

PRODUCT CATALOG
2023



Globus
Electronics

CAT0001 CATÁLOGO DE PRODUTOS_ING REV.2



TECHNOLOGY, COMFORT AND CONNECTIVITY
IN CUSTOM ELECTRONIC CONTROL SOLUTIONS

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ABOUT **Globus** Electronics

Since 1998, Globus Electronics develops, manufactures and sells controllers and electronic devices to the B2B market. The company operates in the areas of Automotive and Industrial Automation.

Globus Electronics is the market leader in controllers for large vehicles, and globally recognized for its efficiency and quality in intelligent solutions for the refrigeration and HVAC market. But our portfolio is much bigger than that!

With excellent cost-benefit ratio, our solutions in intelligent control are used in applications for commercial vehicles, aircraft, boats, vans, buses, trucks, motorhomes, trains, ambulances, rescue vehicles, agricultural and construction machines, enabling monitoring and data management of your fleet.

CUSTOMIZATION IS OUR DIFFERENTIAL.

Our focus is quality, technology and flexibility, allied to excellence in customer service. Visit globuselectronics.com and get to know the possibilities of controls for the most diverse applications.





WE SUPPLY TO MORE THAN 40 COUNTRIES ON 5 CONTINENTS

Taking technology from Brazil to the world for 25 years!

OUR MISSION:

To make people's lives easier by means of technological solutions, providing comfort, practicality and economy, with the commitment to protect the environment.





CONNECTIVITY AND MONITORING FOR FLEET TRACKING



GLOBUS
CONNECT
SYSTEM



CLOUD
STORAGE



MANAGEMENT
SYSTEM



CONTROL PANELS

NEO

OEM

HVAC

CABIN / MUX



NEO 1



NEO 2



NEO 3

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

AVAILABLE FOR



CONTROLLERS DEVELOPED WITH BUTTONS AND INTERFACES FOR COMPLETELY CUSTOMIZABLE FUNCTIONS

CHOOSE BETWEEN THE HORIZONTAL OR VERTICAL (i) FORMATS

INTERFACE POSITIONS



NEO1



NEO2



NEO3



NEO2t



NEO3t

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

22 or 10 positions
Hot & Cold | Cold | Hot | Setpoint



AIR DIRECTION

3 or 5 positions
Flap Positions



BUTTONS

2 INDIVIDUAL BUTTONS

6 status LEDs

* for Potentiometer knob it is possible to include function button



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

CONFIGURATION 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



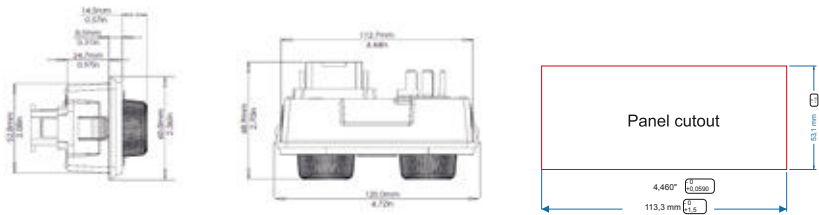
TECHNICAL DATA

NEO1



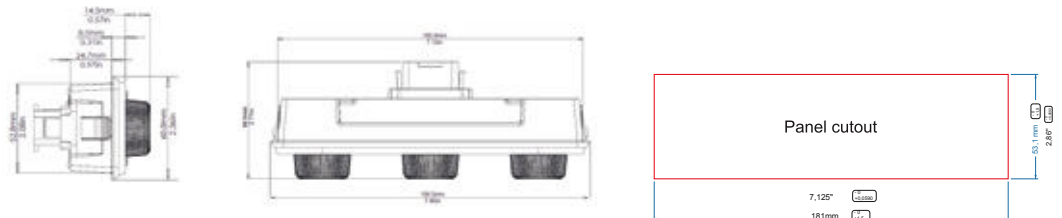
Approximated weight: 80g

NEO2



Approximated weight: 175g

NEO3



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	
TUBULAR > NEO1 - NO POWER KEY	25mA @ 12 VDC / 32mA @ 24 VDC
TUBULAR > NEO1 - WITH POWER KEY - MIN BRIGHTNESS	5,5mA @ 12 VDC / 16,5mA @ 24 VDC
TUBULAR > NEO1 - WITH POWER KEY - MAX BRIGHTNESS	12mA @ 12 VDC / 36mA @ 24 VDC
TUBULAR > NEO2	40mA @ 12 VDC / 20mA @ 24 VDC **
TUBULAR > 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.

NEO 1 VENTILATION

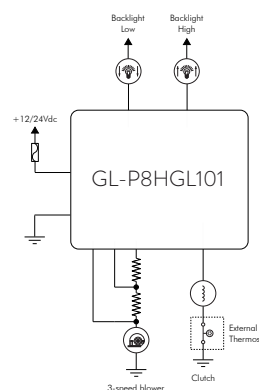
OEM
HVAC

Allows for the practical fan speed or temperature adjustment.
Easy installation and excellent cost benefit ratio.

FAN SPEED CONTROLLER

GL-P8HGL101

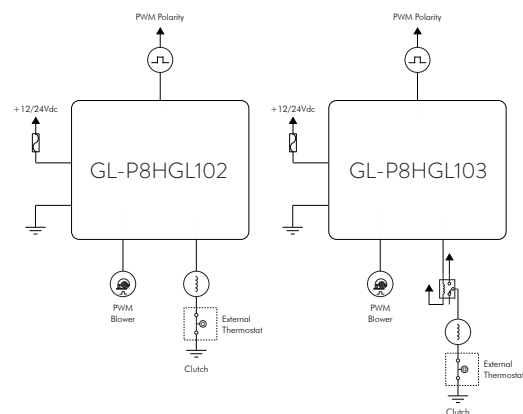
- 3-speed evaporator power switch
16A@12V and 10A@24V
- Dimmer input
- Ventilation ON output – 4A@12V
and 2.5A@24V (clutch)



PWM FAN SPEED CONTROLLER

GL-P8HGL102 / GL-P8HGL103

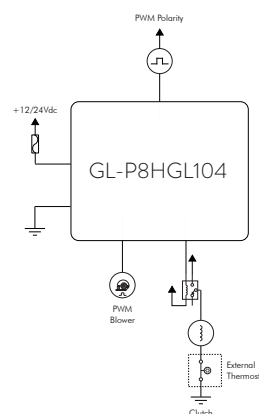
- 9-speed PWM Fan speed signal
- PWM reversing
- 5A positive clutch output (GL-P8HGL102)
- 500mA negative clutch output (GL-P8HGL103)
- A/C Key



PWM FAN SPEED CONTROLLER

GL-P8HGL104

- 9-speed PWM Fan speed signal
- PWM reversing
- Ventilation ON output – negative 500mA
(clutch)

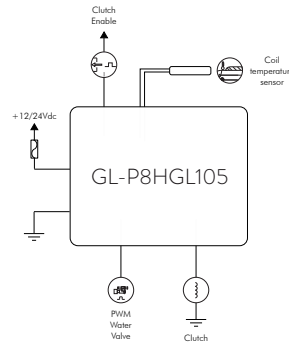


NEO 1 TEMPERATURE

PWM TEMPERATURE CONTROLLER

GL-P8HGL105

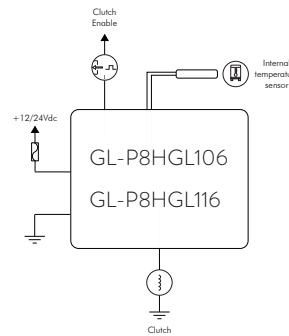
- Coil temperature sensor
- Enable compressor input
- 5A positive clutch output
- PWM hot water valve signal
- A/C button
- Diagnostic LED



COMPRESSOR CYCLING TEMPERATURE CONTROLLER

GL-P8HGL106 (Celsius scale) /
GL-P8HGL116 (Fahrenheit scale)

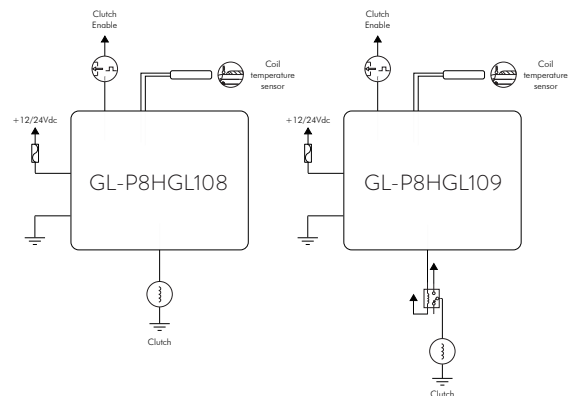
- Return temperature sensor
- Enable compressor input
- 5A positive clutch output
- A/C button
- Diagnostic LED



COMPRESSOR CYCLING TEMPERATURE CONTROLLER

GL-P8HGL108 /GL-P8HGL109

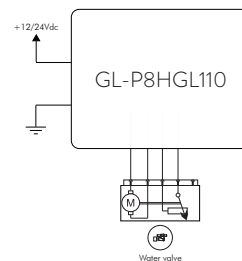
- Coil temperature sensor
- Enable compressor input
- 5A positive clutch output
- GL-P8HGL108
- 500mA negative clutch output
- GL-P8HGL109
- A/C button
- Diagnostic LED



PROPORTIONAL TEMPERATURE CONTROLLER

GL-P8HGL110

- Proportional hot water valve (H-Bridge)
- Valve feedback input
- Diagnostic LED



Customization and flexibility are some of Globus' differentials. We adapt our products according to the needs of our customers. Check below our hardware configuration possibilities.

Choose the best options for your system

PIN	NEO 1 POSSIBLE CONFIGURATIONS - HARDWARE 1										
1	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 5A (*)	OR	PWM OUTPUT	OR	ANALOG OUTPUT (**)	OR	--	OR	--
2	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H1	OR	ONE WIRE	OR	ANALOG INPUT	OR	DIGITAL INPUT
3	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--	OR	--	OR	--
4	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H1	OR	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
5	GND	OR	--	OR	--	OR	--	OR	--	OR	--
6	POWER SUPPLY	OR	--	OR	--	OR	--	OR	--	OR	--

(*) WITH PCI AUXILIAR AUXP8HGL101 / (**) WITH PCI AUXILIAR AUXP8HGL102

PIN	NEO 1 POSSIBLE CONFIGURATIONS - HARDWARE 2		
1	POTENTIOMETER OUTPUT (MAX RESISTANCE PIN - CW)	OR	(*)
2	POTENTIOMETER OUTPUT (CENTER PIN)	OR	(*)
3	GND	OR	(*)
4	MAX BACKLIGHT	OR	--
5	GND	OR	--
6	MIN BACKLIGHT	OR	--

PIN	NEO 1 POSSIBLE CONFIGURATIONS - HARDWARE 3
1	DIGITAL OUTPUT POSITIVE 5A
2	INPUT FOR ENABLE OUTPUT (TURN ON)
3	GND
4	BACKLIGHT
5	GND
6	POWER SUPPLY

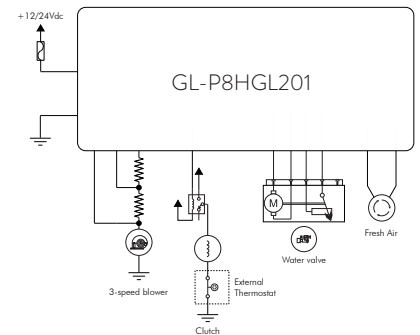
(*) The potentiometer is not mounted when the power switch is used.

Many fan speed and temperature control adjustment options

3-SPEED VENTILATION AND PROPORTIONAL TEMPERATURE CONTROLLER

GL-P8HGL201

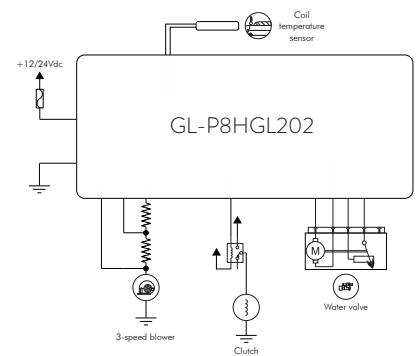
- 3-Speed evaporator power switch 16A@12V and 10A@24V
- Proportional hot water valve control
- Fresh Air output
- 500mA negative clutch output
- Fresh Air button
- A/C button
- Diagnostic LED



3-SPEED VENTILATION AND PROPORTIONAL TEMPERATURE BY COMPRESSOR CYCLING CONTROLLER

GL-P8HGL202

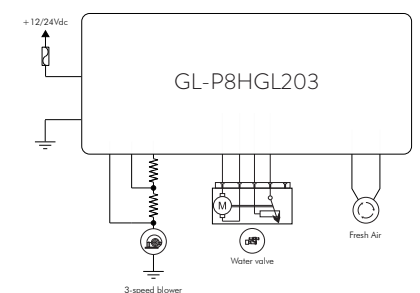
- 3-Speed evaporator power switch 16A@12V and 10A@24V
- Proportional hot water valve control
- Coil temperature sensor
- 500mA negative clutch output
- A/C button
- Diagnostic LED



3 SPEED VENTILATION AND HEATING CONTROL WITH FRESH AIR BUTTON

GL-P8HGL203

- 3-Speed evaporator power switch 16A@12V and 10A@24V
- Proportional hot water valve control
- Fresh Air output
- Diagnostic LED

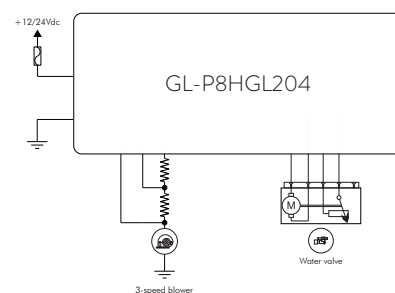


Many fan speed and temperature control adjustment options

3 SPEED VENTILATION AND HEATING CONTROL

GL-P8HGL204

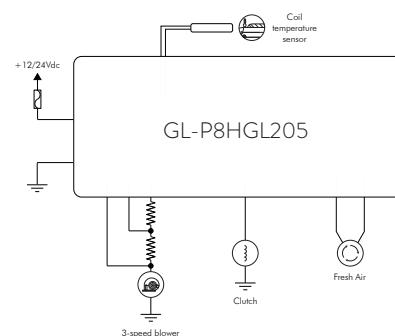
- 3-Speed evaporator power switch
16A@12V and 10A@24V
- Proportional hot water valve control
- Diagnostic LED



FAN SPEED AND TEMPERATURE CONTROL BY COMPRESSOR CYCLING

GL-P8HGL205

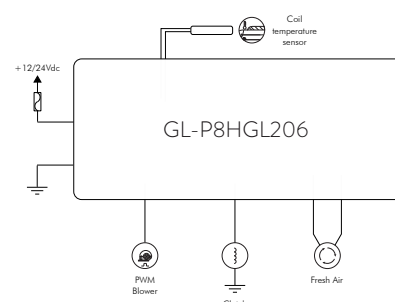
- 3-Speed evaporator power switch
16A@12V and 10A@24V
- Coil temperature sensor
- Fresh Air output
- 5A Positive clutch output
- A/C button
- Fresh Air button
- Diagnostic LED



PWM FAN SPEED AND TEMPERATURE CONTROL BY COMPRESSOR CYCLING

GL-P8HGL206

- 9-Speed PWM Fan speed signal
- Coil temperature sensor
- Fresh Air output
- 5A Positive clutch output
- A/C button
- Fresh Air button
- Diagnostic LED

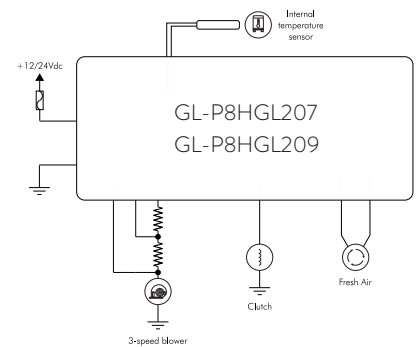


Many fan speed and temperature control adjustment options

3-SPEED VENTILATION AND TEMPERATURE BY COMPRESSOR CYCLING CONTROLLER

GL-P8HGL207 (Celsius scale) /
GL-P8HGL209 (Fahrenheit scale)

