Single axis joystick with CAN bus output

DESCRIPTION

The MAC2L is a single axis electronic joystick with CANbus output.

Joystick command is based on the measurement of magnetic field of a permanent magnet through redundant Hall effect probes, not subject to wear and tear.
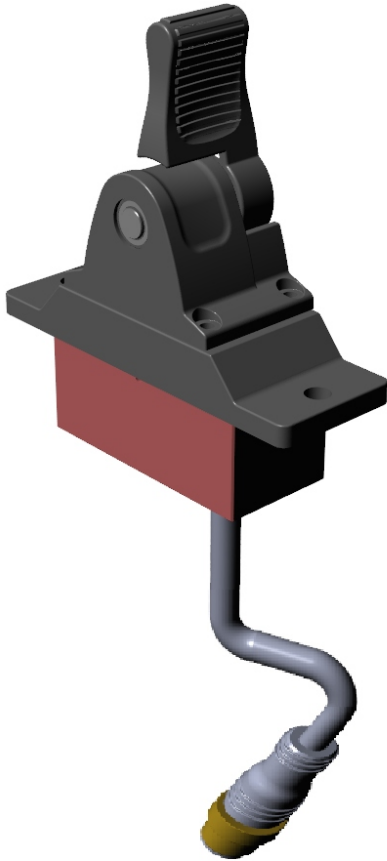
Main characteristics:
- programmable transmission parameters: CANbus speed, device nodeID, data timing;
- synchronous or asynchronous transmission (selectable);
- output curve shape: linear or parabolic (selectable);
- frictioned lever version available.

The fundamental operative parameters are programmable through CAN messages.
All working parameters are adjustable through a serial port and the Windows® SepSim program using a special serial port adapter (AISR).
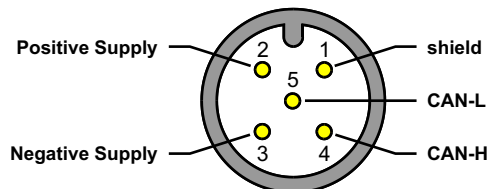
This product is also available with:
- signal output voltage (MAS2L) to interface with a PLC;
- PWM power output MAP2L (to command directly the solenoids).

CONNECTIONS

The MAC2L joystick is provided with a M12 male connector.

Pin	Signal
2	Positive Supply
1	shield
5	CAN-L
3	Negative Supply
4	CAN-H

Technical specifications

Supply voltage	10 ÷ 30 Vcc
Operative temperature	-40 ÷ +70 °C
Connectivity	CAN 2.0B
Available bus speeds	50 - 100 - 125 - 250 (default) - 500 - 1000 Kbps
Connections	L=25 cm cable w/ M12 male connector
Working angle	± 30 degrees
Force for lever at full stroke	Approx. 3.5N ±10% (measured on the top of paddle)
Environmental protection degree	IP66
EMC compatibility	ISO EN 14982:2009

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WORKING MODE

The MAC2L joystick is provided with FABER-COM communication protocol.

On request it is possible to customize the communication protocol in order to link up the joystick to other customer CANbus devices.

With CAN messages it is possible to modify the CANbus speed, the nodeID of the device, the transmission data timing.

Other parameters can be changed using a PC with the SepSim Windows® program and a special serial port adapter with M8 connector (code: PISPR).

SIGNALLING

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

TPDO 1 TRANSMISSION MESSAGE (default)

nodeID: 100d
Bus speed: 250 Kbps
Asynchronous transmission, every 100ms

IDENTIFIER	byte 0	byte 1	byte 2	bytes 3 ÷ 7
0x180 + nodeID	0 ÷ 127 ÷ 254	status byte	error byte	not used
	proportional output			

Example of ordering codes:
PMAC2SSL_nnn   **nnn** (optional): customized special version
                          R: paddle spring return
                          F: paddle with friction

DIMENSIONS   (in millimeters)

Top View

Drill mask

Bottom View

M8 programming connector

Multicolor LED

Supply and outputs cable