

**EC - MMS - 0904 - H**
**Graphic Display Unit**
**Description**

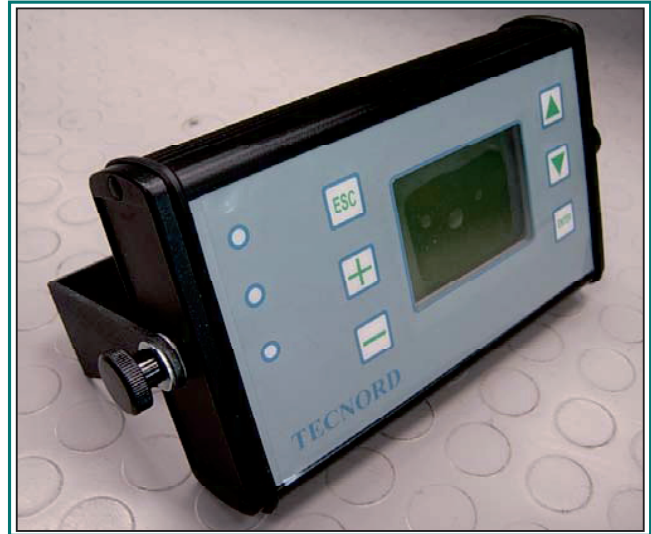
Graphic Display Unit to be used as Operator's interface in complex Machine Management Systems.

**Operation**

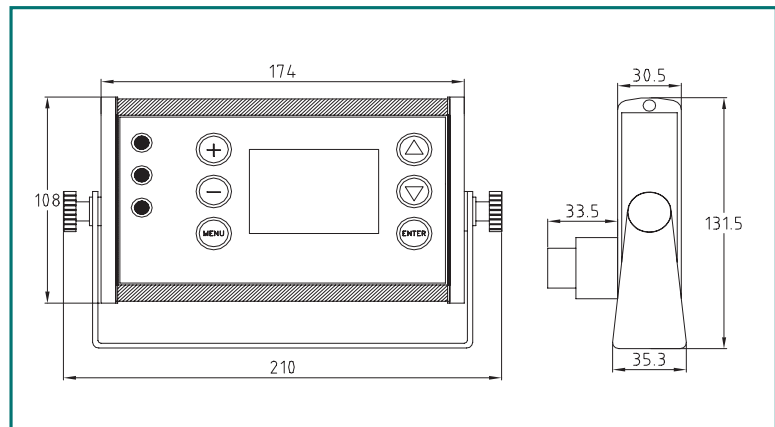
It is normally used as a monitoring unit in conjunction with other MMS electronic units, or as a standalone unit.  
CAN BUS communication.  
Serial connection for Software download.

**Features**

- Supply line is protected against reversed polarity and load dump.
- Inputs are protected against short circuits to GND and supply.
- Outputs are protected against short circuits, reversed polarity, over-current and over-temperature.
- RS-232 serial interface.
- 1 CAN BUS connection.
- Graphic display 128 x 64 dots backlighted.
- Real time clock with calendar.
- Wide data storage memory.


**Specifications**

- Operating voltage: 8.5 - 30 Vdc
- Max current consumption: 500 mA
- Operating temperature: -25 / +85 °C
- Degree of protection: IP67
  
- Analog inputs: 8x0-5 V (10-bit resolution)
- Input impedance: 100 kOhm
- Typical ctrl pot resistance: 1 - 10 kOhm
  
- High Side power outputs: 4 (3.5A max each)  
or alternatively
- PWM output channels: 2 x dual coil prop.valves
- PWM output current range: 100 -1500mA
- Non volatile memory: 192 kByte
- Backlighted pushbuttons: standard 6 ( max 9 )
- High efficiency leds: standard 3 ( max 4 )

**Dimensions**

**Applications**

- 12 Vdc and 24 Vdc systems
- Load limiter and/or Area Control systems
- In-cab terminal
- Data logger

**WARNING:** The specifications/application data shown in our catalogs and data sheets are intended only as a general guide for the product described (herein). Any specific application should not be undertaken without independent study, evaluation, and testing for suitability.