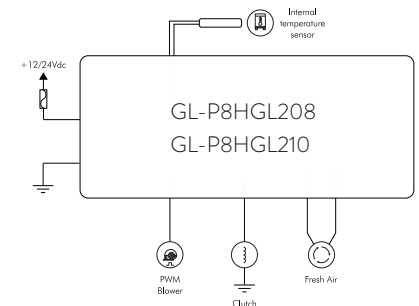
- 3-Speed evaporator power switch 16A@12V and 10A@24V
- Return temperature sensor
- Fresh Air output
- 5A Positive clutch output
- A/C button
- Fresh Air button
- Diagnostic LED



PWM FAN SPEED AND TEMPERATURE CONTROL BY COMPRESSOR CYCLING

GL-P8HGL208 (Celsius scale) /
GL-P8HGL210 (Fahrenheit scale)

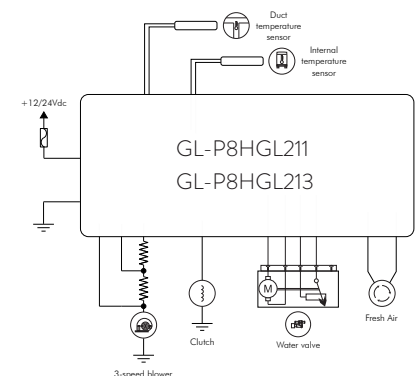
- 8-Speed PWM Fan speed signal
- Return temperature sensor
- Fresh Air output
- 5A Positive clutch output
- A/C button
- Fresh Air button
- Diagnostic LED



DOUBLE PID 3-SPEED VENTILATION AND TEMPERATURE CONTROL

GL-P8HGL211 (Celsius scale) /
GL-P8HGL213 (Fahrenheit scale)

- 3-Speed evaporator power switch 16A@12V and 10A@24V
- Proportional hot water valve control
- Return temperature sensor
- Duct temperature sensor
- Fresh Air output
- 5A Positive clutch output
- A/C button
- Fresh Air button
- Diagnostic LED





VENTILATION and TEMPERATURE

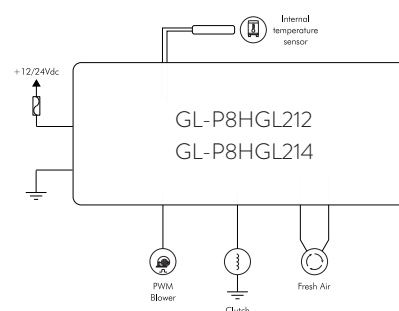
- OEM
- HVAC

Many fan speed and temperature control adjustment options

DOUBLE PID PWM VENTILATION AND TEMPERATURE CONTROL

GL-P8HGL212 (Celsius scale) /
GL-P8HGL214 (Fahrenheit scale)

- 8-Speed PWM Fan speed signal
- Proportional hot water valve control
- Return temperature sensor
- Duct temperature sensor
- Fresh Air output
- 5A Positive clutch output
- A/C button
- Fresh Air button
- Diagnostic LED

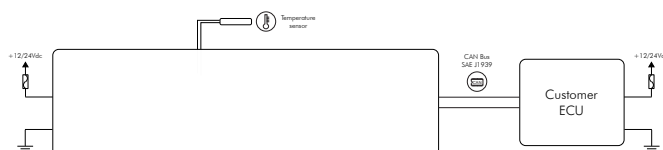


- OEM
- HVAC

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

VENTILATION AND TEMPERATURE CONTROL*

- HMI – Human Machine Interface
- CAN Bus communication with ECU
- Knob position reading
- Button status reading
- LED status writing
- Up to 4 function buttons
- Up to 6 indication LEDs

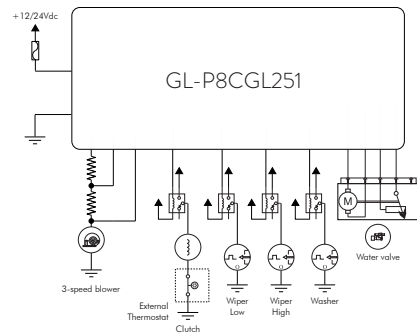


Option for vertical installation

3-SPEED VENTILATION, PROPORTIONAL TEMPERATURE, WINDSHIELD WIPER AND WIPER NOZZLES CONTROLLER

GL-P8CGL251

- 3-Speed evaporator power switch 16A@12V and 10A@24V
- Proportional hot water valve control
- Windshield Wiper, 2 speeds 500mA
- Washer output (500mA)
- Negative clutch output (500mA)
- A/C button
- Frontal nozzle button
- Back wiper button
- Diagnostic LED



Choose the best options for your system

PIN	NEO 2 POSSIBLE CONFIGURATIONS HARDWARE 1
1	POWER SUPPLY
2	--
3	N.O. A/C KEY – 10A
4	BLOWER POTENTIOMETER OUTPUT (CENTER PIN)*
5	BLOWER POTENTIOMETER OUTPUT (MAX RESISTANCE PIN - CW)*
6	BLOWER POTENTIOMETER OUTPUT (MIN RESISTANCE PIN - CW)*
7	--
8	GND
9	POWER A/C KEY – 10A
10	VALVE POTENTIOMETER OUTPUT (CENTER PIN)
11	VALVE POTENTIOMETER OUTPUT (MAX RESISTANCE PIN - CW)
12	VALVE POTENTIOMETER OUTPUT (MIN RESISTANCE PIN - CW)
13	POWER DEF KEY – 10A
14	N.O. DEF KEY – 10A
15	--

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

OBS.1: It is possible to install potentiometers instead of power switches.

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

OBS.2: It is possible to install another on/off switch in the logo position.

PIN	NEO 2 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
3	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H1	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	BRIDGE H2	OR	PWM OUTPUT
6	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	PWM OUTPUT	OR	--
7	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	PWM OUTPUT	OR	DIGITAL OUTPUT POSITIVE 5A
8	GND	OR	--	OR	--	OR	--
9	DIGITAL INPUT	OR	--	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	--	OR	--
15	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--

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

NEO 2 POSSIBLE CONFIGURATIONS - HARDWARE 4									
1	POWER SUPPLY	OR	--	OR	--	OR	--	OR	--
2	CENTER POTENTIOMETER BLOWER	OR	--	OR	--	OR	--	OR	--
3	MAX POTENTIOMETER BLOWER	OR	--	OR	--	OR	--	OR	--
4	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H1	OR	PWM OUTPUT	OR	--
5	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR		OR	DIGITAL OUTPUT POSITIVE 5A	OR	PWM OUTPUT
6	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H2	OR	DIGITAL OUTPUT POSITIVE 5A	OR	PWM OUTPUT
7	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR		OR	PWM OUTPUT	OR	--
8	GND	OR	--	OR	--	OR	--	OR	--
9	FLAP POTENTIOMETER OUTPUT (CENTER PIN)	OR	--	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	FLAP POTENTIOMETER OUTPUT (MAX RESISTANCE PIN - CW)	OR	--	OR	--	OR	--	OR	--
15	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--	OR	--

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

NEO 2 POSSIBLE CONFIGURATIONS - HARDWARE 5									
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	--
6	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	PWM OUTPUT	OR	--	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	CAN L	OR	--	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	CAN H	OR	--	OR	--	OR	--	OR	--
15	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--	OR	--

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

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

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



VENTILATION, TEMPERATURE
and AIR DIRECTION

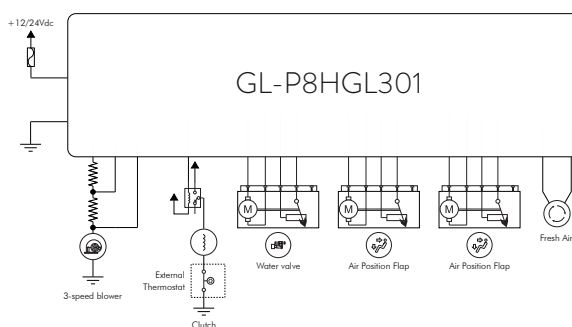
- OEM
- HVAC

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

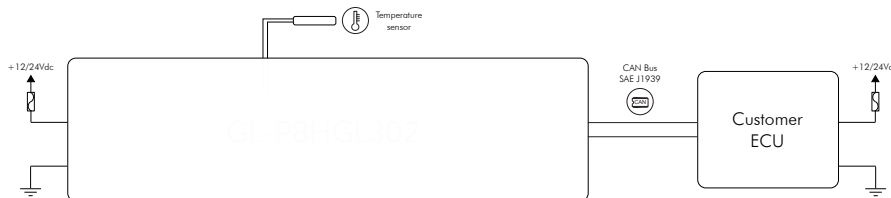


CABIN / MUX

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

VENTILATION, PROPORTIONAL TEMPERATURE
AND AIR DIRECTION CONTROLLER*

- 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

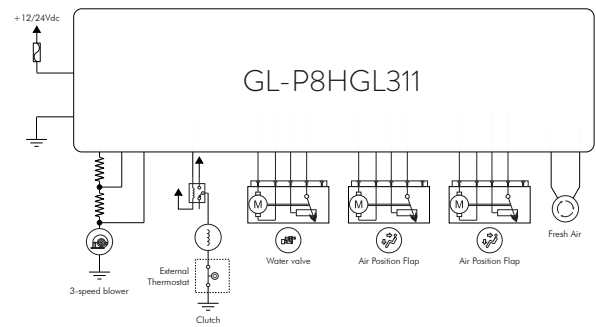


For vertical mounting option

3-SPEED 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



Choose the best options for your system

NEO 3 POSSIBLE CONFIGURATIONS - HARDWARE 1							
PIN CN1							
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 potentiometers instead of power switches.

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

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

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

OEM

HVAC + R

CABIN / MUX



NEO1 PLUS



NEO2 PLUS



NEO3 PLUS

MAIN FUNCTIONS

REFRIGERATION

HEATING

VENTILATION

AIR DIRECTION

MULTIPLEX

CABIN CONTROL

CHARACTERISTICS

- Innovative design
- Dynamic RGB backlight
- Available as HMI - Human Machine Interface (CAN Bus)
- Function Hourmeters

- Graphic 128x64px OLED Display
- Circular Graphic 128x128px OLED Display
- Operation Screen with client logo
- 10 selectable languages via menu



Ventilation function active



Heating function active



Cooling function active

AVAILABLE FOR



CHOOSE BETWEEN HORIZONTAL OR VERTICAL (i) FORMATS

INTERFACE POSITIONS



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

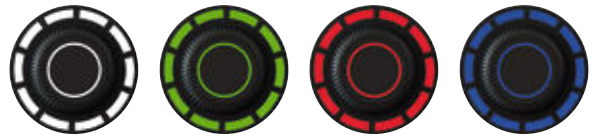


POTENTIOMETER / ENCODER

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



ENCODER WITH CENTRAL BUTTON
Dynamic RGB backlight available



DISPLAY

OLED GRAPHIC DISPLAY 128x64px
Horizontal and vertical positions available



CIRCULAR OLED GRAPHIC DISPLAY 128x128px
Customized operation screen



2-DIGIT 7-SEGMENT LED DISPLAY
4-button keyboard
2 status LEDs available



BUTTONS

5-BUTTON KEYBOARD
4 status LEDs available



2 INDIVIDUAL BUTTONS
6 status LEDs available



* for Potentiometer / Encoder knob you can include function button

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



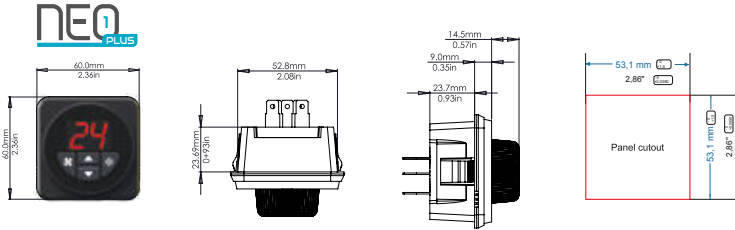
HMI



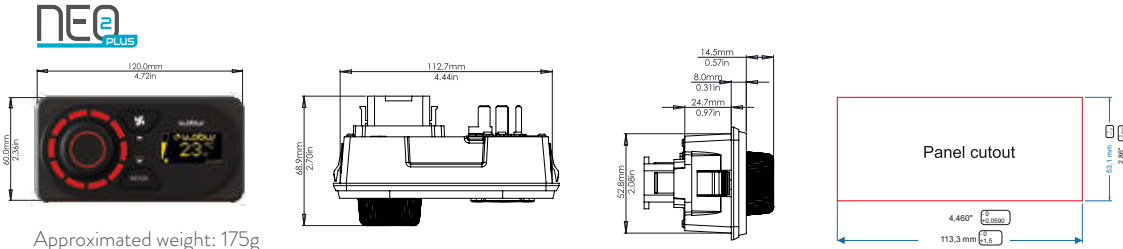
TECHNICAL DATA

OEM

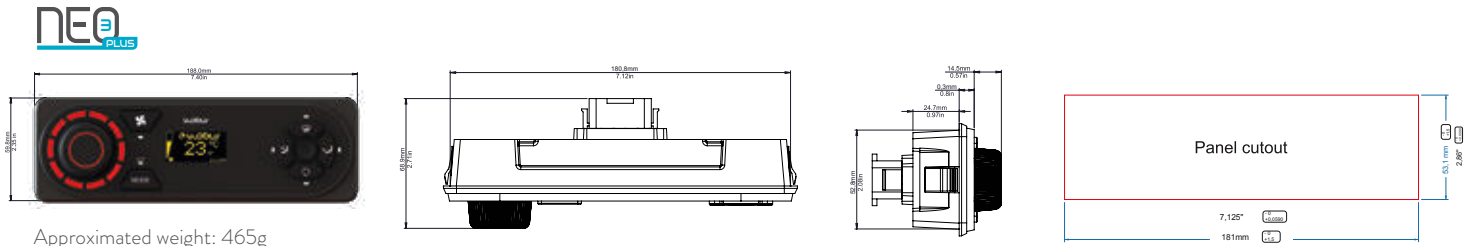
HVAC + R



Approximated weight: 80g



Approximated weight: 175g



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.

NEO 2 PLUS

OEM

HVAC + R

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 6 indication LEDs



OEM

HVAC + R

CABIN / MUX

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

COMPLETELY CUSTOMIZABLE HMI*

- HMI – Human Machine Interface
- CAN Bus Communication with ECU
- Knob Position Reading
- Button Status Reading
- LEDs status writing
- Display Writing
- Up to 3 buttons
- Up to 6 indication LEDs



Vertical mounting option

FLEXIBLE AND CUSTOMIZABLE CONTROL FOR HVAC*

- Innovative Design
- Backlit symbols and buttons
- Customer logo on the panel (optional)
- Screwless installation
- Designed for heavy-duty applications
- Up to 6 indication LEDs
- Vertical position installation



PRODUCT CONFIGURATION

Choose the best options for your system

PIN	NEO 2 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	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--	OR	--	
5	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	PWM OUTPUT	OR	DIGITAL OUTPUT POSITIVE 5A	OR		
6	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	PWM OUTPUT	OR	DIGITAL OUTPUT POSITIVE 5A	OR	ONE WIRE	
7	GND	OR	--	OR	--	OR	--	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	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	PWM OUTPUT	OR	ANALOG INPUT	OR	DIGITAL INPUT	
14	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H2	OR	PWM OUTPUT	OR	CAN L	
15	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR		OR	PWM OUTPUT	OR	CAN H	



PRODUCT CONFIGURATION

NEO 2 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	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	--



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 buttons
- Up to 10 indication LEDs
- Standard DIN radio size



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





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	--



NEO 3 PLUS POSSIBLE CONFIGURATIONS HARDWARE 2									
PIN CN1									
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	--	OR	--
2	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H3	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 H4	OR	PWM OUTPUT	OR	--
5	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR		OR	PWM OUTPUT	OR	--
6	GND	OR	--	OR	--	OR	--	OR	--
7	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	PWM OUTPUT	OR	--	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	DIGITAL OUTPUT POSITIVE 0.5A	OR	--	OR	--	OR	--	OR	--
12	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	PWM OUTPUT	OR	ONE WIRE	OR	--
13	GND	OR	--	OR	--	OR	--	OR	--
14	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H5	OR	PWM OUTPUT	OR	--
15	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR		OR	PWM OUTPUT	OR	--

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

NEO



THE MOST COMPLETE LINE
OF CONNECTIVITY SOLUTIONS KEEPS
GROWING AND INNOVATING.

