

## PRESENTATION

This module generates a PWM supply to the proportional valve regardless of the current really consumed by this valve. The duty cycle of the PWM supply is determined by the position of the potentiometer on the front panel.

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

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).
- 1 potentiometer on the front panel.
- 3 potentiometers on the rear side (MIN, MAX and GRADIENT).
- By adjusting the MIN and MAX, the whole range of front panel potentiometer is useful.
- Protection against overvoltage, short circuit and reverse polarity.
- Plug-type connector: minifit 4 points.
- Fixing the front panel by the potentiometer barrel.

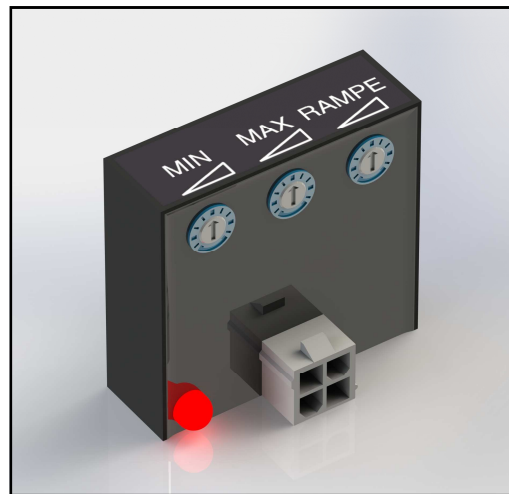
## SUPPLIED ACCESSORIES



1 button to turn the potentiometer (diameter : 28mm, height : 19mm).



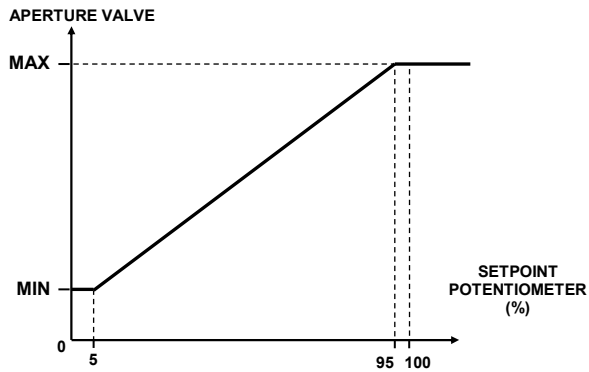
1 strand ( wires 1mm<sup>2</sup>, 1m, type automotive) with 1 minifit connector



## 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)

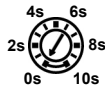
**WORKING**



Aperture setting MIN : Set the setpoint potentiometer to 0 (Stop when potentiometer turn in reverse clockwise). Set minimal aperture with MIN potentiometer on the rear panel.

Aperture setting MAX : Set the setpoint potentiomètre in max stop. (Stop when potentiometer turn in clockwise). 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.

Use on a PVG solenoid valve (with PWM-Voltage adaptor) :

Position the MIN and MAX potentiometers in the middle position.

Set the setpoint potentiometer in min stop and then decrease the MIN potentiometer until the complete opening of EV (PWM about 25%).

Set the setpoint potentiometer in max stop and then increase the MAX potentiometer until the complete opening of EV (PWM about 75%).

**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.

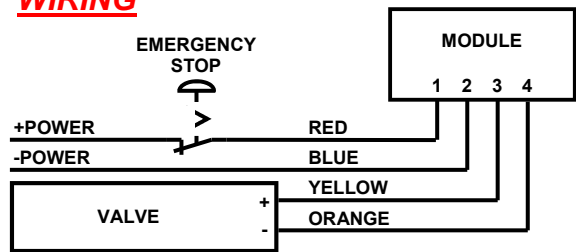
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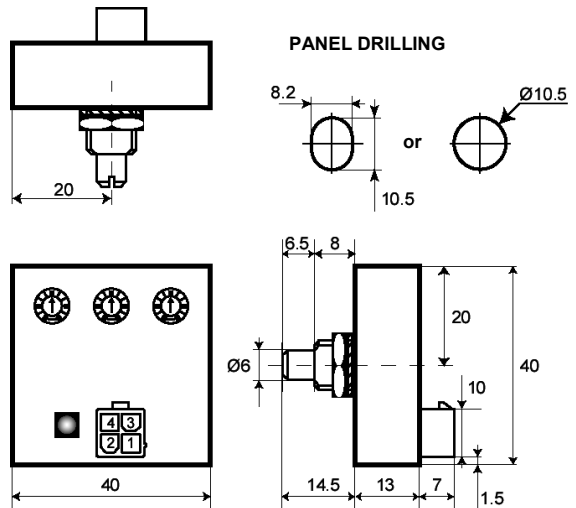
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FEATURES	Value		Unit
	MIN	MAX	
Supply voltage	9	32	VDC
Consumption without valve	1	2	mA
Operating temperature	-40	+85	°C
Storage temperature	-40	+90	°C
Valve current supply	0	3	A
Drift current between -25°C and +70°C	0	+/-0.5	%FS
Drift current between 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