

Universal inputs: mA, V, Ohm, RTD, TC, Strain gauge
2 relay outputs + digital and analogue output
Programmable range, function and setpoints
Galvanic isolation between supply and internal electronics
Communication protocol for PC or slave display
Made in accordance with the CE and EMC regulations



The DP545 is a 4½ digit user programmable panel instrument with backlight LCD. The instrument is supplied with universal metering inputs for direct connection to RTD and various TC temperature sensors, as well as linear current, voltage and resistance/potentiometer signals. At temperature metering, the units are programmable in °C, °F or °K.

Built-in voltage references enables direct connection of 3-wire potentiometers, 2-wire transmitters and strain gauge transducers.

In addition to monitoring of linear signals and linearisation of standard temperature signals, it is also possible to linearize signals in accordance with a user defined curve. The curve is defined as a number of segments, each with individual slope and polarity.

The instrument is supplied with 1 analogue, 1 digital and 2 relay outputs, all outputs are programmable.

A digital control input can be used for several programmable functions.

Optionally the unit is supplied with serial RS232 or current loop interface and interface for a slave display.

The unit is fully programmable via the keys on the front panel, and access limitation in several levels is possible. Reaction delay on both the display reading and the output relays is programmable too.

On the front panel there is a field, in which the metering unit (% , °C, kg,) can be inserted.

Technical data:

Supply voltage:	230 V AC or 115 VAC The supply voltage is galvanically isolated from the internal electronics. (test voltage 4 kV AC)
Power consumption:	5 VA
Operating temp.:	-10°C to +50°C
Humidity:	0 - 90% RH, non-condensing
Digit height:	10 mm.
Protection:	IP 54 (front)
Mech. dimensions:	in accordance with DIN 43700
L x W x D:	48 x 96 x 117 mm.
Panel cut-out:	44 x 92 mm.
Weight:	350 g.
Materials:	NORYL, SE1
Connections:	screw terminals, max. 1,5 □ mm.

Universal metering input:

The input configuration is programmable, and the selection between input pins, metering current etc. is automatically selected, when the actual input is programmed.

DC current:

Input resistance:	75 Ω
Metering ranges, FS:	20 mA to 80 mA
Accuracy:	better than 0.1%

DC voltage:

Input resistance:	10 MΩ
Metering ranges, FS:	10 mV to 10 V
Accuracy:	better than 0.2%

Linear resistance:

Metering current:	2 mA
Metering ranges, FS:	5 Ω to 5 kΩ
Accuracy:	better than 0.2%

Potentiometer:

Metering voltage:	10 V
Metering ranges, FS:	400 Ω to 20 kΩ
Accuracy:	better than 0.2%

Thermocouple:

All signals are linearized in acc. with the IEC584-1 regulations. The unit has internal compensation for Cold Junction and indication for broken sensor cable.

Display reading programmable in °C, °F or °K.

Metering ranges:

Type J:	-210..+ 1200°C (-346..+2192°F)
Type K:	-270..+ 1371°C (-454..+2500°F)
Type R:	0..+ 1768°C (+ 32..+3214°F)
Type S:	0..+ 1768°C (+ 32..+3214°F)
Type T:	-270..+ 400°C (-454..+ 752°F)
Type E:	-270..+ 1000°C (-454..+1832°F)
Type B:	0..+ 1820°C (+ 32..+3308°F)

Display resolution: Programmable 0.1 or 1°

Input resistance: 10 MΩ

RTD sensors:

Metering current:	2 mA
Cable resistance:	max. 100Ω / wire
Display reading:	Programmable in °C, °F or °K.
Display resolution:	0.1°
Metering ranges:	
Pt100:	-200..+850°C (-328..+1562°F)
Pt1000:	-200..+850°C (-328..+1562°F)
Ni100:	- 60..+180°C (- 76..+ 356°F)

Digital input:

Programmable function. Input galvanically isolated from all other in- and outputs.

Max. voltage: 28 VDC
Active input: > 8 VDC
Not active: < 1.7 VDC
Input current: 10 mA @ 24 V

Digital output:

Programmable function. Transistor output, galvanically isolated from all other in- and outputs.

Max. voltage: 30 VDC (not active)
Max. voltage: 2.4 V (active)
Max. load current: 50 mA

Analogue output:

Galvanically isolated current output with programmable range. Retransmission of metering signals or peak-hold value. Other functions by request.

Output range: 0...20 (max 22 mA)
Load resistance: max. 800 Ω
Output ripple: max. 0.5% RMS

Relay outputs (change-over contacts):

Max. voltage: 250 VAC
Max. current: 2 A

RS232 interface (optional):

Retransmission of display value or other function per request.

Communication with pc i connection with programming.

Transmission speed: 9600 bps

Data format: 7 data bits, no parity, 2 stop bits

Interface, slave display (optional):

Output for connection of one or more display units.

Retransmission of display value.

Signal level: 5 V

Cable length: max. 10 m

Ordering guide: DPP451-a-b-c-d

a = Supply voltage

1 = 230 VAC

2 = 115 VAC

b = RS232 interface

0 = no interface

1 = including interface

c = Interface, slave display

0 = no interface

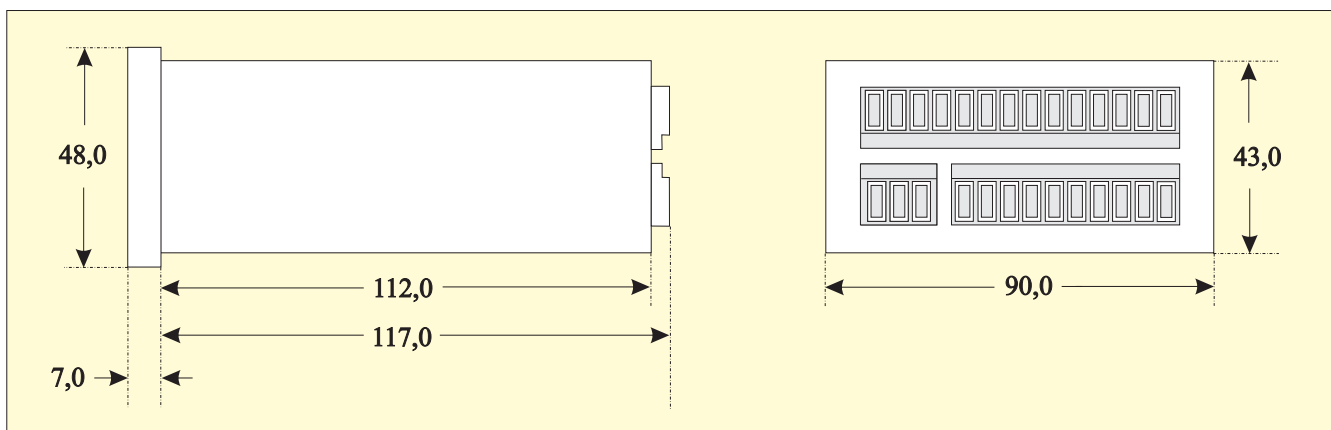
1 = including interface

d = prefix

°C, °F, °K, mA, A, mV, V, g, kg, t, t/h, %, %H,

Ohm, kOhm, mm, cm, m, mb, b, ml, l,.....

Mechanical dimensions:



Block diagram:

