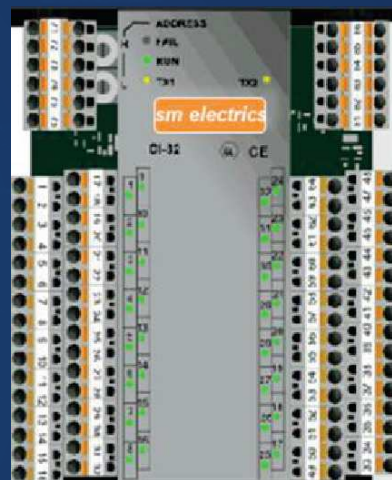




- » 15,6" touch panel operation
- » modern SSD storage technology
- » long term storage via USB flash drive
- » on device user manual



- » analog inputs (0-10V, 4-20mA, Pt100, potentiometer)
- » binary inputs
- » NMEA input

15,6" operation touch panel  
TLO 210.24.0.0

**sm electronics**

## GENERAL DISCRIPTION

The TLO has been designed to indicate on a 15,6" 9:16 (upright) coloured touch panel PC the given manoeuvre commands from Bridge Telegraph unit as well as the responded commands from Engine Room Telegraph. Each command is shown in a single line with a time stamp clearly indicated what telegraph has been represented. Moreover the telegraph logger plus can read binary inputs and analog inputs (e.g. PT100, 0 10V, Resistor) from its external IO modules. All input channels can be individually adapted to specific requirements within the onscreen menu.

Around 35 lines fill a screen. The latest command is shown on the bottom of the screen. In case older commands shall be displayed, the build in scroll function can be used. A defined number of total commands are available on the screen.

The Telegraph logger is connected to the A067 **mtbus** controller and is sending a full system state telegram to the VDR every time the system state changes or the time interval of 10s expires. That NMEA telegram is linked to the Telegraph logger as RS422 serial communication. The logger is analysing permanently the telegram and is generating a new line on the display only in case a telegraph manoeuvre command has been given and the state hasn't been changed within the last 3 seconds or one of the external analog/binary inputs changes its state within the defined range.

Via a password protected time setting menu the operator is able to adjust the system time very easily. The time stamp is based upon that system time.

The TLO plus is generating an XLS file (.XLS) within a defined period of time, stored on a modern internal „solid state drive“. In order to export all stored files from the telegraph logger to an external USB storage, the user interface provides a USB backup button. Once pressed, the TLO will export all files to the mounted pen drive.

An on device user manual is available for immediate user support.  
After a black out the system is starting up automatically. No further starting action is required.

On screen button for a zero dimming screen (incl. backlight).

## TECHNICAL DATA

- Coloured full graphic touch panel PC (255x404x83mm-upright-2,85kg-fanless)
- System power supply:  
24VDC nominal (19,2...31,2V)
- Power consumption:  
max. 37,5W (1,5Amp)
- Complies with IEC 60945
- On device user manual
- Single action storage to USB flash drive (long term storage)
- Black-out-safe operation





## WS#1 - Telegraph Logger 15,6" TOUCH PANEL PC (-TPPC\_01)

24VDC  
1,5A  
2x1,5mm<sup>2</sup>  
existing supply



-USB\_01  
external  
USB socket  
(for storage)

-W02 - 2x2x0,75mm<sup>2</sup>)

