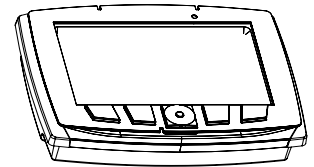


- Digital mobile electronics display CL-711
- 7" colour display
- Robust construction with plug-in connection for mobile applications
- Protection class IP67
- Multi-functional pin assignment, 10 I/Os
- CAN connection
- Freely programmable


**DESCRIPTION**

Microcontroller based control with display and operating buttons including multifunctional inputs/outputs. Delivered in a robust plastic housing, it is designed for the hard use in working devices and is perfectly suitable for the communication between the machine and the user.

**FUNCTION**

The control can be used and programmed as a stand alone unit, or as part of a distributed, decentralised system architecture. The functions on the display and the buttons are simply and individually generated with a programming tool. The additional inputs and outputs enable reading and controlling sensors and actuators of all kinds.

**APPLICATION**

This mobile electronics is used mainly in the mobile field because of the compact construction, protection class IP67 as well as the extensive operating temperature range and the selected plug connection. Customer-specific requirements can easily be implemented.

**CONTENT**

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**TYPE CODE**

CL-711-101-10-WAG-00	Master I/O Display
CL-711-101-20-WAG-00	Client I/O Display

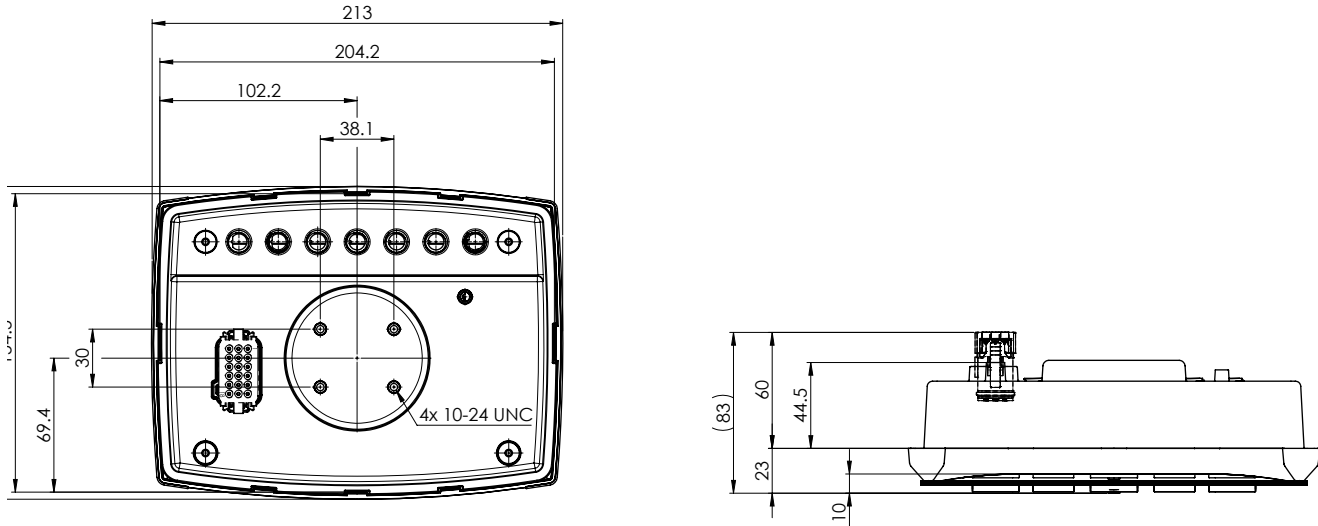
**GENERAL SPECIFICATIONS**

Execution	Plastic molded housing	<b>Display</b>	Diagonal 7" / 178 mm Readable also in direct sunlight
Dimensions	213 x 162 x 67.5 mm (see Dimensions)		TFT LCD 800 x 480 pixel
Mounting	Front panel assembly with separate mounting bracket		Real time clock
Weight	1000 g		Low power sleep mode with wake-up function
Device receptacle	Deutsch DT, 18-pole pin header	<b>Video inputs</b>	
Mating connector	Deutsch DT16-18SA-K004	Device receptacle	male, M12, 4-pole, B coded
		Mating connector	Cable plug (female), M12, 4-pole, B coded
<b>USB connector</b>		<b>Note</b>	The mating connector and mounting bracket are not part of the delivery
Device receptacle	male, M12, 4-pole		
Mating connector	Cable plug (female), M12, 4-pole		
Working temperature	-40...+70°C		

