

CONVERTER PWM/0-10VDC

USER MANUAL

Manufacturer: SOLAR controls s.r.o.

PURPOSE

The converter can be used wherever it is necessary to connect the output modulated by PWM signal to 0-10V input. Within the product range of the manufacturer it is used to connect controllers such as WATTrouter M or Heating Control to the 0-10V control input of an outdoor heat pump unit. Then you can directly control the output power of this unit.

CONNECTION

Connect the PWM converter to the PWM output of the control device according to the specifications of the relevant product (e.g. EXT1 on Heating Control). Observe PWM signal polarity. Connect an external 12 VDC power supply to terminals GND (negative) and + 12V (positive). Connect the analog signal 0-10V to the input with the same name which is available on controlled product (e.g. heat pump control unit).

SPECIFICATION

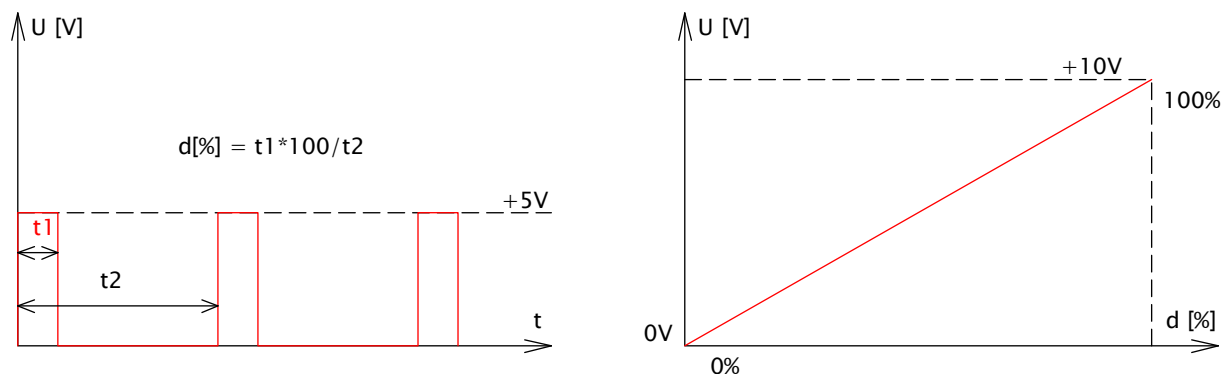


Figure 1: Output voltage U vs. PWM input signal duty cycle d.

| Parameter | Value, note |
|--|---|
| Power supply | 12 VDC / 10 mA |
| Current consumption | Max. 10 mA |
| Power supply – reverse polarity protection | Yes |
| Input – PWM base frequency | 50 Hz – 500 Hz |
| Input – voltage | Max. 6 VDC (between PWM+ and PWM-) |
| Input – reverse polarity protection | Yes |
| Output – voltage | 0-10 VDC, load max. 5 mA |
| Adjustable conversion linearity | Yes, after lifting the lid appropriate converter range can be adjusted with a small screwdriver |
| Galvanic isolation input (terminals PWM + and PWM -) / | Yes |

| output (terminals GND, 0-10V, +12V) | |
|-------------------------------------|--------------------------|
| Working position | Any |
| Mounting | DIN rail 35mm |
| Pollution degree | 2 |
| Operational temperature range | -20°C to +40°C |
| Storage temperature range | -40 °C to +80 °C |
| IP code | IP 20 |
| Dimensions (WxHxD) | 17,6x100x64mm (1 module) |
| Weight | 50g |
| Warranty period | 24 months |

Note: DC supply power may be in the range 6-12 V. Then, the converter operates roughly in the range of supply voltage minus 1 V.