Globus Electronics

NEO

NEO PLUS

MAIN FUNCTIONS

REFRIGERATION	HEATING	VENTILATION
AIR DIRECTION	MULTIPLEX	CABIN CONTROL

CHARACTERISTICS

- Innovative design
- Designed for heavy-duty applications
- Analog commands
- Backlit buttons and symbols
- Available as HMI - Human Machine Interface (CAN Bus)
- Customer logo on the panel
- Screwless installation
- Automotive connector
- High frontal protection grade

- Innovative design
- Graphic 128x64px OLED Display
- Dynamic RGB backlight
- Circular Graphic 128x128px OLED Display
- Available as HMI - Human Machine Interface (CAN Bus)
- Operation Screen with client logo
- Function Hourmeters
- 10 selectable languages via menu

AVAILABLE FOR

INTERFACE POSITIONS

CHOOSE BETWEEN THE HORIZONTAL
OR VERTICAL (i) FORMATS

CONTROLLERS DEVELOPED WITH BUTTONS AND
INTERFACES FOR COMPLETELY CUSTOMIZABLE FUNCTIONS

POWER SWITCH

VENTILATION SPEED CONTROLLER
3 speed 16A@12V or 10A@24V
4 speed 25A@12V or 15A@24V
* Not available at Neo3 central position

POTENTIOMETER

PWM VENTILATION
Automatic ventilation control

TEMPERATURE
Control in 22 or 10 positions
Hot & Cold | Cold | Hot | Setpoint

AIR DIRECTIONING
3 or 5 positions
Flap Positions

BUTTONS

2 INDIVIDUAL BUTTONS
6 available status LEDs

Present a not yet available function and Globus will analyze its development

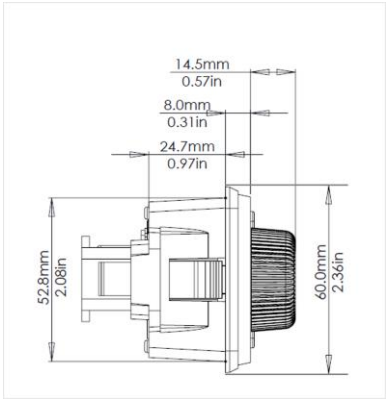
CONFIGURATIONS OPTIONS

OUTPUTS: Analog, Digital Positive and Negative, Bridge (flap motor) and PWM
INPUTS: Analog and Digital
COMMUNICATION: CAN Bus and One Wire

FUNCTIONS UNDER REQUEST

WI-FI
BLUETOOTH
CELL PHONE INTERFACE
CAN BUS
REMOTE I/O NETWORK
DATA LOGGER
CUSTOMIZABLE INTERFACES
HMI

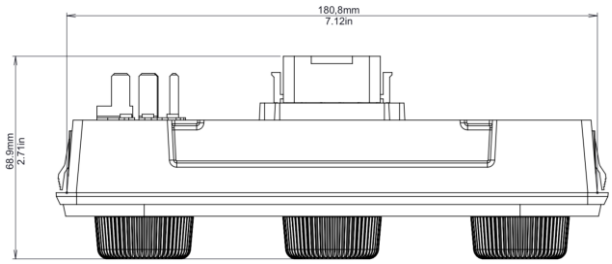
TECHNICAL DATA



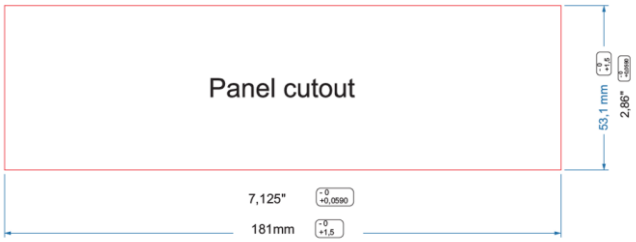
OEM

HVAC

CABIN / MUX



Approximated weight: 465g



CONNECTORS

3 SPEED POWER SWITCH
Part Number: 754C3
Manufacturer: Koch Sales

4 SPEED POWER SWITCH
Part Number: 12110047
Manufacturer: Delphi

POSITIVE LOCK 1 way
Part Number: 154719-1
Terminal – PN: 880645-6
Manufacturer: Tyco Electronics

MATE-N-LOK 15 ways
Part Number: 1-480710 - 0
Terminal - PN: 350689-3
Manufacturer: Tyco Electronics