**ELECTRICAL SPECIFICATIONS**

Protection Class	IP 67	<b>Digital Outputs</b>	
Supply Voltage	8...32 VDC	Number of outputs	up to 4
No-load current	440 mA at 13.8 V, 252 mA at 28 V	Protection	Short to GND Short to Battery Overcurrent
<b>Analogue inputs</b>		Pull-up/down	560 Ohm / 1.4 kOhm for diagnostics
Number of inputs	up to 5	<b>DOUT Digital Outputs</b>	
Input voltage range	0...5.51 V	Maximum current	3.0 A (individual) 8.0 A (grouped for pin 1-4) 2.5 A (grouped)
Input resistance	57 kOhm	<b>PWM Pulse Width Modulation Outputs</b>	
Resolution	12 bit	Maximum current	3.0 A (individual) 8.0 A (grouped for pin 1-4) 2.0 A (grouped)
<b>Digital inputs</b>		<b>ECC Estimated Current Feedback, 0.2-4.1 A / 12 bit</b>	
Number of inputs	up to 10	Accuracy ECC	+/- 50mA at 2A
STB Switch to Battery input		<b>5 V Sensor Supply</b>	
Input resistance	1.4 kOhm	Stabilised output voltage	5 V +/- 5 %
Switching threshold	positive >5.9 V, negative <3.2 V	Max. load	250 mA
STG Switch To Ground input		<b>CAN</b>	
Pull-up resistor	560 Ohm to internal 5 V		2 CAN interfaces 40 kbit/s to 500 kbit/s
Switching threshold	positive >3.25 V, negative <1.75 V	<b>Software</b>	
FREQ Frequency input		Beside the programming tools, a software for diagnostics and troubleshooting for the commissioning of the system is available.	
Switching threshold	positive >3.5 V, negative <1.0 V		
Pull-up resistor	4.7 kOhm to internal 5 V		
Resolution	<5 Hz		
Frequency range	max. 10 kHz (open drain, sinking sensor)		
RTD Resistance to digital			
Pull-up resistor	499 Ohm (Input#1) 2000 Ohm (Input#2)		
Accuracy	+/- 1 % and +/- 5 Ohm (Input#1) +/- 1 % and +/- 19.5 Ohm (Input#2)		

