

## MAV1152HY ELECTRONIC MODULE FOR INTEGRATED CONTROL OF PROPORTIONAL AND ON/OFF VALVES FOR JOYSTICK

The MAV1152HY controller unit is used for the control of one proportional solenoids and additional switching valves. The proportional solenoid output is pulse-width-modulated (PWM) and optimally adapted for electric proportional control of Dana Brevini products. The switched outputs are designed for the direct switching of on/off solenoids, relays, and lamps. The MAV unit can managed 1 PWM current output and 5x2 switched outputs + venting valve (max load 9Amperes).

The RS232 serial interface and BPE software tool enables the connection of PC for service functions, such as diagnostics, parameter setting or display of process variables.

European norms: EN 61000-6-2, EN61000-6-3, ElectroMagnetic Compatibility (EMC) - industrial environment

### MAV1152HY

LAYOUT	CAP. IX • 21
OVERALL DIMENSIONS	CAP. IX • 21
ELECTRICAL CONNECTIONS	CAP. IX • 21
BPE-TERMINAL SOFTWARE	CAP. IX • 21
ELECTRICAL CONNECTION	CAP. IX • 22
MOUNTING EXAMPLE	CAP. IX • 22

### Optional (on request):

- CANbus port communication;
- on/off output for venting valve on CAT 3 safety

### Adjustment parameters by RS232 link :

Frequency PWM  
Offset current  
Gain current  
Ramp up time current  
Ramp down time current  
Analog input configuration (voltage 0.5 ÷ 4.5V, 1 ÷ 9V, current 4 ÷ 20mA).

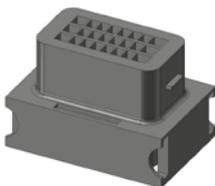
### ORDERING CODE

Code	Description
7.365.1187	MAV1152HY electronic module for integrated control of proportional and on/off valves for Dana Bevini Joystick
www.bpe.it	BPE Terminal software downloaded from www.bpe.it website

### SPECIFICATIONS:

Nominal voltage		12V and 24V
Operating supply voltage		9 ÷ 33Vdc
Current consumption	Max	9A
Protection Fuse	External	Rapid fuse 10A
Constant voltage source	For joystick supply	5V
Analog input Selectable by serial link	Voltage	0 ÷ 5V
	Voltage	0 ÷ 10V
	Current	0 ÷ 20mA
Switch input	High or low active	Low < 1.5V; high > 6V
Proportional PWM output		0 ÷ 2A
PWM frequency range		70Hz ÷ 250Hz
On/off output (mosfet)		3A
Led indicator		Green/red/yellow
Interfaces		RS232 and ( optional as a request CAN 2.0B)
Number of analog input		1
Number of switch input		6
Number of PWM output		1
Number on/off output		5x2
Switch output for venting valve (3A)	CAT3 safety (PLd) (optional as a request)	1
Protection against short circuit	Input and output	Yes
Reverse connect protection	Power supply	Yes
Operating temperature		-40 ÷ 70°C
IP protection	With mounted mating connector	IP67
Mating connector	FCI - SICMA	24 pole

9



Plug-in connector 24 poles FCI - SICMA (to be ordered separately)

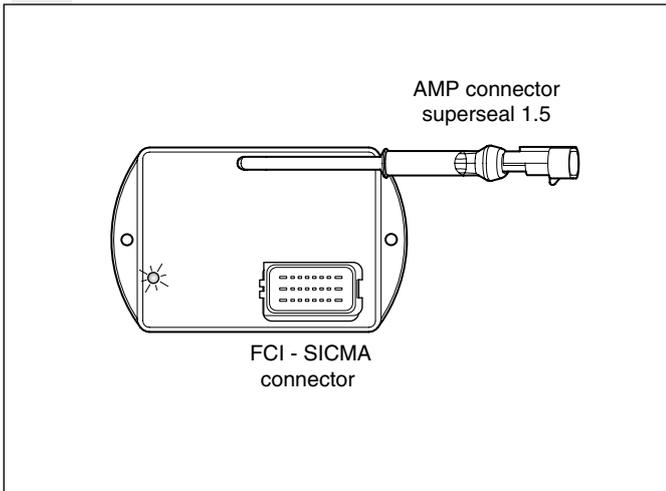
Code	Description
7.003.054	Connector
7.180.403	Connector with 1 mt. cable length

