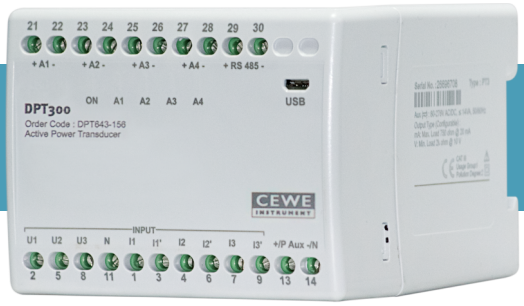
DPT300: three phase

single-function transducers

compact, long range site configurable transducers



Accurate
class 0.2 or 0.5 & 1

USB
programming

Response time
~100-250 ms

DPT300 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. DPT300 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 functions (Measurands)	Output range	No. of outputs	Accuracy class
Voltage, current, frequency, active power, reactive power, power factor	-20 to (+20) mA, 4-20 mA, 0-20 mA, 0-1 mA**, -10 to (+10) mA, -5 to (+5) mA*, -2 to (+2) mA* -5 to (+5) V, -10 to (+10) V	2 or 4	0.2, 0.5, 1.0

*available in accuracy class 0.5 and 1.0

**available in accuracy class 1.0

Power factor accuracy- ± 0.2 degree at nominal input range

CEWE INSTRUMENT

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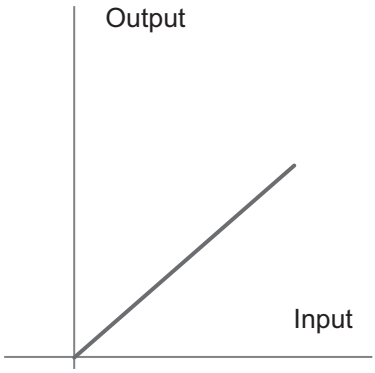
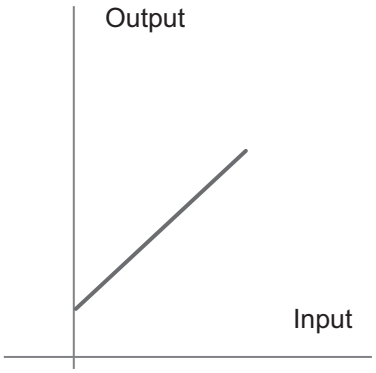
Output cuves

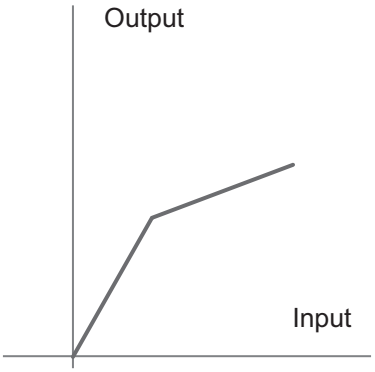
Curve A
Linear



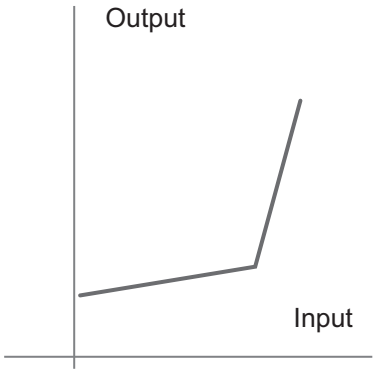
Curve B
Linear with live zero



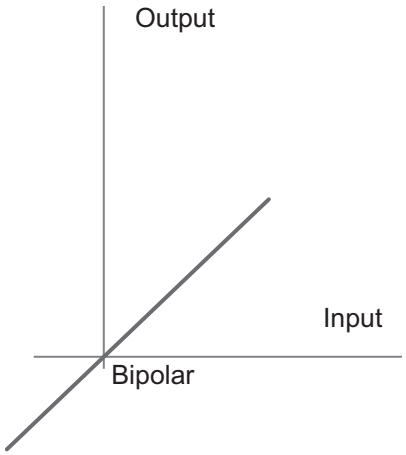
Curve F
Compressed upper region



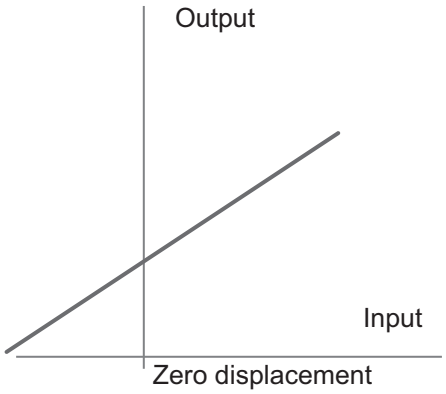
Curve F
Compressed lower region



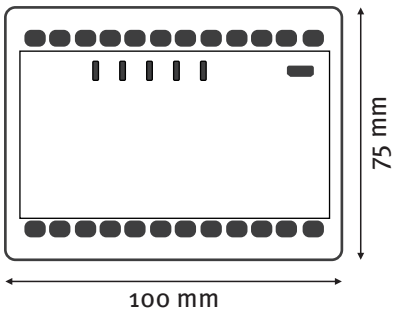
Curve C
Bipolar



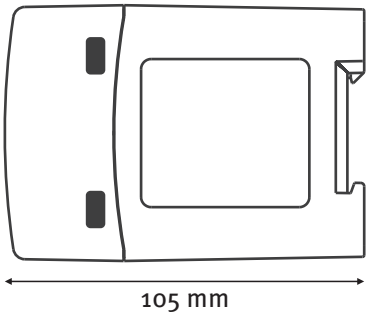
Curve D
bipolar with live zero



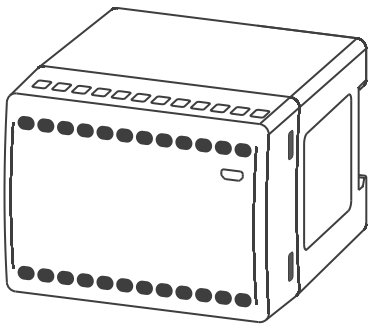
Mechanical dimensions



Front view



Side view



Isometric view

DPT300: three phase

Technical specifications

Variants

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 % of Vn (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
Measuring current range	0 to 150 % I_n
Scale factor	0.6 to 1.5 I_n
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

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 to 130 % U_n (up to 500 V)
Nominal input current (In)	1/5 A
Input current range	0 to 150 % I_n
Measurement frequency	50/60 Hz (±5 %)
Scale factor	0.5 to 1.5 of U_n x I_n primary (active power, at unity power factor) 0.3 to 1 U_n x I_n primary (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 to 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	≤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

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

DPT300: three phase

Technical specifications

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 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 Can be configured without auxiliary power
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 XX3-1YY

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

Function
1: Voltage
5: Current
6: Active Power
7: Reactive Power
8: Power Factor

Example

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

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