

EPowa

Description of the external temperature signal interface HDC-1PH

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Document history

Date	Description
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1 Background

There can be an external temperature sensor connected to the HDC-XPB unit. This sensor can be used to control the output power from the HDC unit.

If the HDC unit is configured to use with an external temperature sensor the HDC unit will be activated when the external temperature sensor reads a temperature that is lower than 1°C below the temperature setting on the HDC. When the temperature is more than 1°C higher than the temperature setting the HDC will deactivate its output.

When the HDC is activated it will give the output power that is set on the knob, or the electrical input signal, whichever is configured to be used.

2 Output signal circuitry

The external temperature sensor that is connected to the HDC can be read out as a voltage level via the signal interface.

In the HDC unit there is a buffer circuit followed by lowpass filter consisting of a 1kΩ resistor and a 100nF capacitor.

3 Voltage to temperature relation

Temperature [C]	Voltage [V]
90	0,715
85	0,806
80	0,908
75	1,020
70	1,143
65	1,275
60	1,417
55	1,566
50	1,722
45	1,879
40	2,037
35	2,192
30	2,341
25	2,481
20	2,610
15	2,727
10	2,831
5	2,920

Table 1: Relation between output voltage and temperature.

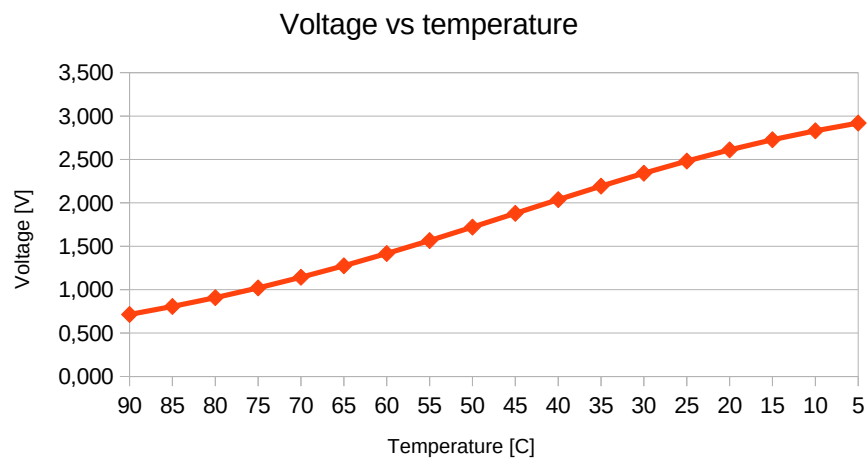


Figure 1: Voltage vs temperature plot.