

EC - PWM - A4 - MPC2 - H PWM Driver

Description

Microprocessor - based PWM driver for remote control of two dual-coil prop. valves with auxiliary triggered outputs for two on/off valves.

Operation

The EC-MPC2 Proportional Valve Driver supplies up to 2 dual-coil proportional valves with *PWM (Pulse Width Modulated)* current proportional to the input signals from potentiometers, PLC or other control systems.

Adjustments of "Imin/Imax", "Ramp time", "Deadband" and "Dither" can be effected directly from a key-pad integrated on the front panel

Mounting option: the EC-PWM MPC2 driver is boxed in a plastic enclosure for wall-mounting by means of 4 x M6 threaded bolts stemming from the rear surface

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.
- Inputs are protected against short circuits to GND and supply.
- Outputs are protected against short circuits, reversed polarity, over-current and over-temperature.



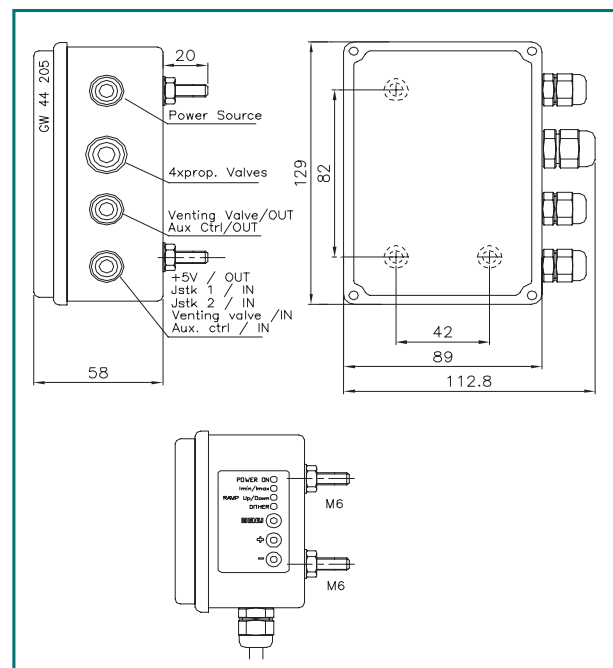
Specifications

- Operating voltage: 8.5 - 30 Vdc
- Max current consumption: 100 mA (no load applied)
- Operating temperature: -25 / +85 °C
- Degree of protection: IP65 ("H" version only)
- Analog inputs signal: 2 x 0-5 V (Standard)
2 x 0-10V (Option)
- Input impedance: 40 kOhm
- Typical ctrl pot resistance: 1 - 10 kOhm
- Digital inputs: 2 (PNP, Active High) for signals from field
2 for joystick directional switches
8 bit
- Resolution: 8 bit
- PWM outputs channels: 2 x dual-coil prop. valves
- Current output range (PWM): 100-1800 mA (3A version available)
- PWM dither frequency: 55-200 Hz (adjustable)
- High side power outputs: 2 (2A each)
- 2-wires RS485 serial interface: Option

Applications

- Specifically designed for general purpose applications requiring easy field-adjustments
- 12 Vdc and 24 Vdc systems
- Remote control of proportional valves
- Control of a 2 functions proportional bi-directional system

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

Circuit board with LED's and push-buttons

Connectors type: MOLEX Mini-Fit

J4

- 1- Directional switch A from joystick no.1
- 2- +5Vdc supply to joystick no.1
- 3- RS485 serial line+ (out)
- 4- RS485 serial line- (out)
- 5- Signal from joystick no.1
- 6- GND
- 7- RS485 serial line+ (in)
- 8- RS485 serial line- (in)

J5

- 1- Directional switch B from joystick no.0
- 2- Directional switch A from joystick no.0
- 3- +5Vdc supply to joystick no.0
- 4- 0.5A fused positive power supply
- 5- Directional switch B from joystick no.1
- 6- GND (return of supply to joystick no.0)
- 7- Signal from joystick no.0
- 8- GND
- 9- GND
- 10- GND (return of supply to joystick no.1)

J6

- 1- Input no.0 from field
- 2- Input no.1 from field
- 3- Common for inputs no.0 and 1
- 4- Prop. coil EV0A feedback
- 5- -Battery (GND)
- 6- Prop. coil EV1A feedback
- 7- -Battery (GND)
- 8- +Battery
- 9- Prop.coil EV0B output
- 10- Prop. coil EV0B output
- 11- Prop. coil EV0B feedback
- 12- Prop. coil EV1B output
- 13- Prop. coil EV1A output
- 14- Prop. coil EV1B feedback
- 15- On/off coil EV3 output
- 16- On/off coil EV2 output

Adjustments

The following adjustments can be made directly from the front key-pad by selecting the 3-pushpins in various combinations:

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

Application example

Proportional regulation of two dual coil valves from two bi-directional levers. The on/off venting valve is automatically operated by the driver.

Ordering Information:

EC - PWM - A4 - MPC2 - *

A = Adjustable

H = plastic Housing
C = circuit board with on-board LEDs and pushbuttons

Part numbers

23.0409.052	23.0409.102 / 3A version
24.0202.020	

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