### Default settings:

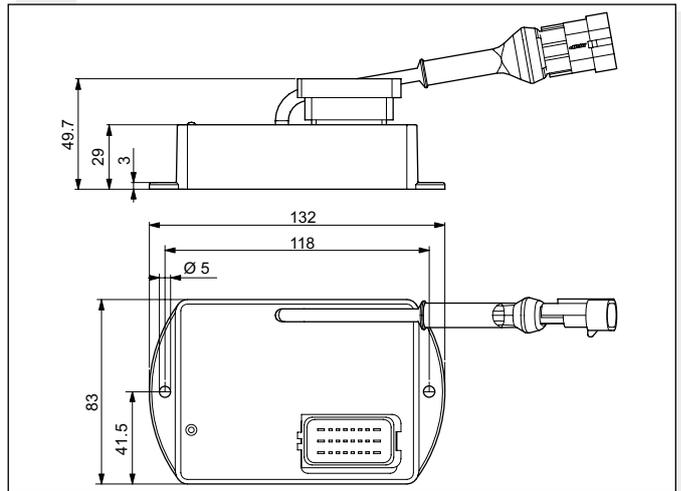
- Analog input signal: 0 ÷ 5V
- PWM frequency: 150 Hz
- Min. current PWM output: 400mA
- Max. current PWM output: 1700mA

# MAV1152HY ELECTRONIC MODULE

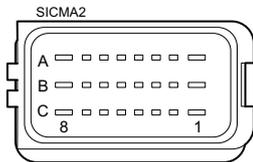
## LAYOUT



## OVERALL DIMENSIONS



## ELECTRICAL CONNECTIONS



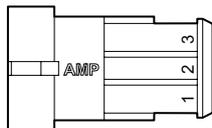
Contacts description: Mating Connector FCI - SICMA

PIN	8	7	6	5	4	3	2	1
A	O1A	Venting OUT	O2A	O3B	PWM re- turn	O5B	O5A	+ Supply
B	O2B	0V	+5V output	IN5	AN1	IN3	PWM out	O1B
C	O3A	IN8	IN7	O4A	O4B	IN6	IN4	- Supply

PIN	Description	Connects to:
B4	AN1	Y signal track of joystick
B5	IN5	Push button n°2 of the joystick
C3	IN6	Push button n°3 of the joystick
C6	IN7	Push button n°4 of the joystick
C7	IN8	Push button n°5 of the joystick
B3	IN3	Push button n°1 of the joystick
C2	IN4	Dead man switch joystick
B6	+5V output	Analogue supply track of the joystick

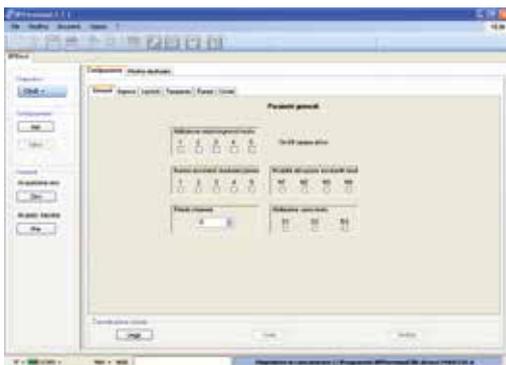
AN = analog input,  
IN = digital input,  
O1A = on/off output 1 coil A directional valve  
O1B = on/off output 1 coil B directional valve

