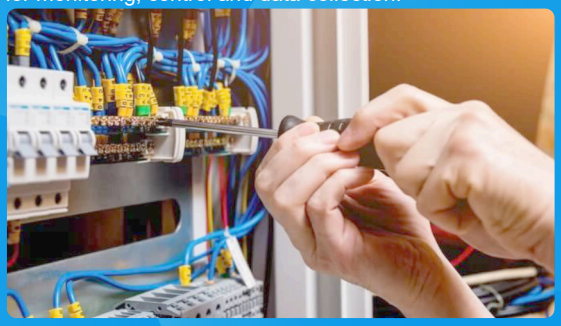
POWER TRANSDUCER

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.



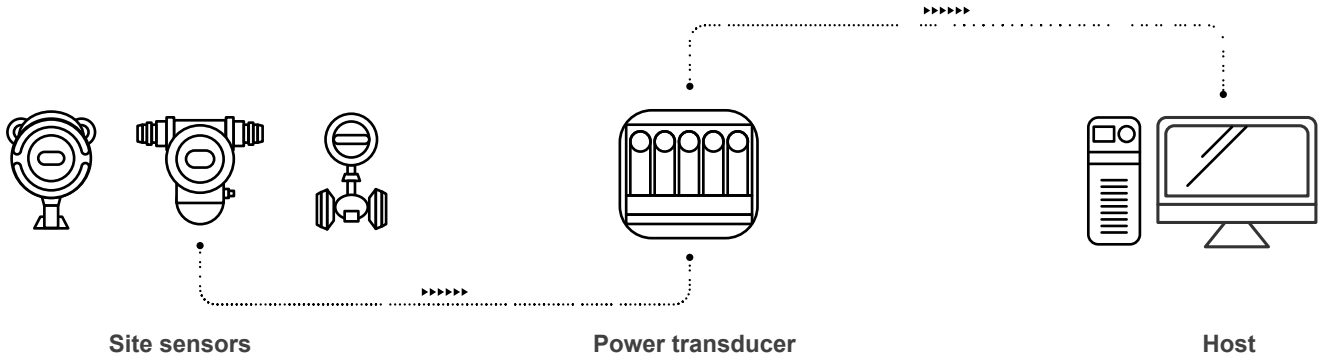
Application

- 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;
- Offers configurability for various parameters and alarm settings;
- Real-time monitoring network performance and stability;

Working Principle



QPPX 3-PHASES PROGRAMMABLE 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/dc wide range voltage optional;
- 400ms response time, 2000V isolation protection;
- With RS485 port for remote control electrical data;
- Programmable settings, freely configurable parameters;
- Accuracy class 0.5measurement 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: 1A/ 5A AC (Customer specified)
	Frequency: 40-65Hz
Output	DC 4 ~ 20 mA / 0~20mV / 0-5V / 0-10V (..Customer specified)
Load resistance	≤ 510Ω in current output, ≥ 10KΩ in voltage output
Accuracy	≤ ±0.5%
Accuracy drift	Annual variation < 0.2%
Response time	≤ 400 ms
Isolation	Input / output / power supply
Power consumption	AC < 3VA
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	≥100 MΩ @500Vac
Dimension	87.3(W) X 132(H) X 35(D) mm
Installation	Fixed in a standard 35mm DIN rail or screwed on the cabinet.
Working condition	0 ~ 50℃/ <95% RH (Non-condensing)
Storage conditions	-20 ~ 70℃/ <70% RH (Non-condensing)

QP/DP SERIES
POWER TRANSDUCER

Introduction

QP/DP series power transducer adopt 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.

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

Main Features

- Ultra-fast 200 ms response time;
- Compact 35 mm DIN rail mountable design;
- 0.2% high-precision measurement;
- True RMS measurement and versatile analog output;
- Support customized parameters;
- Single/Three phase independent measurement;
- Flexible AC voltage input options: 110V, 220V, or 380V;
- Selectable analog output ranges: 0-5V, 0-10V, 4-20mA, or 0-20mA;

Application

- Industrial motor and drive monitoring sector;
- Critical infrastructure power monitoring industry;
- Power electronics and converter applications sector;
- Industrial robotics and automation systems;
- Renewable power plant instrumentation industry;
- HVAC and building automation industry;

Ordering Information

QP/DP 1 - 2 3 4 5

- 5: Power supply
- 4: Output signal
- 3: Input signal
- 2: Function code
- 1: Series type

Num.	Code	Description
1	QP	For AC grid measurement and transducer
	DP	For DC grid measurement and transducer
2	V	Single phase voltage
	A	Single phase current
	VX	Three phases voltage
	AX	Three phases current
	W	Three phases active power
	K	Three phases reactive power
	WK	Three phases active&reactive power
3	A0	Customized current input
	A1	0-1A
	A2	0-5A
	V0	Customized voltage input
	V1	0-5V
	V2	0-10V
	V3	0-100V
	V4	0-220V
	V5	0-400V
4	S0	Customized current output
	S1	0-20mA
	S2	4-20mA
	S3	0-5V
	S4	0-10V
5	P1	85-265VAC
	P2	24VDC
	P3	48VDC

Technical Characteristics

Working power	
Power supply	85-265Vac/dc,optional 12V, 24V, 48VDC
Consumption	<3VA
Power signal inputs	
Rating input	../1A or ../5A CT connected
	110V, 230V, 400V, 415VAC
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%
Frequency influence	<0.02% per Hz
Load influence	<0.25% of F.S. for specific load range
Galvanic isolation between I/O and AUX	
Test voltage	2KV RMS 50Hz for 1 minute
Impulse	4KV 1.2/50μsec waveform
Environment	
Operating	-10~55˚C
Storage	-40~70˚C, 20 ~ 93%RH ; noncondensing