

XD303F

Power Transducer with Frequency Output



- **Ideal for measuring Short Term Energy Usage**
High Frequency Output provides High Resolution Measurements
- **Safe to Use - Conforms to the Low Voltage Directive**
Isolated Frequency Output and Fully Isolated Current Inputs
- **Simple to Install**
Standard DIN Rail mounting
- **Flexible in Use**
Frequency proportional to Power - Total Count proportional to Energy
- **Accurate and Precise**
Measures True Power, even in the presence of Harmonics

SPECIFICATION

XD303F is a precision kW transducer with an isolated frequency output proportional to true power. It allows both Energy and Power to be simply measured:

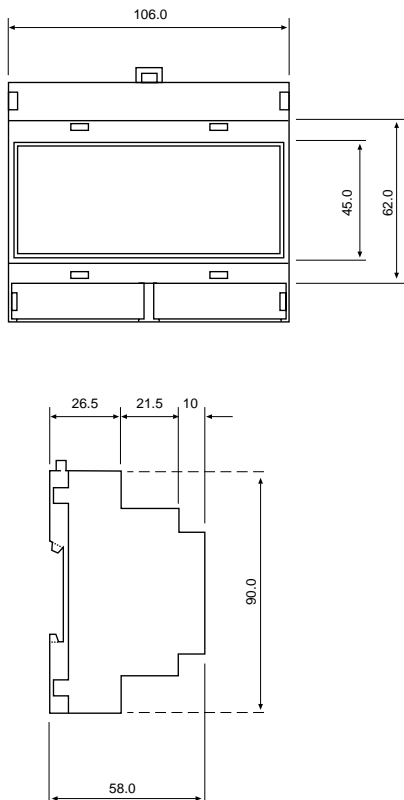
- Measure frequency to obtain Power.
- Count the output pulses to measure the Energy used.

Applications include measurement of energy consumption in short batch processes, such as rubber compounding, preparation of bread dough, general mixing of chemicals, etc. Other applications include the testing of White Goods.

The standard configuration is ideal for 3 phase, 3 or 4 wire unbalanced loads. Units are also optionally available for single phase and for 3 phase balanced loads, either 3 wire or 4 wire. Fully isolated current inputs ensure conformance to the Low Voltage Directive and give safe current inputs. 5 Amp current inputs are standard, while 1 Amp is available as an option.

Frequency output is via an isolated volt free contact and is suitable for interface to external counters, instruments, or to a PLC. Maximum standard output frequency is 100Hz, with 100 pulses per Watt hour being the factory calibration.

The DIN Rail mounting XD303F is housed in a grey Noryl enclosure conforming to DIN 42880, 6 modules wide. The pulse Output conforms to DIN 43864 and the proposed IEC 61393 Class A and Class B devices at output frequencies less than 16.6Hz.



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Configuration

Standard	3Ø 3 or 4 wire unbalanced
Optional	3Ø 3 wire balanced load 3Ø 4 wire balanced load Single Phase

Input Voltage U_n

Standard	230/400V 3Ø or 230V Single Ø
Optional	60/110V 3Ø, 120/208V 3Ø etc.
Voltage Range	50% to 120% U_n (nominal volts)

System Frequency

Standard	45 to 65Hz
Optional	Please Consult

Input Current I_n

Standard	Fully isolated inputs
Optional	5 Amp 1 Amp
Current Range	0.5% to 120% I_n

Auxiliary Supply

Standard	Fully isolated from other inputs and outputs
Optional	230V $\pm 15\%$ 50/60Hz 115V $\pm 15\%$ 50/60Hz
Burden	5VA Max

Accuracy

Energy	Class 1 per EN 61036 (IEC 1036)
Power	$\pm 0.2\%$ (\approx Class 0.2 per IEC 688)

Effect of Harmonics or Input Interruptions

None to the 50th Harmonic. Accuracy not affected by input interruptions as long as Auxiliary Supply is maintained.

Frequency Output Isolation

Rating	Isolated Volt Free Contact 2500V 50/60Hz 1 minute test to other inputs
Format	50V & 100mA ac or dc max. ON/OFF with 1:1 Mark/Space ratio
Max Frequency	100Hz
Standard Value	100 pulses per Watt Hour 100Hz @ 240V 3Ø 5 Amp 33.33 Hz @ 240V 1Ø 5 Amp
Int. Scale Factors	Divider - Binary, 1/2 through to 1/1024 (Default 1/2) Multiplier - x1, x2 through to x9 (Default x1)

Environmental

Temperature	Operating -10°C to +55°C Storage -25°C to +70°C
Humidity	Op. <75%RH non-condensing Store. <85%RH non-condensing

Mechanical

Dimensions	106x90x58mm Cut-out 45x106mm
Weight	360gms
Case	DIN 42880 6 Modules wide. Grey Noryl. ULV94 V-O self extinguishing.