

**EC-MMS-1417-H** MACHINE MANAGEMENT SYSTEM CONTROLLER**new****DESCRIPTION**

MMS (Machine Management System) controller in a rugged nylon enclosure fully potted, dual microprocessor (master and supervisor), CANbus, built-in safety and fault-detection features for integrated control of complex functions in mobile equipment applications.

**OPERATION**

MMS-1417 is normally used as the main or redundant (depending on architecture) control unit in a complete management system. Inside a microprocessor with supervisor and advanced diagnostics for safety applications. PLd capability installing two units (based on architecture of Category 3). CANbus for system communication.

**FEATURES**

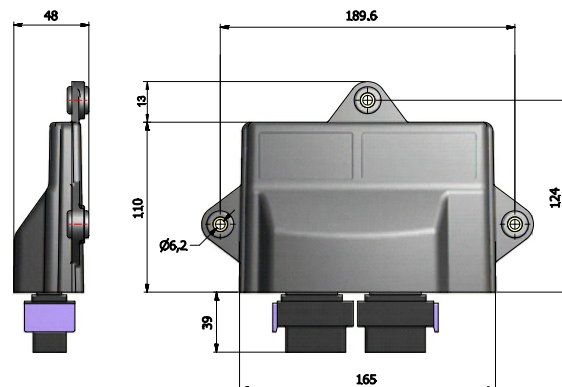
- Robust nylon enclosure fully potted with an excellent power dissipation.
- Microprocessor and supervisor (architecture of Category 2) for advanced diagnostics capability.
- Power Supply is protected against reversed polarity (external fuse required) and load dump.
- Inputs are protected against short circuits to GND and power supply.
- Outputs protected against short circuits, overcurrent and over temperature.
- 1 CANbus connection.
- 2 current feedback inputs for closed loop PWM drivers (maximum two proportional valves driven at the same time).
- Electro Magnetic Compatibility (EMC): EN 61000-6-2 (Immunity), EN 61000-6-3 (Emissions).
- Designed for applications with high safety requirements.
- Detection of ground disconnection according to ISO EN 13849.
- +5V auxiliary power supply for e.g. potentiometers or sensors.
- Dedicated power supply pins for redundant safety power outputs.

**SPECIFICATIONS**

Operating voltage:	8 ÷ 32 Vdc
Max. current consumption:	< 400 mA (no load applied)
Operating Temperature:	-40 ÷ +105°C
Degree of protection:	IP69K
Analog inputs (16 bits):	11 (0 ÷ 5 V)
Digital inputs:	2
High Side power outputs:	15
Low Side power outputs:	2
Current feedback inputs (1,6A):	2
Ground detection input:	1
Pin selectable as power OUT or digital IN:	1
Dedicated power supply for outputs:	10
CANbus line:	ISO 11898, CAN 2.0A/B
Available bus speed:	up to 1 Mbit/s

**APPLICATIONS**

- High precision Hydraulic systems controller.
- Main ECU for aerial platforms, cranes, telehandlers, agriculture vehicles (architecture of Category 2).
- Redundant ECUs for architecture of Category 3 (ISO EN-13849) systems.
- Generic safety critical controller (up to PL-d).

**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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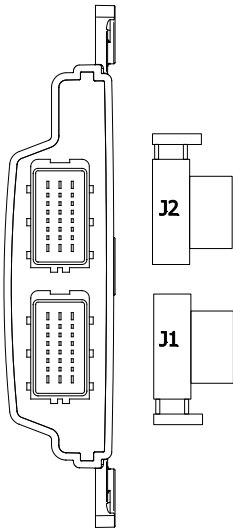
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**EC-MMS-1417-H MACHINE MANAGEMENT SYSTEM CONTROLLER**

**CIRCUIT BOARD PINOUT - WIRING DIAGRAM**

Connector type: framatome SICMA2



**J1 (BLACK)**

- |          |       |
|----------|-------|
| <b>A</b> |       |
| 1        | HS10  |
| 2        | CAN-H |
| 3        | INAN0 |
| 4        | HS11  |
| 5        | HS12  |
| 6        | HS13  |
| 7        | HS14  |
| 8        | HS15  |

- |          |           |
|----------|-----------|
| <b>B</b> |           |
| 1        | +HS10     |
| 2        | CAN-L     |
| 3        | INF2      |
| 4        | INAN2     |
| 5        | INAN4     |
| 6        | INAN6     |
| 7        | GND-SENSE |
| 8        | VBATT     |

- |          |       |
|----------|-------|
| <b>C</b> |       |
| 1        | +HS9  |
| 2        | HS9   |
| 3        | INF1  |
| 4        | INAN1 |
| 5        | INAN3 |
| 6        | INAN5 |
| 7        | INAN7 |
| 8        | GND   |

**J2 (BLACK)**

- |          |     |
|----------|-----|
| <b>A</b> |     |
| 1        | HS8 |
| 2        | HS7 |
| 3        | HS6 |
| 4        | HS5 |
| 5        | HS4 |
| 6        | HS3 |
| 7        | HS2 |
| 8        | HS1 |

- |          |      |
|----------|------|
| <b>B</b> |      |
| 1        | +HS8 |
| 2        | +HS7 |
| 3        | +HS6 |
| 4        | +HS5 |
| 5        | +HS4 |
| 6        | +HS3 |
| 7        | +HS2 |
| 8        | +HS1 |

- |          |                |
|----------|----------------|
| <b>C</b> |                |
| 1        | LS1            |
| 2        | FB0            |
| 3        | FB1            |
| 4        | INAN8          |
| 5        | INAN9          |
| 6        | INAN10         |
| 7        | 5VEXT / INAN11 |
| 8        | LS2            |

**ADJUSTMENTS**

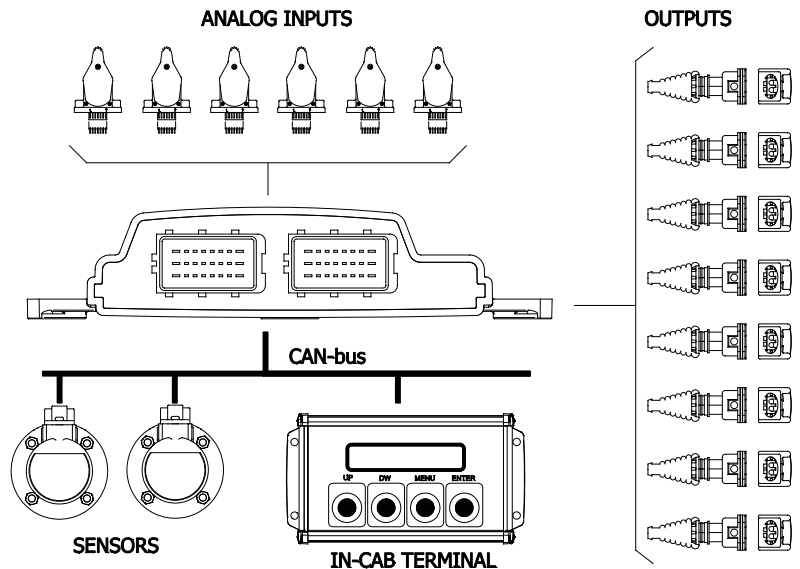
Adjustments of working OUTPUTS parameters can be effected via CANbus interface.

- Imin (minimum output current)
- Imax (maximum output current)
- Ramp-up time
- Ramp-down time



Ask for: PC configuration tool available

**APPLICATION EXAMPLE**



**ORDERING INFORMATION**



W/28 / 2019

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