

PWM proportional controller panel mount for single and double solenoid valves

DESCRIPTION

VPP3 is a family of panel mount PWM controllers for proportional solenoid valves. Just mount it on the operator panel, connect power supply and proportional solenoid, then adjust the current using the potentiometer on board.

VPP3 is available for single solenoid and for double solenoid valves.

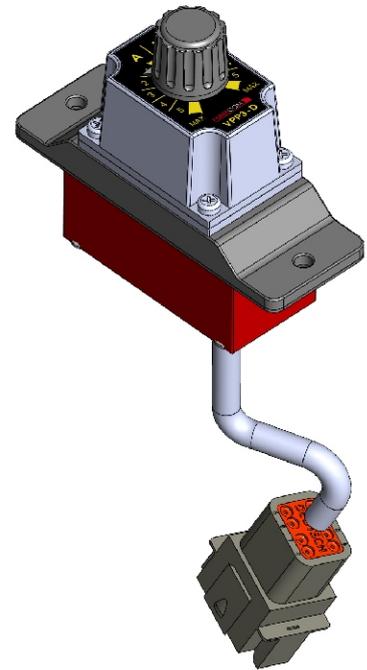
Features

- adjustable minimum/maximum current for each directions (A+B);
- adjustable rise/fall timeramp up to 25 seconds (step 0.1s);
- adjustable PWM frequency from 50 to 300 Hz;
- output curve shape: linear or parabolic (selectable);
- no. 2 multi purpose pins. Each one can be programmed to work as:
 - digital input (to enable or block outputs, speed selection).
 - digital output (dump valve, directional output, output over a threshold).

Factory preset

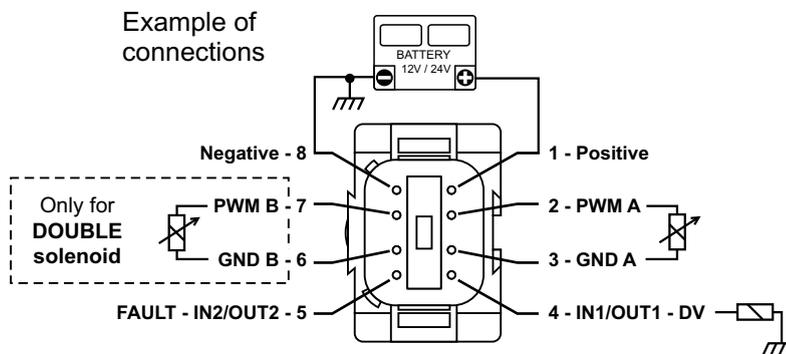
- min/max current: 500/1700 mA [ver. 12V] - 250/850 mA [ver. 24V]
- PWM frequency: 100 Hz
- OUT1 as DV output active when a PWM output is commanded
- OUT2 as FAULT output (positive = normal working);

All working parameters are adjustable through a serial port and the Windows® SepSim program using a special serial port adapter (AISR).



SINGLE
solenoid
VPP3-S

DOUBLE
solenoid
VPP3-D



TECHNICAL SPECIFICATIONS

Power Supply Voltage	10 ÷ 30 Vdc
Working Temperature Range	-40 ÷ +70 °C
PWM outputs min/max current range	50 ÷ 2500 mA
Digital inputs thresholds	$V_{LOW} - V_{HIGH} : 3V$ $V_{HIGH} - V_{LOW} : 2V$
PWM available frequencies	50, 60, 70, 85, 100, 125, 150, 200, 250, 300 Hz
Digital outputs maximum current	2000 mA each
External connections	Cable L=20 cm with Deutsch DT04-8 connector
Ingress Protection Rating	VPP3-S: IP64 (optional IP67) / VPP3-D: IP67
EMC compatibility	ISO EN 14982:2009

HOW IT WORKS

The VPP3 regulator is designed to command directly one or two proportional solenoid valves.

The reference signal is taken from the potentiometer and converted to a low frequency power PWM command.

The current through the solenoid is read in feedback in order to keep it stable regardless of the temperature and supply voltage changes.

The frequency of the PWM outputs is adjustable. To get best performances it should be set accordingly with the specifications of the manufacturer of the hydraulic valves.

The electronic card is protected against short-circuits of the load. In case of supply reversal a power diode inside the device short circuits the power supply. This causes the intervention of the external fuse that must be installed.

VPP3 are prepared with two different settings for 12V and 24V generic hydraulic valves. A more precise settings of the current range will result in improved control sensitivity over the entire control range.

Fall and rise timeramps are preset to zero.

Setting changes and advanced programming can be done using a PC with serial port, using the SepSim Windows® program and the special serial port adapter with M8 connector.

A multicolor LED under the mounting panel is lit green when joystick is supplied and gives information on the status of the device with a sequence of colored flashes.

Ordering codes: **PVPP3 s v Cnnn**

- ↑ (optional): customized special version
- 1: preset for 12V (500+1700 mA - 100Hz)
- 2: preset for 24V (250+850 mA - 100Hz)
- S: single solenoid (A)
- D: double solenoid (A+B)

Accessories:

- Kit with male mating connector Deutsch DT6-8 way (with female contacts). Code: **PCVMDT8**
- AISR: serial port adapter with M8 connector (to adjust settings). Code: **PISPR**

DIMENSIONS

in millimeters