Serial Link RS232 connector : AMP superseal 1.5



PIN 1	PIN 2	PIN 3
GND	RX	TX

## BPE-TERMINAL SOFTWARE



### Software - BPE-Termial

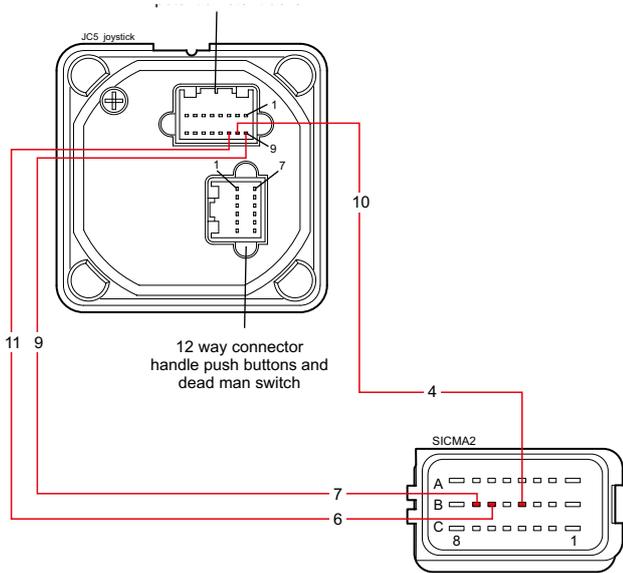
The BPE terminal software, allows to set the MAV. Furthermore with BPE terminal is possible to set all the work parameters, minimum current, maximum current, PWM frequency...

The BPE Terminal software is free downloadable from BPE website [www.bpe.it](http://www.bpe.it)

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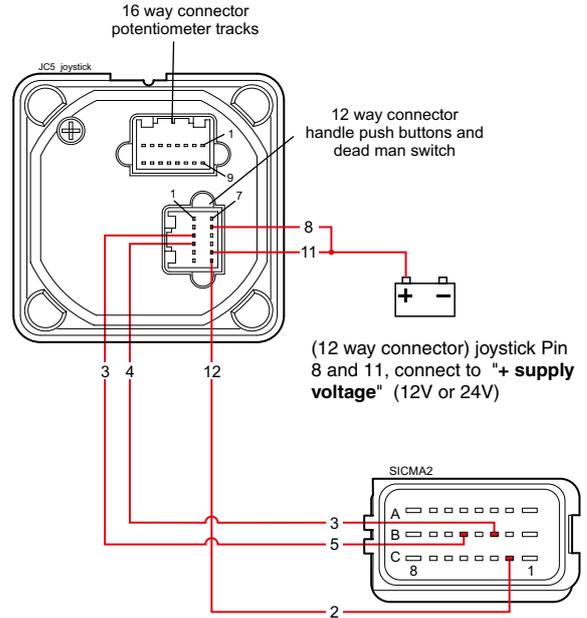
## ELECTRICAL CONNECTIONS

### Y axis Analogue track connections JC5 and MAV



PIN Joy.	Connect to MAV
1	B7
9	B4
10	B6
11	B6

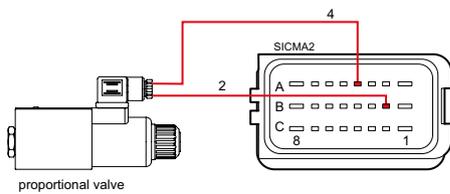
### Dead man switch and push buttons connections



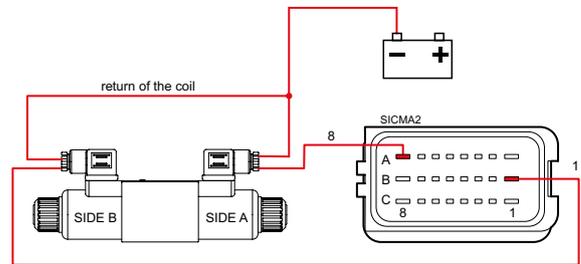
(12 way connector) joystick Pin 8 and 11, connect to "+ supply voltage" (12V or 24V)

PIN Joy.	Function	Connect to MAV
1	Button no. 4	C6
2	Button no. 3	C3
3	Button no. 2	B5
4	Button no. 1	B3
5	Button no. 5	C7
12	Dead man	C2

### Proportional single solenoid valve



### Directional on/off valve



9

## MOUNTING EXAMPLE WITH DANA BREVINI PRODUCTS

