

# DPT300: three phase

single-function transducers

## compact, long range site configurable transducers



Accurate  
class 0.2 or 0.5 & 1



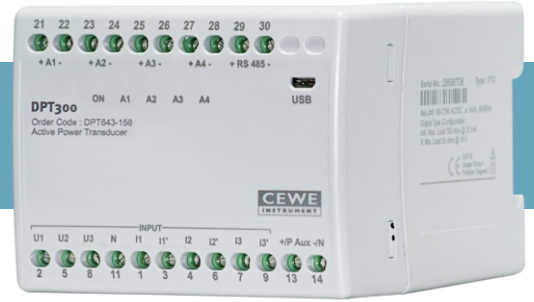
USB  
programming



Response time  
~100-220 ms



Modbus RTU



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

\*available in accuracy class 1.0

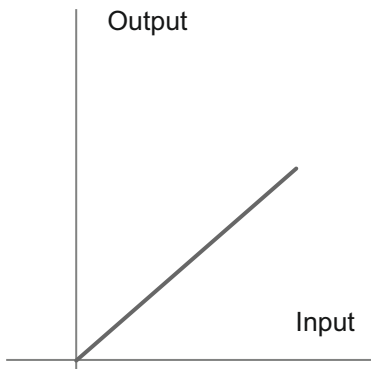
Power factor accuracy-  $\pm 0.2$  degree at nominal input range

# DPT300: three phase

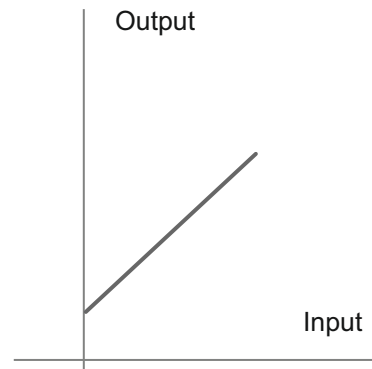
## single-function transducers

### Output curves

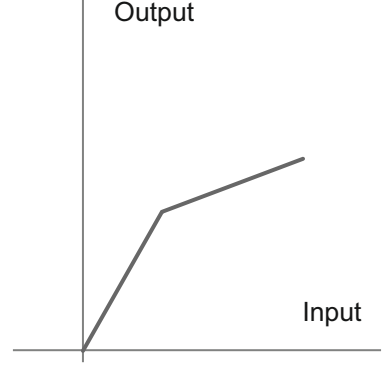
**Curve A**  
Linear



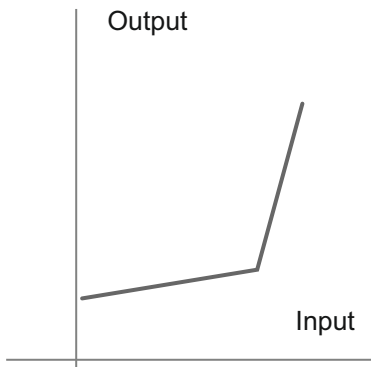
**Curve B**  
Linear with live zero



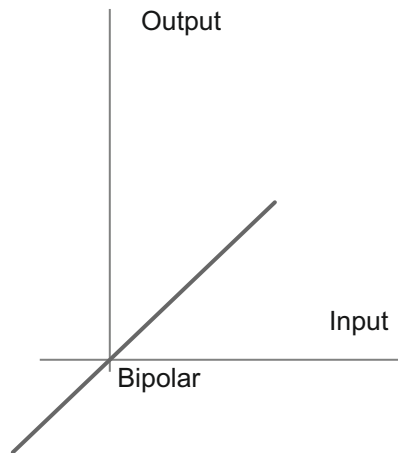
**Curve F**  
Compressed upper region



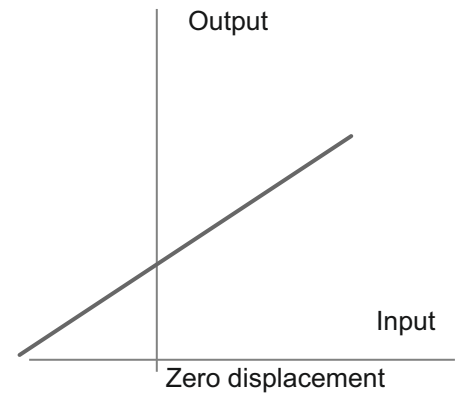
**Curve F**  
Compressed lower region



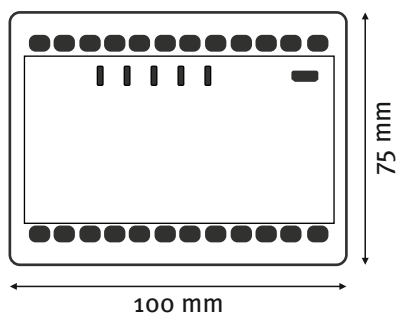
**Curve C**  
Bipolar



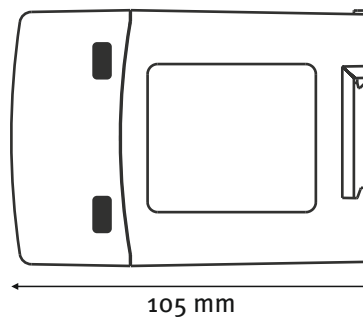
**Curve D**  
bipolar with live zero



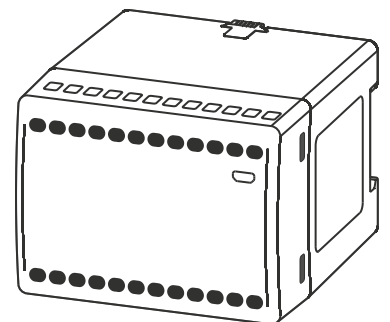
### Mechanical dimensions



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 $V_n$ (500 V max.)
Scale factor	0.8 to 1.3 (500 V max.)
Measurement frequency	50/60 Hz ( $\pm 5$ %)
Burden	$\leq 0.2$ 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	$\leq 0.2$ VA
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 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 ( $\pm 5$ %)
Scale factor	0.5 to 1.5 of $U_n \times I_n$ primary (active power, at unity power factor) 0.3 to 1 $U_n \times I_n$ primary (reactive power, at reactive power factor $> 0.8$ or unity)

#### 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 ( $\pm 5$ %)
Measurement range	-0.8 to +0.8
Accuracy	$\pm 0.2$ degree (at nominal range)

#### Auxiliary supply

##### High auxiliary

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

##### Low auxiliary

Nominal voltage range	24-80 V DC ( $\pm 10$ %)
Maximum burden	$\leq 6$ W with two outputs at 750 $\Omega$ each $\leq 8$ W with four outputs at 750 $\Omega$ each

#### Analogue outputs

Type	Current (bipolar) & Voltage
Maximum load resistance	$\leq 750$ $\Omega$ for 20 mA, $\geq 2$ k $\Omega$ for 10 V (for each output)
Response time	5 cycles measurement ( $\leq 100$ -220 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

### 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 <sup>2</sup>

### 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
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### 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 <a href="http://www.ceweinstruments.se">www.ceweinstruments.se</a>
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## Ordering key

### DPT XX3-1YY

#### Example

##### DPT 623-126

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

