

## EC - PWM - 08 - MPC4 - H PWM Driver

### Description

Microprocessor - based PWM driver for remote control of 4 dual-coil proportional solenoid valves.

### Operation

The EC-MPC4 Proportional Valve Driver supplies up to 4 dual-coil proportional valves with *PWM (Pulse Width Modulated)* current proportional to the input signals coming from potentiometers, PLC or other control systems.

*PWM* currents are factory pre-set and cannot be adjusted.



### Features

- The current in the solenoid is independent from any change in the coil resistance or in the supply voltage
- The inherent superimposed dither frequency helps to overcome friction and stiction effects in the controlled device.
- 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.
- High environmental protection

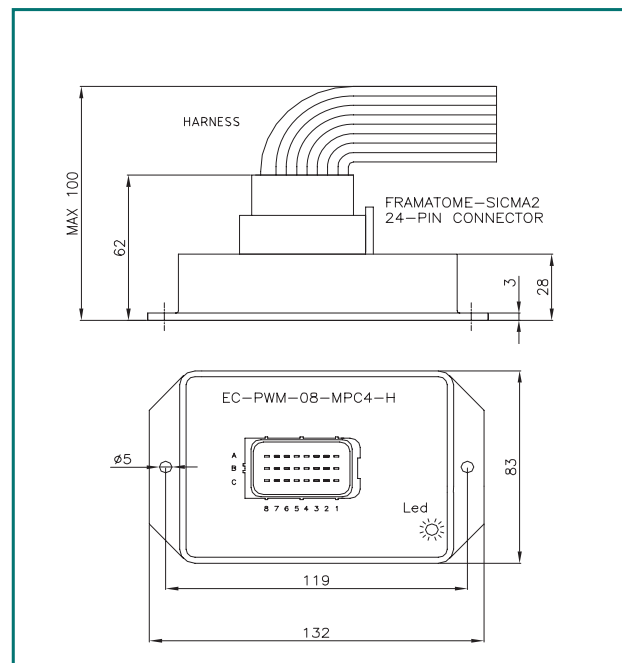
### Specifications

- |                                |                            |
|--------------------------------|----------------------------|
| ● Operating voltage:           | 9 - 20 Vdc                 |
| ● Max current consumption:     | 100 mA (no load applied)   |
| ● Operating temperature:       | -40 / +100 °C              |
| ● Degree of protection:        | IP67                       |
| ● Analog inputs:               | 6x0-5 V                    |
| ● Digital inputs:              | 2 x PNP (Active High)      |
| ● Input impedance:             | 100 kOhm                   |
| ● Typical ctrl pot resistance: | 1 - 10 kOhm                |
| ● Resolution:                  | 10 bits                    |
| ● PWM outputs channels:        | 4 x dual-coil prop. valves |
| ● Current output range (PWM):  | 100-1500 mA                |
| ● PWM dither frequency:        | 75-250 Hz (factory set)    |

### Applications

- Specifically designed for applications with factory-set working parameters and requiring no field-adjustments
- 12 Vdc systems only
- Remote control of proportional valves
- Control of a 4 functions proportional bi-directional system

### Dimensions



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## EC - PWM - P8 - MPC4 - H PWM Driver

### Description

Microprocessor - based PWM driver for remote control of 4 dual-coil proportional solenoid valves.

### Operation

The EC-MPC4 Proportional Valve Driver supplies up to 4 dual-coil proportional valves with *PWM (Pulse Width Modulated)* current proportional to the input signals coming from potentiometers, PLC or other control systems.

The control characteristics ( $I_{min}/I_{max}$ , ramps, deadbands, dither) are configurable via PC connected with a RS232 serial line to a configuration kit and PC interface of Tecnord supply



Joysticks and valve shown in this picture are supplied separately

### Features

- The current in the solenoid is independent from any change in the coil resistance or in the supply voltage
- The inherent superimposed dither frequency helps to overcome friction and stiction effects in the controlled device.
- 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.

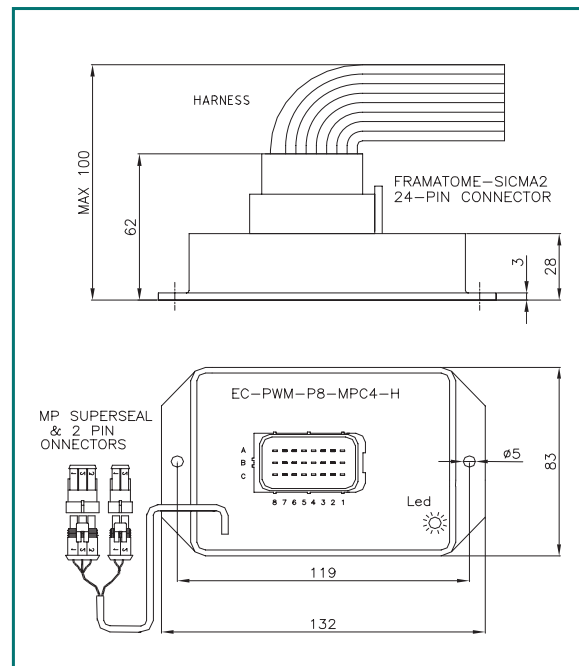
### Specifications

- Operating voltage: 9 - 30 Vdc
- Max current consumption: 100 mA (no load applied)
- Operating temperature: -25 / +85 °C
- Degree of protection: IP67
- Analog inputs: 8x0-5 V
- Input impedance: 100 kOhm
- Typical ctrl pot resistance: 1 - 10 kOhm
- Digital inputs: analog inputs can be used as digital
- Resolution: 10 bit
- PWM outputs channels: 4 x dual-coil prop. valves
- Current output range (PWM): 100-1500 mA (3A version available)
- PWM dither frequency: 75-250 Hz (adjustable)