TECHNICAL DATA	
OPERATING VOLTAGE	12 VDC / 24 VDC
OPERATING VOLTAGE RANGE	9 VDC to 30 VDC
MAXIMUM VOLTAGE	32 VDC during 5 min
MAXIMUM CURRENT PER OUTPUT	See individual product description
OUTPUT SHORT-CIRCUIT	Protected *
REVERSE POLARITY	Protected *
OPERATING TEMPERATURE RANGE	-40°C to +85°C /-40°F to +185°F
STORAGE TEMPERATURE	-40°C to +125°C /-40°F to +257°F
TEMPERATURE SENSOR	NTC - See individual product description
FRONTAL PROTECTION DEGREE	IP 54
COMMUNICATION	One Wire / CAN Bus
MAXIMUM CURRENT CONSUMPTION	
NEO1 – NO POWER KEY	25mA @ 12 VDC / 32mA @ 24 VDC
NEO1 – WITH POWER KEY - MINIMUM BRIGHTNESS	5,5mA @ 12 VDC / 16,5mA @ 24 VDC
NEO1 – WITH POWER KEY - MAXIMUM BRIGHTNESS	12mA @ 12 VDC / 36mA @ 24 VDC
NEO2	40mA @ 12 VDC / 20mA @ 24 VDC **
NEO3	70mA @ 12 VDC / 35mA @ 24 VDC **
STANDBY CONSUMPTION (NEO2 E NEO3)	**

* According to product configuration. ** Consumption may vary according to customer specifications.
We keep the right to update or change information regarding products without prior notice.

VENTILATION, TEMPERATURE and AIR DIRECTION

OEM

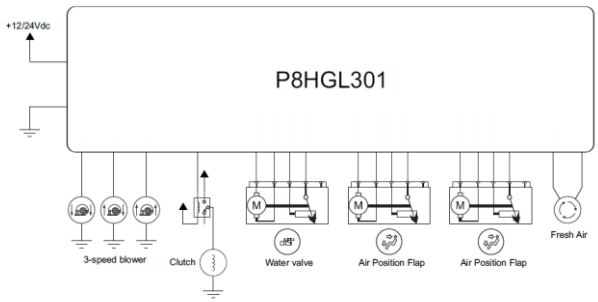
HVAC

Allows for speed, temperature and air direction adjustments

3-SPEED VENTILATION, PROPORTIONAL TEMPERATURE AND AIR DIRECTION CONTROLLER

GL-P8HGL301

- 3-Speed ventilation control
- Proportional hot water valve control
- 2 proportional air position flaps
- 1 Fresh Air flap
- Standard DIN radio size
- 500mA negative clutch output
- A/C button
- Fresh Air button
- Diagnostic LED



OEM

HVAC

CABIN / MUX

Use the panel as an interface and develop your own control algorithm

VENTILATION, PROPORTIONAL TEMPERATURE AND AIR DIRECTION CONTROLLER

GL-P8HGL302

- HMI – Human Machine Interface
- CAN Bus communication with ECU
- Knob position reading
- Button status reading
- Temperature sensor reading
- LED status writing
- Standard DIN radio size
- Up to 2 function buttons
- Up to 8 indication LEDs

VENTILATION, TEMPERATURE and AIR DIRECTION

OEM

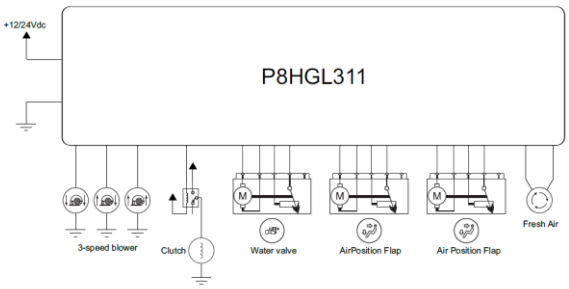
HVAC

For vertical mounting option

3SPEED VENTILATION, PROPORTIONAL TEMPERATURE AND AIR DIRECTION CONTROLLER

GL-P8HGL311

- 3-Speed evaporator power switch 16A@12V
- Proportional hot water valve control
- 2 proportional air position flaps
- 1 Fresh Air flap
- Standard DIN radio size
- Vertical format
- 500mA negative clutch output
- A/C button
- Fresh Air button
- Diagnostic LED



