



VERSION 1.0
DECEMBER 14, 2017

SMALL 7-SEGMENT LED DISPLAY

TECHNICAL PRODUCT DESCRIPTION

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Small 7-Segment LED display

PRODUCT OVERVIEW

LED Display module with RS-485 communication interface.

This module allows to build multiple digit displays by chaining. Whole display can be controlled by single communication line.

TECHNICAL DATA

| | |
|---------------------------------|---------------------|
| Communication interface: | RS-485 |
| Power supply: | Power supply 12V DC |
| Consumption: | max. 300mA / 12V |
| PCB dimensions: | 48 x 91 mm |
| Digit dimensions: | 48 x 70 mm |
| Mounting holes pitch: | 40 x 82 mm |
| Weight: | 30 g |
| Operation temperature: | 0°C to 50°C |
| Protection: | --- |

COMMUNICATION

COMMUNICATION ADDRESS

Each display segment (digit) has its own RS-485 address determined by DIP switch setting (BCD coded, ie. 1&2 in ON state while others are OFF means address number 3). This address defines the position of the digit in the whole display number.

COMMUNICATION PARAMETERS

Baudrate: 57600 kbps

Data bits: 8

Stop bits: 2

Parity: none

COMMUNICATION PROTOCOL

Communication protocol is very simple and contains only two commands to a display digit:

PWM for brightness setting

SET for setting a value to display

PWM COMMAND

Syntax of PWM command is following:

```
pwmxxx\r
```

where

XXX can be values from 000 to 100 (percent) of brightness

SET COMMAND

Syntax of SET command is following:

```
setX7.X6.X5.X4.X3.X2.X1.X0.\r
```

where

Xn (0..7) is the value to be displayed at the digit with address n.

It can contain only following characters: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, a, b, c, d, e, f or space for nothing

After each Xn value is a dot character for activating a dot on the segment. If you don't want to use a dot symbol, replace "." character with space.

Example:

```
Set8.7 5 4\r
```

Shows a 8.754 value on a four digit display.