

EC - MMS - 2020 - 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

20 inputs and 20 outputs are managed by this small-size unit.

Analog outputs are field-adjustable and their setting is stored in a EEPROM memory and can be loaded via software from a standard PC connected with a RS232 serial line.

It can be used as a stand-alone controller or in conjunction with other *MMS* electronic units like Tecnord's Mod. *MMS-4820*

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.
- 3-wires RS232 serial interface and 2-wires RS485 serial interface
- Especially designed to drive up to 6 electro-hydraulic proportional actuators Tecnord type MLT-FD4/5



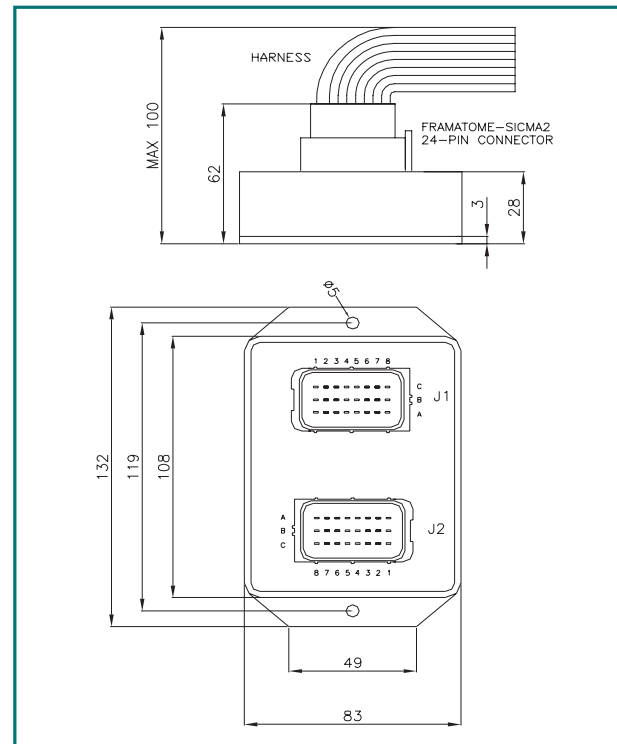
Specifications

- Operating voltage: 8.5 - 30 Vdc
- Max current consumption: 0.5 A (no load applied)
- Operating temperature: -25 / +85 °C
- Degree of protection: IP67
- Analog inputs: 8 x 0-5 V
- Input impedance: 100 kOhm
- Typical ctrl pot resistance: 1 - 10 kOhm
- Digital inputs: 12 (10 if RS485 is used)
- Resolution: 10 bits
- High Side power outputs: 14 (3.5A max each)
- Max current load on all outputs: 10 A
- Analog outputs: 6 (0-5 V)

Applications

- 12 Vdc and 24 Vdc systems
- Closed loop systems with electro-hydraulic prop. actuators
- General purpose applications requiring field-adjustments
- Two or more *MMS* boards can be interconnected by means of 2-wires RS485 serial lines where rotating joints or cable are installed

Dimensions



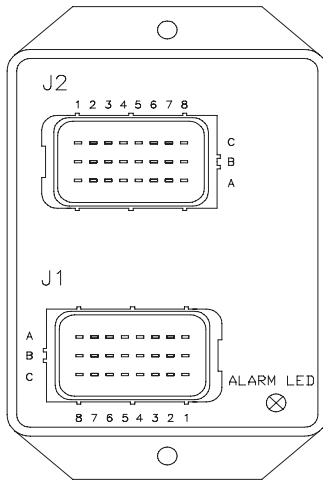
WARNING: The specifications/application data shown in our catalogs and data sheets are intended only as a general guide for the product described (herein). Any specific application should not be undertaken without independent study, evaluation, and testing for suitability.

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Circuit board pinout - Wiring diagram

Connector type: Framatome SICMA2



J1		
A	B	C
1 Analog in 2	Analog in 1	Analog in
2 Analog in 5	Analog in 4	Analog in 3
3 Digital in 0	Analog in 7	Analog in 6
4 Digital in 2	Digital in 1	Ext.sup.+5V
5 Digital in 4	Digital in 3	GND
6 Digital in 7	Digital in 6	Digital in 5
7 Digital in 9	Digital in 8	Digital in 10
8 RS232 TX	RS232 RX	Digital in 11

J1-7C as alternative: RS485 BUS+
J1-8C as alternative: RS485 BUS-

J2		
A	B	C
1 Out 0	Out 7	Out 6
2 Out 1	Ext.sup.Vprot	Out 9
3 Out 2	Analog out 0	Out 8
4 Out 3		Out 11
5 Out 4	Analog out 2	Out 10
6 Out 5	Analog out 1	Out 13
7 Analog out 4	Analog out 5	Out 12
8 -Battery	+Battery	Analog out 3

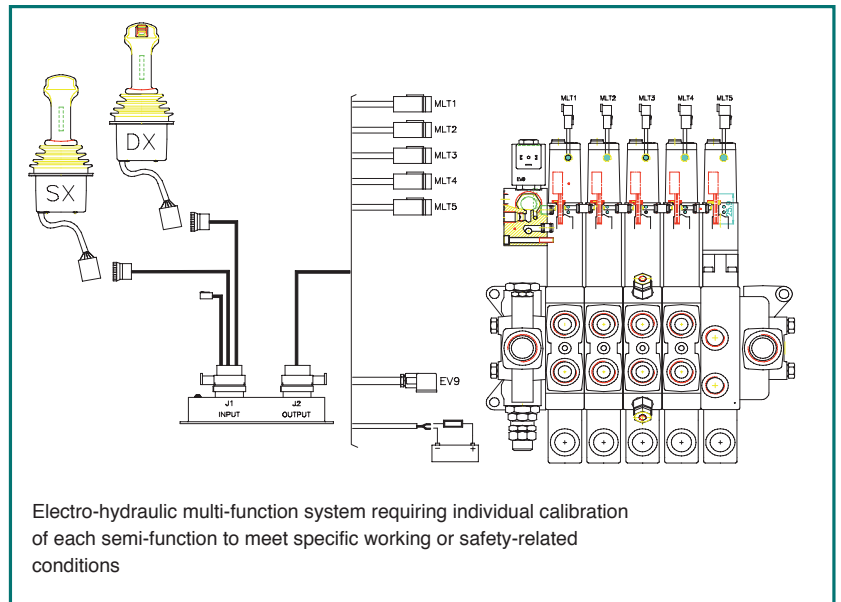
Adjustments

Adjustments can be effected via RS232 serial line to modify the following work parameters:

- Vmin (minimum output voltage)
- Vmax (maximum output voltage)
- Ramp-up time
- Ramp-down time

Ask for: PC configuration tools available

Application example



Electro-hydraulic multi-function system requiring individual calibration of each semi-function to meet specific working or safety-related conditions

Ordering Information:

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2020 = 20 inputs - 20 outputs

H = potted plastic Housing for panel mounting

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