NEO 3 PRODUCT CONFIGURATION

Choose the best options for your system

PIN CN1	NEO 3 | POSSIBLE CONFIGURATIONS - HARDWARE 1						
1	POWER SUPPLY	OR	--	OR	--	OR	-
2	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H1	OR	PWM OUTPUT
3	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR		OR	PWM OUTPUT
4	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H2	OR	PWM OUTPUT
5	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR		OR	PWM OUTPUT
6	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 5A	OR	PWM OUTPUT	OR	-
7	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	--	OR	-
8	GND	OR	--	OR	--	OR	-
9	DIGITAL INPUT	OR	CAN L	OR	--	OR	-
10	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	-
11	GND	OR	--	OR	--	OR	-
12	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	-
13	GND	OR	--	OR	--	OR	-
14	ANALOG INPUT	OR	DIGITAL INPUT	OR	CAN H	OR	-
15	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	-
PIN CN2							
1	POWER SUPPLY	OR	--	OR	--	OR	-
2	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H3	OR	PWM OUTPUT
3	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR		OR	PWM OUTPUT
4	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H4	OR	PWM OUTPUT
5	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR		OR	PWM OUTPUT
6	--	OR	--	OR	--	OR	-
7	--	OR	--	OR	--	OR	-
8	GND	OR	--	OR	--	OR	-
9	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	-
10	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	-
11	--	OR	--	OR	--	OR	-
12	ONE WIRE	OR	ANALOG INPUT	OR	DIGITAL INPUT	OR	-
13	GND	OR	--	OR	--	OR	-
14	--	OR	--	OR	--	OR	-
15	--	OR	--	OR	--	OR	-

OBS.: It is possible to install potenciometers instead of power switches.

NEO 3 PRODUCT CONFIGURATION

PIN	NEO 3 | POSSIBLE CONFIGURATIONS - HARDWARE 2		
1	POWER SUPPLY – COMUM DEFROST KEY / MAX POT VALVE / MIN POT FLAP	OR	--
2	N.O. DEFROST KEY – 10A	OR	--
3	--	OR	MAX POT BLOWER (*)
4	--	OR	MIN POT BLOWER (*)
5	--	OR	CENTER POT BLOWER (*)
6	N.O. A/C KEY – 10A	OR	--
7	--	OR	MIN POT FLAP
8	GND – BACKLIGHT / MIN POT VALVE	OR	--
9	CENTER POT FLAP	OR	--
10	CENTER POT VALVE	OR	--
11	--	OR	--
12	POWER SUPPLY BACKLIGHT	OR	--
13	MAX POT FLAP	OR	--
14	--	OR	COMUM DEFROST KEY
15	POWER SUPPLY A/C KEY	OR	--

* The potentiometer is not mounted when the power switch is used.

PIN	NEO 3 | POSSIBLE CONFIGURATIONS - HARDWARE 3								
1	POWER SUPPLY	OR	--	OR	--	OR	--	OR	--
2	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H1	OR	PWM OUTPUT	OR	--
3	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR		OR	PWM OUTPUT	OR	--
4	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H2	OR	PWM OUTPUT	OR	--
5	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR		OR	PWM OUTPUT	OR	DIGITAL OUTPUT POSITIVE 5A
6	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 5A	OR	PWM OUTPUT	OR	--	OR	--
7	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	--	OR	--	OR	--
8	GND	OR	--	OR	--	OR	--	OR	--
9	DIGITAL INPUT	OR	CAN L	OR	ONE WIRE	OR	ANALOG INPUT	OR	--
10	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--	OR	--
11	GND	OR	--	OR	--	OR	--	OR	--
12	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--	OR	--
13	GND	OR	--	OR	--	OR	--	OR	--
14	ANALOG INPUT	OR	DIGITAL INPUT	OR	CAN H	OR	--	OR	--
15	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--	OR	--

OBS.: It is possible to install potentiometers instead of power switches.

PRODUCT CONFIGURATION

PIN	NEO 3 | POSSIBLE CONFIGURATIONS - HARDWARE 4				
1	POWER SUPPLY	OR	--	OR	--
2	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	--
3	ANALOG OUTPUT 50mA	OR	--	OR	--
4	ANALOG OUTPUT 50mA	OR	--	OR	--
5	ANALOG OUTPUT 50mA	OR	--	OR	--
6	DIGITAL OUTPUT POSITIVE 5A	OR	--	OR	--
7	ANALOG INPUT	OR	DIGITAL INPUT	OR	ONE WIRE
8	GND	OR	--	OR	--
9	DIGITAL INPUT	OR	CAN L	OR	--
10	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
11	GND	OR	--	OR	--
12	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
13	GND	OR	--	OR	--
14	ANALOG INPUT	OR	DIGITAL INPUT	OR	CAN H
15	ANALOG INPUT	OR	DIGITAL INPUT	OR	--

OBS.: It is possible to install potentiometers instead of power switches.

