DPT100: single phase

single-function transducers

compact, long range site configurable transducers

Accurate
class 0.2, 0.5 & 1

USB
programming

Response time
range is 100-220 ms

Compact size

DPT100 is a range of compact, configurable single 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 two load-independent, galvanically-isolated analogue outputs that can be configured for desired input range and output curves.

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

System	Measurement functions (Measurands)	Output type	Output range	No. of outputs	Accuracy class
AC	Voltage, current, frequency, active power	Option for mA or V	0-20 mA, 4-20 mA, 0-10 mA, 0-5 mA* 0-2 mA*, 0-5 V, 0-10 V	2	0.2, 0.5, 1.0
DC	Voltage, current	Option for mA or V	0-20 mA, 4-20 mA, 0-10 mA, 0-5 mA* 0-2mA*, 0-5 V#, 0-10 V#	2	0.2, 0.5, 1.0

*available in accuracy class 1.0 only
Frequency accuracy - ± 0.1 Hz
#Available with DC Voltage function only

CEWE INSTRUMENT

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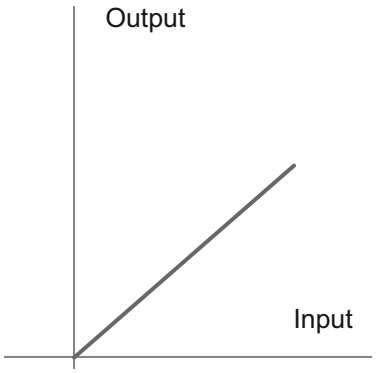
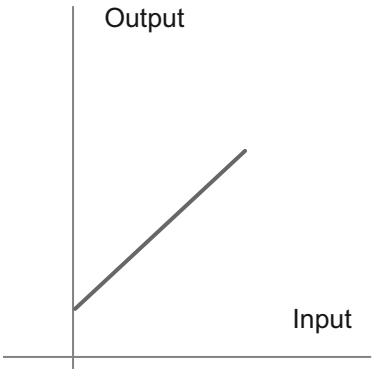
DPT100 single-function transducers

