

Single axis finger joystick with signal output

Description

MAS2L is a single axis electronic joystick with voltage signal output.

Joystick command is based on the measurement of the magnetic field of a permanent magnet through redundant Hall effect probes, not subject to wear and tear.

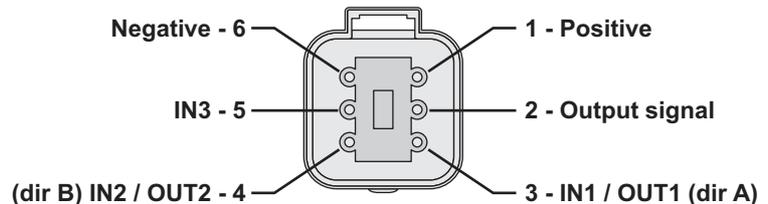
Main characteristics:

- single output voltage signal.
 - available ranges are: 0÷5V, 0÷10V, 5÷0÷5V, 0.5÷2.5÷4.5V or any other range within 0÷10V;
 - ratiometric (25%÷50%÷75% of supply voltage).
- output curve shape: linear or parabolic (selectable);
- ramps on signal adjustable from 0 to 25 s (step 0.1 s);
- input usable for:
 - speed reduction (calibration adjustable for each side);
 - block one or both sides of signal output;
 - deadman feature (to be activated before moving the paddle);
- paddle with friction version available (retained paddle);
- high current digital directional outputs, usable as FAULT signal;
- all working parameters are programmable through a serial port and the Windows® SepSim program using a special serial port adapter (AISR).

For direct PWM outputs the version "MAP2L" is available.



Connections



Technical specifications

Power Supply Voltage	10 ÷ 30 Vdc
Working Temperature Range	-30 ÷ +70 °C
Output signal range (programmable)	0÷5V, 0÷10V, (any value in 0÷10V), ratiometric (Danfoss® signal)
Max signal output current	10 mA
Digital outputs OUT1 and OUT2 maximum current	2000 mA
Input Threshold	$V_{t-(In1, In2, In3)} \sim 2V$ / $V_{t+(In1, In2)} \sim 3V$ / $V_{t+(In3)} \sim 80\%$ Power Supply
Connections	cable L=20 cm with Deutsch DT04-6 connector
Working Angle	± 30 degrees
Force for paddle at full stroke	Approx. 3.5N ±10% (measured on the top of paddle)
Ingress Protection Rating	IP66
EMC compatibility	ISO EN 14982:2009

Working mode

MAS2L joystick can generate almost any output signal in a programmable range all contained within 0 and 10V. Ratiometric output (25%±50%±75% of supply voltage) is also available for Danfoss® devices.

Dead band, signal range, ramps, output shape (linear or parabolic) and other parameters are adjustable. Setting can be changed using a PC with the SepSim Windows® program and a special serial port adapter with M8 connector (code: PISPR).

The electronic card is protected against short-circuits of the load.
 The MAS2L joystick can be ordered with different configuration of output signal, ready to use.
 Ask for a special configuration.

Signaling

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

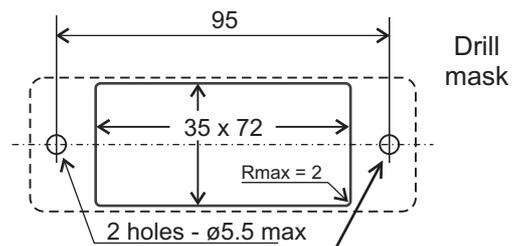
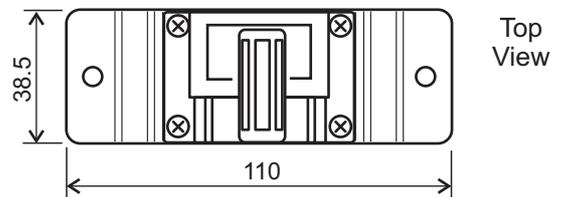
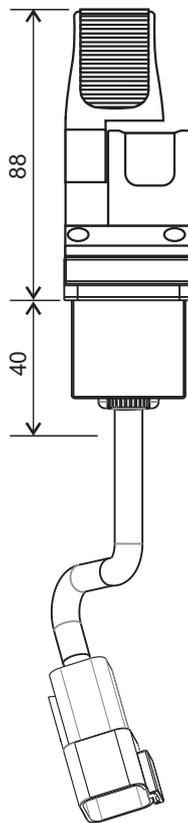
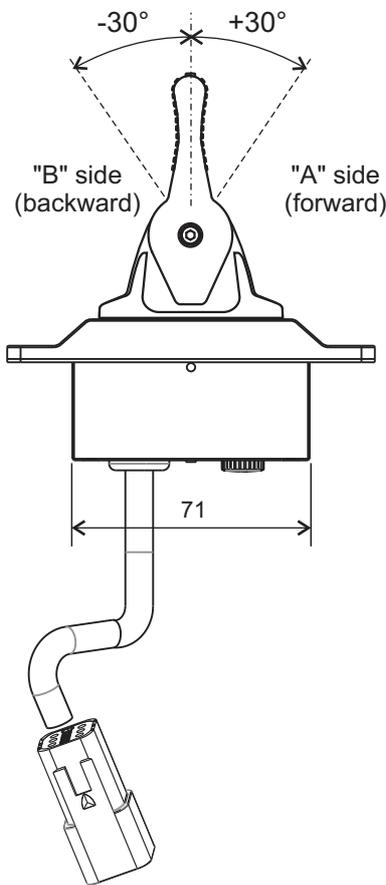
Example of ordering codes:

PMAS2_L_nnn ← nnn (optional): customized special version

- **R**: paddle spring return
- **F**: paddle with friction
- **S**: fixed
- **R**: ratiometric (Danfoss® signal)
- **V**: vertical symmetrical signal
- **Z**: asymmetrical signal



DIMENSIONS (in millimeters)



Mounting screws must be sealed apart (rubber gasket does not seal them)

