



The MVS.B4E is suitable for landscape/portrait, standalone or in-dash mounting. The adjustable backlight and the high resolution of the LCD display allows an optimal reading of texts and machine functions.

The Linux operating system allows to a stable and reliable use with a multi-platform application programming.

The device provides several communication ports for serial line (RS232), CAN networks, ethernet and high speed USB port.



## TECHNICAL FEATURES

<b>MASTER CODE</b>	MVS.B4EB70
<b>POWER SUPPLY</b>	8 ÷ 36 VDC with protections   CONSUMPTION ≤1200 mA @ 12 VDC
<b>LED</b>	N.1 LIGHT SENSOR N.1 MULTI-COLOR LED
<b>CAN BUS</b>	N. 2 PORTS: 2.0 A/B COMPLIANT - (11, 29 BIT) - ISO 11898 UP TO 1MBIT/S (default 250 Kbit/s)
<b>SERIAL</b>	N. 1 PORTS: RS232 (Type: EIA232 (only RxD, TxD, GND) - Speed: max. 115.200baud
<b>RTC</b>	Buffered by gold cap for 2 weeks. Deviation max. 1 s/day
<b>COMMUNICATIONS</b>	N.2 USB HOST 2.0 (Side + Back connector A High speed. Guaranteed 900mA @ 5V) N.1 ETHERNET: (10/100 Mbit/s Base T or Automotive Interface)
<b>TOUCH</b>	CAPACITIVE TOUCH
<b>PUSH BUTTON</b>	SIDE PUSHBUTTON FOR POWER ON/OFF
<b>DISPLAY</b>	LCD TYPE: TFT Color Graphic LCD with LED backlight RESOLUTION: 800 X 480px (WQVGA), 15:9 SIZE: 7", 152.4 mm (W) x 91.44 mm (H) LUMINANCE: typ. 800 cd/m <sup>2</sup> CONTRAST RATIO: typ. 700:1
<b>BUZZER</b>	YES – 90dB 10 cm distance
<b>AUDIO OUTPUT</b>	N.1 (L, R, GND) AC97 COMPATIBLE (MAX POWER ~50mW )
<b>WORKING TEMPERATURE</b>	-30°C +75°C - Storage temperature: -40°C +80°C
<b>CASE</b>	ALUMINIUM DIE CAST, POWDER COATED FRONT-GLASS
<b>VIDEO INPUT</b>	1 PORT: 1 VSS - CAMERA SUPPLY: 12 VDC – MAX CURRENT 300 mA CAMERA CONTROL OUTPUT (OPEN DRAIN) FOR SPECIAL FUNCTIONALITY (MIRROR, SHUTTER, HEATING ETC.)





