PT3: three phase
single-function transducers

Accurate class 0.2, 0.5 & 1

USB programming

Response time ~100-220 ms

Compact, long range site configurable transducers

PT3 is a range of compact, configurable single measured transducers designed to meet the demanding needs of supply utilities and industrial applications. It offers accurate true RMS measurements for high efficiency with quick response time. It is equipped with up to four load-independent, galvanically-isolated analogue outputs that can be configured for desired input range and output curves. PT3 transducers comply with IEC 60688.

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

Measurement function (Measurand)	Output range	No of output	Accuracy class
Current, active power, frequency, reactive power, power factor, apparent power	0-1 mA*, 0-2 mA**, 0-5 mA**, 0-10 mA, 0-20 mA, 4-20 mA, -20 -(+20) mA, -10-(+10) mA, -5-(+5) mA**, -2-(+2) mA**, -1-(+1) mA*, 0-5 V, 0-10 V, -10-(+10) V, -5-(+5) V	2 or 4	0.2, 0.5, 1.0
Voltage	0-1 mA*, 0-2 mA**, 0-5 mA**, 0-10 mA, 0-20 mA, 4-20 mA 0-5 V, 0-10 V	2 or 4	0.2, 0.5, 1.0

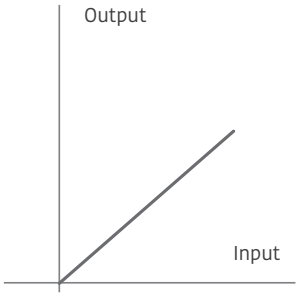
*available in accuracy class 1.0
**available in accuracy class 0.5 and class 1.0
Power factor accuracy ± 0.2 degree at nominal input range

