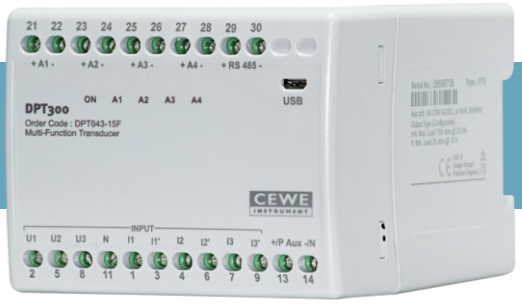
DPT300: three phase

multi-function transducers

compact, configurable multiple measurand transducers



Accurate
class 0.2 or 0.5 & 1

USB
programming

Response time
~100-250 ms

Modbus RTU

DPT300 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 up to four load-independent, galvanically-isolated analogue outputs that can be configured for desired measurands, input range and different curves. PT3 transducers comply with IEC 60688.

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

Measurement functions (Measurands)	Output type	Output range	No. of outputs	Accuracy class
Voltage, current, active power, reactive power, active power factor	mA or V	±20 mA, 4-20 mA, 0-20 mA, ±10mA, ±5mA*, ±2mA**, ±1mA**, ±5V, ±10V	2 or 4	0.2, 0.5, 1.0

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

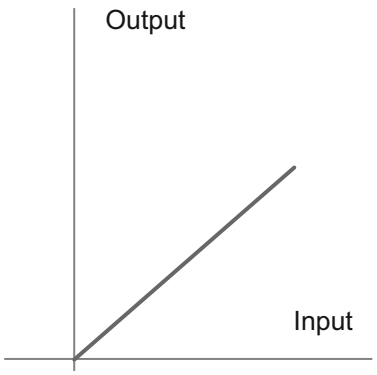
CEWE INSTRUMENT

DPT300: three phase

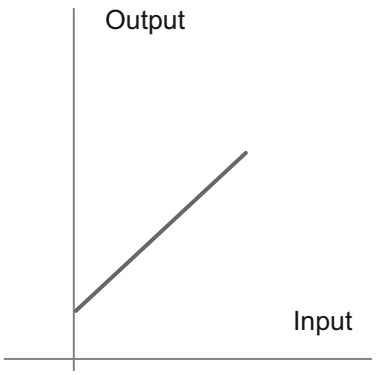
multi-function transducers

Output cuves

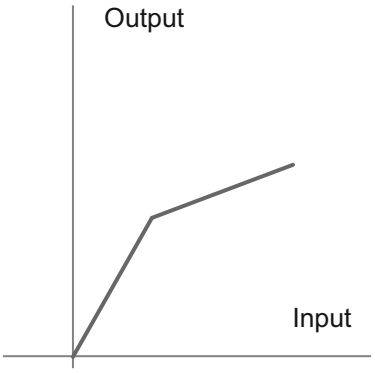
Curve A
Linear



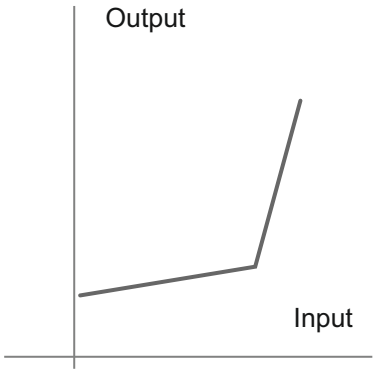
Curve B
Linear with live zero



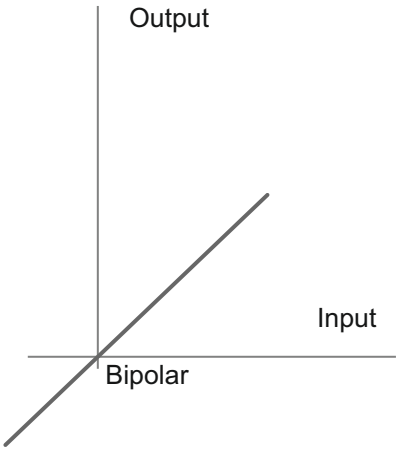
Curve F
Compressed upper region



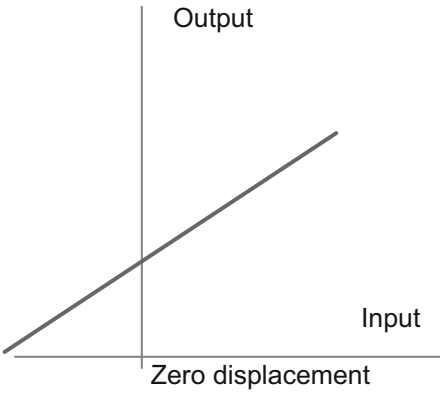
Curve F
Compressed lower region



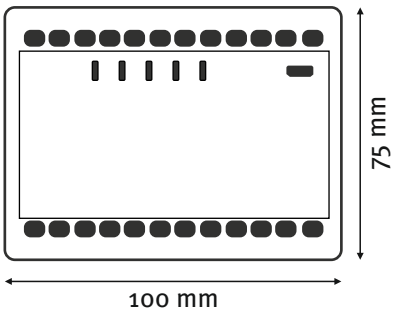
Curve C
Bipolar



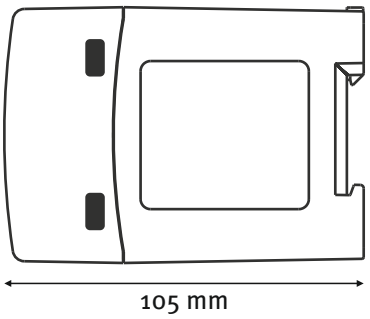
Curve D
bipolar with live zero



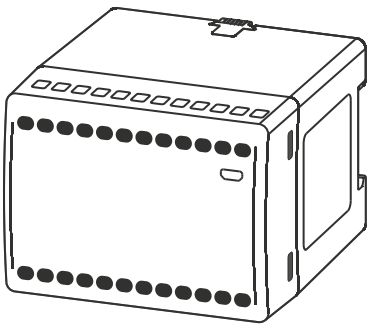
Mechanical dimensions



Front view



Side view



Isometric view

DPT300: three phase

Technical specifications

Site-configurable measurement functions (measurands)

AC voltage

Nominal input (U_n)	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% U_n (500 V max.)
Measurement frequency	50/60 Hz (± 5 %)
Burden	≤0.2 VA
Maximum overload voltage	1.3 x U_n continuously (500 V max.)
	2 x U_n for 1 s, with up to 10 repetitions at 10 s intervals

AC current

Nominal input (I_n)	1/5 A
Maximum input current	0 to 150% I_n
Scale factor	0.6 to 1.5
Burden	≤ 0.2 VA per phase
Maximum overload current	2 x I_n continuously
	20 x I_n for 1 s, with up to 10 repetitions at 100 s intervals

Active power/reactive power