MORE NEWS COMING SOON!



FOX

OEM

HVAC + R

CABIN / MUX



FOX



FOX
OLED DISPLAY



FOX
OLED DISPLAY CABIN



FOX
OLED DISPLAY CAN

MAIN FUNCTIONS

REFRIGERATION

CLIMATIZATION

CABIN CONTROL

MULTIPLEX

CHARACTERISTICS

- Available as HMI - Human Machine Interface (CAN Bus)
- Highly customizable
- Personalized button symbols
- Customer logo on display
- Individual multicolored indicators
- Backlit 13-button rubber keyboard
- RTC (Real Time Clock) with battery
- Function hourmeters
- Robust automotive connector
- OLED Graphic Display 128x64px
- Diagnostics menu
- Data logger
- Two temperature scales (°F or °C)
- 10 selectable languages via menu
- Bluetooth and Wi-Fi modules available

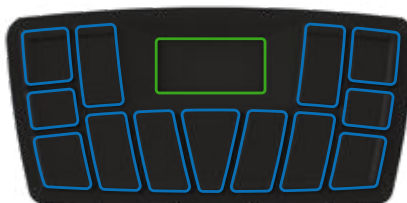
AVAILABLE FOR



MODERN AND ROBUST LINE OF CONTROLLERS DESIGNED TO PROVIDE THE MOST COMFORT TO THE USER

ALL FUNCTIONS ARE COMPLETELY CUSTOMIZABLE

- BUTTON POSITIONS
- OLED GRAPHIC DISPLAY



FOX

DISPLAY

- OLED GRAPHIC DISPLAY 128x64px
- Logo on display
- 10 Languages
- °F and °C scales available



BUTTONS

- PERSONALIZED 13-BUTTON KEYBOARD
- Personalized button symbols
- Intelligent function lights
- Backlight
- Individual multicolored indicators



DISPLAY EXAMPLES

Menu



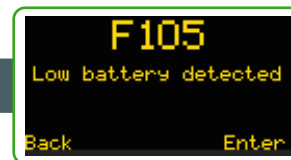
Function Pop-up



Hourmeters



Failure Description



CONFIGURATION OPTIONS

INPUTS / OUTPUTS: See product configuration table

COMMUNICATION: CAN Bus, Remote I/O network (through ECU), One Wire, Telematics

FUNCTIONS UNDER REQUEST



WI-FI



BLUETOOTH



CELL PHONE INTERFACE



CAN BUS



REMOTE I/O NETWORK



DATA LOGGER



CUSTOMIZABLE INTERFACES



HMI



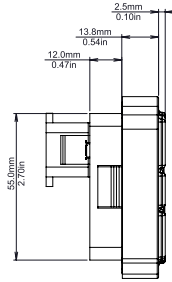
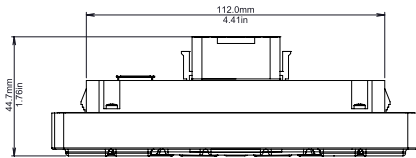
TECHNICAL DATA

FOX

OEM

HVAC + R

CABIN / MUX



SUGGESTED PANEL CUT OUT:
MINIMUM THICKNESS = 1,0 mm [0,039 in]
MAXIMUM THICKNESS = 3,0 mm [0,118 in]

Approximated weight: 160g

CONNECTORS



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
OPERATION VOLTAGE RANGE	10 VDC to 30 VDC
MAXIMUM VOLTAGE	32 VDC during 5 min
MAXIMUM CURRENT PER OUTPUT	500mA
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 +85°C / -40°F to +185°F
TEMPERATURE SENSOR	NTC - 10k @ 25°C / 77°F
FRONTAL PROTECTION DEGREE	IP 54
COMMUNICATION	CAN-SAE J1939 / One Wire
MAXIMUM CURRENT CONSUMPTION	120 to 150mA *
STANDBY CONSUMPTION	50 to 100 mA *

* Consumption in stand by mode may vary depending on client specifications.
We keep the right to update or change information regarding products without prior notice

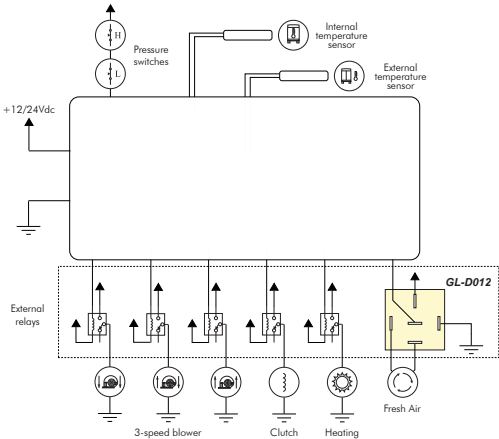
RUBBER KEYBOARD, ROBUST AND CONFIGURABLE CONTROLLER CONCEPT*

- HMI (Human Machine Interface) allows button state reading and LED writing
- CAN Bus communication
- Highly customizable
- Control software developed by customer



HVAC+R CONTROLLER CONCEPT | RUBBER KEYBOARD AND OLED GRAPHIC DISPLAY*

- 3-speed evaporator fan
- Automatic heating and refrigeration modes
- Pressure switch input
- Return temperature sensor input
- External temperature sensor input
- Clutch relay output
- Heating relay output
- Fresh air output



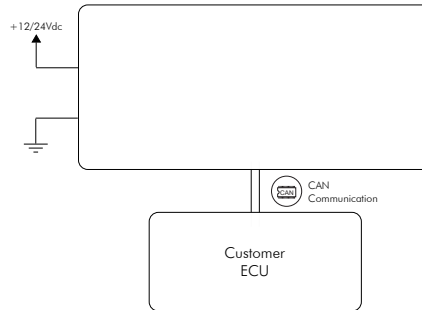


OEM

HVAC + R

HVAC+R CONTROLLER CONCEPT | RUBBERIZED AND OLED GRAPHIC DISPLAY*

- HMI (Human Machine Interface) allows button state reading and LED writing
- CAN Bus communication with ECU
- Control software developed by customer

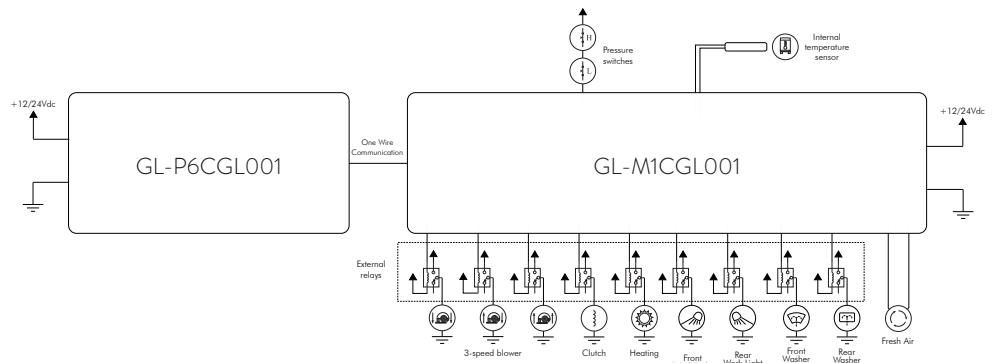


OEM

CABIN / MUX

HVAC+R CONTROLLER CONCEPT | RUBBERIZED AND OLED GRAPHIC DISPLAY
GL-P6CGL001+MICGL001

- 3-speed evaporator fan
- Front and rear wiper windshield washer
- Front and rear windshield wiper
- Front and rear work light
- Return temperature sensor input
- Pressure switch input
- Fresh Air output
- Clutch relay output
- Extension ECU (GL-M1CGL001)
- One Wire communication



Choose the best options for your system

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

TWISTER

OEM

HVAC

HVAC + R



TWISTER



EZ TWISTER

MAIN FUNCTIONS

REFRIGERATION

HEATING

VENTILATION

DEFROST

CHARACTERISTICS

- 6 backlit buttons
- Backlit graphic 128x96px display
- Available as HMI - Human Machine Interface (CAN Bus)
- Customizable parameters
- Failure indication on display
- Screwless installation

AVAILABLE FOR



PRACTICAL CONTROLLER LINE WITH BACKLIT DISPLAY, FACILITATING THE USE OF ITS FUNCTIONS

BUTTON POSITIONS

GRAPHIC DISPLAY



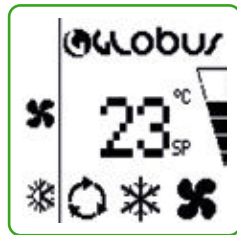
TWISTER



EZTWISTER

DISPLAY

GRAPHIC BACKLIT
DISPLAY 128x96px
Logo on display
°F and °C scales available
Diagnostic Menu
Parameter Adjustment



BUTTONS

6-BUTTON KEYBOARD
Custom functions
Backlight



FUNCTIONS UNDER REQUEST



WI-FI



BLUETOOTH



CELL PHONE
INTERFACE



CAN BUS



REMOTE I/O
NETWORK



DATA
LOGGER



CUSTOMIZABLE
INTERFACES

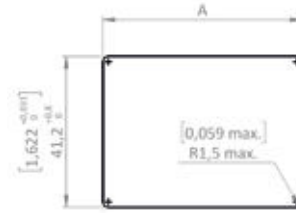
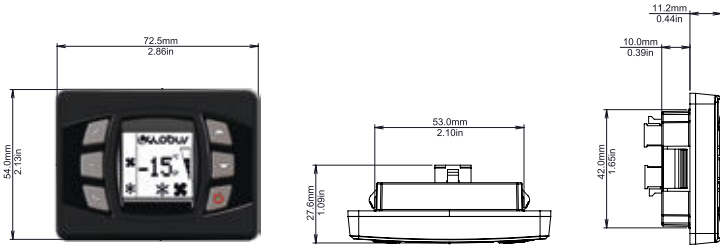


TECHNICAL DATA

TWISTER

OEM

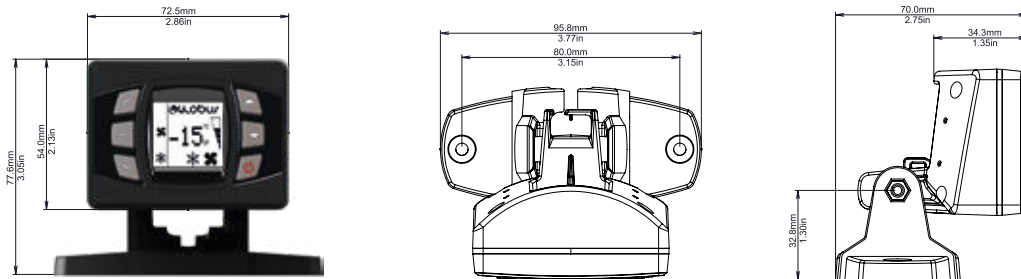
HVAC + R



SUGGESTED PANEL CUT OUT:
MINIMUM THICKNESS = 1,2 mm [0,047 in]
MAXIMUM THICKNESS = 3,0 mm [0,118 in]

Approximated weight: 60g

EZ TWISTER



Approximated weight: 115g

CONNECTORS



MICRO-FIT 6 ways
PN: 662006113322
Terminal - PN: 66210113722
Manufacturer: WÜRTH



MICRO-FIT 8 ways
PN: 662008113322
Terminal - PN: 66210113722
Manufacturer: WÜRTH

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
OUTPUT SHORT-CIRCUIT	Protected
REVERSE POLARITY	Protected
OPERATING TEMPERATURE RANGE	-30°C to +85°C / -22°F to +185°F
STORAGE TEMPERATURE	-40°C to +85°C / -40°F to +185°F
TEMPERATURE SENSOR	NTC 10K@25°C/77°F
FRONTAL PROTECTION DEGREE	IP 54
COMMUNICATION	N/A
MAXIMUM CURRENT CONSUMPTION	30mA *
STANDBY CONSUMPTION	10mA *

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



FLEXIBLE

EZ TWISTER



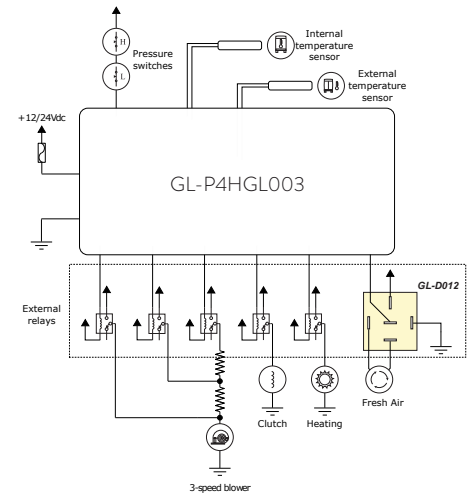
EASY INSTALLATION

TWISTER

AIR CONDITIONING CONTROL PANEL WITH GRAPHIC DISPLAY

GL-P4HGL003

- Refrigeration, heating and Auto Modes
- 3-speed fan, clutch, fresh air and heating output
- Return temperature sensor
- External temperature sensor
- Pressure Switch

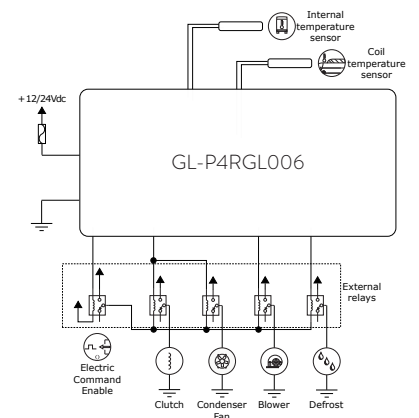


TWISTER

TRANSPORT REFRIGERATION CONTROL PANEL WITH GRAPHIC DISPLAY

GL-P4RGL006

- Defrosting Function configurable by time or temperature
- Evaporator output
- Compressor/Condenser output
- Return temperature sensor
- Coil temperature sensor
- Defrost output
- Electric command output Enable

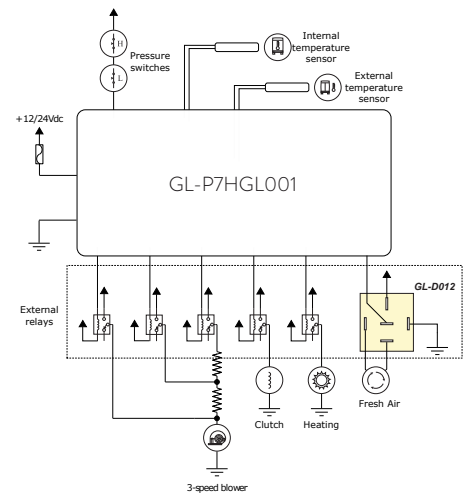




AIR CONDITIONING CONTROL PANEL WITH GRAPHIC DISPLAY

GL-P7HGL001

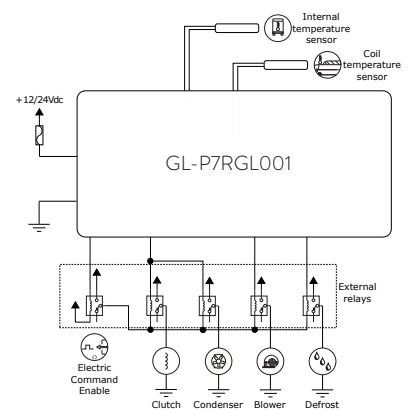
- Refrigeration, heating and Auto Modes
- 3-speed fan, clutch, fresh air and heating output
- Return temperature sensor
- External temperature sensor
- Pressure Switch



TRANSPORT REFRIGERATION CONTROL PANEL WITH GRAPHIC DISPLAY

GL-P7RGL001

- Defrosting Function configurable by time or temperature
- Evaporator output
- Compressor/Condenser output
- Return temperature sensor
- Coil temperature sensor
- Defrost output
- Electric command output enable



TWISTER | EZ TWISTER

PRODUCT CONFIGURATION

Choose the best options for your system

PIN CN1		TWISTER - EZ TWISTER POSSIBLE CONFIGURATIONS - HARDWARE 1			
1	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	OR	--
2	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	--
3	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	OR	--
4	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	OR	--
5	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	--
6	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	OR	--
PIN CN2					
1	POWER SUPPLY 5V - TRANSDUCER	OR	--	OR	--
2	GND	OR	--	OR	--
3	GND	OR	--	OR	--
4	GND	OR	--	OR	--
5	DIGITAL INPUT	OR	ANALOG INPUT	OR	ONE WIRE
6	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
7	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
8	POWER SUPPLY	OR	--	OR	--

PIN CN1		TWISTER - EZ TWISTER POSSIBLE CONFIGURATIONS - HARDWARE 2			
1	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	OR	--
2	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	OR	--
3	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
4	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	--
5	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	--
6	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
PIN CN2					
1	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	--
2	GND	OR	--	OR	--
3	GND	OR	--	OR	--
4	GND	OR	--	OR	--
5	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	ONE WIRE
6	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
7	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
8	POWER SUPPLY	OR	--	OR	--



TWISTER | EZ TWISTER

PRODUCT CONFIGURATION

PIN	TWISTER - EZ TWISTER POSSIBLE CONFIGURATIONS - HARDWARE 3				
1	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	OR	--
2	GND	OR	--	OR	--
3	GND	OR	--	OR	--
4	GND	OR	--	OR	--
5	DIGITAL INPUT	OR	ANALOG INPUT	OR	ONE WIRE
6	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
7	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
8	POWER SUPPLY	OR	--	OR	--

Note: Buzzer inside of panel.