Output cuves

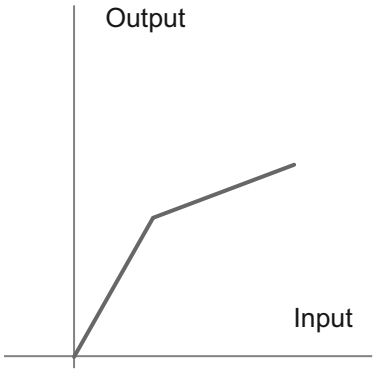
Curve A
Linear



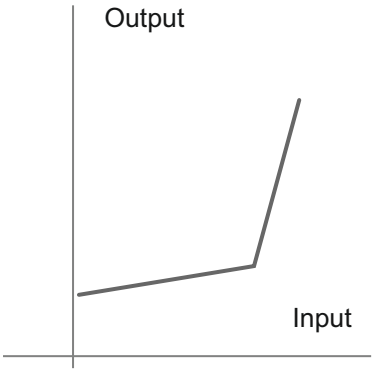
Curve B
Linear with live zero



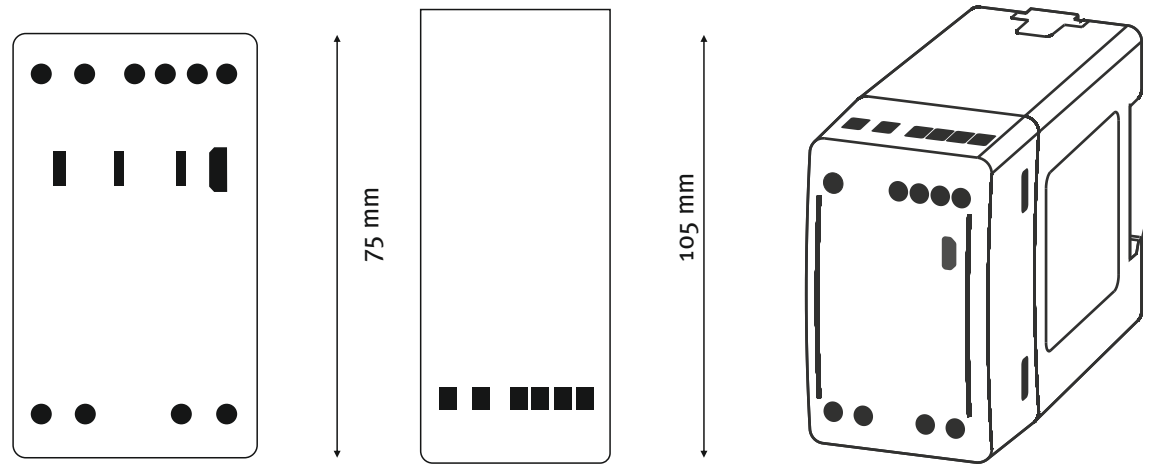
Curve C
Compressed upper region



Curve D
Compressed lower region



Mechanical dimensions



DPT100: single phase

Technical specifications

Variant-wise technical specifications

AC/DC voltage	
Nominal input (U_n)	57.7 to 415 V
Measuring range	0 to 130 % U_n (up to 500 V)
Scale factor	0.8 to 1.3 of U_n (up to 500 V)
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
For self-powered variant (AC/DC Voltage)	
Measurement range	80 to 276 V AC/DC
Measurement range	0 to 110% U_n
Burden	≤6VA, 3W with one output at 750 Ω
	≤7VA, 3.5W with two outputs at 750 Ω each
AC current	
Nominal input (I_n)	1/5 A
Measuring current range	0 to 150% I_n
Scale factor	0.6 to 1.5 of I_n
Burden	≤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
DC current	
Measurement input range	0-20 mA directly, or 0-300 mV through shunt
Frequency	
Nominal input voltage (U_n)	57.7 to 415 V
Input range	0 to 130% Un (up to 500 V)
Measurement range	45 Hz to 55 Hz, or 55 Hz to 65 Hz
Accuracy	±0.1 Hz
Active Power	
Nominal input voltage (U_n)	57.7 to 415 V
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%)
Scale factor	0.5 to 1.5 of U_n x I_n (at unity power factor)
Auxiliary Supply	
High auxiliary	
Nominal voltage range	80-276 V AC/DC (±10%)
Frequency	50/60 Hz
Maximum burden	≤6VA, 3W with one output at 750 Ω
	≤7VA, 3.5W with two outputs at 750 Ω each
Low auxiliary	
Nominal voltage range	24-80 V DC (±10%)
Maximum burden	≤3 W with one output, ≤4 W with two outputs
Self-powered (only for voltage transducers)	
Nominal voltage range	80-276 V AC/DC
Maximum burden	≤6VA, 3W with one output at 750 Ω
	≤7VA, 3.5W with two outputs at 750 Ω each

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Technical specifications

Analogue outputs	
Type	mA or V, uni-polar
Maximum load resistance	≤750 Ω for 20 mA, ≥2 kΩ for 10 (for each output)
Response time	5 cycles measurement (≤100-220 ms)
Ripple	‹0.4 % peak to peak
Temperature range	
Operating range	-5 °C to +55 °C
Functional range	-20 °C to +70 °C
Mechanical	
Dimension (W x H x D)	45 x 75 x 105 mm
Weight	0.4 kg (approx.)
Material	Fire-retardant polycarbonate (PC-FR), UL94 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	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 on-site configuration
Configuration software tool	
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 XXX-1YY

X	X	X	–	1	Y	Y

Aux supply
6: High
7: Low
8: Self Powered*

Output
1: mA#
2: V

HW Configuration
1 : Default**
2 : DC Current

Accuracy
1: Cl 1.0
2†: Cl 0.2
5: Cl 0.5

Function
1: Voltage AC/DC
2: Current DC#
3: Frequency†
5: Current AC
6: Active Power

Example

DPT 611-126
where high auxiliary (6),
mA output (1), accuracy class 0.2,
function (6)

*Self powered is voltage transducer only.
** Default means AC/DC voltage, AC current
† default digit for frequency accuracy i.e. ± 0.1 Hz
#Current DC available only in DC Current and mA output

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