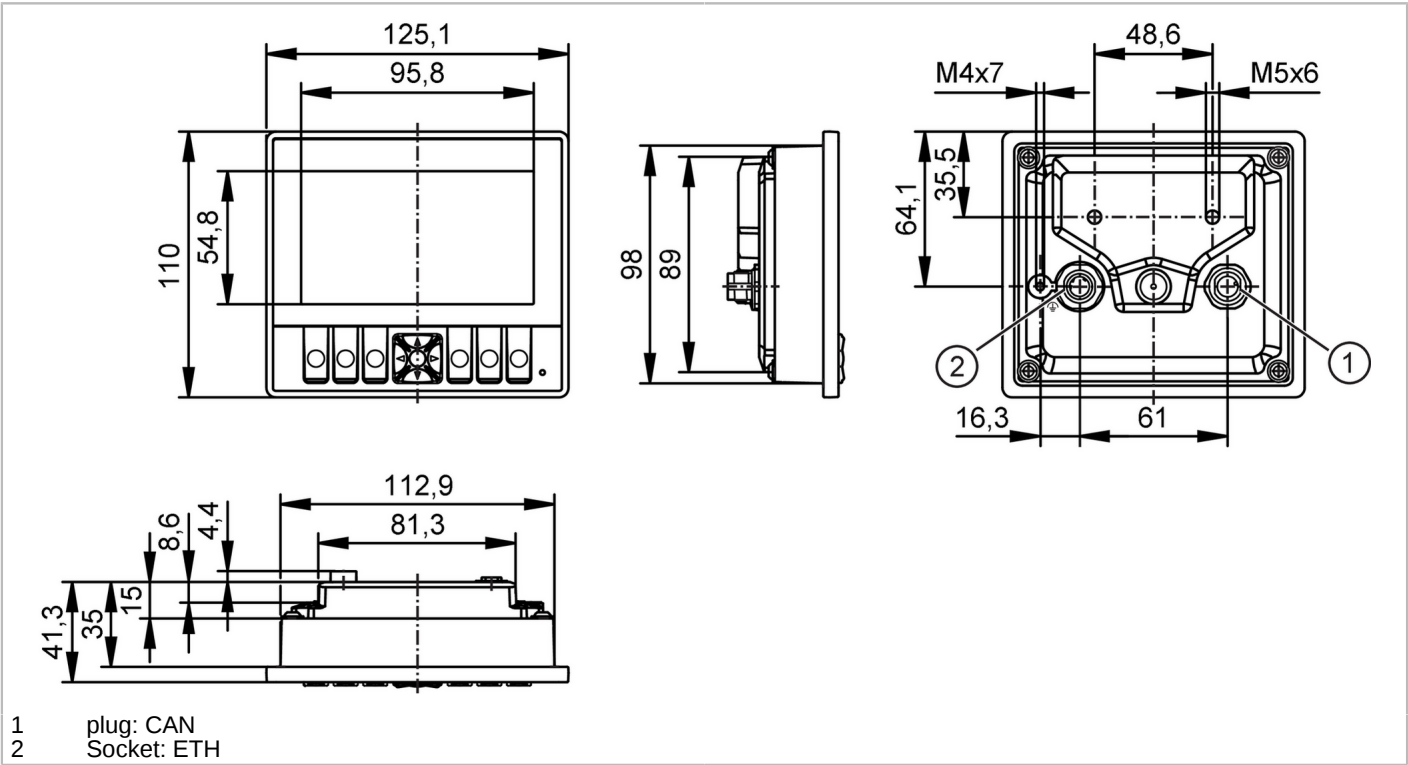


CR1140



Programmable Human Machine Interface

ecomatDisplay/4.3"/STD./E



Product characteristics		
Communication interface	CAN; Ethernet	
Operating elements	6	freely programmable backlit function keys
	1	navigation key with central confirmation button
Display type	Color display	
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	



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Number of CAN interfaces	1	
Number of Ethernet interfaces	1	
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 interference:	100 V/m
	DIN EN 61000-6-2	
	DIN EN 61000-6-4	
	DIN EN 13766-1	
	ISO 10605 ESD	
	noise 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

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Fast temperature changes	EN 60068-2-30 damp heat: cyclical EN 60068-2-78 damp heat: constant	55 °C upper temperature limit / 6 cycles 40 °C 93 % rH / test period 21 days
Vibration resistance	ISO 16750-3 Test VII EN 60068-2-6 sine	random, mounting place car body 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/surf.; installation in panels or panel cutouts; (panel cutout: 114 x 99 mm)
Dimensions [mm]	125.1 x 110 x 41.3
Material	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 lifetime: > 50000 h

Displays / operating elements

Display	Status LED	1 LED, multi-color freely programmable
Operating elements	6	freely programmable backlit function keys
	1	navigation key with central confirmation button
Display resolution	800 x 480	
Display type	Color display	
Display size	4.3"	
Aspect ratio	16:10	
Display background illumination	LED	
Color 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
Working memory	1 GByte RAM
Mass storage	4 GByte Flash
Non-volatile memory	8 kByte

Data memory

Real-time clock	yes; UTC, battery buffered
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Remarks

Pack quantity	1 pcs.
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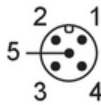


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Electrical connection - CAN

Connector: 1 x M12; coding: A; Contacts: 5



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

Electrical connection - ETH

Connector: 1 x M12; coding: D; Contacts: 4



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