

PWM proportional controller for double solenoid valves

DESCRIPTION

The CPD is a PWM controller for proportional solenoid valves. It commands a couple of solenoids starting from an analogue reference signal in the range 0.5V ÷ 2.5V ÷ 4.5V.

A +5V stabilized output can be used to supply an external potentiometer for the reference signal.

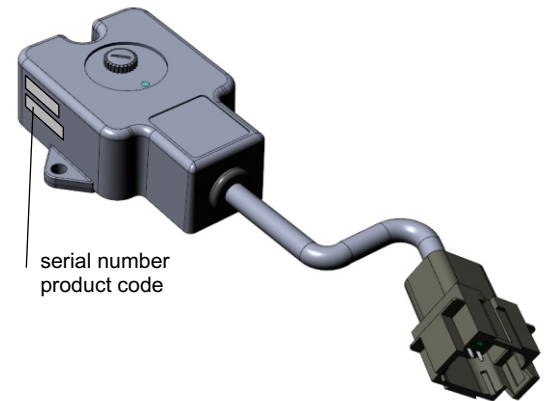
Features

- 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);
- DV (Dump Valve) output.

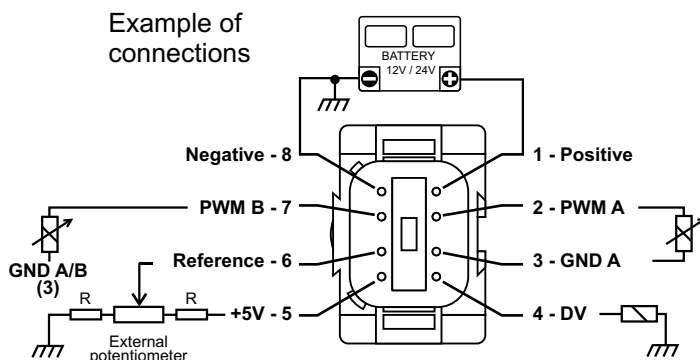
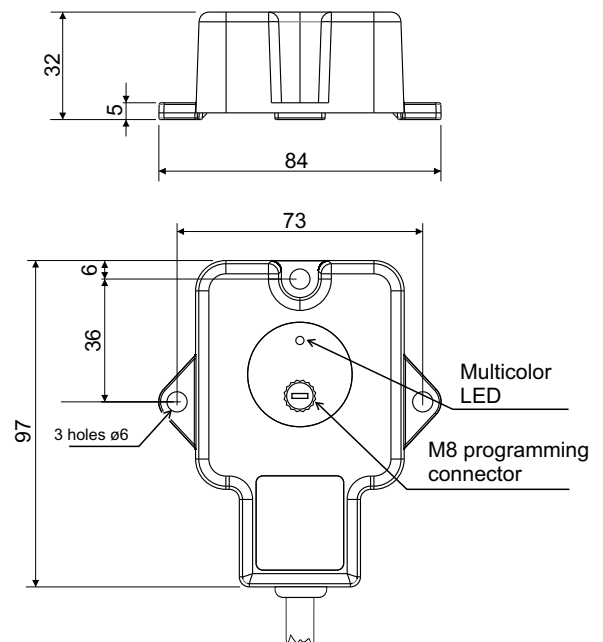
Factory preset

- min/max current: 500/1700 mA [ver. 12V] - 250/850 mA [ver. 24V]
- PWM frequency: 100 Hz
- DV output active when a PWM output is commanded

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



Dimensions



TECHNICAL SPECIFICATIONS

Power Supply Voltage	10 ÷ 30 Vdc
Working Temperature Range	-40 ÷ +70 °C
PWM outputs min/max current range	50 ÷ 2500 mA
Stabilized output for external potentiometer	+5 V - max 50 mA
Reference signal input range	0.5 V ÷ 2.5 V ÷ 4.5 V
Analog input impedance	50 kOhm towards 2.5 V
PWM available frequencies	50, 60, 70, 85, 100, 125, 150, 200, 250, 300 Hz
DV maximum output current	2000 mA
External connections	Cable L=20 cm with Deutsch DT04-8 connector
Ingress Protection Rating	IP67
EMC compatibility	ISO EN 14982:2009

HOW IT WORKS

The CPD regulator is designed to command directly two proportional solenoid valves.

The input reference signal is converted into 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.

CPD 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 on the device is lit green when joystick is supplied and gives information on the status of the device with a sequence of colored flashes.

Ordering codes: **PCPD s v Cnnn**

- (optional): customized special version
- 1: preset for 12V (500+1700 mA - 100Hz)
- 2: preset for 24V (250+850 mA - 100Hz)
- 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**



Parameter adjustment example:

Current calibrations

				Side A	Side B	
18	0	0	W	d	25	25 SET1 - start (min) [x0.1V]
19	50	50	W	d	85	85 SET1 - stop (max) [x0.1V]
20	0	0	W	d	0	0 SET1 - ramp up [x0.1s]
21	0	0	W	d	0	0 SET1 - ramp down [x0.1s]

