PT1: single phase
multi-function transducers

Accurate class 0.2, 0.5 & 1 | USB programming | Response time ~100-220 ms | Compact size

Compact, configurable multiple measurand transducers

Pt1 is a range of compact, configurable multiple measurand transducers designed to meet the demanding needs of supply utilities and industrial applications. It offers accurate true-RMS measurements for high efficiency and quick response time. It is equipped with two load-independent, galvanically-isolated analogue outputs that can be configured for different measurands, input range and output curves.

- Best in class response time
- Long range, site-configurable inputs, outputs and measurands
- Load-independent accuracy on all outputs
- 2-in-1 programmable transducers
- Diagnostic LEDs
- Compact footprint

Measurement function (Measurand)	**Output type**	**Output range**	**No of** output	**Accuracy class**
Voltage, current, frequency, active power	Option for mA or V	0-20 mA, 4-20 mA, 0-10 mA, 0-5 mA* 0-2 mA*, 0-1 mA*, 0-5 V, 0-10 V	2	0.2, 0.5, 1.0

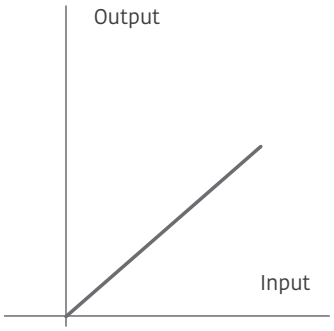
*available in accuracy class 1.0 only

SECURE energy together

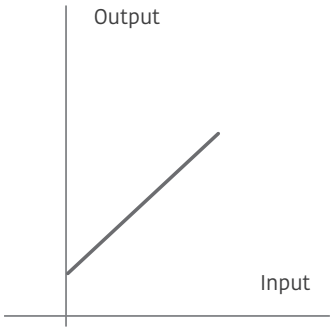
PT1: single phase

Output cuves

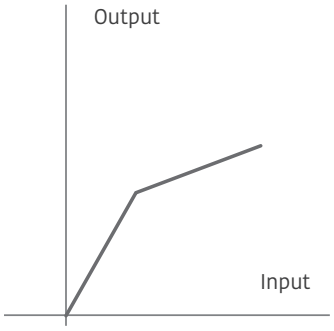
Curve A
Linear



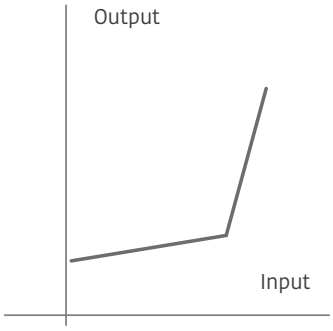
Curve B
Linear with live zero



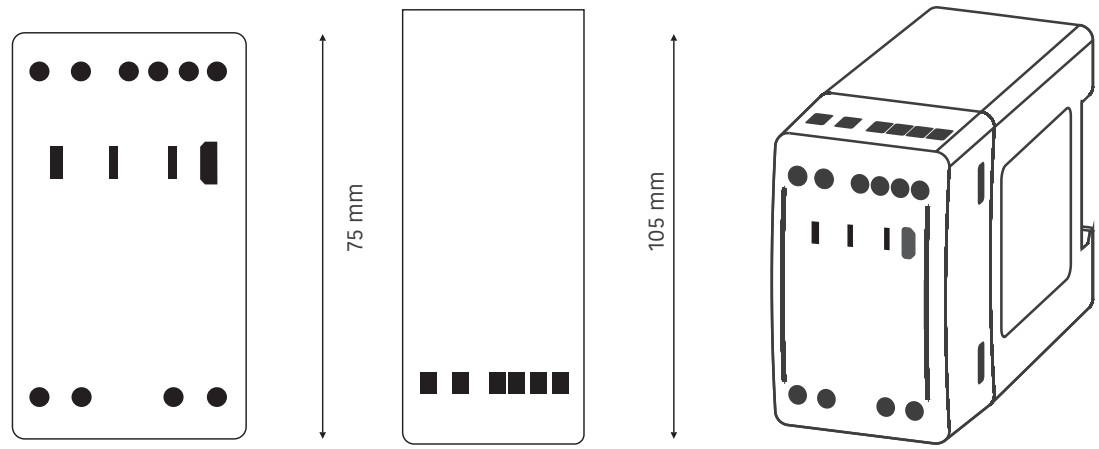
Curve F
Compressed upper region



Curve F
Compressed lower region



Mechanical dimensions



Technical specifications

Site-configurable measurement functions (measurands)

