

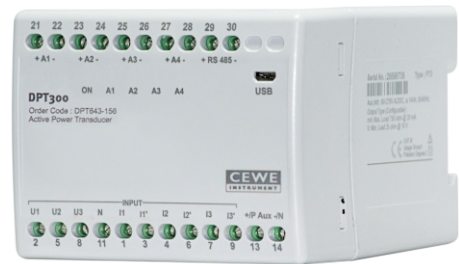
# DPT300: three phase

single-function transducers

compact, long range  
site configurable transducers

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
Current, active power, reactive power, power factor	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

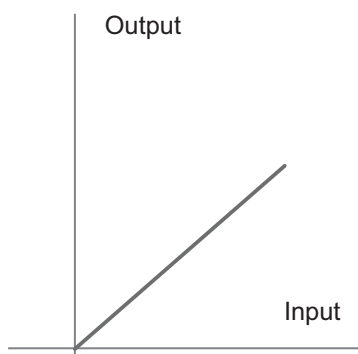
Power factor accuracy  $\pm 0.2$  degree at nominal input range

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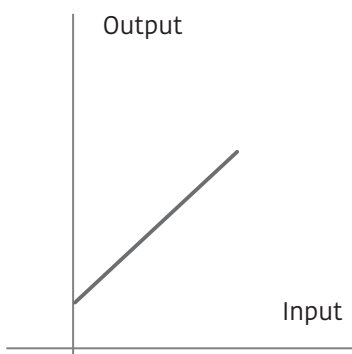
single-function transducers

