EC-MMS-1012-H  MACHINE MANAGEMENT SYSTEM

DESCRIPTION

Digital MMS (Machine Management System) with built-in advanced safety and fault detection features for integrated control of mobile equipment functions.

OPERATION

10 inputs and 12 outputs are managed by this small-size unit. PWM current outputs are field-adjustable and their setting is stored in a EEPROM memory. Parameters can be loaded via software from a standard PC connected with a RS232 serial line. It can be used as a stand-alone controller for both meter-in systems (up to 5 functions) and bidirectional proportional systems (up to 4 functions). Additional output for a safety venting valve is available.

FEATURES

- Supply line is protected against reversed polarity and overvoltage.
- Inputs are protected against short circuits to GND and power supply.
- Outputs are protected against short circuits, reversed polarity, over-current and over-temperature.
- 3-wires RS232 serial interface.
- Auxiliary +5 V supply for control devices (e.g. potentiometers).
- Performance level c capability according to ISO 13849, due to high reliability of components and embedded diagnostics.
- Electro Magnetic Compatibility (EMC): EN 61000-6-2 (Immunity), EN 61000-6-3 (Emissions).

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specification</th>
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<tbody>
<tr>
<td>Operating voltage:</td>
<td>9÷30 VDC</td>
</tr>
<tr>
<td>Max current consumption:</td>
<td>100 mA (no load applied)</td>
</tr>
<tr>
<td>Operating temperature:</td>
<td>-25°C / +85°C</td>
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<tr>
<td>Degree of protection:</td>
<td>IP 67</td>
</tr>
<tr>
<td>Input impedance:</td>
<td>100 kΩ</td>
</tr>
<tr>
<td>Analog inputs (10 bits):</td>
<td>8 (0-5 V)</td>
</tr>
<tr>
<td>Typical ctrl pot resistance:</td>
<td>1÷10 kΩ</td>
</tr>
<tr>
<td>Digital inputs:</td>
<td>2</td>
</tr>
<tr>
<td>High side power outputs:</td>
<td>12 (3.5 A max)</td>
</tr>
<tr>
<td>Inputs for current feedback:</td>
<td>4</td>
</tr>
<tr>
<td>Current output range (PWM):</td>
<td>100÷1500 mA</td>
</tr>
<tr>
<td>PWM dither frequency:</td>
<td>60÷200 Hz</td>
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APPLICATIONS

- 12 VDC and 24 VDC systems.
- Remote control of non-feedback proportional and on-off valves.
- Specifically designed for applications requiring accurate adjustments and calibrations.
- Control of up to 4 proportional bidirectional valves plus a venting valve and additional 3 auxiliary outputs.
- Control of up to 5 functions in meter-in configuration (10 on-off valves plus 1 proportional valve and 1 venting valve).

DIMENSIONS

Harness
Framatome - Sicma2 24-PIN connector
Deutsch DT06-6S 6-PIN Connector
AMP Superseal 3 & 2 Pin connectors

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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CIRCUIT BOARD PINOUT - WIRING DIAGRAM (reference: meter-in layout)

ADJUSTMENTS
Adjustments can be effected via RS232 serial line to modify the following work parameters:
- Imin (minimum output current)
- Imax (maximum output current)
- Ramp-up time
- Ramp-down time
- Dither frequency

Calibration tool ordering code: 20.1001.026/A
RS232 cable adapter for PC connection including calibration software on CD (see page EC44-45).

APPLICATION EXAMPLE

ORDERING INFORMATION

EC-MMS-1012-H

Part number (Std Version)
23.0409.177

1012 = 10 inputs - 12 outputs
H = potted plastic
Housing for panel mounting

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