NEO 3 PLUS

INTERFACE POSITIONS

CHOOSE BETWEEN THE HORIZONTAL
OR VERTICAL (i) FORMATS

CONTROLLERS DEVELOPED WITH BUTTONS AND
INTERFACES FOR COMPLETELY CUSTOMIZABLE FUNCTIONS

POWER SWITCH

VENTILATION KNOBS
3 speed 16A@12V AND 10A@24V
4 speed 25A@12V AND 15A@24V
* Not available in Neo 3 Plus central position

POTENTIOMETER / ENCODER

POTENTIOMETER WITH 22, 10, 5 OR 3 POSITIONS
Central button available

ENCODER WITH CENTRAL BUTTON
Dynamic RGB button available

DISPLAY

OLED GRAPHIC DISPLAY 128x64px
Horizontal and vertical position available

CIRCULAR OLED GRAPHIC DISPLAY 128x128px
Customized operation screen

2 DIGITS / 7 SEGMENTS LED DISPLAY
4 button keyboard
2 status LEDs available

BUTTONS

5 BUTTON KEYBOARD
4 status LEDs available

2 INDIVIDUAL BUTTONS
6 status LEDs available

Present a not yet available function and Globus will analyze its development

FUNCTIONS UNDER REQUEST

WI-FI

BLUETOOTH

CELL PHONE INTERFACE

CAN BUS

REMOTE I/O NETWORK

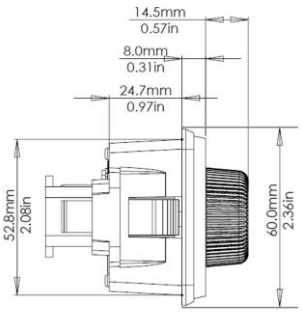
DATA LOGGER

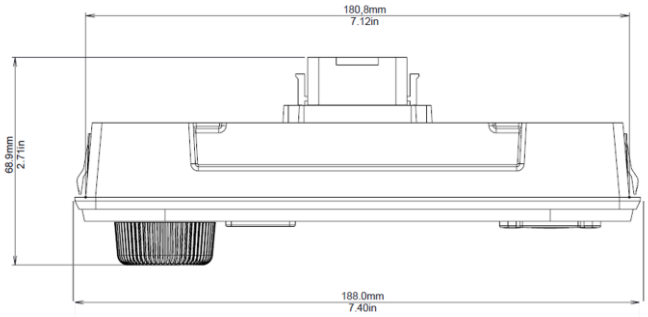
CUSTOMIZABLE INTERFACES

HMI

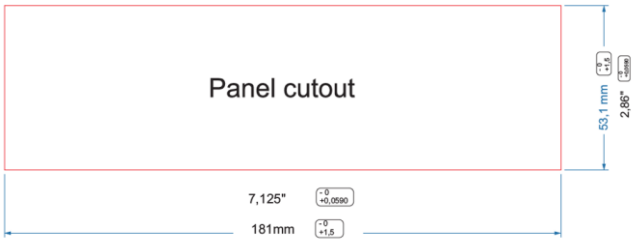
OEM

HVAC + R





Approximated weight: 465g



CONNECTORS

3 SPEED POWER SWITCH
Part Number: 754C3
Manufacturer: Koch Sales

4 SPEED POWER SWITCH
Part Number: 12110047
Manufacturer: Delphi

MATE-N-LOK 15 ways
Part Number: 1-480710 - 0
Terminal - PN: 350689-3
Manufacturer: Tyco Electronics

TECHNICAL DATA	
OPERATING VOLTAGE	12 VDC / 24 VDC
OPERATING VOLTAGE RANGE	10 VDC to 30 VDC
MAXIMUM VOLTAGE	32 VDC during 5 min
MAXIMUM CURRENT PER OUTPUT	500mA/5A *
OUTPUT SHORT-CIRCUIT	Protected *
REVERSE POLARITY	Protected *
OPERATING TEMPERATURE RANGE	-40°C to +85°C /-40°F to +185°F
STORAGE TEMPERATURE	-40°C to +125°C /-40°F to +257°F
TEMPERATURE SENSOR	NTC - See individual product description
FRONTAL PROTECTION DEGREE	IP 54
COMMUNICATION	One Wire / CAN Bus
MAXIMUM CURRENT CONSUMPTION (NEO2 Plus)	55mA @ 12 VDC / 30mA @ 24 VDC **
MAXIMUM CURRENT CONSUMPTION (NEO3 Plus)	80mA @ 12 VDC / 40mA @ 24 VDC **
STANDBY CONSUMPTION	10mA @ 12 VDC / 20mA @ 24 VDC **

* According to product configuration. ** Consumption may vary according to customer specifications.
We keep the right to update or change information regarding products without prior notice.