PIN	TWISTER - EZ TWISTER POSSIBLE CONFIGURATIONS - HARDWARE 4				
1	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	--
2	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
3	GND	OR	--	OR	--
4	GND	OR	--	OR	--
5	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	ONE WIRE
6	CAN L	OR	--	OR	--
7	CAN H	OR	--	OR	--
8	POWER SUPPLY	OR	--	OR	--

PIN	TWISTER - EZ TWISTER POSSIBLE CONFIGURATIONS - HARDWARE 5				
1	POWER SUPPLY				
2	GND				
3	POWER SUPPLY FOR RTC				
4	CAN L				
5	ONE WIRE				
6	CAN H				



BASIC

OEM

HVAC + R

CABIN / MUX



BASIC

BASIC
LITE

BASIC
CABIN

MAIN FUNCTIONS

REFRIGERATION

CLIMATIZATION

CABIN CONTROL

MULTIPLEX

CHARACTERISTICS

- Customizable functions
- Multifunction
- Function Hourmeters
- Available in vertical and horizontal versions
- Two temperature scales (°F or °C)
- Integrated or remote I/Os (ECU)
- Telematics through additional module
- Automotive connector
- One Wire Communication (optional)
- Customer logo on the panel (optional)

AVAILABLE FOR



TRADITIONAL AND MULTIFUNCTIONAL CONTROL PANEL. HIGH QUALITY AND LOW COST.

CHOOSE BETWEEN HORIZONTAL OR VERTICAL (i) FORMATS.



DISPLAY

- DIGITAL DISPLAY
- 2 digits (all)
- 3 digits (available in the i version)
- °F and °C scales available



BUTTONS

- 7, 9 OR 12-BUTTON KEYBOARD
- Multiple functions at your disposal in a single control panel
- Personalized button symbols
- Functions lights
- Backlight



CONFIGURATION OPTIONS

INPUTS: Analog and Digital

OUTPUTS: Negative Digitals or through external ECU: Analogs, Positive Digitals, Bridge (flap motor) and PWM

COMMUNICATION: ECU Module or Telematics Module

FUNCTIONS UNDER REQUEST



WI-FI



BLUETOOTH



CELL PHONE
INTERFACE



CAN BUS



REMOTE I/O
NETWORK



DATA
LOGGER



CUSTOMIZABLE
INTERFACES



HMI



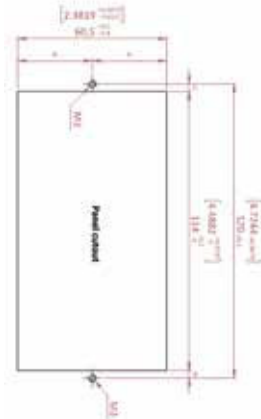
TECHNICAL DATA

OEM

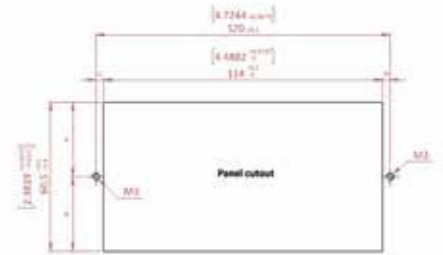
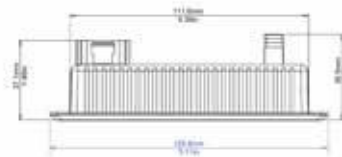
HVAC + R

CABIN / MUX

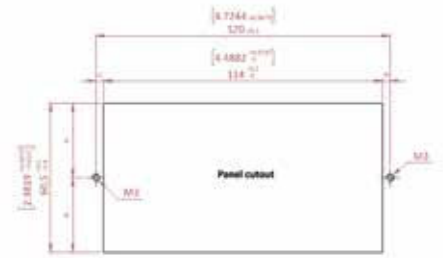
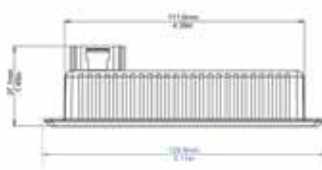
BASIC
CABIN



BASIC



BASIC
LITE



Approximated weight: 110g

CONNECTORS

BASIC



MATE-N-LOK 9 ways
Part Number: 880125 - 0
Terminal - PN: 880685-2
Manufacturer: Tyco Electronics

BASIC



POSITIVE LOCK 2 ways
Part Number: 926522 - 2
Terminal - PN: 8806456
Manufacturer: Tyco Electronics

BASIC
LITE



MINI-FIT 12 ways
Part Number: 39-01-2120
Terminal - PN: 39-00-0038
Manufacturer: Molex

TECHNICAL DATA

OPERATING VOLTAGE	12 VDC / 24 VDC
VOLTAGE RANGE	10 VDC to 30 VDC
MAXIMUM VOLTAGE	32 VDC during 5 min
MAXIMUM CURRENT PER OUTPUT	500mA
OUTPUT SHORT-CIRCUIT	Protected
REVERSE POLARITY	Protected
OPERATING TEMPERATURE	-40°C to +85°C / -40°F to +185°F (Normal or extended temperature range options)
STORAGE TEMPERATURE	-40°C to +85°C / -40°F to +185°F
TEMPERATURE SENSOR	NTC (Other types under request)
FRONTAL PROTECTION DEGREE	IP 54
COMMUNICATION	One Wire / CAN Bus
MAXIMUM CURRENT CONSUMPTION	50mA @ 12 VDC / 55mA @ 24 VDC *
STANDBY CONSUMPTION	N/A

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

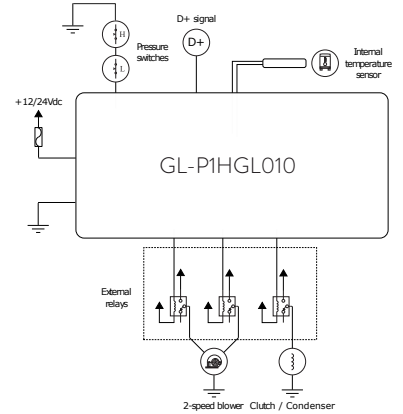


BASIC

AUTOMOTIVE AIR CONDITIONING CONTROL PANEL COOLING

GL-P1HGL010

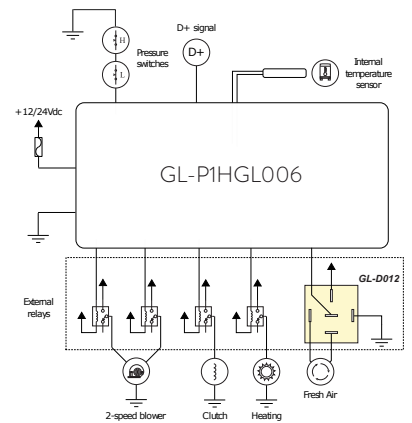
- Air conditioning (only cooling)
- 2-speed ventilation (high and low + auto)



AUTOMOTIVE AIR CONDITIONING CONTROL PANEL COOLING, HEATING AND FRESH AIR

GL-P1HGL006

- Air conditioning (heating and cooling)
- 2-speed ventilation (high and low + auto)
- Fresh Air

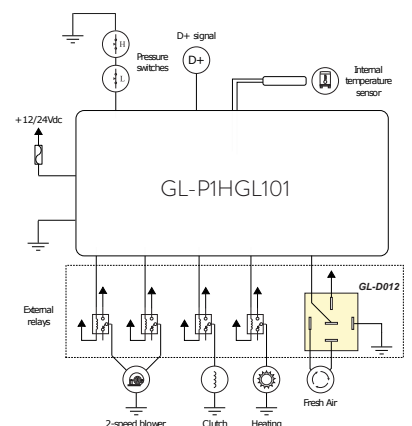


BASIC LITE

AUTOMOTIVE AIR CONDITIONING CONTROL PANEL COOLING, HEATING AND FRESH AIR

GL-P1HGL101

- Air conditioning (heating and cooling)
- 2-speed ventilation (high and low + auto)
- Fresh Air



BASIC

PANEL WITH REMOTE ECU AND TELEMATICS MODULE

GL-P1HGL011

- One Wire Communication
- HMI – Human Machine Interface
- CAN Bus communication with ECU

TELEMATICS MODULE - GL-M1SGL002

- One Wire Communication
- Bluetooth

AC MODULE - GL-M1HGL003

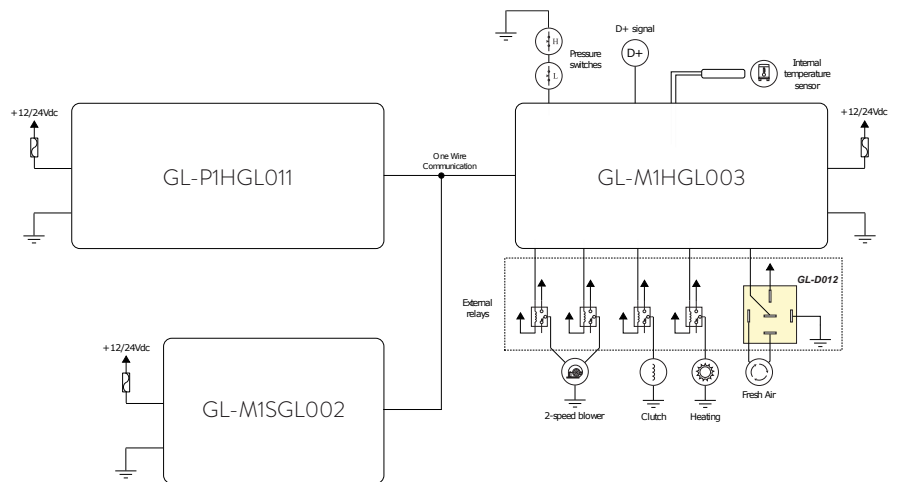
- Air Conditioning (heating and cooling)
- 2-speed ventilation (high and low + auto)
- Fresh Air
- Pressure Switch
- Compressor
- Condenser



GL-M1SGL002



GL-M1HGL003



PANEL WITH REMOTE ECU FOR DIESEL MOTOR CONTROL

GL-G5500

- Start/stop control
- Fault indication

ECU - GL-W3101

Inputs:

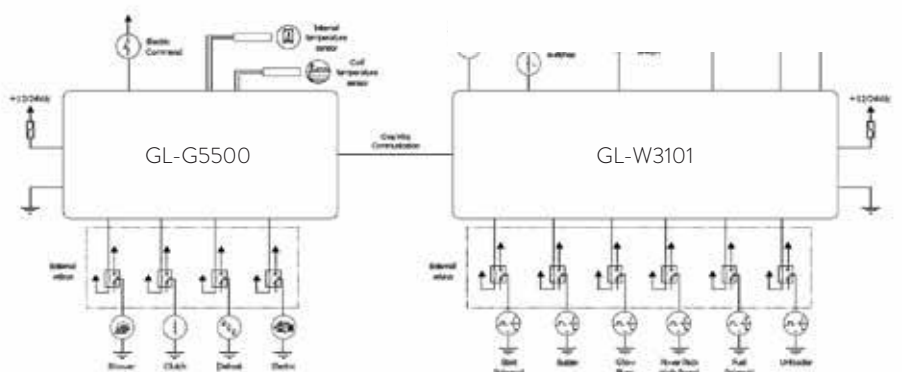
- D+ signal
- Pressure Switches
- Oil Pressure Switch
- Water Thermostat
- Manual Control
- Water Level

Outputs:

- Start Solenoid
- Fuel Solenoid
- Buzzer
- Glow plug preheating
- Engine throttle up
- Unloader



GL-W3101



For the vertical mounting option

FLEXIBLE AND CUSTOMIZABLE CABIN CONTROL PANEL IN VERTICAL FORMAT *

- Start/stop control
- Fault indication
- HMI – Human Machine Interface
- CAN Bus communication with ECU
- 9 or 12 buttons
- Customizable Functions
- Function Indication LEDs
- 3-digit 7-segment display (optional only on 9-button option)



PRODUCT CONFIGURATION

Choose the best options for your system

PIN CN1	BASIC POSSIBLE CONFIGURATIONS- HARDWARE 1		
1	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT
2	DIGITAL OUTPUT NEGATIVE 0.5A	OR	ONE WIRE
PIN CN2			
1	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--
2	GND	OR	--
3	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--
4	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--
5	GND	OR	--
6	ANALOG INPUT	OR	DIGITAL INPUT
7	POWER SUPPLY	OR	--
8	DIGITAL INPUT	OR	--
9	ANALOG INPUT	OR	DIGITAL INPUT

PIN CN1	BASIC LITE POSSIBLE CONFIGURATIONS- HARDWARE 2		
1	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT
2	GND	OR	--
3	DIGITAL OUTPUT NEGATIVE 0.5A		--
4	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT
5	GND	OR	--
6	ANALOG INPUT	OR	DIGITAL INPUT
7	POWER SUPPLY	OR	--
8	DIGITAL INPUT	OR	--
9	ANALOG INPUT	OR	DIGITAL INPUT
10	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--
11	ONE WIRE	OR	--
12	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT





MAIN FUNCTIONS

REFRIGERATION

CLIMATIZATION

CABIN CONTROL

MULTIPLEX

CHARACTERISTICS

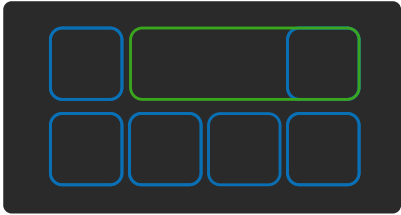
- Available as HMI - Human Machine Interface (CAN Bus)
- Compact size
- Exclusive design
- Graphic 128x64px OLED Display
- Friendly interface
- Backlit buttons
- Integrated or remote I/Os (ECU)
- USB interface through ECU (optional)
- Customizable Functions
- Automotive connector
- Diagnostics Menu
- Parameter Adjustment Menu
- Two temperature scales (°F or °C)
- Bluetooth and Wi-Fi Modules Interface
- Function Hourmeters
- 10 selectable languages via menu

AVAILABLE FOR



CUSTOMIZABLE CONTROLLER COMPLETE, COMPACT, EASY OPERATION.

