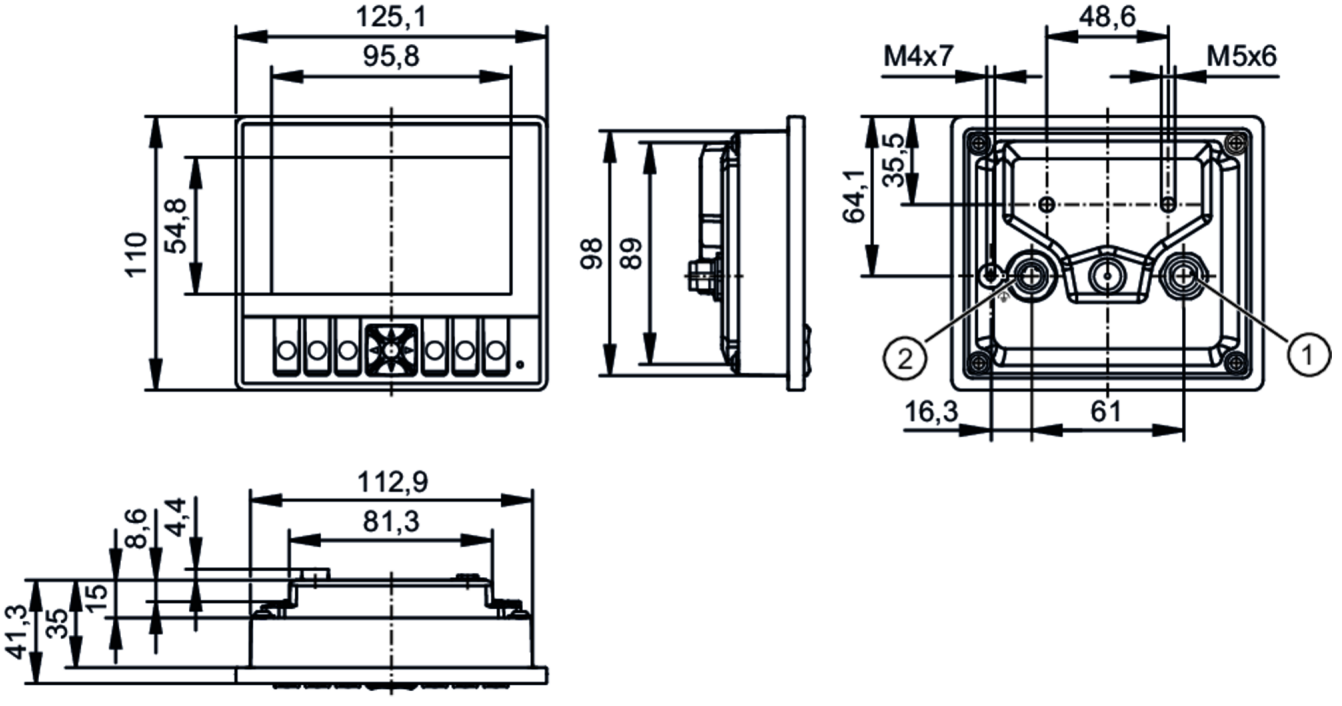
CR1140

Programmable graphic display for controlling mobile machines

ecomatDisplay/4.3"/STD./E



1 plug: CAN
2 socket: ETH

Application		
Application		for mobile applications; For use in industrial environments; for use in wet environments
Electrical data		
Operating voltage	[V]	8...32 DC; (to SELV/PELV)
Nominal voltage DC	[V]	12 / 24
Current consumption	[mA]	< 210; (24 V DC)
Power consumption	[W]	5
Inputs / outputs		
Number of inputs and outputs		Number of digital inputs: 1
Inputs		
Number of digital inputs		1; (non-configurable service input)
Software / programming		
Parameter setting options		CODESYS 3.5; Qt
PLC function to IEC 61131-3		yes
Operating system		Embedded Linux
Interfaces		
Communication interface		CAN; Ethernet
Number of CAN interfaces		1
Number of Ethernet interfaces		1