SECURE energy together

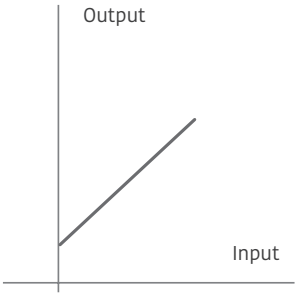
PT3: three phase

Output cuves

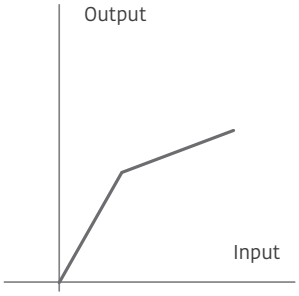
Curve A
Linear



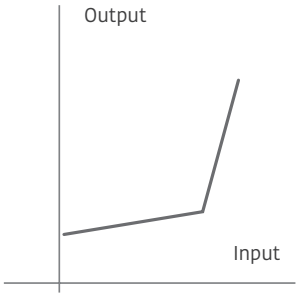
Curve B
Linear with live zero



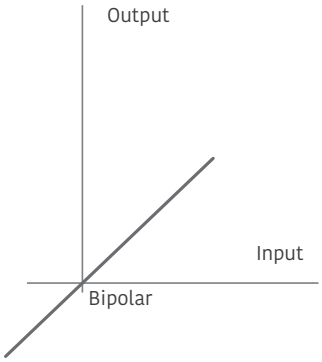
Curve F
Compressed upper region



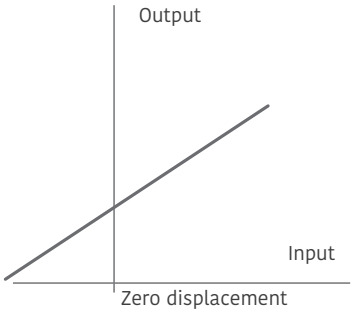
Curve F
Compressed lower region



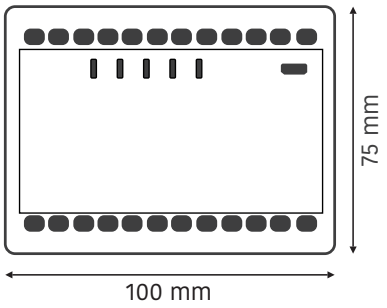
Curve C
Bipolar



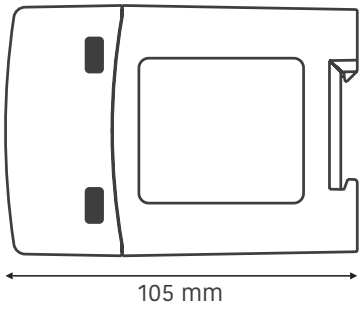
Curve D
bipolar with live zero



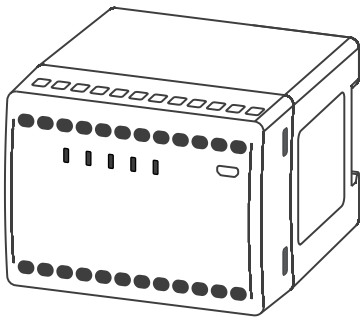
Mechanical dimensions



Front view



Side view



Isometric view

Technical specifications

Variants

AC voltage

Nominal input (Un)	3 x 100 to 415 V L-L (3-phase 3-wire system) 3 x 57.5 to 240V L-N (3-phase 4-wire system)
Measuring range	0 to 130 % of Vn (500 V max.)
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 1.5 Un

AC current

Nominal input (In)	1A to 5A
Measuring current range	0 to 150 % In
Scale factor	0.6 to 1.5 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

Active power /reactive power/ apparent power

Nominal input voltage (Un)	3 x 100 to 415 V L-L (3-phase 3-wire system) 3 x 57.5 to 240V L-N (3 -phase 4-wire system)
Input voltage range	0 to 130 % Un (up to 500 V)
Nominal input current (In)	1A to 5A
Input current range	0 to 150 % In
Measurement frequency	50/60 Hz (±5 %)
Scale factor	0.5 to 1.5 of Un x In primary (active power, at unity power factor) 0.3 to 1 Un x In primary (reactive power, at reactive power factor>0.8 or unity) Un x In primary (apparent power)

Active power factor / load power factor

Nominal input voltage (Un)	3 x 100 to 415 V L-L (3 phase 3 wire system) 3 x 57.5 to 240V L-N (3 phase 4 wire system)
Input voltage range	0 to 130 % Un (up to 500 V)
Nominal input current (In)	1A to 5A
Input current range	0 to 150 % In
Measurement frequency	50/60 Hz (±5 %)
Measurement range	-1...0...1
Resolution (phase angle)	±0.2 degree (at nominal range)

Frequency

Nominal input voltage (Un)	3 x 100 to 415 V L-L (3 phase 3 wire system) 3 x 57.5 to 240V L-N (3 phase 4 wire system)
Nominal input current (In)	1A to 5A
Measurement range	45Hz to 55Hz or 55Hz to 65Hz
Accuracy	+ 0.2%

High auxiliary

Nominal voltage range	80-276 V AC/DC (±10 %)
Frequency	50/60 Hz
Maximum burden	≤11 VA, 6 W with two outputs at 750 Ω each ≤12 VA, 7 W with four outputs at 750 Ω each

Low auxiliary

Nominal voltage range	24-80 V DC (±10 %)
Maximum burden	≤6 W with two outputs at 750 Ω each ≤8 W with four outputs at 750 Ω each

PT3: three phase

Technical specifications

Analogue outputs	
Type	Current & Voltage (bipolar)
Maximum load resistance	≤750 Ω for 20 mA, ≥ 2 k Ω for 10 V (for each output)
Response time	5 cycles measurement (≤100-250 ms)
Ripple	<0.4 % peak to peak
Temperature range	
Operating temperature	-5 °C to +55 °C
Storage temperature	-25 °C to +70 °C
Usage group	1
Physical	
Dimension (W x H x D)	100 x 75 x 105 (mm)
Weight	0.7 kg (approx.)
Material	Fire-retardant polycarbonate (PC-FR, UL 94 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 configuration Can be configured without auxiliary power
Configuration software	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

PT3 XX3-1YY

Example

PT3 623-126
where high auxiliary (6),
output nos. (2), accuracy class (2)
function active power (6)

X	X	3	—	1	Y	Y
Aux supply 6: High 7: Low	Output 2: 2 nos. 4: 4 nos.				Accuracy 1: Cl 1.0 2: Cl 0.2 5: Cl 0.5 7: Accuracy as per configuration	Function 1: Voltage 3: Frequency 5: Current 6: Active Power 7: Reactive Power 8: Power Factor 9: Apparent Power

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