Nominal input voltage (U_n)	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	0-130% U_n (up to 500 V)
Nominal input current (I_n)	1/5 A
Input current range	0 to 150% I_n
Measurement frequency	50/60 Hz (± 5%)
Scale factor	0.5 to 1.5 (active power, at unity power factor)
	0.3 to 1 (reactive power, at reactive power factor >0.8 or unity)

Active power factor

Nominal input voltage (U_n)	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	0-130 % U_n (up to 500 V)
Nominal input current (I_n)	1/5 A
Input current range	0 to 150 % I_n
Measurement frequency	50/60 Hz (±5 %)
Measurement range	-1...0...1
Resolution	±0.2 degree (at nominal range)

Auxiliary Supply

High auxiliary

Nominal voltage range	80-276 V AC/DC (±10 %)
Frequency	50/60 Hz
Maximum burden	≤11VA, 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

Analogue outputs

Type	Current & Voltage (bipolar)
Maximum Load resistance	≤750 Ω for 20 mA, ≥2 kΩ for 10 V (for each output)
Response time	5 cycles measurement (≤100-250 ms)
Ripple	<0.4 % peak to peak

DPT300: three phase

Technical specifications

Temperature range	
Operating temperature	-5 °C to +55 °C
Storage temperature	-25 °C to +70 °C
Mechanical	
Dimension (W x H x D)	100 x 75 x 105 (mm)
Weight	0.7 kg (approx.)
Material	Fire-retardant polycarbonate (PC-FR), UL94 V-0
Mounting	DIN (EN 50022)
Connector type	Screw terminals
Conductor size for terminals	≤4 mm^2
Environmental	
Protection class	II (double insulation) EN 61010-1
Pollution degree	2
Installation category	CATIII
Protection degree	Protection housing IP 40, terminals IP 20
Standards compliance	
Standards	IEC 60688, IEC 61010-1, IEC 61010-2-30, IEC 61326-1, DIN 50022
Communication ports	
Micro USB	For configuration
RS-485	Modbus RTU enabled (Suitable for integration with SCADA/PLC)
Baud rate	1200-38400 baud
Configuration software- Configview	
ConfigView	For on-site configuration of measurement inputs, measurands, output curve and online parameter reading. It can be freely downloaded from www.ceweinstruments.se

Ordering key

DPT XX3-1YF

X	X	3	–	1	Y	F

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

Example

DPT 643-12F
where high auxiliary (6), output nos. (4), accuracy class(2)

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