INTERFACE POSITIONS



MiD

DISPLAY

7-SEGMENT LED DISPLAY
3 or 4-Digits or 128x64px OLED Display
°F and °C scales available



BUTTONS

KEYBOARD WITH 5 OR 6 CUSTOM BUTTONS
Custom Symbols
Backlight
Individual status indicators



DISPLAY EXAMPLES

Menu		Function Pop-up	
Hourmeters		Failure Description	

CONFIGURATION OPTIONS

INPUTS: Analog and Digital
 OUTPUTS: Positive and Negative Digitals, Bridge (flap motor) and PWM or Analogs (external ECU)
 OPTIONAL COMMUNICATION: One Wire, LIN Bus, CAN Bus, I/Os integrated remotely (through ECU), Telematics Module

FUNCTIONS UNDER REQUEST



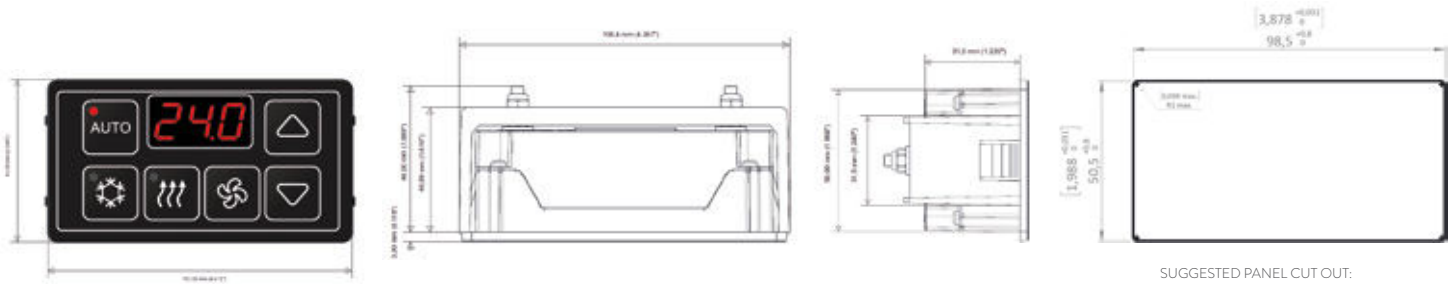
TECHNICAL DATA



OEM

HVAC + R

CABIN / MUX



Approximated weight: 315g

SUGGESTED PANEL CUT OUT:
 MINIMUM THICKNESS = 1,5 mm [0,059 in]
 MAXIMUM THICKNESS = 3,0 mm [0,118 in]

CONNECTORS



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

TECHNICAL DATA

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
OUTPUT SHORT-CIRCUIT	Protected
REVERSE POLARITY	Protected
OPERATING TEMPERATURE RANGE	-40°C to +85°C / -40°F to +185°F (Normal or extended temperature range options)
STORAGE TEMPERATURE	-40°C to +85°C / -40°F to +185°F
TEMPERATURE SENSOR	NTC (Other types under request)
FRONTAL PROTECTION DEGREE	IP 54
COMMUNICATION	One Wire / CAN Bus
MAXIMUM CURRENT CONSUMPTION	110mA @ 12 VDC / 80mA @ 24 VDC *
STANDBY CONSUMPTION	48mA @ 12 VDC / 45mA @ 24 VDC *

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



VENTILATION AND TEMPERATURE

OEM

HVAC

CABIN / MUX

AIR CONDITIONING CONTROL PANEL WITH OLED DISPLAY*

- Graphic OLED display
- Backlit symbols and buttons
- Client logo on panel (optional)
- Fixation without frontal screws
- Up to 2 indication LEDs per button



AIR CONDITIONING CONTROL PANEL WITH 7-SEGMENT DISPLAY*

- 7-segment display
- Backlit symbols and buttons
- Client logo on panel (optional)
- Fixation without frontal screws
- Up to 2 indication LEDs per button



REFRIGERATION

OEM

HVAC

CABIN / MUX

REFRIGERATION CONTROL PANEL WITH OLED DISPLAY*

- Graphic OLED display
- Backlit symbols and buttons
- Client logo on panel (optional)
- Fixation without frontal screws
- Up to 2 indication LEDs per button



Choose the best options for your system

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

PIN	MID POSSIBLE CONFIGURATIONS - HARDWARE 2						
1	POWER SUPPLY	OR	--	OR	--		
2	GND	OR	--	OR	--		
3	ANALOG INPUT	OR	DIGITAL INPUT	OR	--		
4	DIGITAL OUTPUT POSITIVE 0.5A	OR	--	OR	--		
5	ANALOG INPUT	OR	DIGITAL INPUT	OR	--		
6	DIGITAL OUTPUT POSITIVE 0.5A	OR	--	OR	--		
7	GND	OR	--	OR	--		
8	DIGITAL OUTPUT POSITIVE 0.5A	OR	DIGITAL OUTPUT NEGATIVE 0.5A	OR	BRIDGE H		
9	ANALOG INPUT	OR	DIGITAL INPUT	OR	--		
10	DIGITAL OUTPUT POSITIVE 0.5A	OR	--	OR	--		
11	ANALOG INPUT	OR	DIGITAL INPUT	OR	--		
12	DIGITAL OUTPUT POSITIVE 0.5A	OR	POWER SUPPLY 5V – TRANSDUCER	OR	--		
13	ANALOG INPUT	OR	DIGITAL INPUT	OR	--		
14	DIGITAL OUTPUT POSITIVE 0.5A	OR	DIGITAL OUTPUT NEGATIVE 0.5A	OR	BRIDGE H		
15	GND	OR	--	OR	--		
16	ANALOG INPUT	OR	DIGITAL INPUT	OR	--		
17	PWM OUTPUT	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	ANALOG OUTPUT		
18	DIGITAL OUTPUT POSITIVE 0.5A	OR	--	OR	--		
19	DIGITAL OUTPUT POSITIVE 0.5A	OR	ANALOG INPUT	OR	DIGITAL INPUT		
20	GND	OR	--	OR	--		
21	DIGITAL OUTPUT POSITIVE 0.5A	OR	ONE WIRE	OR	--		
22	POWER SUPPLY 5V – TRANSDUCER	OR	--	OR	--		
23	DIGITAL OUTPUT POSITIVE 0.5A	OR	--	OR	--		
24	DIGITAL OUTPUT POSITIVE 0.5A	OR	--	OR	--		

PRODUCT CONFIGURATION

PIN	MID POSSIBLE CONFIGURATIONS - HARDWARE 3				
1	POWER SUPPLY	OR	--	OR	--
2	GND	OR	--	OR	--
3	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
4	DIGITAL OUTPUT POSITIVE 0.5A	OR	--	OR	--
5	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
6	DIGITAL OUTPUT POSITIVE 0.5A	OR	--	OR	--
7	GND	OR	--	OR	--
8	DIGITAL OUTPUT POSITIVE 0.5A	OR	DIGITAL OUTPUT NEGATIVE 0.5A	OR	BRIDGE H
9	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
10	DIGITAL OUTPUT POSITIVE 0.5A	OR	--	OR	--
11	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
12	DIGITAL OUTPUT POSITIVE 0.5A	OR	POWER SUPPLY 5V - TRANSDUCER	OR	--
13	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
14	DIGITAL OUTPUT POSITIVE 0.5A	OR	DIGITAL OUTPUT NEGATIVE 0.5A	OR	BRIDGE H
15	GND	OR	--	OR	--
16	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
17	PWM OUTPUT	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	ANALOG OUTPUT
18	DIGITAL OUTPUT POSITIVE 0.5A	OR	--	OR	--
19	DIGITAL OUTPUT POSITIVE 0.5A	OR	ANALOG INPUT	OR	DIGITAL INPUT
20	DIGITAL OUTPUT POSITIVE 0.5A	OR	PWM OUTPUT	OR	--
21	DIGITAL OUTPUT POSITIVE 0.5A	OR	ONE WIRE	OR	--
22	POWER SUPPLY 5V - TRANSDUCER	OR	ANALOG INPUT	OR	DIGITAL INPUT
23	DIGITAL OUTPUT POSITIVE 0.5A	OR	--	OR	--
24	DIGITAL OUTPUT POSITIVE 0.5A	OR	--	OR	--



MAIN FUNCTIONS

REFRIGERAÇÃO

CLIMATIZAÇÃO

CUSTOM FUNCTIONS

CHARACTERISTICS

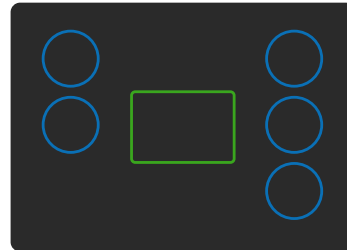
- 7-segment LED Display
- Client Logo on the panel (optional)
- Great Cost X Benefit ratio
- Function Hourmeters
- Custom Design
- Customized Functions
- One Wire Communication (optional)
- Backlit Buttons
- Two temperature scales (°F or °C)
- Metallic or plastic housing

AVAILABLE FOR



COMPACT AIR CONDITIONING CONTROL PANEL.

INTERFACE POSITIONS



mini

DISPLAY

7-segment LED Display
2 or 3 digits
°F and °C scales available



BUTTONS

5-BUTTON KEYBOARD

On/Off
4 adjustment buttons
Fresh Air

VENTILATION CONTROL
AIR CONDITIONING CONTROL



CONFIGURATION OPTIONS

INPUTS: Analog and Digital

OUTPUTS: Negative Digitals or through external ECU: Analogs, Positive Digitals, Bridge (flap motor) and PWM

COMMUNICATION: ECU Module or Telematics Module

FUNCTIONS UNDER REQUEST



WI-FI



BLUETOOTH



CELL PHONE
INTERFACE



CAN BUS



REMOTE I/O
NETWORK



DATA
LOGGER



CUSTOMIZABLE
INTERFACES

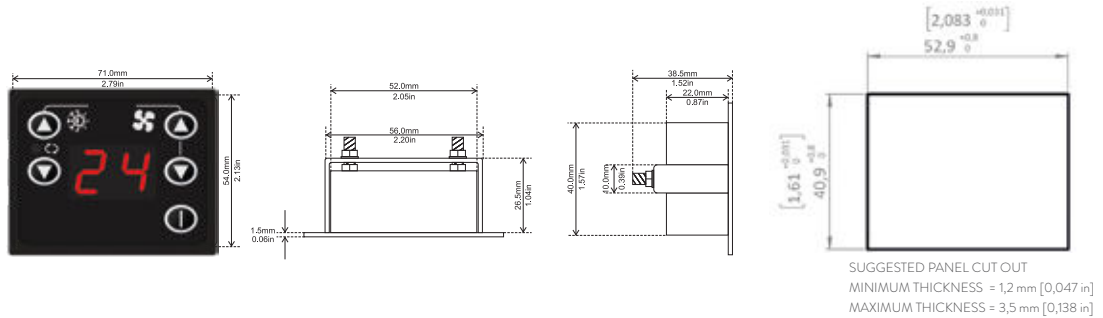


TECHNICAL DATA

HVAC + R

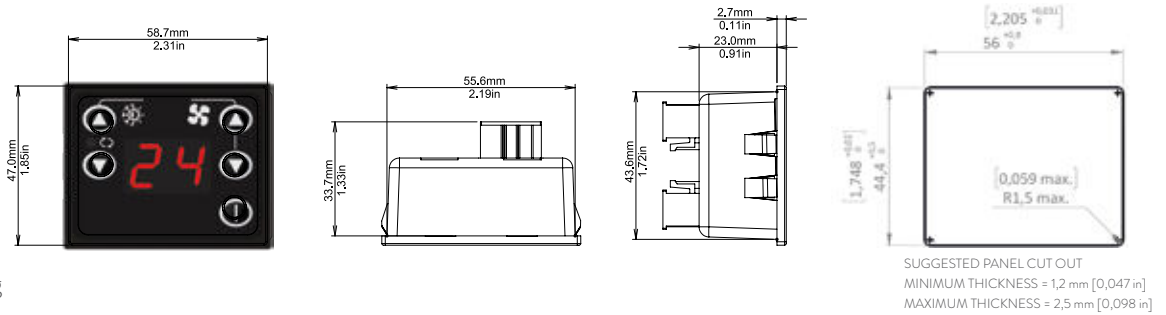
mini
METALLIC

Approximated weight: 120g



mini
PLASTIC

Approximated weight: 50g



CONNECTORS



MINI-FIT 6 ways
Part Number: 39-01-2060
Terminal - PN: 39-00-0038
Manufacturer: Molex



MINI-FIT 8 ways
Part Number: 39-01-2080
Terminal - PN: 39-00-0038
Manufacturer: Molex

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
OUTPUT SHORT-CIRCUIT	Protected
REVERSE POLARITY	Protected
OPERATING TEMPERATURE RANGE	-40°C to +85°C / -40°F to +185°F (Normal or extended temperature range options)
STORAGE TEMPERATURE	-40°C to +85°C / -40°F to +185°F
TEMPERATURE SENSOR	NTC (Other types under request)
FRONTAL PROTECTION DEGREE	IP 54
COMMUNICATION	One Wire / CAN Bus
MAXIMUM CURRENT CONSUMPTION	12 VDC @ 20mA / 24 VDC @ 25mA *
STANDBY CONSUMPTION	N/A

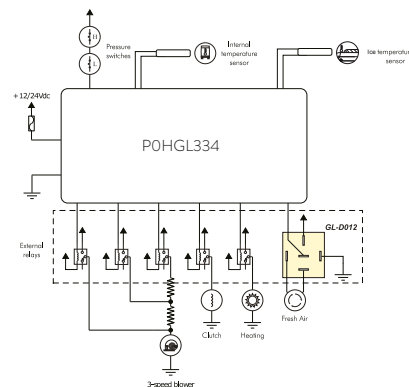
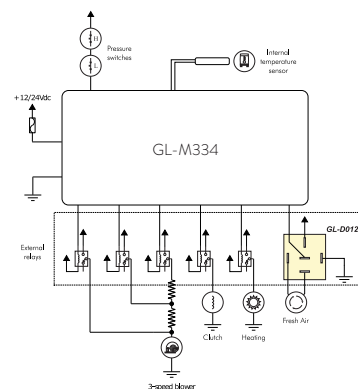
* Consumption may vary according to customer specifications.
We keep the right to update or change information regarding products without prior notice.

mini

7-SEGMENT DISPLAY AIR CONDITIONING CONTROL PANEL

GL-M334

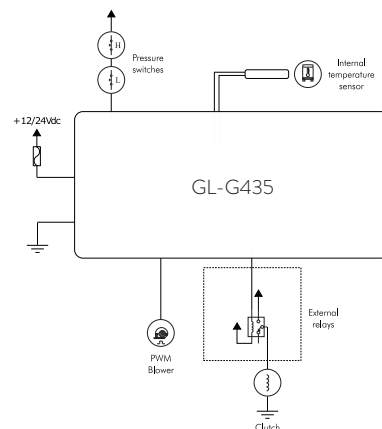
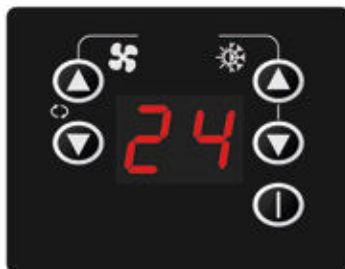
- Return sensor input
- Pressure Switch input (digital) - GL M334
- Coil temperature sensor input - GL-POHGL334
- 3-speed evaporator output
- Compressor/Condenser output
- Heating output
- Fresh Air output
- Plastic housing



AIR CONDITIONING CONTROL PANEL, 7-SEGMENT LED DISPLAY

GL-G435

- 6-speed PWM ventilation
- Pressure Switch Input (digital)
- Return Temperature Sensor
- Metallic housing



Choose the best options for your system

PIN CN1	MINI POSSIBLE CONFIGURATIONS - HARDWARE 1		
1	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--
2	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--
3	DIGITAL OUTPUT NEGATIVE 0.5A	OR	(*)
4	DIGITAL OUTPUT NEGATIVE 0.5A	OR	ONE WIRE
5	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--
6	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--
PIN CN2			
1	GND	OR	--
2	GND	OR	--
2	GND	OR	--
4	GND	OR	--
5	ANALOG INPUT	OR	DIGITAL INPUT
6	ANALOG INPUT	OR	DIGITAL INPUT
7	ANALOG INPUT	OR	DIGITAL INPUT
8	POWER SUPPLY	OR	--

(*) When using ONE WIRE communication you cannot use this output.