### Applications

- Specifically designed for applications requiring accurate adjustments and calibrations
- 12 Vdc and 24 Vdc systems
- Remote control of non-feedback proportional valves
- Control of a proportional bi-directional valve with a venting valve

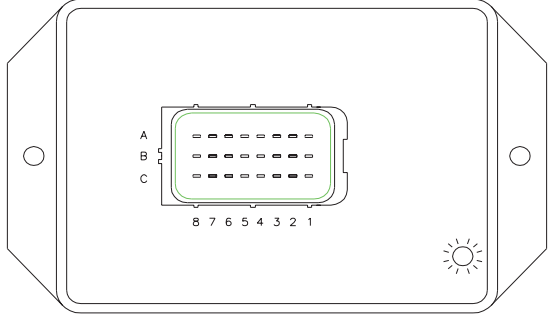
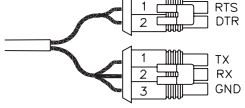
### Dimensions



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## EC - PWM - P8 - MPC4 - H PWM Driver

### Circuit board pinout - Wiring diagram

<p><b>Connector type:</b> Framatome SICMA2</p> 	<p><b>Connector type:</b> AMP-Seal</p>  <p>For software download 1- RTS 2- DTR</p> <p>For calibration and adjustments 1- TX 2- RX 3- GND</p>	
<p><b>A</b></p> <ul style="list-style-type: none"> <li>1- Prop. coil no. 6 output</li> <li>2- Prop. coil no. 7 output</li> <li>3- Prop. coil no. 4 output</li> <li>4- Prop. coil no. 5 output</li> <li>5- Input no. 4 (analog)</li> <li>6- Input no. 5 (analog)</li> <li>7- Input no. 6 (analog)</li> <li>8- Common feedback no.0-1</li> </ul>	<p><b>B</b></p> <ul style="list-style-type: none"> <li>1- +Battery</li> <li>2- Not connected</li> <li>3- Input no. 3 (analog)</li> <li>4- Input no. 7 (analog)</li> <li>5- Input no. 0 (analog)</li> <li>6- Common feedback no.2-3</li> <li>7- Common feedback no.6-7</li> <li>8- Common feedback no.4-5</li> </ul>	<p><b>C</b></p> <ul style="list-style-type: none"> <li>1- -Battery (GND)</li> <li>2- Command signal supply (+5V)</li> <li>3- Input no. 2 (analog)</li> <li>4- Input no. 1 (analog)</li> <li>5- Prop. coil no. 1 output</li> <li>6- Prop. coil no. 0 output</li> <li>7- Prop. coil no. 3 output</li> <li>8- Prop. coil no. 2 output</li> </ul>

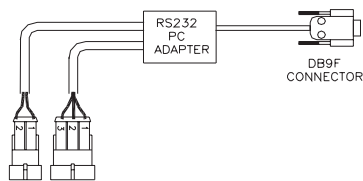
### Adjustments

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

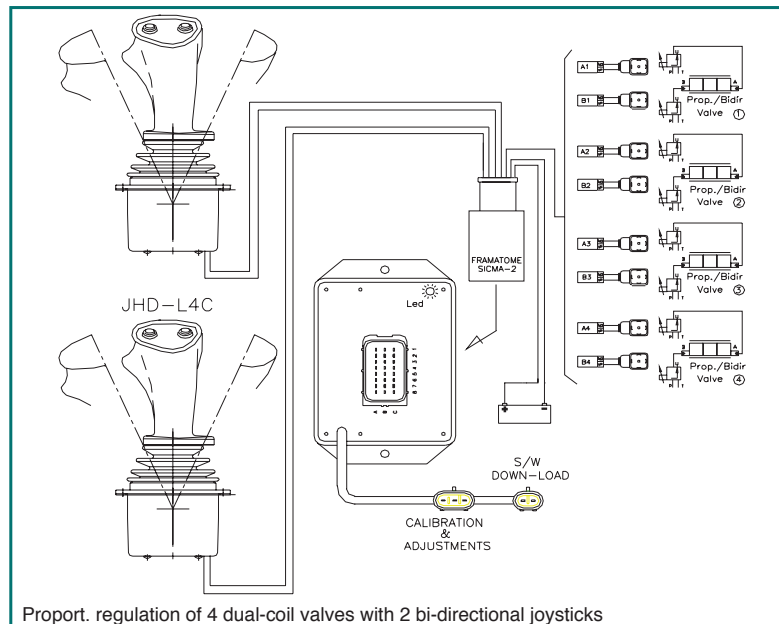
### Ordering information for the configuration kit:

**20.1001.026** RS232 interface card including PC configuration software tool on CD



\* : USB / RS232 interface available on request

### Application example



### Ordering Information:

**EC - PWM - P8 - MPC4 - H**



### Part number

<b>23.0409.081</b>	<b>23.0409.071 / 3A version</b>
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