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## Graphic Display Unit

### Circuit board pinout - Wiring diagram

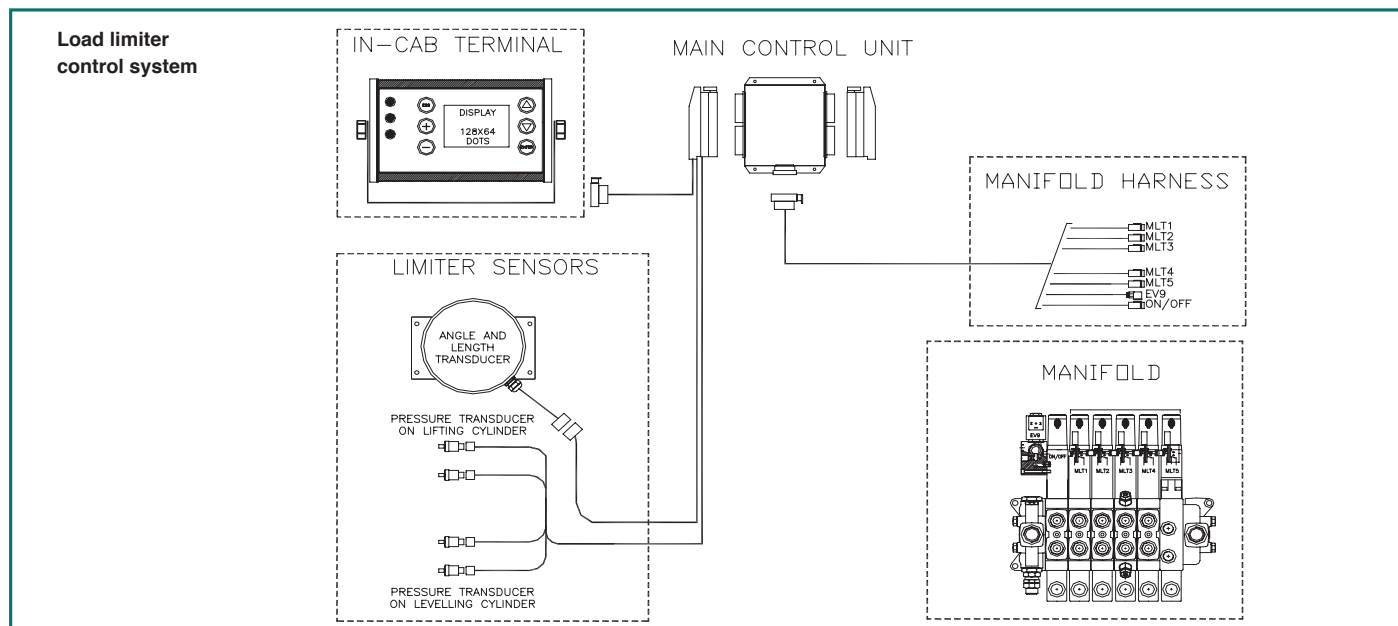
**Connector type:**

Sicma-2 (24way)



<p><b>A</b></p> <ul style="list-style-type: none"> <li>1 -- Battery (GND)</li> <li>2 Analog input no.1</li> <li>3 Analog input no.2</li> <li>4 Pushbutton input</li> <li>5 Analog input no.5</li> <li>6 Analog input no.6</li> <li>7 Digital output no.1</li> <li>8 Digital output no.0</li> </ul>	<p><b>B</b></p> <ul style="list-style-type: none"> <li>1 +5Vdc external supply voltage</li> <li>2 Analog input no.0</li> <li>3 Analog input no.3</li> <li>4 Heater command input</li> <li>5 Analog input no.4</li> <li>6 Analog input no.7</li> <li>7 (GND)</li> <li>8 Digital output no.3</li> </ul>	<p><b>C</b></p> <ul style="list-style-type: none"> <li>1 ++ Battery</li> <li>2 CAN-L</li> <li>3 CAN-H</li> <li>4 PWM Common no.1</li> <li>5 PWM Common no.2</li> <li>6 RS232 TX</li> <li>7 RS232 RX</li> <li>8 Digital output no.2</li> </ul>
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### Application example



**Ordering Information:**

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0904 = 9 inputs - 4 outputs

H = Metal enclosure

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