



The MVS.A3E is suitable for panel installation or with RAM® mounting bracket. The adjustable backlight and the high resolution of the LCD display allow an optimal reading of the texts and functions of the machine, in any situation.

Using the Linux operating system, the operating logic and the graphics are easily programmable.

It can be implemented in a serial line (RS232) or in a CAN network, as MASTER or SLAVE.

There are 2 version available, with different features:

MVS.A3EB43 and MVS.A3EF43



TECHNICAL FEATURES

	BASIC VERSION	FULL VERSION
MASTER CODE	MVS.A3EB43	MVS.A3EF43
POWER SUPPLY	9 ÷ 36 VDC – 55 mA @ 27 VDC IN SLEEP MODE	
LED	N.1 LIGHT SENSOR N.1 MULTICOLOR LED	
CAN BUS	N. 2 PORTS: 2.0 A/B COMPLIANT - (11, 29 BIT) - ISO 11898 UP TO 1MBIT/S	
SERIAL	N. 1 PORTS: RS232 UP TO 115 Kbps	
RTC	YES	
COMMUNICATIONS	N.1 USB HOST 2.0 (LOAD AND UPLOAD SOFTWARES AND DATA)	N.1 USB HOST 2.0 (LOAD AND UPLOAD SOFTWARES AND DATA) N.1 ETHERNET (10/100 Mbit/s Base T)
CONNECTIONS	MAIN: TYCO-AMP 1437288-6	MAIN: TYCO-AMP 1437288-6 INPUT VIDEO: M12 CONNECTOR, FEMALE, 5-POLE, B-CODED, ACC. TO EN 61076-2-101 ETHERNET: M12 CONNECTOR, FEMALE, 4-POLE, D-CODED ACC. TO EN 61076-2-101
TOUCH	OPTIONAL: ANALOGUE RESISTIVE	ANALOGUE RESISTIVE
DISPLAY	LCD TYPE: TFT DOT MATRIX: 480 X 272 px (WQVGA), 15:9 VISUAL AREA: 95 mm (W) x 53 mm (H) LUMINANCE: typ. 400 cd/m ²	
BUZZER	NO	YES – 60dB 30 cm distance
WORKING TEMPERATURE	-30°C +75°C	
CASE	PC/ABS, with rubber frame	





TECHNICAL FEATURES

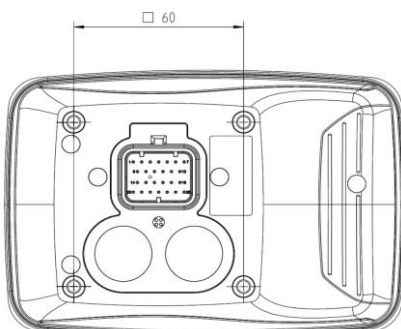
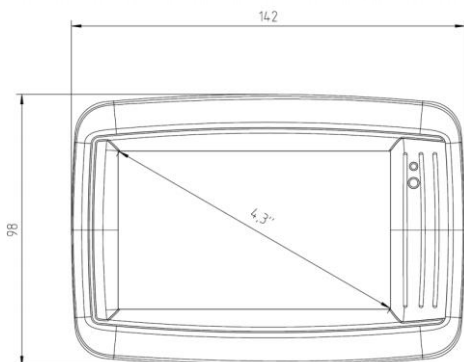
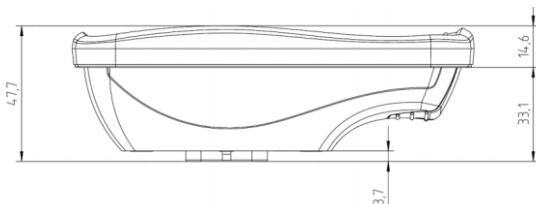
Only for FULL version

OUTPUT	MAX 3	Short circuit protection: Up to 36 V I max 300 mA open drain $R_{DS,on} < 1 \text{ Ohm}$ $R_{DS,off} > 100 \text{ kOhm}$
INPUTS	MAX 4	Input impedance: $> 3k \text{ Ohm}$ Resolution: 10 bit (1028 digits, 1 digit = 11,7 mV) Voltage range: 0 ... 12 V Over-voltage protection & Short circuit protection: Up to 36 V DC Frequency: Max. signal frequency 50 Hz
INPUT VIDEO	1 PORT	1 PORT: $V_{SS}: 1 \text{ V}$ - CAMERA SUPPLY: 12 VDC – MAX CURRENT 500 Ma WITH CAMERA CONTROL OUTPUT FOR SPECIAL FUNCTION

ELECTRONIC FEATURES

SLAVE USAGE	EDS FILE			
MASTER USAGE	CODESYS-TOOLS (3.X)			
	STANDARD C PROGRAM LANGUAGE			
CPU	Freescale I.MX35®, 532 MHz			
MEMORY	for BASIC version	STORAGE: 512 MByte RAM: 128 Mbyte	for FULL version	STORAGE: 1 GByte RAM: 256 MByte

SIZE (mm)



