

PRESENTATION

This module regulates the current drawn by the solenoid valve according to the potentiometer on front side.

The proportional solenoid aperture is between a minimum and a maximum threshold defined by 2 potentiometers incorporated on the rear side.

The proportional solenoid valve is not supplied when the potentiomètre (front side) is set to 0.

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

A flashing red LED indicates the correct module state.

The display shows the position of the potentiometer and all 10 s, accumulated operating time of the valve.

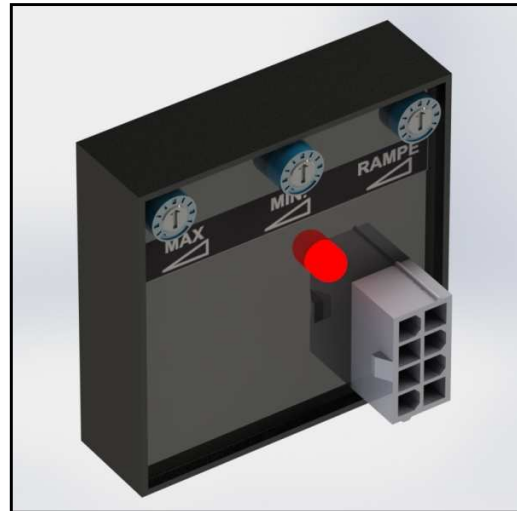


APPLICATION

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

PERFORMANCES

- Power supply : 9VDC to 32VDC.
- Regulation of circulating current in the solenoid valve, therefore the valve's aperture is independent of the supply voltage and the oil temperature.
- Accept proportional solenoid valves 12VDC and 24VDC (from 0 to 3A).
- 1 setpoint potentiometer on front side.
- 3 potentiometers on the rear side (MIN, MAX and GRADIENT).
- By adjusting the MIN and MAX, the whole range of front side potentiometer is useful.
- Protection against overvoltage, short circuit and reverse polarity.
- Intégration of a counter accumulated operating time of the valve.
- Plug-type connector: minifit 8 points.
- Fixing the front panel by the potentiometer barrel.



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-§5.1.1et EN60068-2-1;-2;-14;-30;-78
- REACH (1907/2006) and RoHS (2011/65/EU)

SUPPLIED ACCESSORIES

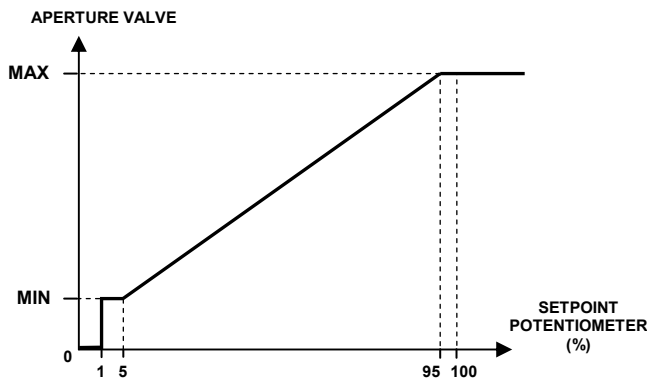


1 button to turn the potentiometer (diameter : 28mm, height : 19mm).



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

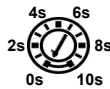
WORKING



Aperture setting MIN : Set the setpoint potentiometer to 0 (Stop when potentiometer turn in reverse clockwise). Then turn it slightly in the opposite direction until the LED blinks. Set minimal aperture with MIN potentiometer on the rear panel.

Aperture setting MAX : Set the setpoint potentiometer 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.

Information : If the setpoint potentiometer is equal to 0, the LED is off (1 flash every 5 seconds) and the proportional valve is no longer supplied.

DISPLAY

Display show position of the potentiometer on the front panel (from 0 to 100 from the minimum position to the maximum position).

In addition, the display shows every 10 s the counter accumulated operating time of the valve. The unit is minute.

The internal precision of the counter is 1 s. The value of this counter is stored for continue to count after a power failure.

When the counter equal to 10000, it's reset to 0 and continue to count normally. There is no reset of this timer.

Immediately after "STOP FORCE FLOW" input is inactive AND the displayed value of the front panel potentiometer is different from 0, the counter counts.

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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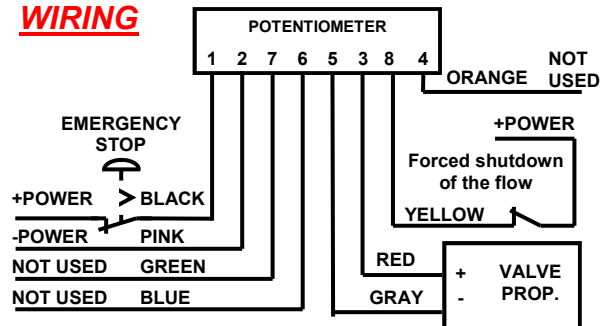
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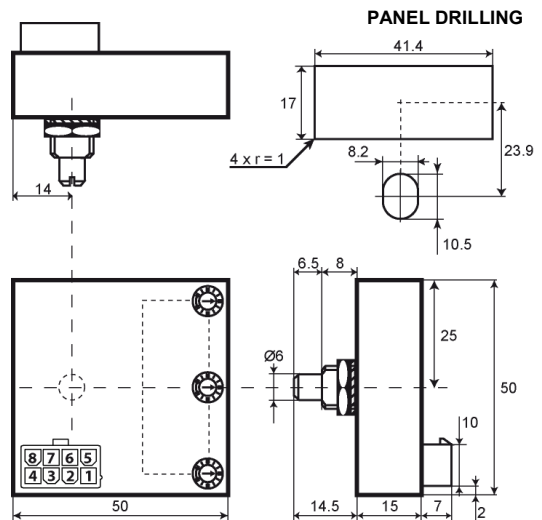
FEATURES

	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	57		g

WIRING



MECHANICAL DESIGN (en 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