OEM

HVAC + R

NEO 3 PLUS

OLED Display, backlit buttons and symbols

CUSTOMIZABLE CLIMATIZATION CONTROL*

- Innovative Design
- Backlit symbols and buttons
- Customer logo on the panel (optional)
- Screwless installation
- Designed for heavy-duty applications
- Up to 8 function buttons
- Up to 10 indication LEDs
- Standard DIN radio size

OEM

HVAC

NEO 3i PLUS

For the vertical mounting option

FLEXIBLE AND CUSTOMIZABLE HVAC CONTROLLER*

- Innovative Design
- Backlit symbols and buttons
- Customer logo on the panel (optional)
- Screwless installation
- Standard DIN radio size
- Designed for heavy-duty applications

*Concept product, under request

PRODUCT CONFIGURATION

Choose the best options for your system

PIN	NEO 3 PLUS | POSSIBLE CONFIGURATIONS | HARDWARE 1									
1	POWER SUPPLY	OR	--	OR	--	OR	--	OR	--	
2	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H1	OR	PWM OUTPUT	OR	--	
3	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR		OR	PWM OUTPUT	OR	--	
4	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H2	OR	PWM OUTPUT	OR	CAN L	
5	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR		OR	PWM OUTPUT	OR	CAN H	
6	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	PWM OUTPUT	OR	DIGITAL OUTPUT POSITIVE 5A	OR	--	
7	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	PWM OUTPUT	OR	DIGITAL OUTPUT POSITIVE 5A	OR	ONE WIRE	
8	GND	OR	--	OR	--	OR	--	OR	--	
9	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--	OR	--	
10	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--	OR	--	
11	GND	OR	--	OR	--	OR	--	OR	--	
12	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--	OR	--	
13	GND	OR	--	OR	--	OR	--	OR	--	
14	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--	OR	--	
15	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--	OR	--	

PRODUCT CONFIGURATION

PIN CN1	NEO 3 PLUS | POSSIBLE CONFIGURATIONS | HARDWARE 2									
1	POWER SUPPLY	OR	--	OR	--	OR	--	OR	--	
2	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H1	OR	PWM OUTPUT	OR	--	
3	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR		OR	PWM OUTPUT	OR	--	
4	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H2	OR	PWM OUTPUT	OR	CAN L	
5	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR		OR	PWM OUTPUT	OR	CAN H	
6	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	PWM OUTPUT	OR	DIGITAL OUTPUT POSITIVE 5A	OR	--	
7	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	PWM OUTPUT	OR	DIGITAL OUTPUT POSITIVE 5A	OR	--	
8	GND	OR	--	OR	--	OR	--	OR	--	
9	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--	OR	--	
10	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--	OR	--	
11	GND	OR	--	OR	--	OR	--	OR	--	
12	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--	OR	--	
13	GND	OR	--	OR	--	OR	--	OR	--	
14	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--	OR	--	
15	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--	OR	--	

PIN CN2							
1	POWER SUPPLY	OR	--	OR	--	OR	--
2	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H3	OR	PWM OUTPUT
3	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR		OR	PWM OUTPUT
4	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H4	OR	PWM OUTPUT
5	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR		OR	PWM OUTPUT
6	GND	OR	--	OR	--	OR	--
7	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	PWM OUTPUT	OR	--
8	GND	OR	--	OR	--	OR	--
9	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--
10	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--
11	DIGITAL OUTPUT POSITIVE 0.5A	OR	--	OR	--	OR	--
12	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	PWM OUTPUT	OR	ONE WIRE
13	GND	OR	--	OR	--	OR	--
14	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H5	OR	PWM OUTPUT
15	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR		OR	PWM OUTPUT

OBS.: It is possible to install potentiometers instead of power switches.

GLOBUS
Electronics

Av.Pernambuco, 106 | Navegantes | Porto Alegre | Brasil
Fone: +55 51 3205 0555

Phone: +1 754 600 9882

www.globuselectronics.com