PIN	MINI POSSIBLE CONFIGURATIONS - HARDWARE 2		
1	GND	OR	--
2	GND	OR	--
3	GND	OR	--
4	ONE WIRE	OR	--
5	ANALOG INPUT	OR	DIGITAL INPUT
6	ANALOG INPUT	OR	DIGITAL INPUT
7	POWER SUPPLY	OR	--
8	POWER SUPPLY	OR	--

PIN CN1	MINI POSSIBLE CONFIGURATIONS - HARDWARE 3		
1	DIGITAL OUTPUT POSITIVE 0.5A	OR	--
2	DIGITAL OUTPUT POSITIVE 0.5A	OR	--
3	DIGITAL OUTPUT POSITIVE 0.5A	OR	--
4	DIGITAL OUTPUT POSITIVE 0.5A	OR	--
5	DIGITAL OUTPUT POSITIVE 0.5A	OR	--
6	DIGITAL OUTPUT POSITIVE 0.5A	OR	--
PIN CN2			
1	GND	OR	--
2	GND	OR	--
3	GND	OR	--
4	GND	OR	--
5	ANALOG INPUT	OR	DIGITAL INPUT
6	ANALOG INPUT	OR	DIGITAL INPUT
7	ANALOG INPUT	OR	DIGITAL INPUT
8	POWER SUPPLY	OR	--

PRODUCT CONFIGURATION

PIN CN1	MINI POSSIBLE CONFIGURATIONS - HARDWARE 4				
1	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	OR	--
2	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	OR	--
3	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	OR	--
4	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	OR	--
5	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	OR	--
6	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	OR	--
PIN CN2					
1	GND	OR	--	OR	--
2	GND	OR	--	OR	--
2	GND	OR	--	OR	--
4	GND	OR	--	OR	--
5	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
6	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
7	ANALOG INPUT	OR	DIGITAL INPUT	OR	ONE WIRE
8	POWER SUPPLY	OR	--	OR	--

PIN CN1	MINI POSSIBLE CONFIGURATIONS - HARDWARE 5				
1	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	OR	--
2	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	OR	--
3	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	OR	--
4	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	--
5	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	OR	--
6	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	--
PIN CN2					
1	GND	OR	--	OR	--
2	GND	OR	--	OR	--
2	GND	OR	--	OR	--
4	GND	OR	--	OR	--
5	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
6	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
7	ANALOG INPUT	OR	DIGITAL INPUT	OR	ONE WIRE
8	POWER SUPPLY	OR	--	OR	--

EDGE

OEM

HVAC + R

CABIN / MUX



MAIN FUNCTIONS

REFRIGERATION

CLIMATIZATION

CABIN CONTROL

MULTIPLEX

PRE-HEATER TIMER

CHARACTERISTICS

- Available as HMI Human Machine Interface (CAN Bus)
- Customizable Design
- Customizable Functions
- Multifunction
- One Wire Communication (optional)
- Function Hourmeters
- Customer Logo on panel
- Integrated or remote I/Os (ECU)
- USB interface through ECU (optional)
- Telematics through additional module
- Bluetooth and Wi-Fi Modules Interface
- Two temperature scales
- Automotive connector
- Rubber keyboard
- DIN Radio Size

CONFIGURATION OPTIONS

INPUTS: Analogs and Digitals.

OUTPUTS: Negative Digitals or through external ECU: Analogs, Positive Digitals, Bridge (flap motor) and PWM.

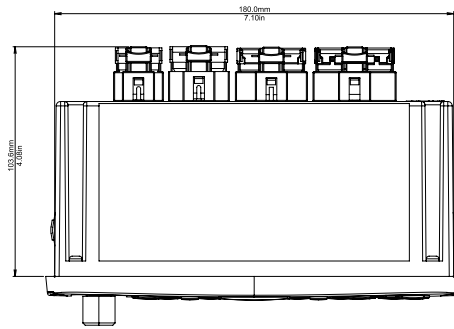
COMMUNICATION: ECU Module or Telematics Module.

AVAILABLE FOR

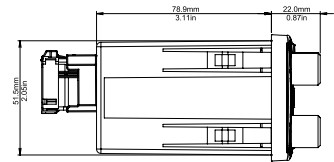




Approximated weight: 250g



**PANEL CUTOUT:
1 DIN 75490 RADIO SIZE**



CONNECTORS



MCP 9 ways
Part Number: 8-968971-1
Terminal - PN: 1-968851-1
Manufacturer: Tyco Electronics



MCP 12 ways
Part Number: 8-968972-1
Terminal - PN: 1-968851-1
Manufacturer: Tyco Electronics



MCP 15 ways
Part Number: 8-968973-1
Terminal - PN: 1-968851-1
Manufacturer: Tyco Electronics



MCP 18 ways
Part Number: 8-968974-1
Terminal - PN: 1-968851-1
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	500 mA
OUTPUT SHORT-CIRCUIT	Protected *
REVERSE POLARITY	Protected *
OPERATING TEMPERATURE RANGE	-40°C to +85°C / -40°F to +185°F (Extended or normal temperature options)
STORAGE TEMPERATURE	-40°C to + 85°C / -40°F to + 185°F
TEMPERATURE SENSOR	NTC - For other sensor types please consult with our technical team
PROTECTION DEGREE	IP 54
COMMUNICATION	One Wire / CAN Bus
MAXIMUM CURRENT CONSUMPTION	120mA @ 12VDC / 70mA @ 24VDC **
STANDBY CONSUMPTION	60mA @ 12VDC / 40mA @ 24VDC **

* 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.

FUNCTIONS UNDER REQUEST



WI-FI



BLUETOOTH



CELL PHONE
INTERFACE



CAN BUS



REMOTE I/O
NETWORK



DATA
LOGGER



CUSTOMIZABLE
INTERFACES



HMI





2 KNOBS*



3 KNOBS*

Choose the best option for your system

PIN CN1		EDGE 2 E 3 KNOBS POSSIBLE CONFIGURATIONS - HARDWARE 1			
1	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
2	GND	OR	--	OR	--
3	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
4	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
5	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	OR	--
6	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	OR	--
7	POWER SUPPLY	OR	--	OR	--
8	GND	OR	--	OR	--
9	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	OR	--
10	VBAT - RTC	OR	--	OR	--
11	ONE WIRE	OR	DIGITAL INPUT	OR	--
12	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	OR	--
PIN CN2					
1	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H1
2	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H4
3	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
4	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H1
5	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H4
6	GND	OR	--	OR	--
7	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H2
8	PWM PUSH PULL	OR	--	OR	--
9	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
10	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H2
11	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	OR	--
12	GND	OR	--	OR	--
13	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H3
14	DIGITAL OUTPUT POSITIVE 0.5A	OR	--	OR	--
15	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
16	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H3
17	POWER SUPPLY 5V - TRANSDUCER	OR	--	OR	--
18	GND	OR	--	OR	--

PRODUCT CONFIGURATION



Choose the best option for your system

PIN CN1	EDGE BUTTONS CAN POSSIBLE CONFIGURATIONS- HARDWARE 2						
1	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--
2	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--
3	CAN H	OR	--	OR	--	OR	--
4	GND	OR	--	OR	--	OR	--
5	GND	OR	--	OR	--	OR	--
6	CAN L	OR	--	OR	--	OR	--
7	VBAT - RTC	OR	--	OR	--	OR	--
8	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--
9	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--
PIN CN2							
1	POWER SUPPLY	OR	--	OR	--	OR	--
2	GND	OR	--	OR	--	OR	--
3	ANALOG OUTPUT 50mA	OR	--	OR	--	OR	--
4	POWER SUPPLY	OR	--	OR	--	OR	--
5	GND	OR	--	OR	--	OR	--
6	GND	OR	--	OR	--	OR	--
7	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	PWM OUTPUT	OR	--
8	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	OR	--	OR	--
9	ANALOG OUTPUT 50mA	OR	--	OR	--	OR	--
10	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	PWM OUTPUT	OR	BRIDGE H1
11	DIGITAL OUTPUT POSITIVE 0.5A	OR	--	OR	--	OR	--
12	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	OR	--	OR	--
13	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	PWM OUTPUT	OR	BRIDGE H1
14	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	PWM OUTPUT	OR	--
15	ANALOG OUTPUT 50mA	OR	--	OR	--	OR	--

PIN CN1	EDGE BUTTONS - USB POSSIBLE CONFIGURATIONS - HARDWARE 3		
1	DIGITAL OUTPUT NEGATIVE 0.5A	OR	ONE WIRE
2	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--
3	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--
4	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--
5	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--
6	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--
7	ANALOG INPUT	OR	DIGITAL INPUT
8	ANALOG INPUT	OR	DIGITAL INPUT
9	ANALOG INPUT	OR	DIGITAL INPUT
PIN CN2			
1	ANALOG INPUT	OR	DIGITAL INPUT
2	GND	OR	--
3	GND	OR	--
4	ANALOG INPUT	OR	DIGITAL INPUT
5	GND	OR	--
6	GND	OR	--
7	CAN H	OR	--
8	POWER SUPPLY	OR	--
9	ANALOG INPUT	OR	DIGITAL INPUT
10	CAN H	OR	--
11	POWER SUPPLY 5V - TRANSDUCER	OR	--
12	ANALOG INPUT	OR	DIGITAL INPUT

EDGE COMPACT

OEM

HVAC + R

CABIN / MUX



MAIN FUNCTIONS

REFRIGERATION

CLIMATIZATION

CABIN CONTROL

MULTIPLEX

PRE-HEATER TIMER

CHARACTERISTICS

- Available as HMI Human Machine Interface (CAN Bus)
- Customizable Design
- Customizable Functions
- Multifunction
- One Wire Communication (optional)
- Function Hourmeters
- Customer Logo on panel
- Integrated or remote I/Os (ECU)
- USB interface through ECU (optional)
- Telematics through additional module
- Bluetooth and Wi-Fi Modules Interface
- Two temperature scales
- Automotive connector
- Rubber keyboard

CONFIGURATION OPTIONS

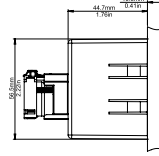
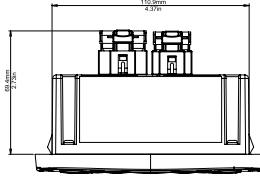
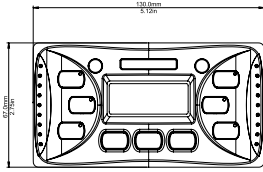
INPUTS: Analogs and Digitals.

OUTPUTS: Negative Digitals or through external ECU: Analogs, Positive Digitals, Bridge (flap motor) and PWM.

COMMUNICATION: ECU Module or Telematics Module.

AVAILABLE FOR





Approximated weight: 175g

CONNECTORS



MCP AMP 9 ways
Part Number: 8-968971 - 1
Terminal - PN: 1-968851-1
Manufacturer: Tyco Electronics



MCP 12 ways
Part Number: 8-968972-1
Terminal - PN: 1-968851-1
Manufacturer: Tyco Electronics



MINI-FIT 8 ways
Part Number: 39-01-2080
Terminal - PN: 39-00-0038
Manufacturer: Molex



MINI-FIT 12 ways
Part Number: 39-01-2120
Terminal - PN: 39-00-0038
Manufacturer: Molex

TECHNICAL DATA	
OPERATING VOLTAGE	12 VDC / 24 VDC
OPERATING VOLTAGE RANGE	9 VDC to 30 VDC / 10 VDC to 30 VDC
MAXIMUM VOLTAGE	32 VDC during 5 min
MAXIMUM CURRENT PER OUTPUT	500 mA
OUTPUT SHORT-CIRCUIT	Protected **
REVERSE POLARITY	Protected **
OPERATING TEMPERATURE RANGE	-40°C to +85°C
STORAGE TEMPERATURE	-40°C to +85°C / -40°F to +185°F
TEMPERATURE SENSOR	NTC - For other sensor types please consult with our technical team
PROTECTION DEGREE	IP 30
COMMUNICATION	One Wire / CAN Bus / RS485
MAXIMUM CURRENT CONSUMPTION	120mA @ 12 VDC / 70mA @ 24 VDC ***
STANDBY CONSUMPTION	60mA @ 12 VDC / 40mA @ 24 VDC ***

* Concept product / Concept product ** 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.

FUNCTIONS UNDER REQUEST



WI-FI



BLUETOOTH



CELL PHONE
INTERFACE



CAN BUS



REMOTE I/O
NETWORK



DATA
LOGGER



CUSTOMIZABLE
INTERFACES



HMI



Choose the best option for your system

PIN CN1	EDGE COMPACT POSSIBLE CONFIGURATIONS - HARDWARE 1				
1	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
2	GND	OR	--	OR	--
3	GND	OR	--	OR	--
4	CAN H	OR	--	OR	--
5	CAN L	OR	--	OR	--
6	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	--
7	ONE WIRE	OR	--	OR	--
8	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	--
9	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	--
PIN CN2					
1	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
2	GND	OR	--	OR	--
3	DIGITAL INPUT	OR	--	OR	--
4	DIGITAL INPUT	OR	--	OR	--
5	GND	OR	--	OR	--
6	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	--
7	VBAT RTC	OR	--	OR	--
8	POWER SUPPLY	OR	ANALOG INPUT	OR	--
9	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	--
10	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	ONE WIRE
11	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	--
12	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	--

PIN CN1	EDGE COMPACT - CONNECTOR MINI FIT POSSIBLE CONFIGURATIONS - HARDWARE 2				
1	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--
2	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT NEGATIVE 0.5A	OR	BRIDGE H1
3	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT NEGATIVE 0.5A	OR	BRIDGE H2
4	POWER SUPPLY	OR	--	OR	--
5	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT NEGATIVE 0.5A	OR	BRIDGE H1
6	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT NEGATIVE 0.5A	OR	BRIDGE H2
7	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT
8	GND	OR	--	OR	--
PIN CN2					
1	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
2	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
3	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
4	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
5	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
6	ANALOG INPUT	OR	--	OR	--
7	GND	OR	--	OR	--
8	GND	OR	--	OR	--
9	GND	OR	DIGITAL INPUT	OR	--
10	GND	OR	--	OR	--
11	GND	OR	--	OR	--
12	DIGITAL INPUT	OR	--	OR	--

PRODUCT CONFIGURATION

EDGE COMPACT – USB POSSIBLE CONFIGURATIONS - HARDWARE 3			
PIN CN1			
1	PWM PUSH PULL	OR	--
2	PWM PUSH PULL	OR	--
3	PWM PUSH PULL	OR	--
4	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--
5	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--
6	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--
7	ANALOG INPUT	OR	DIGITAL INPUT
8	ANALOG INPUT	OR	DIGITAL INPUT
9	ANALOG INPUT	OR	DIGITAL INPUT
PIN CN2			
1	ANALOG INPUT	OR	DIGITAL INPUT
2	GND	OR	--
3	GND	OR	--
4	ANALOG INPUT	OR	DIGITAL INPUT
5	GND	OR	--
6	GND	OR	--
7	CAN H	OR	RS-485 D+
8	POWER SUPPLY	OR	--
9	ANALOG INPUT	OR	DIGITAL INPUT
10	CAN H	OR	RS-485 D-
11	POWER SUPPLY 5V – TRANSDUCER	OR	--
12	ANALOG INPUT	OR	DIGITAL INPUT

SLIM

OEM

HVAC + R



MAIN FUNCTIONS

REFRIGERAÇÃO

CLIMATIZAÇÃO

CUSTOM FUNCTIONS

CHARACTERISTICS

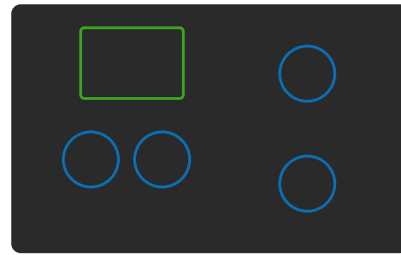
- 7-segment LED Display
- Client Logo on the panel (optional)
- Great Cost X Benefit ratio
- Function Hourmeters
- Custom Design
- Backlit Buttons
- Two temperature scales (°F or °C)
- Integrated or remote I/Os (ECU)
- Metallic or plastic housing

AVAILABLE FOR



PANEL WITH DISCREET AND ELEGANT DESIGN.
INTUITIVE AND CUSTOMIZABLE INTERFACE.