## Output curves

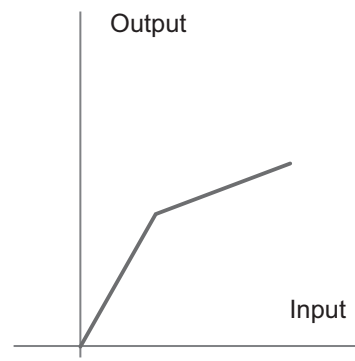
Curve A  
Linear



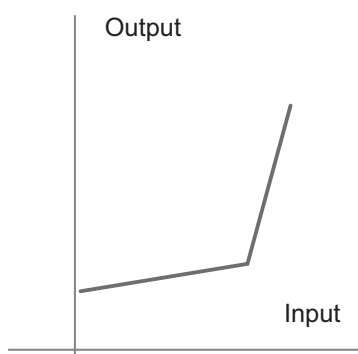
Curve B  
Linear with live zero



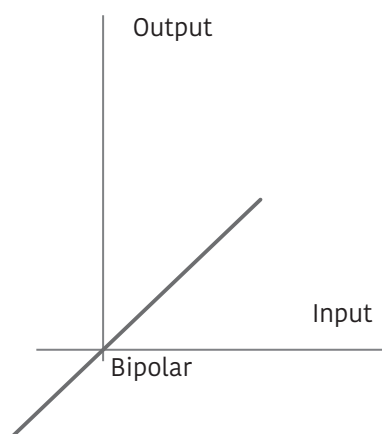
Curve F  
Compressed upper region



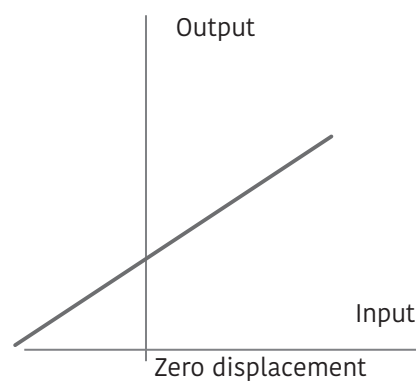
Curve F  
Compressed lower region



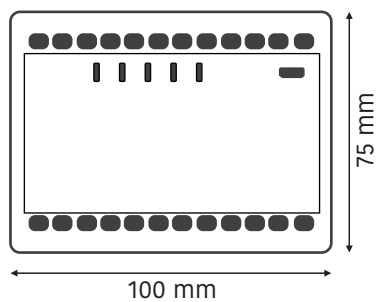
Curve C  
Bipolar



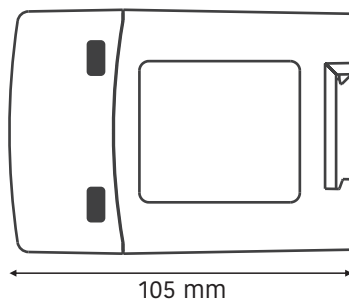
Curve D  
bipolar with live zero



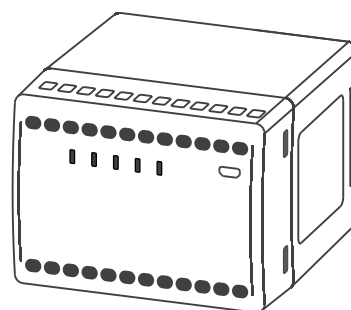
## Mechanical dimensions



Front view



Side view



Isometric view

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## single-function transducers

### 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.)
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)

##### 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 ( $\pm 5$ %)
Measurement range	-1...0...1
Resolution	$\pm 0.2$ 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 & Voltage (bipolar)
Maximum load resistance	$\leq 750$ $\Omega$ for 20 mA, $\geq 2$ k $\Omega$ for 10 V (for each output)
Response time	5 cycles measurement ( $\leq 100$ -250 ms)
Ripple	$< 0.4$ % peak to peak

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## Technical specifications

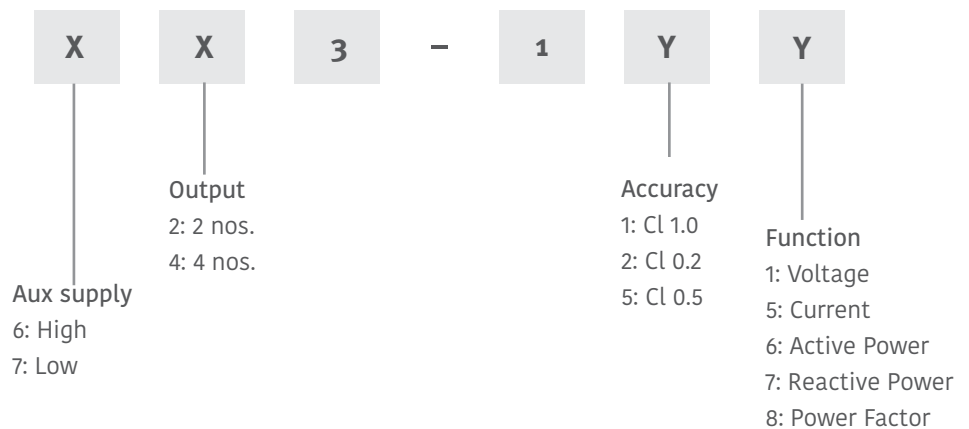
Temperature range	
Operating temperature	-5 °C to +55 °C
Storage temperature	-25 °C to +70 °C
Usage group	1
<hr/>	
Physical	
Dimension (W x H x D)	100 x 75 x 105 (mm)
Weight	0.7 kg (approx.)
Material	Fire-retardant polycarbonate (PC-FR, UL 94 V-0)
Mounting	DIN (EN 50022)
Connector type	Screw terminals
Conductor size for terminals	≤4 mm <sup>2</sup>
<hr/>	
Environmental	
Protection class	II (double insulation) EN 61010-1
Pollution degree	2
Installation category	CATIII
Protection degree	Protection housing IP 40, terminals IP 20
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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
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Configuration software- Configview	
ConfigView and	For on-site configuration of measurement inputs, measurands, output curve and  online parameter reading. It can be freely downloaded from <a href="http://www.cewesecure.se">www.cewesecure.se</a>

## Ordering key

DPT XX3-1YY

### Example

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



Specifications are subject to change without prior notice

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