm (1.38 inch) DIN rail or screwed on the cabinet.
Working condition	0 ~ 50°C/ less than 95% RH (Non-condensing)
Storage conditions	-20 ~ 70°C/ less than 70% RH (Non-condensing)

TR SERIES

POWER TRANSDUCER

POWER TRANSDUCER



Introduction

TR series power transducer adopts microcontroller technology as the core using the latest algorithms to achieve precise measurement. The AC/DC grid transducer is designed to convert AC/DC voltage or current inputs into a load-independent output signal.

TR series transducer exhibits exceptional temperature stability and reliable operational performance. It derives its output signal through the precise calculation of the root mean square measurement of the input signal, making it compatible with distorted waveforms.

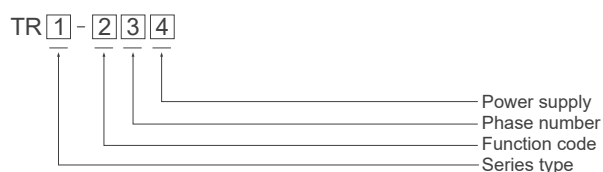
Main Features

- 200ms response time.
- 35mm Din rail mounting.
- 0.2 measurement accuracy.
- RMS measurement and output.
- Support customized parameters.
- Single/Three phase independent measurement.
- AC Voltage Input: 110V,220V,380V optional.
- Output: 0-5V,0-10V,4-20mA, 0-20mA optional.

Application

- AC/DC grid systems.
- Medium and low voltage systems.
- Metering of distribution feeders, transformers.
- Generators, capacitor banks and motors.
- Measuring converter: optional association of an instantaneous Analogue outputs available (0...20 mA / 4...20 mA).

Ordering Information



Num.	Code	Description
1	Blank	Default basic type
	D	Digital type, with RS485
	C	CT type, built-in CT
2	U	Voltage
	I	Current
	P	Active power
	Q	Reactive power
	H	Frequency
	F	Power factor
3	1	Single-phase
	3	Three-phases
4	A	For AC grid
	D	For DC grid

Technical Characteristics

Power signal inputs	
Rating	../1A or ../5A C.T. connected
	110V, 230V, 400V, 415V ac
Power consumption	<1 VA voltage
	<0.2 VA current
Overload capacity	1.2 times continuous
	5 sec @ 10 times of rated current 2sec @ 2 times of rated voltage
Frequency range	50Hz, 60Hz
Measurement output	
Standard outputs (others on request)	4~20mA, 0~5V
	0~20mA
	5~10V
	0~10V
Maximum load	<750 Ω (0-20mA, 4-20mA)
	>2000 Ω (voltage output)
Ripple	<1% peak to peak
Response time	<250ms 0-90%
	<500ms 0-99%
Measurement accuracy	
Class	± 0.5 % complying with IEC 60688
Accurate range	0 - 120% I
Frequency influence	<0.02% per Hz
Load influence	<0.25% of F.S. for specific load range
Auxiliary supply	
Rating	85-265Vac/dc, optional 12V, 24V, 48VDC
Consumption	<3VA
Galvanic isolation between I/O and AUX	
Test voltage	2KV RMS 50Hz for 1 minute
Impulse	4KV 1.2/50 μ sec waveform
Environment	
Operating	-10~55°C
Storage	-40~70°C, 20 ~ 93%RH ; noncondensing