INTERFACE POSITIONS



SLIM

DISPLAY

DIGITAL DISPLAY
7-segment LED Display
2 Digits
°F and °C scales available



BUTTONS

BACKLIT BUTTONS

UP AND DOWN
Temperature and parameters

VENTILATION CONTROL
High, Medium, Low

AC CONTROL
Heating and Cooling Functions



CONFIGURATION OPTIONS

INPUTS: Analog and Digital

OUTPUTS: Negative Digital or through external ECU: Analog, Positive Digital, H-Bridge (flap motor) and PWM

COMMUNICATION: ECU Module

FUNCTIONS UNDER REQUEST



REMOTE I/O
NETWORK



CUSTOMIZABLE
INTERFACES

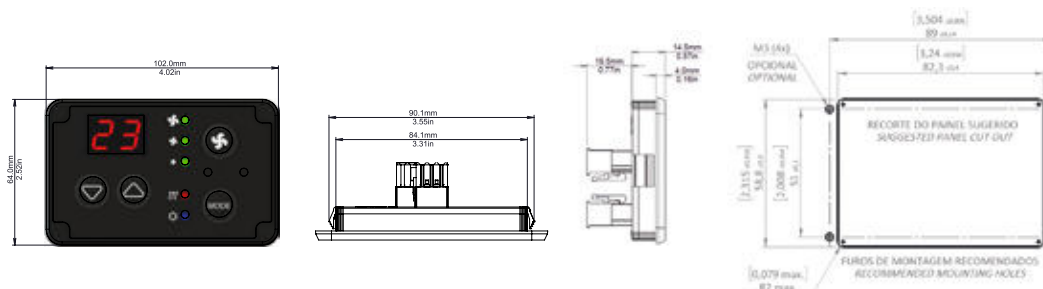


TECHNICAL DATA

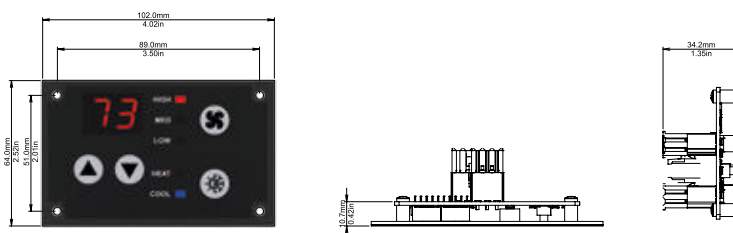
HVAC + R

GABINETE PLÁSTICO

Approximated weight: 115g


GABINETE METÁLICO

Approximated weight: 115g



CONNECTORS



MINI-FIT 6 ways
Part Number: 39-01-2060
Terminal - PN: 39-00-0038
Manufacturer: Molex



MINI-FIT 8 ways
Part Number: 39-01-2080
Terminal - PN: 39-00-0038
Manufacturer: Molex



TEMPERATURE SENSOR 10K
Part Number: GL-GS814
Manufacturer: Globus

TECHNICAL DATA

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
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 +85°C / -40°F to +185°F
TEMPERATURE SENSOR	NTC
FRONTAL PROTECTION DEGREE	IP 30
COMMUNICATION	One Wire / CAN Bus
MAXIMUM CURRENT CONSUMPTION	50mA @12 VDC / 90mA @ 24 VDC *
STANDBY CONSUMPTION	35mA @ 12 VDC / 50mA @ 24 VDC *

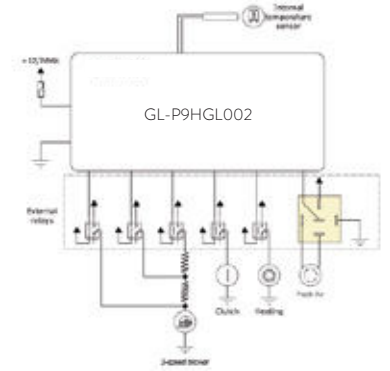
* Consumption may vary according to customer specifications.
We keep the right to update or change information regarding products without prior notice.



CLIMATIZATION CONTROLLER

GL-P9HGL002

- 7-segment LED Display
- Customer Logo on the Panel (optional)



PRODUCT CONFIGURATION

Choose the best options for your system

PIN CN1	SLIM POSSIBLE CONFIGURATIONS - HARDWARE 1				
1	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	--
2	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	--
3	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	--
4	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	--
5	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	--
6	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	--
PIN CN2					
1	GND	OR	--	OR	--
2	GND	OR	--	OR	--
2	GND	OR	--	OR	--
4	GND	OR	--	OR	--
5	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
6	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
7	ANALOG INPUT	OR	DIGITAL INPUT	OR	ONE WIRE
8	POWER SUPPLY	OR	--	OR	--

PIN CN1	SLIM POSSIBLE CONFIGURATIONS - HARDWARE 2	
1	ANALOG INPUT	OR DIGITAL INPUT
2	GND	OR --
PIN CN2		
1	POWER SUPPLY	OR --
2	ONE WIRE	OR --
2	GND	OR --
4	DIGITAL OUTPUT NEGATIVE 0.5A	OR --
5	DIGITAL OUTPUT NEGATIVE 0.5A	OR --
6	DIGITAL OUTPUT NEGATIVE 0.5A	OR --
7	DIGITAL OUTPUT NEGATIVE 0.5A	OR --
8	DIGITAL OUTPUT NEGATIVE 0.5A	OR --



ELECTRONIC CONTROL MODULE WITH RELAYS

ECM



OPTIONAL
ENCLOSURE

INDEPENDENT FUSES

**RELAY
BOARD**

Drives charges



ECU
ELECTRONIC CONTROL UNIT

Drives relay board and receives auxiliary
inputs and/or outputs

USE THE MOST APPROPRIATE RELAYS FOR YOUR NEEDS!

(10A - 16A - 20A - 40A...) @ (12 VDC - 24VDC...)



DIAGNOSTIC LEDS:

- ACTIVE FUNCTIONS
- BLOWN FUSES
- OPERATION / FAULT STATUS



CAN/LIN BUS COMMUNICATION

AUXILIARY I/OS:

- DIGITAL/ANALOG INPUTS
- DIGITAL/ANALOG OUTPUTS





MODULES

TELEMATICS MODULE

Tested and Certified

HVAC + R

STANDARD

CABIN / MUX



Certified

N° 00965-21-13681



MAIN FUNCTIONS

DATA LOGGER

FLEET TRACKING

REMOTE CONTROL

CONNECTIVITY

DIAGNOSTICS

SERVICE ALERTS

MAINTENANCE

CONFIGURATIONS

CHARACTERISTICS

- Preventive maintenance alerts with customized individual hourmeters
- **Data Logging:** Records faults with date and time stamp - geolocation also possible
- **Remote Diagnostics:** View faults, status and events in real time from your smartphone, tablet or PC
- **Increased operational efficiency:** Remote system configuration - local configuration lock option
- Real-time clock
- CAN Bus (2 ports) - SAE J1939
- One Wire
- 2 to 8GB flash memory for Data Logger

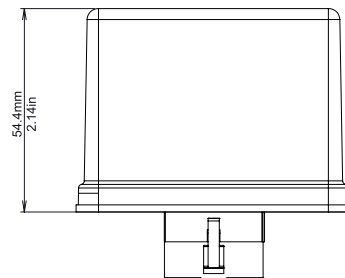
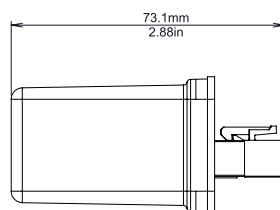
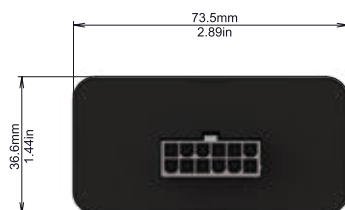
AVAILABLE FOR



TECHNICAL DATA



Approximated weight: 100g



CONNECTORS



MINI-FIT 12 ways
Part Number: 39-01-2120
Terminal - PN: 39-00-0038
Manufacturer: Molex

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	N/A
OUTPUT SHORT-CIRCUIT	N/A
REVERSE POLARITY	YES
OPERATING TEMPERATURE RANGE	-40°C to +85°C / -40°F to +185°F
STORAGE TEMPERATURE	-40°C to +85°C / -40°F to +185°F
TEMPERATURE SENSOR	N/A
PROTECTION DEGREE	IP 30
WIRELESS COMMUNICATION	Bluetooth and Wi-Fi
WIRED COMMUNICATION	One Wire / CAN Bus
MAXIMUM CURRENT CONSUMPTION	60mA @ 12VDC / 40mA @ 24VDC *
STANDBY CONSUMPTION	N/A *

* According to product configuration. ** Consumption may vary according to customer specifications.
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CONFIGURATION OPTIONS

INPUTS: Two inputs (Analog and/or Digital)



WI-FI



BLUETOOTH



CELL PHONE
INTERFACE



CAN BUS



DATA
LOGGER



ECU – ELECTRONIC CONTROL UNITS

HVAC + R

STANDARD

CABIN / MUX

PREMIUM



WIDE



FLEX



COMPACT



MAIN FUNCTIONS

The Electronic Control Unit (ECU) modules are systems that interface with the application's I/Os (inputs and outputs). Globus ECUs present high level of reliability and add modularity and safety, replacing relays and fuses with 100% electronic components.

They interact with human-machine interfaces, such as panels, displays, sensors, and other peripherals, depending on the client's application needs.

CHARACTERISTICS

- Customizable software
- Data Logger
- Configurable I/Os
- CAN Bus Interface
- LIN Interface
- One Wire interface
- RS-485 Interface
- USB Interface
(Not recommended for new projects)

CONFIGURATION OPTIONS

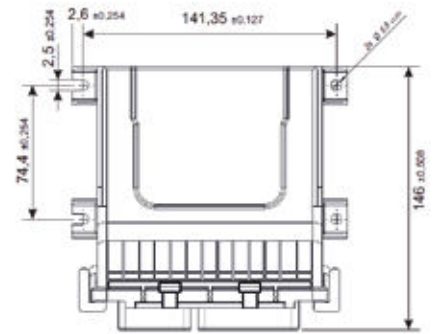
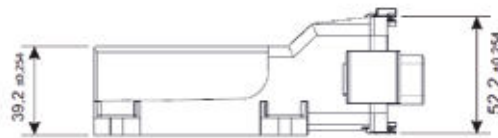
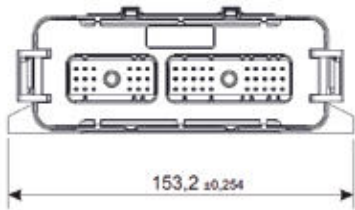
INPUT: Analogs and Digitals

OUTPUT: Analog, Digital Positive, Digital Negative, PWM and H-Bridge

AVAILABLE ENERGY



ECU PREMIUM



Approximated weight: 500g

CONNECTORS



MODICE CINCH 18 ways
Part Number: 581-01-18-023
Terminal - PN: 425-00-00-872
Manufacturer: Modice Cinch



MODICE CINCH 30 ways
Part Number: 581-01-18-029
Cavity Plug Seal - PN: 581-00-00-011
Manufacturer: Modice Cinch

TECHNICAL DATA

OPERATING VOLTAGE	24 VDC
OPERATING VOLTAGE RANGE	18 VDC to 30 VDC
MAXIMUM VOLTAGE	32 VDC during 5 min
OUTPUT MAXIMUM CURRENT	500mA
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 +85°C / -40°F to +185°F
TEMPERATURE SENSOR	NTC
PROTECTION DEGREE	IP 68K
COMMUNICATION	CAN Bus / LIN
MAXIMUM CURRENT CONSUMPTION	17mA **
STANDBY CONSUMPTION	**

* 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.

FUNCTIONS UNDER REQUEST



WI-FI¹



BLUETOOTH¹



CELL PHONE
INTERFACE²



CAN BUS



REMOTE I/O
NETWORK



DATA
LOGGER¹



ECU

PREMIUM

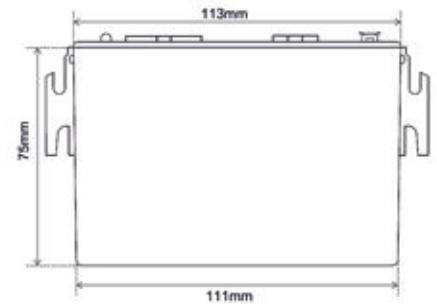
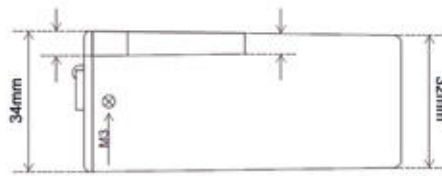
PRODUCT CONFIGURATIONS

Choose the best options for your system

PIN CN1	ECU PREMIUM	POSSIBLE CONFIGURATIONS HARDWARE 1	
1	DIGITAL INPUT	OR	--
2	DIGITAL INPUT	OR	--
3	DIGITAL INPUT	OR	--
4	DIGITAL INPUT	OR	--
5	DIGITAL INPUT	OR	--
6	DIGITAL INPUT	OR	--
7	PWM OUTPUT	OR	--
8	DIGITAL INPUT	OR	DIGITAL OUTPUT POSITIVE 0.5A
9	PWM OUTPUT	OR	--
10	DIGITAL OUTPUT POSITIVE 0.5A	OR	--
11	DIGITAL OUTPUT POSITIVE 0.5A	OR	--
12	PWM OUTPUT	OR	--
13	DIGITAL OUTPUT POSITIVE 0.5A	OR	--
14	GND	OR	--
15	DIGITAL OUTPUT POSITIVE 0.5A 12V	OR	--
16	DIGITAL OUTPUT POSITIVE 0.5A	OR	--
17	GND	OR	--
18	DIGITAL OUTPUT POSITIVE 0.5A 12V	OR	--
PIN CN2			
1	LIN 2	OR	--
2	CAN2 L	OR	--
3	CAN2 H	OR	--
4	LIN 1	OR	--
5	CAN1 L	OR	--
6	CAN1 H	OR	--
7	ANALOG INPUT	OR	DIGITAL INPUT
8	TRANSDUCER POWER SUPPLY GND	OR	--
9	TRANSDUCER POWER SUPPLY 5V	OR	--
10	GND	OR	--
11	GND	OR	--
12	ANALOG INPUT	OR	DIGITAL INPUT
13	ANALOG INPUT	OR	DIGITAL INPUT
14	ANALOG INPUT	OR	DIGITAL INPUT
15	ANALOG INPUT	OR	DIGITAL INPUT
16	ANALOG INPUT	OR	DIGITAL INPUT
17	ANALOG INPUT	OR	DIGITAL INPUT
18	ANALOG INPUT	OR	DIGITAL INPUT
19	GND	OR	--
20	ANALOG INPUT	OR	--
21	GND	OR	--
22	ANALOG INPUT	OR	DIGITAL INPUT
23	DIGITAL INPUT	OR	--
24	ANALOG INPUT	OR	DIGITAL INPUT
25	GND	OR	--
26	DIGITAL INPUT	OR	--
27	GND	OR	--
28	POWER SUPPLY +VBAT	OR	--
29	POWER SUPPLY -VBAT	OR	--
30	POWER SUPPLY 12V OUT	OR	--



ECU FLEX



Approximated weight: 130g

CONNECTORS



MINI-FIT 6 ways
Part Number: 4202P0612T1



MINI-FIT 8 ways
Part Number: 39-01-2080



MINI-FIT 10 ways
Part Number: 39-01-2100



MINI-FIT 12 ways
Part Number: 39-01-2120



MINI-FIT 16 ways
Part Number: 39-01-2160

Terminal - PN: 39-00-0038
Manufacturer: Molex

TECHNICAL DATA

OPERATING VOLTAGE	12 VDC / 24 VDC
OPERATING VOLTAGE RANGE	10 VDC to 30 VDC
MAXIMUM VOLTAGE	32 VDC during 5 min
OUTPUT MAXIMUM CURRENT	500mA
OUTPUT SHORT-CIRCUIT	Protected*
REVERSE POLARITY	Protected*
OPERATING TEMPERATURE RANGE	-40°C to +85° / - 40°F to +185°F
STORAGE TEMPERATURE	-40°C to +85° / - 40°F to +185°F
TEMPERATURE SENSOR	NTC
PROTECTION DEGREE	IP 30
COMMUNICATION	CAN Bus / One Wire / RS-485
MAXIMUM CURRENT CONSUMPTION	40mA @ 12 VDC / 60mA @ 24 VDC **
STANDBY CONSUMPTION	**

* 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.

