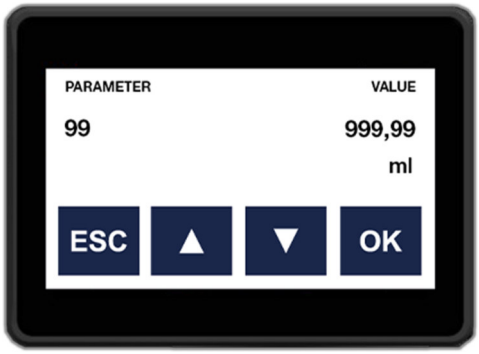
CAN Display OPUS B2 lococube®
Art. No. 0044-0032

INSTRUCTIONS FOR SOFTWARE USE



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Disclaimer

This document covers the use of the software („Template“ hereinafter) that we provide with every OPUS B2 display.
We provide this software to our customers free of charge to get them started as quickly and easily as possible with integration of the product.
Even though the template was developed with due diligence, we can not guarantee function or fitness for purpose for the application of our customer. It is the customers responsibility to evaluate it.
Safety- and technical information about the product is available here:

https://topcon-electronics.de/fileadmin/user_upload/TDS_OPUS-B2__Full.pdf

1. Introduction to lococube® templates

lococube® templates are pre-made display pages, that can be called and filled with content by sending specific CAN-messages to the display. We will explain how to do this for template 1 in this document.

2. Customization of lococube® templates

If you need to alter the template to fit your application please feel free to contact us via support@barth-elektronik.de. We will inform you about options for customization.

3. Basic CAN bus setup

Please configure your CAN-bus as follows to use template 1:

- Baudrate: 250 kBit/s
- DLC (data length code): 8 Byte
- Termination resistor: 60 Ohm

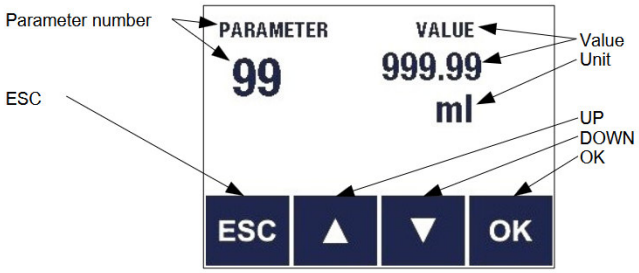
4. General message structure

All commands that control the contents of the template have to be sent to 0x7FD. The mapping is as follows:

Byte number	Function
0	Call template 1
1	Parameter number
2	Value
3	
4	
5	
6	Unit
7	Visibility

5. Get started with an example

To get the following result...:



...please send this message to address 0x7FD:

Byte number	Content
0	0x01
1	0x63
2	0x01869F
3	
4	
5	
6	0x05
7	0xFF

6. Calling template 1

To call template 1, 0x01 has to be sent in byte 0 of a message to address 0x7FD

7. Changing parameter number

To change the parameter number, please send the desired number (format: hexadecimal) in byte 1 of a message to address 0x7FD.

8. Changing value

To change the parameter number, please send the desired number (format: hexadecimal) in byte 2-5 of a message to address 0x7FD.

9. Selecting a unit

You can have one of the following units displayed by sending the corresponding value in byte 6 of a message to address 0x7FD:

Content of byte 6 (Hex)	Displayed unit
0x00	--- (none)
0x01	%
0x02	°C
0x03	°K
0x04	l

0x05	ml
0x06	m
0x07	mm
0x08	kg
0x09	g
0x0A	kN
0x0B	N
0x0C	V
0x0D	mV
0x0E	A
0x0F	mA
0x10	kΩ
0x11	Ω
0x12	kW
0x13	W
0x14	h
0x15	min
0x16	s
0x17	ms
0x18	kHz
0x19	Hz
0x1A	Ws
0x1B	Wh
0x1C	kWh
0x1D	MWh
0x1E	‰
0x1F	As
0x20	Ah
0x21	H
0x22	F
0x23	V/m
0x24	A/m
0x25	lx
0x26	cd
0x27	lm
0x28	bar
0x29	Pa
0x2A	kPa
0x2B	J
0x2C	kJ
0x2D	m/s
0x2E	km/h
0x2F	m/s^2
0x30	mol
0x31	mol/l
0x32	m^2
0x33	m^3
0x34	°
0x35	rad

10. Controlling visibility of elements

Each element on the screen can either be displayed or hidden. You control the visibility of the elements by the content of Byte 7. If you set a bit of byte 7 to ONE, the corresponding element is shown. If you set the bit to ZERO, the corresponding element is hidden. The relation is as follows:

Bit number within byte 7 of message to 0x7FD	Controls visibility of element
0	Parameter number
1	Value
2	Unit
3	--- (not used)
4	Button ESC
5	Button UP
6	Button DOWN
7	Button OK

11. Button feedback message

When a button is pressed, the display will send a message to address 0x7FC. The value in byte 2 & 3 will show you which button was pressed as follows:

Content of byte 2 & 3 (Hex)	Pressed button
0x20	ESC
0x40	UP
0x80	DOWN
0x100	OK