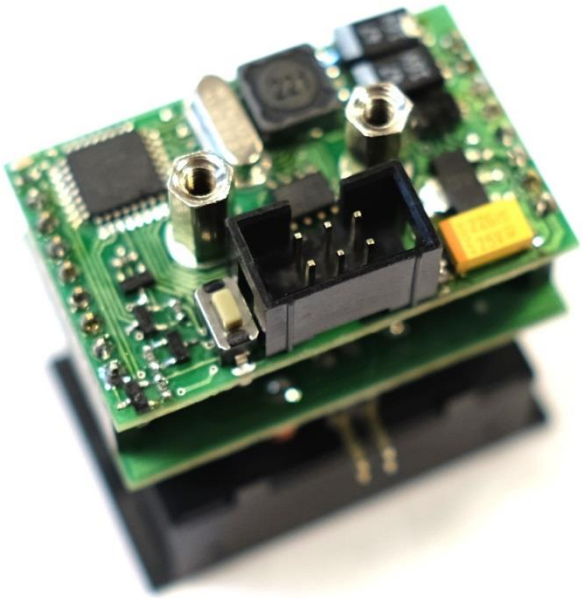
FLIPDIGIT 1”

CONTROLLER



MANUAL

DISPLAY PROGRAMMING SOFTWARE

Attention: Please read the manual carefully.

In case of any doubts or questions pls contact

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Please note that Poland is GMT+1

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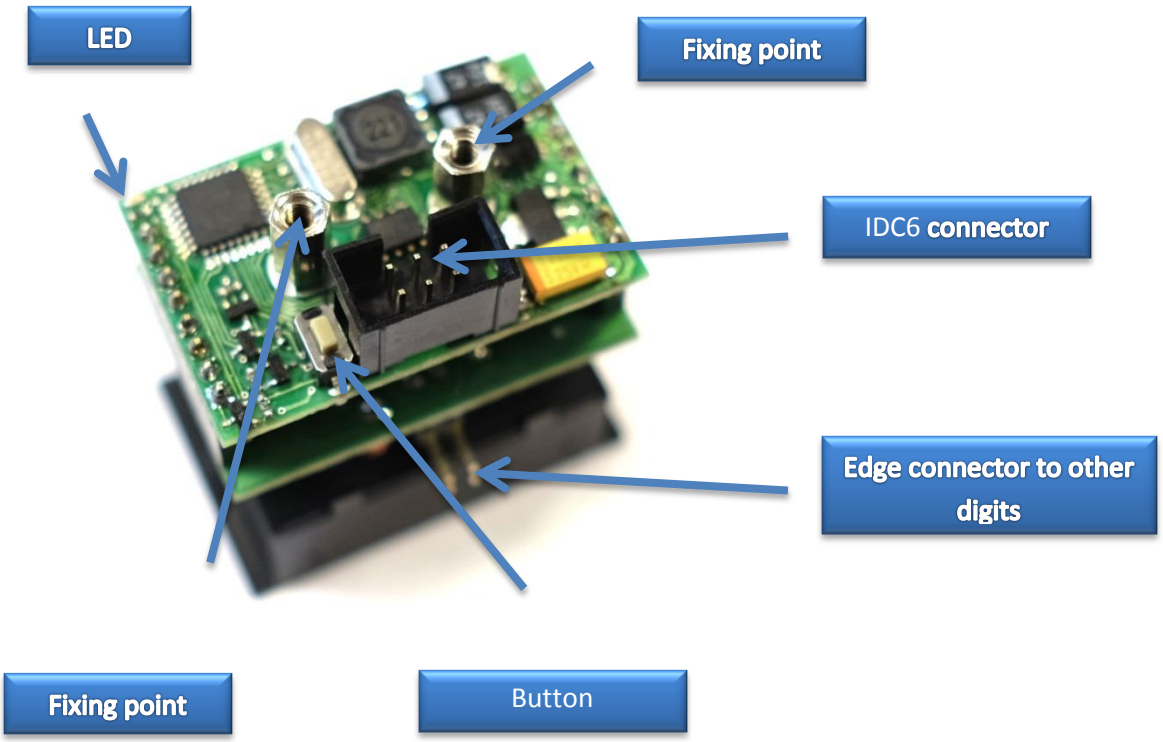
corporate website
visual information displays
fiber optic lighting
LED lighting