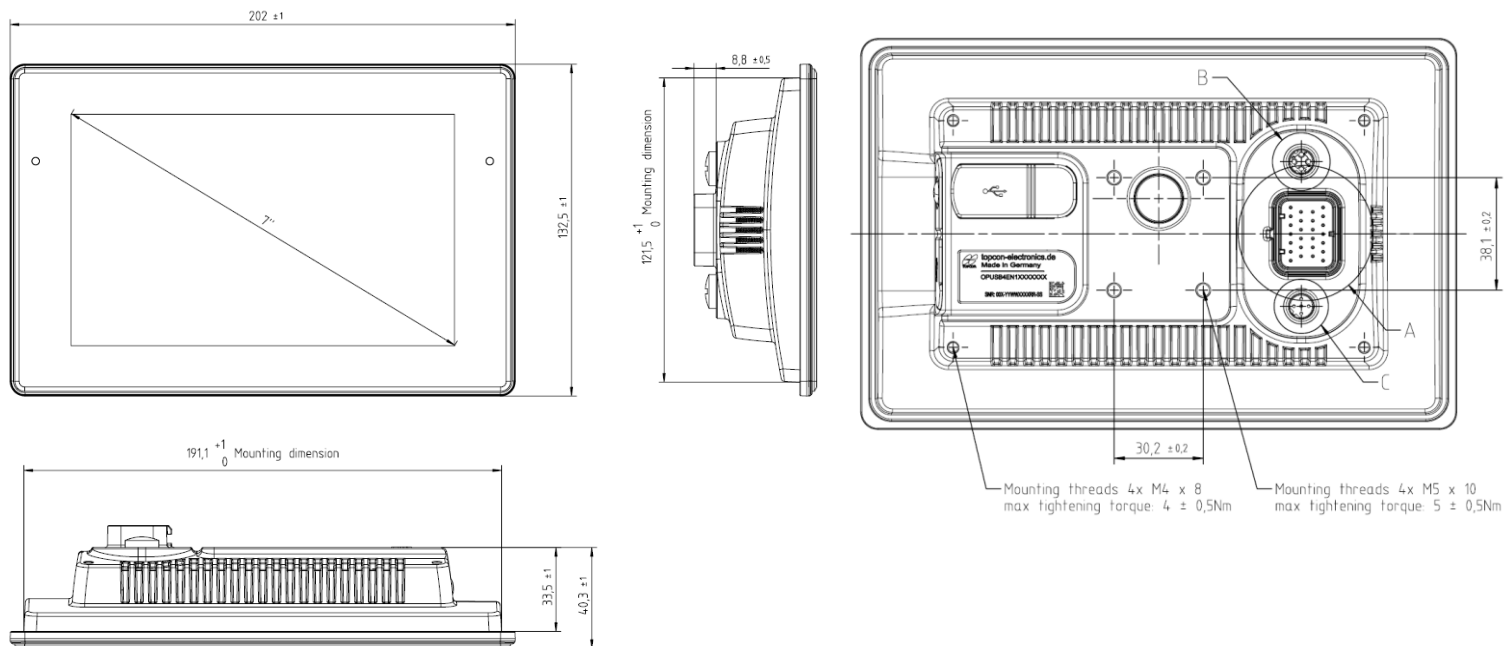
## STANDARDS

<b>EU Directive 2014/30/EU (EMC)</b>	EN 13766-1 (part 1); EN ISO 14982; EN 50498; EN 61000-6-2; EN 61000-6-4;
<b>E1 – Type approval</b>	EU Directive ECE R 10.4
<b>IP GRADE</b>	IP 66 according to ISO 20653: Road Vehicles – Degrees of protection (IP-Code) – Protection of electrical equipment against foreign objects, water and access

## ELECTRONIC FEATURES

<b>OS</b>	Linux Kernel 5.43.53 or higher
<b>APPLICATION PROGRAMMING</b>	OPUS Projektor // COESYS 3.x // C/C++ // ISO-HORIZON
<b>CPU</b>	Freescale I.MX6®, 800 MHz
<b>MEMORY</b>	Mass storage: 4 GByte (minus space for OS & application) RAM: Basic: 512 MB   Full: 1 GB

## SIZE (mm)



## CONNECTION

- (A) MAIN:** Tyco-AMP 1437288-6
- (B) ETHERNET:** M12 CONNECTOR, FEMALE, 4-POLE, D-CODED ACC. TO EN 61076-2-101
- (C) VIDEO INPUT:** M12 CONNECTOR, FEMALE, 5-POLE, B-CODED, ACC. TO EN 61076-2-101

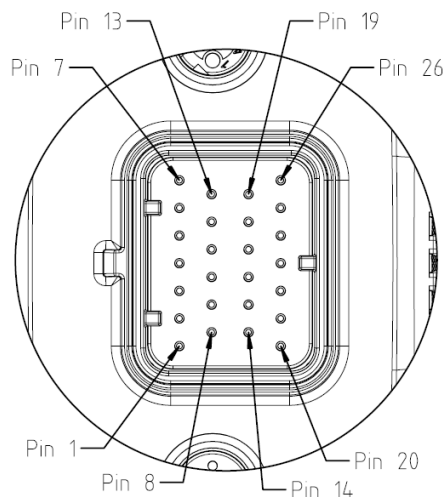
- MAIN (A) MATING CONNECTOR**  
 Tyco-AMP 3-1437290-7  
**MATING CRIMP CONTACT (CUSTOMER):**  
 Tyco-AMP 3-1447221-4  
**DUMMY PLUG (CUSTOMER):**  
 Tyco AMP 4-1437284-3





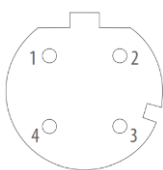
### (A) MAIN CONNECTOR PINOUT

PIN	ASSIGNMENT	DESCRIPTION
1	VCC	SUPPLY VOLTAGE + ; TERMINAL 30
2	IGNITION INPUT	IGNITION INPUT; TERMINAL 15
3	GND	SUPPLY VOLTAGE - ; TERMINAL 31
4	WAKE	WAKE INPUT «DOORSWITCH»
5	AUDIO OUT LEFT	Audio line out, Stereo
6	AUDIO OUT RIGHT	Audio line out, Stereo
7	AUDIO OUT GND	Audio line out, GROUND
8	CAN 1 H	CAN 1 HIGH
9	CAN 1 L	CAN 1 LOW
10	CAN 2 H	CAN 2 HIGH
11	CAN 2 L	CAN 2 LOW
16	RS232 RxD	RS232 receive data
17	RS232 TxD	RS232 transmit data
18	RS232 GND	RS232 ground
23	ENA	Service enable



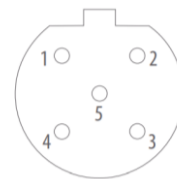
### (B) ETHERNET CONNECTOR PINOUT

ETHERNET		ETHERNET AUTOMOTIVE	
PIN	ASSIGNMENT	PIN	ASSIGNMENT
1	TD+	1	D+
2	RD+	2	-
3	TD-	3	D-
4	RD-	4	-



### (C) VIDEO INPUT CONNECTOR PINOUT

PIN	ASSIGNMENT
1	VID SIG +
2	SWITCH
3	POWER 12V
4	POWER GND
5	VID SIG GND



### FEATURES

<b>MECHANICAL RESISTANCE TESTS</b>	VIBRATION: NOISE, SINUSOIDAL AND ENDURANCE TEST MECHANICAL SHOCK / DROP PACKAGE DROP
<b>CLIMATE TESTS</b>	SALT SPRAY CHEMICAL RESISTANCE DAMP HEAT STEADY / CYCLIC TEMPERATURE CYCLING / SHOCK UV RESISTANCE
<b>POWER SUPPLY</b>	SHORT CIRCUIT PROTECTION. OVER-VOLTAGE PROTECTION UP TO 48 V FOR MAX. 5 MIN. INVERSE POLARITY PROTECTION UP TO -48 V DC FOR MAX. 5 MIN



**ALMEC**  
MECHATRONICS

NOTE