CR1140

Programmable graphic display for controlling mobile machines

ecomatDisplay/4.3"/STD./E

CAN			
Transmission rate		10 kBit/s... 1 MBit/s	
Protocol		CANopen; SAE J1939; free protocol	
Profile		CiA DS 301 Version 4.2; CiA DS 401 Version 1.4	
Interface		CAN Interface 2.0 A/B ISO 11898	
Factory settings		Transmission rate: 250 kBit/s	
Ethernet			
Transmission standard		10Base-T; 100Base-TX	
Transmission rate		10 MBit/s; 100 MBit/s	
Protocol		TCP/IP; UDP; Modbus TCP; OPC UA; EtherNet/IP	
Note on interfaces		OPC UA PubSub	
Operating conditions			
Ambient temperature	[°C]	-30...65	
Note on ambient temperature		2000 m: -30...65 °C	
		3000 m: -30...61 °C	
		4000 m: -30...60 °C	
		5000 m: -30...58 °C	
		The mainboard temperature must not exceed 80 °C.	
		for further information please see the operating instructions	
Storage temperature	[°C]	-30...85	
Max. relative air humidity	[%]	90; (non condensing)	
Max. height above sea level	[m]	5000	
Protection		IP 65; IP 67	
Pollution degree		2; (before installation and when the device is replaced)	
Chemical media		ISO 16750-5	AA, BA, BD, CC, DB, DC, DD, ED
			only one chemical permitted at a time
Tests / approvals			
EMC		UN/ECE-R10 noise emission and noise immunity:	100 V/m
		DIN EN 61000-6-2	
		DIN EN 61000-6-4	
		DIN EN 13766-1	
		ISO 10605 ESD	
		immunity ISO 11452-1	
		ISO 7637-2 pulse 1	severity level 4 / function state C (24 V)
		ISO 7637-2 pulse 2a	severity level 4 / function state A (24 V)
		ISO 7637-2 pulse 2b	severity level 4 / function state C (24 V)
		ISO 7637-2 pulse 3a	severity level 4 / function state A (24 V)
		ISO 7637-2 pulse 3b	severity level 4 / function state A (24 V)
		ISO 16750-2 pulse 4	severity level 4 / function state A (12 V)
		ISO 16750-2 pulse 4	severity level 4 / function state A (24 V)
		ISO 16750-2 pulse 5	severity level 3 / function state C (24 V)
Continuous shock resistance		ISO 16750-3	30 g 6 ms / 24000 shocks
Fast temperature change		EN 60068-2-30 damp heat: cyclical	55 ° C upper temperature limit / 6 cycles
		EN 60068-2-78 damp heat: constant	40 ° C 93 % rH / test period 21 days

CR1140

Programmable graphic display for controlling mobile machines

ecomatDisplay/4.3"/STD./E

Vibration resistance		ISO 16750-3 Test VII	random, mounting place car body
		EN 60068-2-6 Sinus	10...500 Hz / 0.72 mm / 10 g 10 cycles/axis, sine
Salt spray test		EN 60068-2-52 Salt spray	severity level 3 / motor vehicle
MTTF	[years]	105	
Railway applications		DIN EN 50155 Pkt 12.2	
		EN 50121-3-2	
		EN 55016	
Mechanical data			
Weight	[g]	491.55	
Type of mounting		panel / surface; installation in panels or panel cutouts; (panel cutout: 114 x 99 mm)	
Dimensions	[mm]	125.1 x 110 x 41.3	
Materials		housing: diecast aluminium powder-coated; Display: glass anti-reflective and hardened; rear of the housing: plastics; diaphragm: Gore-Tex	
Information on service life		pushbuttons:	750000 Betätigungen
		navigation key with pushbutton:	750000 Betätigungen
		Display-LED Lebensdauer:	> 50000 h
Displays / operating elements			
Display		status LED	1 LED, multi-colour freely programmable
Operating elements		6	freely programmable backlit function keys
		1	navigation key with central confirmation button
Display resolution		800 x 480	
Display type		colour display	
Display size		4.3"	
Aspect ratio		16:10	
Display background illumination		LED	
Colour depth		24 Bit	
Brightness	[cd/m²]	1000; (adjustable: 0...100 %; In steps of: 1 %)	
Contrast ratio		800:1	
Hardware			
Processor		ARM Dual Core 64 Bit 1,4 GHz	
RAM		1 GByte RAM	
Mass storage		4 GByte Flash	
Non-volatile memory		8 kByte	
Data memories			
Real-time clock		yes; UTC, battery buffered	
Remarks			
Pack quantity		1 pcs.	

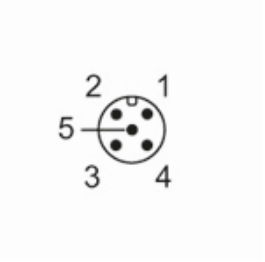
CR1140

Programmable graphic display for controlling mobile machines

ecomatDisplay/4.3"/STD./E

Electrical connection - CAN

Connector: 1 x M12; coding: A



1:	Service
2:	VBB30
3:	GND
4:	CAN_H
5:	CAN_L

Electrical connection - ETH

Connector: 1 x M12; coding: D

1:	TxD+
2:	RxD+
3:	TxD-
4:	RxD-
SCREEN:	FE screen connected to plug