Technical data

Supply voltage:	19V DC - 24V DC
Control interface:	RS485
Operating temperature:	-40°C to +70°C
Humidity:	up to 95% (no condensation)

General layout



General info

The controller is built to drive one 1” small seven segment module. It is using RS485 to communicate a master unit which can be any rs485 data sending device (a PC with RS485 interface, Arduino, Raspberry Pi, etc) Each digit has got its own unique address and communication speed. In order to set these parameters you need to use a protocol described below or use a dedicated software.

Address is a number 0 – 255.

Possible communications speeds are:

1. 1200 bit/s
2. 2400 bit/s
3. 4800 bit/s
4. 9600 bit/s
5. 19200 bit/s
6. 38400 bit/s
7. 57600 bit/s
8. 115200 bit/s

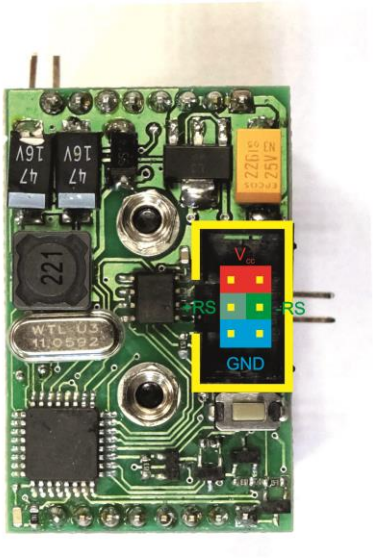
A center IDC6 connector is used to combine a number of strips into one network using ribbon cables which carry in one cable both power supply and data.

When shipped controllers are set to the following:

Speed: 9600

Address: 255

IDC6 connector layout



Protocol

Frame structure

Header	command	Address	Data	End byte
0x80	Description below	0x00 – 0xFF	Description below	0x8F

Data:

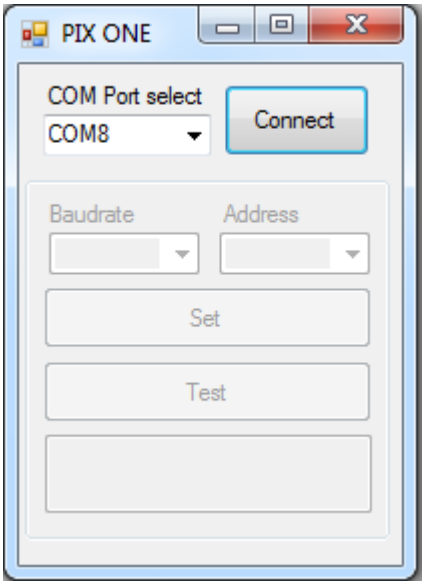
- MSB is neglected, the following bits B6 – B0 are setting dots from top to bottom respectively.

Commands:

