

LED25 Process Display

Version 1.0

2x5 digit full alphanumeric display

Display

- Red LED 32 x 16 dot matrix
- Full alphanumeric font set
- 2 lines of 5 characters (17.5mm high), visible up to 7m distance
- 1 line of 4 characters (30.5mm high) , visible to more than 10m distance
- Automatic or selectable intensity adjustment



Electrical

- Supply voltage 8..32VDC
- Current requirement 180mA at 24V

Interface

- RS-485 multi-trop, 9600 Baud
- Maximum 32 nodes per multi-trop network
- Up to 500 cable length at 9600 Baud

Environment

- 0..50°C ambient temperature
- IEC60654-1 Class B (95% humidity, non condensing at 30°C)

Enclosure

- DIN 43700 panel mount enclosure
- Noryl UL 94-V0, black
- IP54 (when installed in a panel, terminals are IP20)

Dimension

- Width 96mm
- High 48mm
- Depth 63mm (80mm including connector)
- Panel cut-out 92mm by 45mm
- Wight 140g

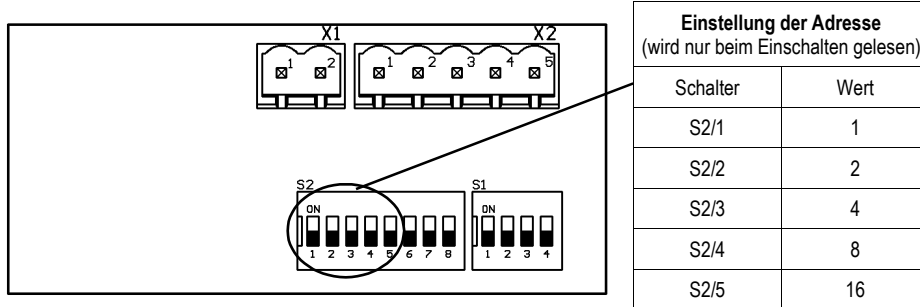
Setting address:

Setting of own address is made with switch S2 on backside. Available address range is 01...31. Address 00 has been reserved for „broadcast“. It means all the displays on the same bus may be accessed with address 00.

Baudrate is fix set to 9600.

Setting address 00 (S2,1 to S2,5 off) caused no addressing or single display mode. In this mode no address is expected. Display is always selected.

The switch S2 is only read by power on. After any changes the display must be switched off and on to read then new configuration!



For example

Switches S2,1 on and S2,5 on sets address 17. The selected address is indicated on the display after power on.

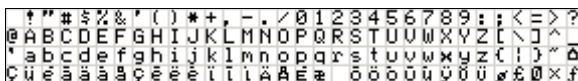
Data frame example:

Start	Address	Data	End
1 character ": " (3A hex)	2 characters wit decimal values 00 - 31	Any data or control characters	2 characters CR, LF

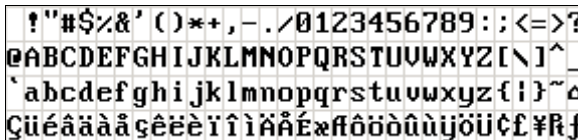
If the received address „aa“ fits with the selected address or is 00 the LED25 goes in receiving mode. It keeps in receiving mode until it has received CR LF or the time limit of 25 seconds exceeds.

All valid characters will be deployed and the contra characters will be executed.

Font #1, 5 X 7 dots, character size: 17,8 mm



Font #2, 7 X 12 Dots, character size: 30,5 mm



Control Functions													
"\D"	Clear Screen												
"\Lx"	Display intensity. x=0..9. Switch off automatic intensity control. Level 6 is sent after power on.												
"\A"	Sets automatic intensity control. Will be switched off with "\Lx" . May be set by power up with S1/2 too and overwritten by software commands any time.												
"\aidd..."	Writes intensity values in the table for automatic intensity control. More information on request.												
"\T"	Blinking on (all characters)												
"\t"	Blinking off												
"\MS...Y"	Stores initial string including control characters. This characters are displayed and/or executed during power up												
"\MC"	Erase initial string												
"\Sx"	Sets Character size and font set x= 0, 1 0 = Character size 17.8 mm, 2 lines of 5 characters, font set #1 1= Character size 30.5 mm, 1 line of 4 characters, font set #2												
"\J"	All LED's on line 2												
"\Fyx"	Decimal dot setting <table style="margin-left: 20px;"> <tr> <td>y= 0,1,2</td> <td>x= 0..4</td> </tr> <tr> <td>0 = Line 1</td> <td>0 - no fix position</td> </tr> <tr> <td>1 = Line 2</td> <td>1 - ,0</td> </tr> <tr> <td>2 - Line 1 and 2</td> <td>2 - ,00</td> </tr> <tr> <td></td> <td>3 - ,000</td> </tr> <tr> <td></td> <td>4 - ,0000</td> </tr> </table>	y= 0,1,2	x= 0..4	0 = Line 1	0 - no fix position	1 = Line 2	1 - ,0	2 - Line 1 and 2	2 - ,00		3 - ,000		4 - ,0000
y= 0,1,2	x= 0..4												
0 = Line 1	0 - no fix position												
1 = Line 2	1 - ,0												
2 - Line 1 and 2	2 - ,00												
	3 - ,000												
	4 - ,0000												
"\Rx"	Mode „writes from left to right or right to left“ (used for numeric values mostly) x= 0, 1, 2, 3 0 = Writes from left to right for both lines 1 = Line 1 from right / line 2 from left, 2 = Line 2 from right / line 1 from left 3= Both lines from right to left												
"\H"	Sets home position. Next character will be written on line 1 position 1												
"\Pyx"	Sets cursor to line (y), character to position (x) . Centre adjusted. y= 0 for line 1, y=1 for line 2, x=0 for character position 1												
"\Byx"	Sets cursor to line (y), character to position (x) . Right adjusted. y= 0 for line 1, y=1 for line 2, x=0 for character position 1												

