

# UAV : MASTER CAN BUS MODULE WITH INPUTS, OUTPUTS, DISPLAY AND KEYPAD



MASTER CAN BUS module with ON/OFF and analog inputs, ON/OFF and PWM outputs, alphanumeric display 2 lines for 16 chars and 9 push buttons keypad with LEDs.

Unit designed as MASTER for control, limiting and automation systems on mobile machine, as "TRC", where is required the outdoor application.

CAN BUS nets and Black Box functions can be managed.



## TECHNICAL DATA

### **CONTROL SYSTEM:**

- Freescale microcontroller, 16bit, 25 MHz clock
- Flash memory 256 KB
- RAM memory 12 KB
- EEPROM memory 4 KB for parameters storage
- 2nd microcontroller Freescale, 8bit with 32KB Flash, 2KB RAM, 1KB EEPROM for safety critical applications
- Additional Flash memory 256KB for data logging and Black Box
- Real time clock with 240 bytes RAM and rechargeable backup battery

### **CONNECTIVITY:**

- 1 CAN-BUS, CAN 2.0B (11 or 29 bit), ISO 11898-2 compliant, speed up to 1 Mbit/s CAN-OPEN compatible.
- 1 RS232 (baud rate up to 57600 baud)

### **ELECTRICAL CHARACTERISTICS:**

- Power supply: 9 ÷ 30 Vdc (operates on vehicle power supply directly)
- Separated power supply for outputs and logic
- Current requirements for logic: 180 @12V mA  
100 @24V mA
- Maximum current for the outputs: 10A (external fuse required)
- Internal watchdog safety relay with free contacts to be placed in series of emergency line to cut-off the power to the outputs in case of hardware or software failure.

### **CERTIFICATIONS:**

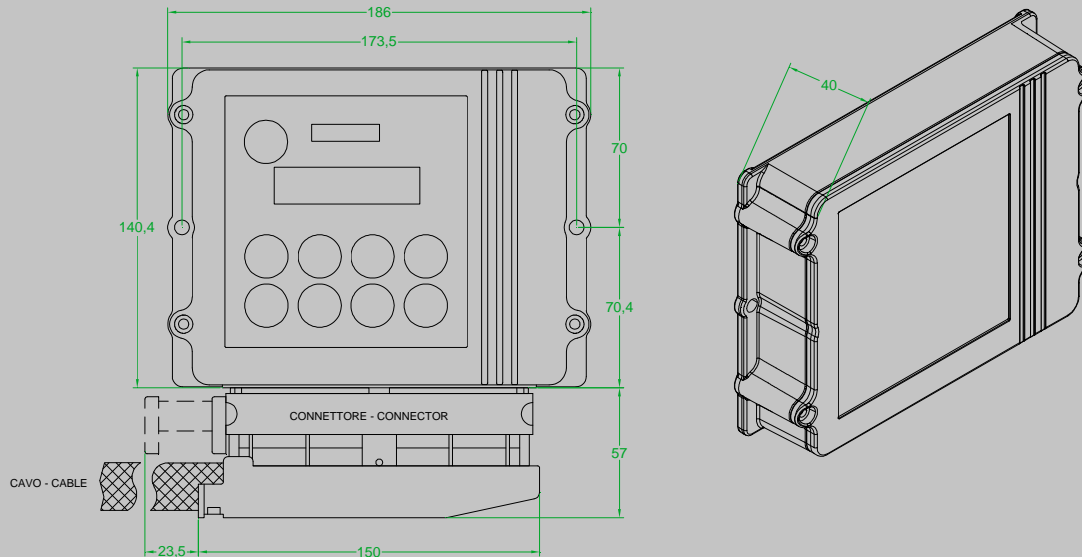
The UAV unit (all models) is conformed to the following directives and standards required by 89/336 CE:

- 1) EMC generic standards for emissions, heavy industrial environment :
  - Reference standard: EN 61000-6-4
  - Base standard: EN 55011 (Radiated RF emissions)
- 2) Electromagnetic immunity in heavy industrial environment:
  - Reference standard: EN 61000-6-2
  - Base standard: EN 61000-4-3 (Radiated RF immunity);  
EN 61000-4-4 (Fast transient "Burst");  
EN 61000-4-6 (Conducted RF immunity)

### **MECHANICAL CHARACTERISTICS AND RATINGS :**

- Operating Temperature Range: form -20°C to +70°C (from -4°F to +158°F)
- Storage Temperature Range: from -35°C to +85°C (from -31°F to +185°F)
- Housing: Aluminium
- Dimensions : Width 186 mm - Height 140,4 mm - Depth 40 mm
- Connector: FCI 56 way connector
- Pin maximum current: 10A @ 23°C (73,4°F)
- Protection: IP65
- Frontal decal: IP65 membrane with 9 integrated keys;

### **MECHANICAL DIMENSIONS:**



### **I/O CONFIGURATION:**

- 16 On/Off inputs;
- 4 On/Off inputs with Pull-up enable by Software ;
- 4 analog Inputs 4 ÷ 25 mA.;
- 4 analog Inputs configurable through software 0 ÷ 25 mA or 0 ÷ 5,5 V;
- 4 analog Inputs configurable through software (0 ÷ 25 mA or 0 ÷ 30 V);
- 4 analog Inputs configurable through software (0 ÷ 5,5V or 0 ÷ 30 V);
- 6 On/Off Outputs or open loop PWM (max. 2A each)
- 2 On/Off Outputs or open loop PWM (max. 2A each) read by inputs
- Alphanumeric display 2x16 figures + 8 LEDs;