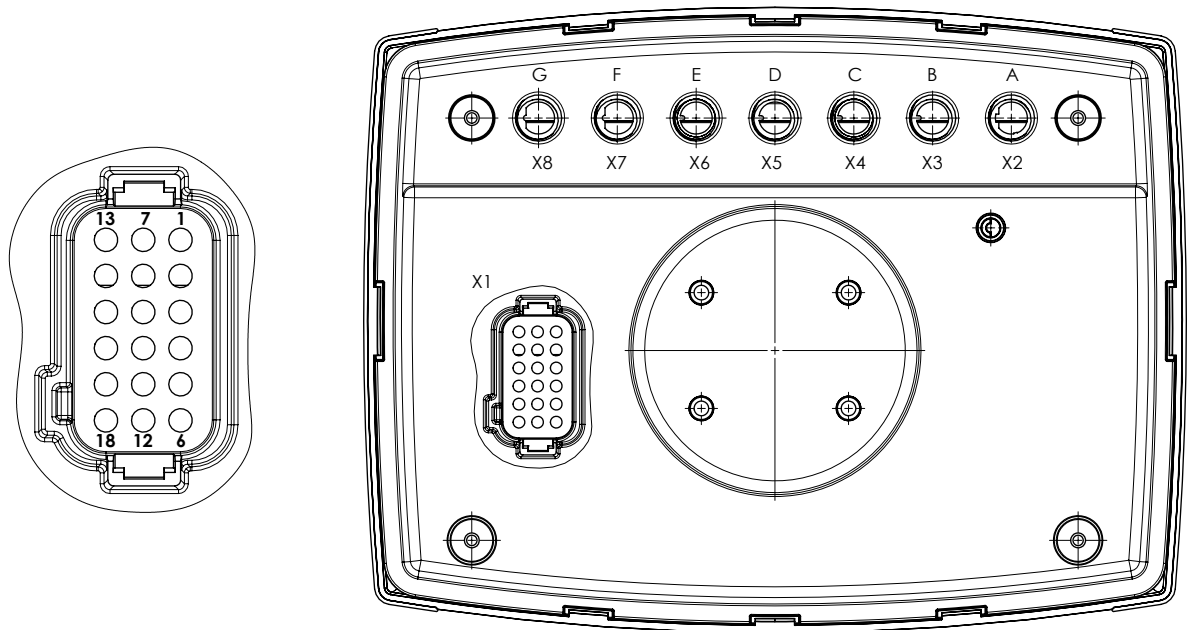
**DIMENSIONS**



Fixing: Threaded socket UNC 10-24, max. depth 11 mm

**ACCESSORIES**

Mating connector	DT16-18SA-K004
Crimp socket AWG 16-20, 0.5-1.5 mm <sup>2</sup>	Deutsch 0462-201-16141 (max. 18 pcs)
or crimp socket AWG 14, max. 2 mm <sup>2</sup>	Deutsch 0462-209-16141 (max. 18 pcs)
Sealing plug	Deutsch 114017 (max. 18 pcs)
or snapping sealing plug	Deutsch 0413-217-1605
USB connector	
Mating connector	Cable plug (female), M12, 4-pole
Video connector	
Mating connector	Cable plug (female), M12, 4-pole, B coded
Orchestra Software Suite	Project management software
Art. no. 740.1000	Ladder-Logic and C-Code
	Display GUI Programming incl. Conductor Software
Conductor Software	Standalone diagnostics and set-up tool
Art. no. 740.1001	
NXP (Freescale) CodeWarrior	C-Code Programming tool/Compiler
3rd party tool	

**CONNECTOR WIRING DIAGRAM / PIN ASSIGNMENT**

**X1, 18-pole, connector A-coded**

Pin	Function
1	Output #1 DOUT(+) / PWM(+) / ECC/(+) / Input STB / STG
2	Output #2 DOUT(+) / PWM(+) / ECC/(+) / Input STB / STG
3	Output #3 DOUT(+) / PWM(+) / ECC/(+) / Input STB / STG
4	Output #4 DOUT(+) / PWM(+) / ECC/(+) / Input STB / STG
5	BAT(-) Module
6	Steady plus +Battery Module and Outputs
7	Input #9 Battery Voltage
8	CAN1-H
9	CAN1-L
10	Input #1 STB / STG / VTD(0-5.6V) / FREQ / PWM / Encoder(1A) / RTD(0-500Ohm)
11	Input #2 STB / STG / VTD(0-5.6V) / FREQ / PWM / Encoder(1B) / RTD(0-2kOhm)
12	Input #3 STB / STG / Wake-Up
13	Input #4 STB / STG / VTD(0-5.6V)
14	CAN2-L
15	CAN2-H
16	Input #5 STB / STG / VTD(0-5.6V) / FREQ / PWM / Encoder(2A)
17	Input #6 STB / STG / VTD(0-5.6V) / FREQ / PWM / Encoder(2B)
18	5VDC Sensor Supply Ground
19	5VDC Sensor Supply

DOUT = Digital output  
 ECC = Estimated current feedback  
 PWM = Pulse width modulation  
 STB = Switch to battery input  
 STG = Switch to ground input  
 FREQ = Frequency input  
 VTD = Voltage to digital (Analogeingang)  
 RTD = Resistance to digital (Widerstandseingang)

**X4 (C), USB Client, X6 (E) USB Host  
 round 4-pole, M12 connector, A-coded for USB**

Pin	Function
1	USB (Power)
2	USB (DP)
3	USB (DM)
4	USB (GND)

**X7 (F), X8 (G)  
 round 4-pole, M12 connector, B-coded for Video**

Pin	Function
1	Ground
2	Ground
3	F: Video #1 / G: Video #3
4	F: Video #2 / G: Video #4