

Ref: WAAB1106 REMOTE CONTROL MORE AND LESS, 10 STEPS, WITH STORED AND RESUMED ON POWERING FOR 1 PWM PROPORTIONAL SOLENOID VALVE

Data sheet DSENWAAB1106 – september 2016 - Revised : no revised

PRESENTATION

This module regulates the current drawn by the valve's coil according to adjustable setpoint by 2 digital inputs MORE and LESS.

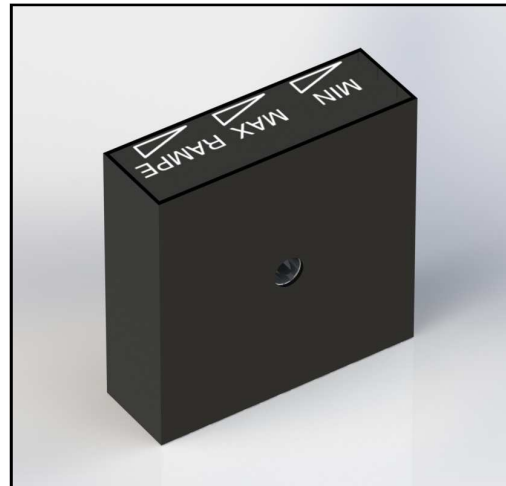
The setpoint is stored after each change and resumed on each powering.

The proportional valve aperture is between a minimum and a maximum threshold defined by two potentiometers incorporated on the rear side.

The valve's coil is not supplied when the setpoint is zero.

The gradient is adjusted by a third potentiometer at the rear side.

A flashing red LED indicates the correct module state.



APPLICATION

- To control an hydraulic proportional valve 12VDC and 24VDC.
- To control an hydraulic motor speed through a proportional valve.

PERFORMANCE

- Power supply : 9VDC to 32VDC.
- Regulation of circulating current in the coil, therefore the valve's aperture is independent of the supply voltage and the oil temperature.
- Accept proportional valves 12VDC and 24VDC (from 0 to 3A).
- 3 potentiometers on the rear side (MIN, MAX and GRADIENT).
- By adjusting the MIN and MAX, the adjustment range by + and — is bounded.
- 10 steps between the MIN and MAX.
- Protection against overvoltage, short circuit and reverse polarity.
- Plug-type connector: minifit 8 points
- Fixing by a M4 screw.



FULFILS THE STANDARDS

- CE mark compliant with 2014/30/UE
- E mark (ECE R10.05) N° 10R-05-13766 compliant with 2009/19/EC
- EMC ISO11452-4
- ESD ISO61000-4-2
- Immunity: ISO7637-2
- Protection: IP66/67
- Vibration-shock: EN60068-2-32;-27;-64;-29
- Supply voltage: 9V à 32V ASAE EP 455-§5.10.1
- Operating temperature: -40, +85°C ASAE EP 455-§5.1.1 et EN60068-2-1;-2;-14;-30;-78
- REACH (1907/2006) and RoHS (2011/65/EU)

SUPPLIED ACCESSORIES

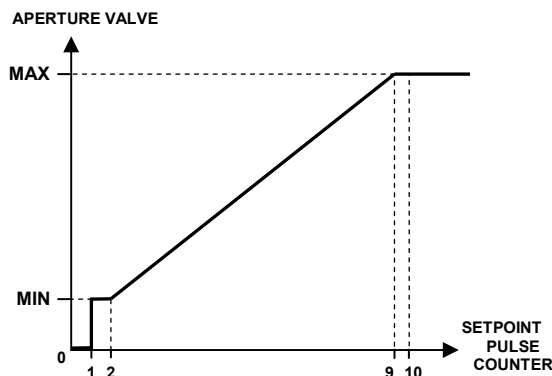


1 strand (wires 1mm², 1m, type automotive) with 1 minifit connector.

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WORKING

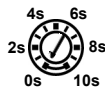


10 pulses on input PLUS are required to open the valve from minimum to maximum. 10 pulses on input LESS are required to close the valve from maximum to minimum.

Aperture setting MIN : Set the setpoint to 0 with the input LESS then increase the setpoint of one pulse until the LED blinks. After, set minimal aperture with MIN potentiometer on the rear panel.

Aperture setting MAX : Set the setpoint to the max with the input PLUS. After, set maximal aperture with MAX potentiometer on the rear panel.

GRADIENT setting : Time between the minimum and maximum aperture opening, setting the GRADIENT potentiometer on the rear panel:



Running red light indicator :

- If the valve is opened, the light indicator blinks :
- If 2 flashes: PWM duty cycle < 5%.
- If 4 flashes: PWM duty cycle > 95%.
- If 6 flashes: Valve shorted.
- If 7 flashes: Valve not connected.

Information :

If the setpoint (pulse counter) is at zero, the LED is off (1 flash every 5 seconds) and the proportional valve is no longer supplied.

BUILDING IN SAFETY

All brands and all types of electronic modules can fail. Thus the necessary protection against the serious consequences of module failure should always be built into the system. For each application, an assessment should be made for the consequences of electronic module failure and uncontrolled or blocked movements.

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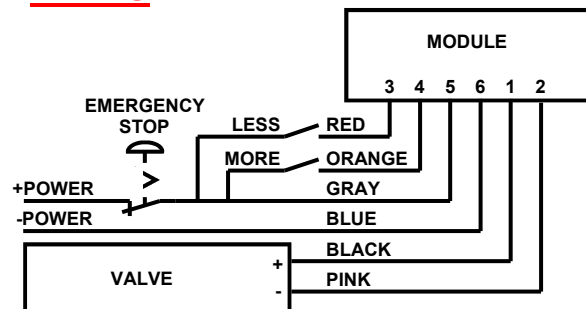
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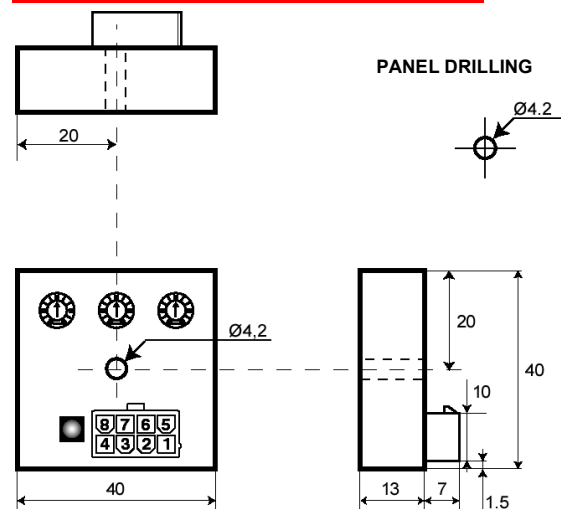
FEATURES

	Value		Unit
	MIN	MAX	
Supply voltage	9	32	VDC
Consumption without valve	1	2	mA
Operating temperature	-40	+85	°C
Storage temperature	-40	+90	°C
Valve current supply	0	3	A
Drift current between -25°C and +70°C	0	+/-0.5	%FS
Drift current between 9V and 32V	0	+/-0.5	%FS
Gradient setting	0	10	s
PWM frequency	125		Hz
Weight	30		g

WIRING



MECHANICAL DESIGN (in mm)



Tracability label description : (example)

V02bf → 02: Software Version, bf: Hardware Version

Ref: NGDF7536 → Product reference

Ser: 1611-0003CW → tracability

16: Year, 11: Month, 0003: serial N°, CW: operator