AC/DC voltage	
Nominal input (Un)	57.7 to 415 V
Measuring range	0 to 130 % Un (up to 500 V)
Measurement frequency	50/60 Hz (±5%)
Burden	≤ 0.2 VA
Maximum overload voltage	1.3 x Un continuously (500 V max.)
	2 x Un for 1 s, with up to 10 repetitions at 10 s intervals
Scale factor	0.8 to 1.3 Un
AC current	
Nominal input (In)	1 A to 5 A
Measuring current range	0 to 150 % In
Scale factor	0.6 to 1.5 of In
Burden	≤ 0.2 VA
Maximum overload current	2 x In continuously
	20 x In for 1 s, with up to 10 repetitions at 100 s intervals
Frequency	
Nominal input voltage (Un)	57.7 to 415 V
Measurement range	45 Hz to 55 Hz or 55 Hz to 65 Hz
Accuracy	±0.2%
Active Power	
Nominal input voltage (Un)	57.7 to 415 V
Input voltage range	0 to 130 % Un (up to 500 V)
Nominal input current (In)	1 A to 5 A
Input current range	0 to 150 % In
Measurement frequency	50/60 Hz (±5%)
Scale factor	0.5 to 1.5 of Un x In (at unity power factor)
Auxiliary Supply	
High auxiliary	
Nominal voltage range	80 to 276 V AC/DC (±10 %)
Frequency	50/60 Hz
Maximum burden	≤6VA, 3W with one output at 750 Ω
	≤7VA, 3.5W with two outputs at 750 Ω each
Low auxiliary	
Nominal voltage range	24 to 80 V DC (±10 %)
Maximum burden	≤3 W with one output at 750 Ω
	≤4 W with two outputs 750 Ω each
Analogue outputs	
Output type	mA or V
Maximum load resistance	≤750 Ω for 20 mA, ≥ 2 k Ω for 10 V (for each output)
Response time	5 cycles measurement (≤100-220 ms)
Ripple	<0.4 % peak to peak

PT1: single phase

Technical specifications

Temperature range	
Operating range	-5 °C to +55 °C
Storage range	-25 °C to +70 °C
Usage group	1
Mechanical	
Dimension (W x H x D)	45 x 75 x 105 mm
Weight	0.4 kg approx.
Material	Fire-retardant polycarbonate (PC-FR), UL94 V-0
Mounting	DIN (EN 50022)
Connector type	Screw terminals
Conductor size for terminals	≤4 mm2
Environmental	
Protection class	II (double insulation) EN 61010-1
Pollution degree	2
Installation category	CAT III for < 300V AC and CAT II for < 600V AC
Protection degree	Protection housing: IP 40, terminals: IP 20
Compliance	
Standards	IEC 60688, IEC 61010-1, IEC 61010-2-30, IEC 61326-1, DIN 50022
Communication ports	
Micro USB	For on-site configuration (can be configured without auxilary power)
Configuration software tool	ConfigView For on-site configuration of measurement inputs, measurands, output curve and online parameter reading. It can be freely downloaded from www.securemeters.com

Ordering key

PT1 XX1-1XF

Example

PT1 611-12F
where high auxiliary (6),
mA output (1), accuracy class 0.2

X	X	1	—	1	X	F

Aux supply
6: High
7: Low

Output
1: mA
2: V

Accuracy
1: Cl 1.0
2: Cl 0.2
5: Cl 0.5
7: Accuracy as per configuration

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