

## MCD10 Mobile Colour Display with touch screen technology

The robust 10-inch color display MCD10 in a flat housing is an operating and monitoring unit for use in harsh environments. The surface is extremely scratch-proof and resistant to breakage. The anti-reflective glass ensures glare-free reading even in bad lighting conditions. The brightness is automatically readjusted by means of a sensor.

MCD10 is specially designed for installation in mobile machinery. For all applications, the touch-screen of the device can be easily custom-configured.

The user surface offers free design possibilities to display and to operate preferred instruments, individual menus and overviews.

The monitor can be used horizontally or vertically. Due to the vertical orientation of the display the machine environment is represented in a natural way.

The display is equipped for the connection of three color cameras and features an acoustic signal transducer.

A USB interface is available for reading user data, back up the customized configuration and for loading updates.

Data exchange with control units and sensors is carried out via CAN bus - all CAN-based protocols are suitable. Also it is possible to communicate via Ethernet.

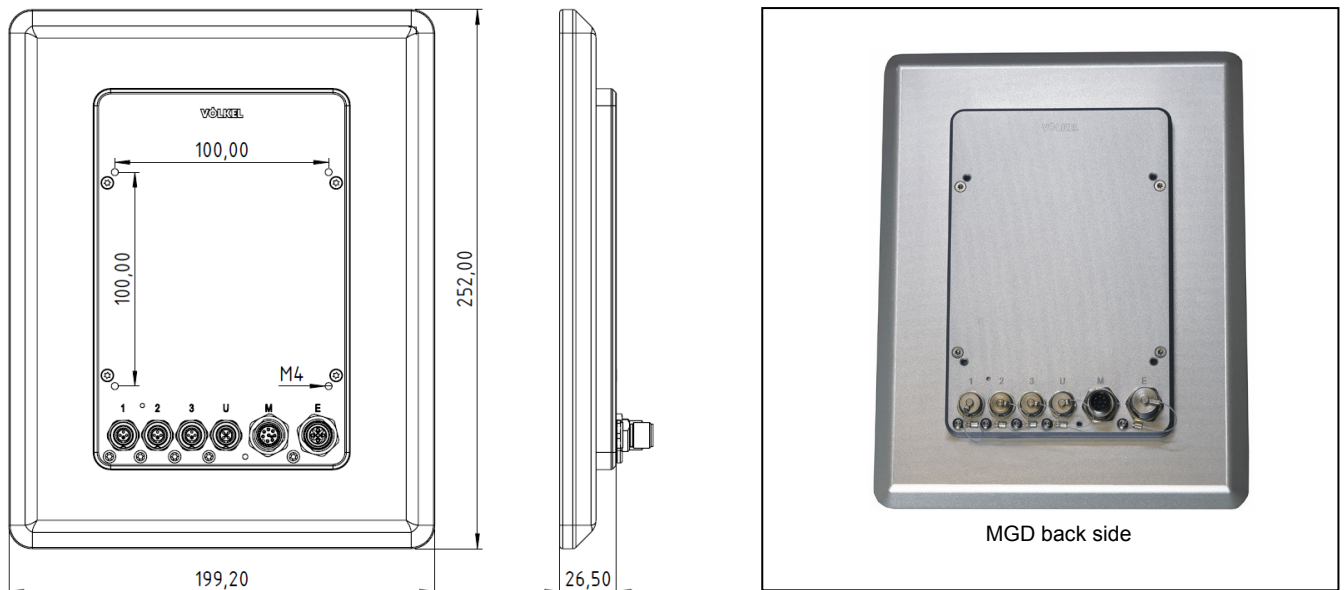


## MCD10 technical data

Dimensions	Width x height x depth in cm:19,92 x 25,2 x 2,65
Housing	Colourless anodized aluminium
Weight	1,35kg
Display	480 x 640 pixels with 262144 colours 10.4 inch diagonal, aspect ratio 3:4 Dimmable, sensor-controlled LED backlight Brightness: 550cd/m <sup>2</sup> Contrast: 1500:1 Viewing angle: vertical 176°, horizontal 176° Anti-reflective and hardened non-Flex-Tec glass, bonded
Operation	By projected capacitive touchscreen
Operating conditions	Normal, Standby, Idle
Programming	C ++ by the manufacturer or user
Power supply	Operating UB = 8 ... 32V Data retention up to UB = 4,5V
Connections	M12 8-pole for supply M12 4-pole, D-coded, Industrial Ethernet M9 4-pole for USB M9 3-pole for cameras
Power consumption	Normal operation 12V / approx. 1A (without external peripherals) Standby 12V / approx. 4mA Idle 12V / approx. 2mA
Microcontroller	1 x ATSAMA5D36 / 536MHz (ARM Cortex-A5)
Mass storage	8GB eMMC
Main memory	512MB LPDDR2
Time recording	Real-time clock, battery backed up to +/- 2 seconds / day
Interfaces	1 RS232, maximum baud rate: 115kBaude 1 CAN 2.0B, maximum data rate: 1Mbit/s 1 Ethernet, maximum data rate: 100Mbit/s 1 USB 2.0 High Speed Host, maximum data rate: 480Mbit/s
Inputs	1 activation input (terminal 15) 3 camera inputs (composite video signal) with 12V exit for a total of 1A
Signal transducer	1 internal acoustic signal transducer 1 internal optical signal transducer (front-LED)
Protection	Category IP 65, reverse polarity protection, ventilation membrane
Operating temperature	-30 ... 70°C (ambient)
Mounting	VESA MIS-D 100x100mm
EMV	Road vehicles: 2014/30/EC (2004/108/EC), ISO 10605, ISO 7637-1, ISO 7637-2, ISO 7637-3 Construction machinery EN 13309 Agricultural, forestry machinery: Directive 2009/64/EG, EN ISO 14982 Industrial use: 61000-6-2, EN 61000-6-4

We reserve the rights to make technical changes · Status 05/18

## MCD10 housing dimensions



## MCD10 pin assignment

### Assignment of connector „M“ (Supply / CAN / RS232) Plug 8-pin M12

Pin No.	Identifier	Specification
1	UB	Supply
2	DG	Earth
3	AKT	Switching on signal
4	CH	CAN line H
5	CL	CAN line L
6	TXD	RS232 transmission line
7	RXD	RS232 receive path
8	SHLD	Cable shield

### Assignment of connector „U“ (USB memory) Socket 4-pin M9

Pin No.	Identifier	Specification
1	VCC	USB line VCC
2	DM	USB line DM
3	DP	USB line DP
4	GND	USB line GND

### Assignment of connector „1“ (camera 1), „2“ (camera 2) and „3“ (camera 3) Socket 3-pin M9

Pin No.	Identifier	Specification
1	YIN	Camera video signal
2	SG	Camera earth
3	US	Camera supply

### Assignment of connector „E“ (Ethernet) Socket 4-pin M12 D-coded

Pin No.	Identifier	Specification
1	TXD+	Transmission line +
2	RXD+	Receive path +
3	TXD-	Transmission line -
4	RXD-	Receive path -