STANDARDS

EU Directive 2014/30/EU (EMC)	EN 12895 // EN13309 // EN ISO 14982	
E1 – Type approval	EU Directive ECE R 10.4	
IP GRADE	IP6k5 and IP6k7	
ELECTRICAL	ISO 16750-2 // ISO15003	
MECHANICAL	ISO16750-3	MECHANICAL SHOCK: LEVEL 2
	ISO 15003	RANDOM VIBRATION: LEVEL 2 SINUSOIDAL VIBRATION: LEVEL 2
CLIMATE	ISO 16750-4 // ISO 15003	

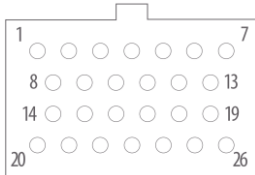
COPULING CONNECTOR

MATING CONNECTOR (CUSTOMER)
Tyco-AMP 3-1437290-7

MATING CRIMP CONTACT (CUSTOMER)
Tyco-AMP 3-1447221-4

DUMMY PLUG (CUSTOMER)
Tyco AMP 4-1437284-3





MAIN CONNECTOR PINOUT

BASIC VERSION

PIN	ASSIGNMENT	DESCRIPTION	PIN	ASSIGNMENT	DESCRIPTION
1	VCC	SUPPLY VOLTAGE + ; TERMINAL 30	12	USB_VCC	USB +5V DC SUPPLY
2	IGNITION INPUT	IGNITION INPUT; TERMINAL 15	13	USB_GND	USB SUPPLY GROUND
3	GND	SUPPLY VOLTAGE - ; TERMINAL 31	14	USB_D-	USB DATA LINE -
4	CARGND	CAR GND	15	USB_D+	USB DATA LINE +
8	CAN 1 H	CAN 1 HIGH	16	RS232 RxD	RS232 receive data
9	CAN 1 L	CAN 1 LOW	17	RS232 TxD	RS232 transmit data
10	CAN 2 H	CAN 2 HIGH	18	RS232 GND	RS232 ground
11	CAN 2 L	CAN 2 LOW	23	SERV_EN	Service enable

FULL VERSION

PIN	ASSIGNMENT	DESCRIPTION	PIN	ASSIGNMENT	DESCRIPTION
1	VCC	SUPPLY VOLTAGE + ; TERMINAL 30	14	USB_D-	USB DATA LINE -
2	IGNITION INPUT	IGNITION INPUT; TERMINAL 15	15	USB_D+	USB DATA LINE +
3	GND	SUPPLY VOLTAGE - ; TERMINAL 31	16	RS232 RxD	RS232 receive data
4	CARGND	CAR GND	17	RS232 TxD	RS232 transmit data
5	--	--	18	RS232 GND	RS232 ground
6	--	--	19	A/DI3	ANALOG/DIGITAL INPUT 3
7	--	--	20	A/DI1	ANALOG/DIGITAL INPUT 1
8	CAN 1 H	CAN 1 HIGH	21	A/DI2	ANALOG/DIGITAL INPUT 2
9	CAN 1 L	CAN 1 LOW	22	A/DI4	ANALOG/DIGITAL INPUT 4
10	CAN 2 H	CAN 2 HIGH	23	SERV_EN	Service enable
11	CAN 2 L	CAN 2 LOW	24	DO3	DIGITAL OUTPUT 3
12	USB_VCC	USB +5V DC SUPPLY	25	DO1	DIGITAL OUTPUT 1
13	USB_GND	USB SUPPLY GROUND	26	DO2	DIGITAL OUTPUT 2

M12 CONNECTOR PINOUT

PIN	ASSIGNMENT	VIDEO CONNECTOR	PIN	ASSIGNMENT	ETHERNET CONNECTOR
1	VIDSIG+		1	TD+	
2	MIRROR		2	RD+	
3	CAMERA +		3	TD-	
4	CAMERA -		4	RD-	
5	VIDSIG GND				

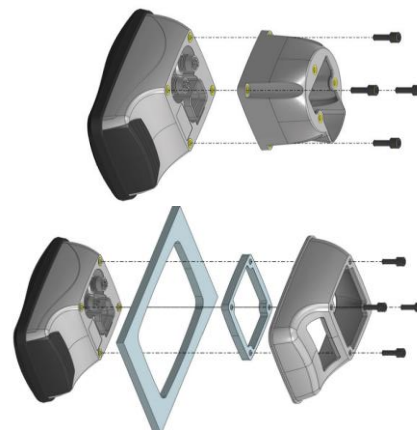
FEATURES

STANDALONE MOUNTING ADAPTOR FOR RAM[®] MOUNTING SYSTEM

Material: PC+ABS
 Dimensions: 74x84x42 mm (WxHxD)
 Operating Temperature: -30 ... +75 °C
 Max mounting torque: 2.5 ± 0.2 Nm

IN-DASH MOUNTING FRAME

Material: PC+ABS
 Dimensions: 144x101x35 mm (WxHxD)
 Operating Temperature: -30 ... +75 °C
 Max mounting torque: 2.5 ± 0.2 Nm





ALMEC
MECHATRONICS

NOTE