ecomatDisplay: powerful dialogue modules for mobile machines

Devices for operation and monitoring tasks

- **LED displays 5", 7" and 12" with buttons or touch screen**
- **Housing optimised for mobile use**
- **Optical bonding: prevents penetration of moisture, offers optimum readability**
- **Software supports any orientation of the device (portrait/landscape)**
- **Programmable via CODESYS, numerous interfaces such as CAN**

E1

IP 65
IP 67

CAN open

CODESYS

Vibration and shock resistant

Display and operation in a rough environment

The new dialogue modules 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 RGB LED panels offer optimum readability even in a bright environment. For operation the displays have freely programmable buttons (5" and 7" versions) or optionally a capacitive touch screen.

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.							
	CR1058	CR1059	CR1074	CR1075	CR1076	CR1077	CR1202	CR1203
Display	5.0"		7.0"				12.3" (wide)	
Aspect ratio	16:10	16:10	16:10	16:10	16:10	16:10	8:3	8:3
Resolution	800 x 480	800 x 480	800 x 480	800 x 480	800 x 480	800 x 480	1280 x 480	1280 x 480
Number of colours	262,144	262,144	262,144	262,144	262,144	262,144	16.7 million	16.7 million
Touch	–	•	–	–	–	•	–	•
Controller with GPU	dual core, 800 Mhz	dual core, 800 Mhz	dual core, 800 Mhz	dual core, 800 Mhz	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	1	1	1	1
Memory (flash) [GByte]	2	4	2	4	8	8	4	8
Buttons (RGB backlit)	4	4	6	6	6	6	–	–
Navigation element	cross	cross	cross	cross	cross	cross	–	–
Communication interface								
Ethernet	1	1	1	1	2	2	1	2
CAN	2	4	2	4	4	4	4	4
USB 2.0	1	1	1	1	2	2	1	2
Analogue video interfaces	–	2	–	2	4	4	2	4
Audio interfaces								
Stereo Out (amplified)	1	1	1	1	1	1	1	1
Line In	–	–	–	–	1	1	–	1
Headphones Out	–	–	–	–	1	1	–	1
Inputs / outputs								
Digital In BL	–	2	–	2	2	2	2	2
Digital Out 2.5 A	–	2	–	2	2	2	2	2

Mechanical design

The displays have a sealed diecast aluminium housing with the protection rating 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. They can be used to provide acoustic and voice messages.

Programming to IEC 61131-3

The CODESYS software enables a 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 – CR1058/59, CR1074/75 2 x 40-pole Tyco / AMP, 4 x M12 – CR1076/77, CR1203
Protection rating		IP 65 / IP 67
Temperature range Storage	[°C]	-30...80
Operating voltage	[V DC]	8...32
Power consumption	[W]	18...32, depending on the device type
Programming		CODESYS V 3.5 (IEC 61131-3)
CAN communication profile		CAN interface 2.0 A/B, ISO 11898 20 kbit/s...1 Mbit/s CANopen or SAE J 1939 or free protocol
Ethernet communication protocols		TCP/IP, UDP, Modbus TCP OPC UA, EtherNet/IP
Standards and tests (extract)		CE, E1 (UN-ECE R10), EN 50 155