Decimal dot setting with switch (line 1 only) (will be read during power on)	
S2,6 ON, S2/7 OFF, S2/8 OFF	0000,0
S2,6 ON, S2/7 ON, S2/8 OFF	000,00
S2,6 OFF, S2/7 OFF, S2/8 ON	00,000
S2,6 ON, S2/7 OFF, S2/8 ON	0,0000

Power up macro

Characters and control characters may be executed during power up automatically. It's limited to 32 characters.

This string will be stored save against power loss in the EEPROM.

This string may be programmed with the instruction „\MS ...“ and terminated with „\Y“ .

Instructions and characters may be mixed in any ways.

General – Reset (set s all to default)

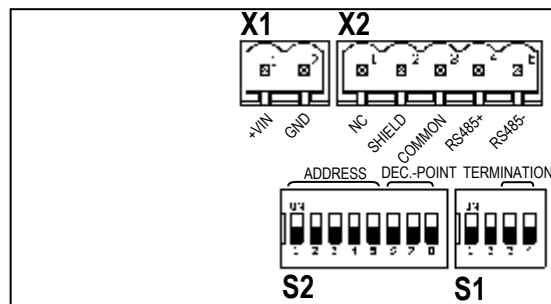
If during power up S 2,6 ON S 2,7 EN and S 2,8 ON then a ‚General-Reset‘ will be executed.

All the settings will be set to factory values.

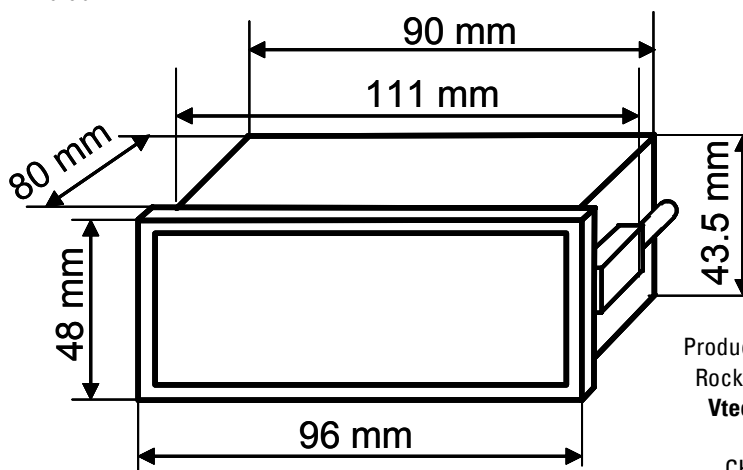
Pin configuration	
X1/1	Power supply + 8..32 VDC
X1/2	Power supply-, Internal GND
X2/1	NC, not connected
X2/2	Frame, connected with internal GND if S1/1 is ON
X2/3	Internal GND, via 100 Ohm resistor
X2/4	Input RS485+
X2/5	Input RS485-

Switch functions (if ON) * read in just during power up			
S1		S2	
1	Connect internal GND with frame	1*	Address set 1
2*	Automatic intensity control on	2*	Address set 2
3	RS485 termination on	3*	Address set 4
4	RS485 termination on	4*	Address set 8
		5*	Address set 16
		6*	Dec. dot 1 / General reset
		7*	Dec. dot 1 / General reset
		8*	Dec. dot 1 / General reset

Specification:
- Power supply 8..32 VDC
- Supply current 180mA typ. @ 24 VDC
- Protected against wrong polarity and self reset fuse
- Ambient temperature 0..50°C
- Weight 140 gr.



Dimension:



Product manufactured for
Rockwell Automation by:
Vtec Electronics GmbH
Schenkstrasse 1
CH-3380 Wangen a.A.
Tel. 032 631 11 54
www.vtec.ch