ecomatDisplay: powerful, robust HMIs for mobile machines

Units for operation and monitoring

LED displays 10", 12" and 12.3" with buttons or touch screen

Housing optimised for mobile use

Optical bonding: offers optimum readability, prevents fogging of the front pane

Mounting of the devices in any orientation (portrait/ landscape)

Programmable via CODESYS, numerous interfaces such as CAN, USB 2.0 and Ethernet

E1

IP 65
IP 67

CAN open

CODESYS

Vibration and shock resistant

Display and operation in harsh environments

The new robust HMIs have been developed for use in cabins and outside vehicles. Thanks to a high protection rating and optical bonding they are optimally protected against moisture.
They withstand strong impacts and permanent vibrations as well as extreme ambient temperatures.

The high-resolution colour displays offer optimum readability even in bright lighting conditions. For operation the devices have freely programmable buttons and/or a capacitive touch screen. For pure display purposes, there is also a device version without operating elements.

The integrated powerful PLC can perform visualisation and operation tasks. It is freely programmable via CODESYS. Numerous interfaces at the back of the device, e.g. CAN, analogue video, USB 2.0 and Ethernet offer maximum connectivity.

LED displays with optical bonding	Order no.			
	CR1102	CR1204	CR1202	CR1203
Display	**10.0"**	**12.0"**	**12.3"**	
Aspect ratio	16:10	16:10	8:3	8:3
Resolution [px]	1280 x 800	1280 x 800	1280 x 480	1280 x 480
Number of colours	16.7 million	16.7 million	16.7 million	16.7 million
Touch	•	•	–	•
Controller with GPU	quad core, 1.2 GHz	quad core, 1.2 GHz	dual core, 800 MHz	quad core, 1.2 GHz
Memory (RAM) [GByte]	1	1	1	1
Memory (flash) [GByte]	8	8	4	8
Buttons (RGB backlit)	8	10	–	–
Navigation element	cross	cross	–	–
Ethernet CAN USB 2.0	2 4 2	2 4 2	1 4 1	2 4 2
Analogue video interfaces	4	4	2	4
Stereo output (amplified) Line input Headphones output	1 1 1	1 1 1	1 – –	1 1 1
Digital input BL Digital output 2.5 A	2 2	2 2	2 2	2 2

Mechanical design

The displays have a sealed diecast aluminium housing with protection ratings IP 65, IP 67. For connection sealed M12 connections and a 40-pole AMP connector are used.
The displays can be used as surface mount device using the tried-and-tested RAM mount system or can be mounted in a wall.Depending on the requirement, the displays can be installed in any orientation.

Powerful electronics

The integrated 64-bit controller allows a powerful presentation of the high-resolution graphics, processing of the application program and the device functions. Furthermore, there are many opportunities with regard to communication and networking with other systems and networks. With the integrated real-time clock it is possible to give log data a time stamp for better traceability.

Audio

All displays have extensive audio functions that, depending on the version, include recording and output.

Programming to IEC 61131-3

The CODESYS license included in the scope of supply enables clear and easy creation of the application software. The graphic elements are created via the integrated visualisation editor and can, for example, be selected via the buttons or the optional touch function.

Common technical data LED displays with optical bonding	
Housing	sealed metal housing
Installation	control cabinet with mounting frame surface mounting with RAM ® mount system
Device connection	1 x 40-pole Tyco / AMP, 2 x M12 - (CR1202) 1 x 40-pole Tyco / AMP, 4 x M12 - (CR1102, CR1203, CR1204)
Protection rating	IP 65 / IP 67
Temperature range Storage [°C]	-30...80
Operating voltage [V DC]	8...32
Power consumption [W]	29...36
Programming	CODESYS V 3.5 (IEC 61131-3)
CAN communication profile	CAN interface 2.0 A/B, ISO 11898 20 kbits/s...1 Mbit/s CANopen or SAE J 1939 or free protocol
Ethernet communication protocols	TCP/IP, UDP, Modbus TCP, OPC UA Server, EtherNet/IP
Standards and tests (extract)	CE, E1 (UN-ECE R10), EN 50 155