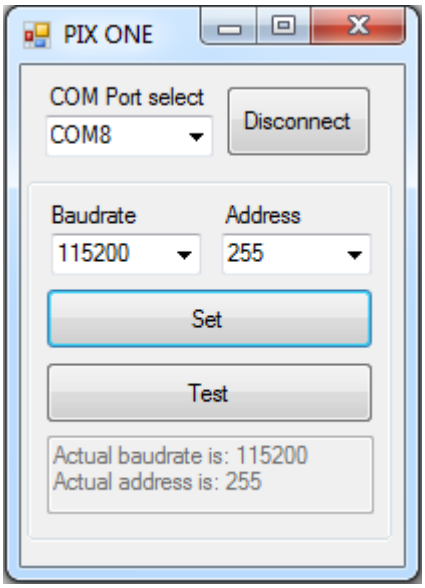
Command	Number of data bytes	Automatic refresh	Description
0x89	1	Yes	Send one data byte and show it in the display
0x8A	1	NO	Send one data byte and wait for refresh
0x8B	1	-	Set RS speed: 0x00 – 1200bit/s 0x01 – 2400bit/s 0x02 – 4800bit/s 0x03 – 9600bit/s 0x04 – 19200bit/s 0x05 – 38400bit/s 0x06 – 57600bit/s 0x07 – 115200bit/s
0x8C	1	-	Set address 0x00 – 0xFE (0xFF broadcast)
0xC0	0	-	Format 0x80, 0xC0, 0x8F – request for address, response – 0xAA, 0xCC, [address]

Programming

In order to simplify address / speed settings we offer a small app:



After selection of COM port and choosing ‘connect’, this software will show current speed and address.



‘Set’ button is used to send data from ‘Baud rate’ and ‘Address’ fields.

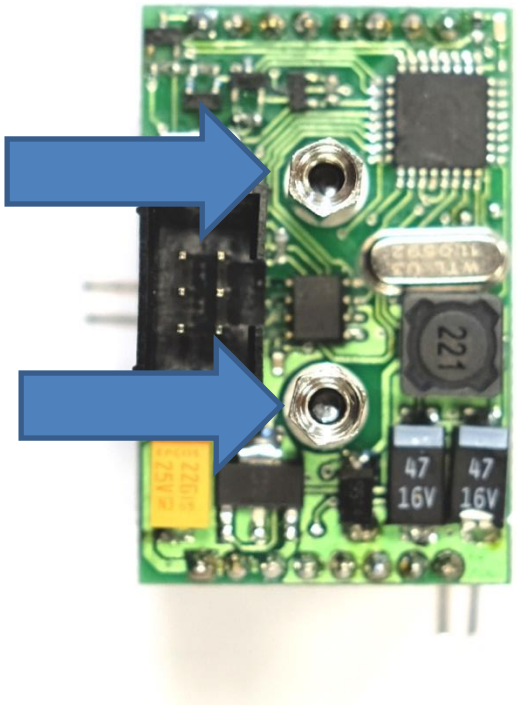
After successful programming, new values are being shown in a window in a lower part of the window.

‘Test’ button allows to show a sample sequence on a strip.

You can program only one digit at a time.

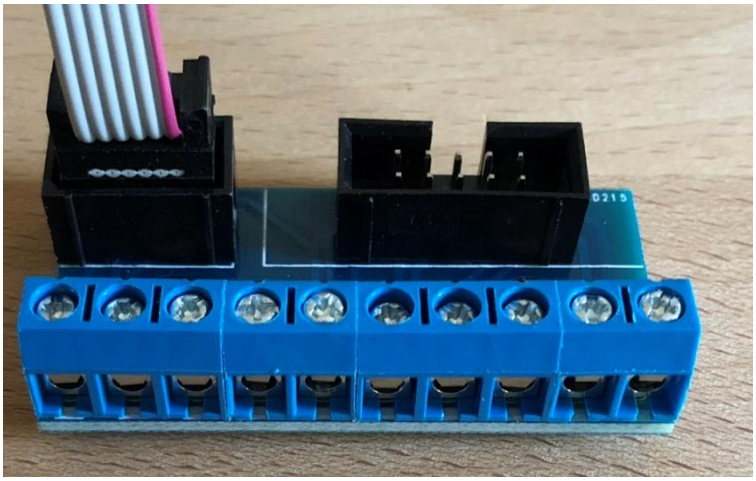
Default settings out of the box are speed of 9600 and address 255.

Two fixing tubes M3.



Screw connector

We can ship your digits with a ribbon cable and screw connector which simplifies connection to power and data source.



1	2	3	4	5	6	7	8	9	10
Vcc (24V DC)		RS+	RS-	GND					