FUNCTIONS UNDER REQUEST



WI-FI¹



BLUETOOTH¹



CELL PHONE
INTERFACE²



CAN BUS



REMOTE I/O
NETWORK



DATA
LOGGER¹



ECU

FLEX

PRODUCT CONFIGURATIONS

Choose the best options for your system

PIN CN1	ECU FLEX POSSIBLE CONFIGURATIONS HARDWARE 1				
1	CAN L	OR	--	OR	--
2	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H1
3	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H1
4	CAN H	OR	--	OR	--
5	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	OR	--
6	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	OR	--
PIN CN2					
1	ANALOG OUTPUT	OR	--	OR	--
2	GND ANALOG OUTPUT	OR	--	OR	--
3	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H2
4	--	OR	--	OR	--
5	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
6	ANALOG OUTPUT	OR	--	OR	--
7	GND ANALOG OUTPUT	OR	--	OR	--
8	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H2
9	TRANSDUCER POWER SUPPLY	OR	--	OR	--
10	GND	OR	--	OR	--
PIN CN3					
1	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
2	GND	OR	--	OR	--
3	DIGITAL INPUT	OR	--	OR	--
4	DIGITAL INPUT	OR	--	OR	--
5	ONE WIRE	OR	--	OR	--
6	GND	OR	--	OR	--
7	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
8	GND	OR	--	OR	--
9	DIGITAL INPUT	OR	--	OR	--
10	DIGITAL INPUT	OR	--	OR	--
11	POWER SUPPLY	OR	--	OR	--
12	POWER SUPPLY	OR	--	OR	--

ECU

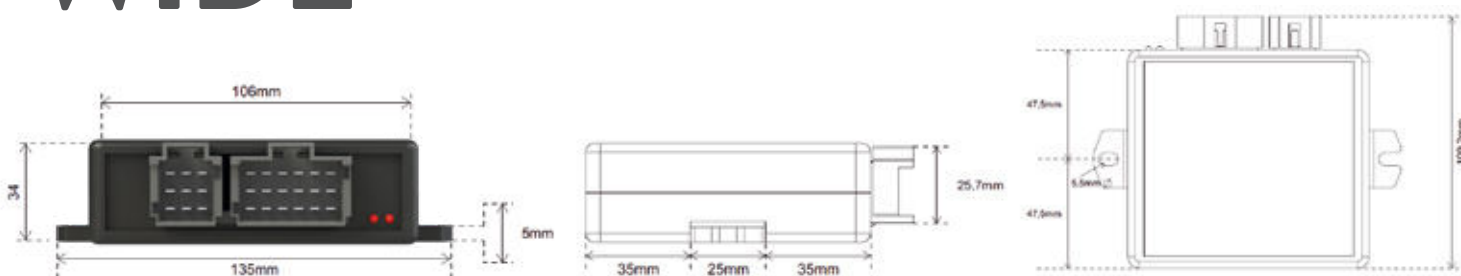
FLEX

PRODUCT CONFIGURATIONS

PIN CN1	ECU FLEX POSSIBLE CONFIGURATIONS HARDWARE 2						
1	TRANSDUCER POWER SUPPLY 5V	OR	--	OR	--	OR	--
2	POWER SUPPLY	OR	--	OR	--	OR	--
3	CAN L	OR	--	OR	--	OR	--
4	CAN H	OR	--	OR	--	OR	--
5	GND	OR	--	OR	--	OR	--
6	RS-485 D+	OR	--	OR	--	OR	--
7	RS-485 D-	OR	--	OR	--	OR	--
8	ONE WIRE	OR	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
PIN CN2							
1	GND	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	BRIDGE H2	OR	PWM OUTPUT
4	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	--	OR	--
5	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	--	OR	--
6	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	--	OR	--
7	GND	OR	--	OR	--	OR	--
8	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H1	OR	PWM OUTPUT
9	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H2	OR	PWM OUTPUT
10	DIGITAL OUTPUT NEGATIVE 0.5A	OR	PWM OUTPUT	OR	--	OR	--
11	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	PWM OUTPUT	OR	--
12	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	PWM OUTPUT	OR	--
PIN CN3							
1	ANALOG OUTPUT - 50MA	OR	--	OR	--	OR	--
2	GND	OR	--	OR	--	OR	--
3	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--
4	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--
5	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--
6	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--
7	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--
8	GND	OR	--	OR	--	OR	--
9	ANALOG OUTPUT - 50MA	OR	--	OR	--	OR	--
10	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--
11	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--
12	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--
13	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--
14	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--
15	ANALOG INPUT	OR	DIGITAL INPUT	OR	--	OR	--
16	GND	OR	--	OR	--	OR	--



ECU WIDE



Approximated weight: 180g

CONNECTORS



MCP AMP 9 ways
Part Number: 8 - 968971 - 1



MCP AMP 18 ways
Part Number: 8 - 968974 - 1

TERMINAL - PN: 1-968851-1
Manufacturer: AMP

TECHNICAL DATA

OPERATING VOLTAGE	12 VDC / 24 VDC
OPERATING VOLTAGE RANGE	10 VDC to 30 VDC
MAXIMUM VOLTAGE	32 VDC during 5 min
OUTPUT MAXIMUM CURRENT	10A / 500mA / 5A
OUTPUT SHORT-CIRCUIT	Protected*
REVERSE POLARITY	Protected*
OPERATING TEMPERATURE RANGE	-40°C to +85° / - 40°F to +185°F
STORAGE TEMPERATURE	-40°C to +85° / - 40°F to +185°F
TEMPERATURE SENSOR	NTC
PROTECTION DEGREE	IP 30
COMMUNICATION	CAN Bus / One Wire
MAXIMUM CURRENT CONSUMPTION	36mA @ 12 VDC / 41mA @ 24 VDC **
STANDBY CONSUMPTION	**

* 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.

FUNCTIONS UNDER REQUEST



WI-FI¹



BLUETOOTH¹



CELL PHONE
INTERFACE²



CAN BUS



REMOTE I/O
NETWORK



DATA
LOGGER¹



ECU

WIDE PRODUCT CONFIGURATIONS

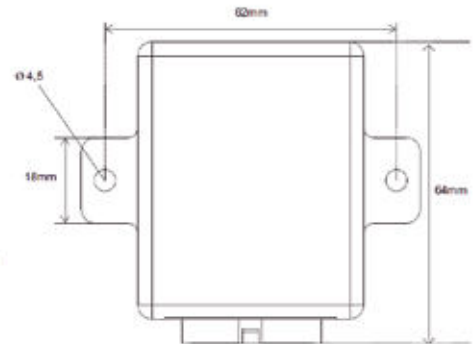
Choose the best options for your system

PIN CN1		ECU WIDE POSSIBLE CONFIGURATIONS HARDWARE 1		
1	ANALOG INPUT	OR		DIGITAL INPUT
2	GND	OR		--
3	DIGITAL INPUT	OR		--
4	ANALOG INPUT	OR		DIGITAL INPUT
5	GND	OR		--
6	ANALOG INPUT	OR		DIGITAL INPUT
7	ANALOG INPUT	OR		DIGITAL INPUT
8	GND	OR		--
9	ANALOG INPUT	OR		DIGITAL INPUT
PIN CN2				
1	POWER SUPPLY	OR		--
2	GND	OR		--
3	POWER SUPPLY	OR		--
4	POWER SUPPLY	OR		--
5	GND	OR		--
6	POWER SUPPLY	OR		--
7	DIGITAL OUTPUT POSITIVE 10A	OR		--
8	* THE SAME OUTPUT OF PIN 7	OR		--
9	--	OR		--
10	DIGITAL OUTPUT POSITIVE 10A	OR		PWM OUTPUT 5A
11	DIGITAL OUTPUT POSITIVE 0,5A	OR		--
12	--	OR		--
13	DIGITAL OUTPUT POSITIVE 5A	OR		PWM OUTPUT 5A
14	DIGITAL OUTPUT POSITIVE 0,5A	OR		--
15	CAN H	OR		--
16	DIGITAL OUTPUT POSITIVE 5A	OR		--
17	DIGITAL OUTPUT POSITIVE 5A	OR		--
18	CAN L	OR		--

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



ECU COMPACT



Approximated weight: 50g

CONNECTORS



MINI-FIT 12 ways
Part Number: 39-01-2120

TERMINAL - PN: 39-00-0038
Manufacturer: MOLEX

TECHNICAL DATA

OPERATING VOLTAGE	12 VDC / 24 VDC
OPERATING VOLTAGE RANGE	10 VDC to 30 VDC
MAXIMUM VOLTAGE	32 VDC during 5 min
OUTPUT MAXIMUM CURRENT	500mA
OUTPUT SHORT-CIRCUIT	Protected*
REVERSE POLARITY	Protected*
OPERATING TEMPERATURE RANGE	-40°C to +85° / - 40°F to +185°F
STORAGE TEMPERATURE	-40°C to +85° / - 40°F to +185°F
TEMPERATURE SENSOR	NTC
PROTECTION DEGREE	IP 30
COMMUNICATION	CAN Bus / One Wire
MAXIMUM CURRENT CONSUMPTION	15mA @ 12 VDC / 30mA @ 24 VDC **
STANDBY CONSUMPTION	**

* 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.

FUNCTIONS UNDER REQUEST



WI-FI¹



BLUETOOTH¹



CELL PHONE
INTERFACE²



CAN BUS



REMOTE I/O
NETWORK



DATA
LOGGER¹



ECU

COMPACT

PRODUCT CONFIGURATIONS

Choose the best options for your system

PIN	ECU COMPACT		POSSIBLE CONFIGURATIONS HARDWARE 1		
1	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
2	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
3	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	OR	--
4	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	OR	--
5	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H
6	DIGITAL OUTPUT NEGATIVE 0.5A	OR	DIGITAL OUTPUT POSITIVE 0.5A	OR	BRIDGE H
7	ANALOG INPUT	OR	DIGITAL INPUT	OR	--
8	ANALOG INPUT	OR	DIGITAL INPUT	OR	DIGITAL OUTPUT POSITIVE 0.5A
9	DIGITAL OUTPUT NEGATIVE 0.5A	OR	GND (SENSOR)	OR	--
10	ONE WIRE	OR	--	OR	--
11	GND	OR	--	OR	--
12	POWER SUPPLY	OR	--	OR	--

PIN	ECU COMPACT		POSSIBLE CONFIGURATIONS HARDWARE 2	
1	DIGITAL OUTPUT POSITIVE 0.5A	OR	--	--
2	DIGITAL OUTPUT POSITIVE 0.5A	OR	--	--
3	DIGITAL OUTPUT POSITIVE 0.5A	OR	--	--
4	DIGITAL OUTPUT POSITIVE 0.5A	OR	--	--
5	DIGITAL OUTPUT POSITIVE 0.5A	OR	--	--
6	DIGITAL OUTPUT POSITIVE 0.5A	OR	--	--
7	POWER SUPPLY	OR	--	--
8	ANALOG INPUT	OR	DIGITAL INPUT	--
9	ANALOG INPUT	OR	DIGITAL INPUT	--
10	CAN H	OR	--	--
11	CAN L	OR	--	--
12	GND	OR	--	--

PIN	ECU COMPACT		POSSIBLE CONFIGURATIONS HARDWARE 3	
1	ANALOG INPUT	OR	DIGITAL INPUT	--
2	--	OR	--	--
3	--	OR	--	--
4	DIGITAL INPUT	OR	--	--
5	--	OR	--	--
6	POWER SUPPLY	OR	--	--
7	ANALOG INPUT	OR	DIGITAL INPUT	--
8	ANALOG OUTPUT	OR	--	--
9	ANALOG OUTPUT	OR	--	--
10	ANALOG INPUT	OR	DIGITAL INPUT	--
11	DIGITAL OUTPUT NEGATIVE 0.5A	OR	--	--
12	GND	OR	--	--

PIN	ECU COMPACT		POSSIBLE CONFIGURATIONS HARDWARE 4	
1	CAN H	OR	--	--
2	CAN L	OR	--	--
3	DIGITAL OUTPUT POSITIVE 0.5A	OR	--	--
4	DIGITAL OUTPUT POSITIVE 0.5A	OR	--	--
5	DIGITAL OUTPUT POSITIVE 0.5A	OR	PWM OUTPUT 0.5A	--
6	DIGITAL OUTPUT POSITIVE 0.5A	OR	PWM OUTPUT 0.5A	--
7	ANALOG INPUT	OR	DIGITAL INPUT	--
8	ANALOG INPUT	OR	DIGITAL INPUT	--
9	ANALOG INPUT	OR	DIGITAL INPUT	--
10	ANALOG INPUT	OR	DIGITAL INPUT	--
11	GND	OR	--	--
12	POWER SUPPLY	OR	--	--



PWM | PULSE WIDTH MODULATION

HVAC + R

STANDARD



MAIN FUNCTIONS

ENGINE SPEED CONTROL

HIGH VOLTAGES

HIGH RELIABILITY

CHARACTERISTICS

- Metal or Plastic housing
- Resinated product providing high IP rating
- Automotive connector
- One Wire Interface

CONFIGURATION OPTIONS

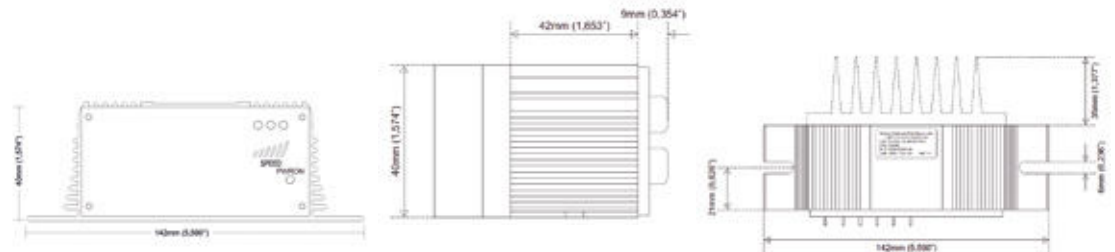
INPUTS: Analogs and Digitals

OUTPUTS: Analogs, Positive Digitals, Negative Digitals and PWM

AVAILABLE FOR



PWM MODULE ALUMINUM



Approximated weight: 400g

CONNECTORS



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

TECHNICAL DATA

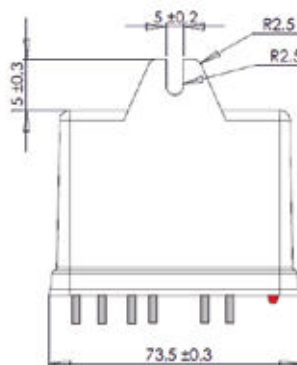
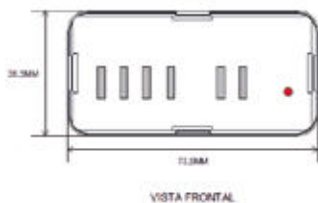
TECHNICAL DATA	
OPERATING VOLTAGE	12 VDC / 24 VDC
VOLTAGE RANGE	11 VDC to 30 VDC
MAXIMUM VOLTAGE	32 VDC during 5 min
MAXIMUM CURRENT PER OUTPUT	30A
OUTPUT SHORT-CIRCUIT	Protected*
REVERSE POLARITY	Protected*
OPERATING TEMPERATURE	-40°C to +85°
STORAGE TEMPERATURE	-40°C to +85°C / -40°F to +185°F
TEMPERATURE SENSOR	N/A
PROTECTION DEGREE	IP 65
COMMUNICATION	One Wire
MAXIMUM CURRENT CONSUMPTION	40mA @ 12VDC / 60mA @ 24VDC
STANDBY CONSUMPTION	N/A

* 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.

PWM MODULE

PLASTIC

GL-M1HGL002



Approximated weight: 200g

CONNECTORS

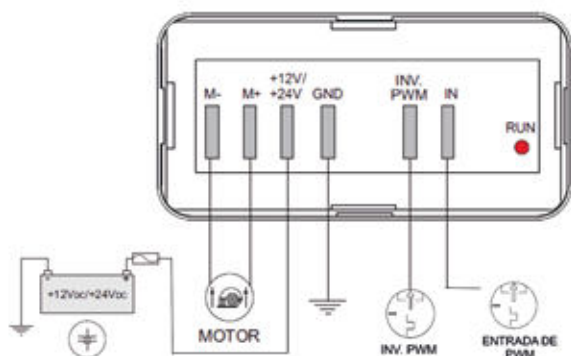


POSITIVE LOCK 1 way
Part Number: 154719-1
Terminal - PN: 880645-6
Manufacturer: AMP

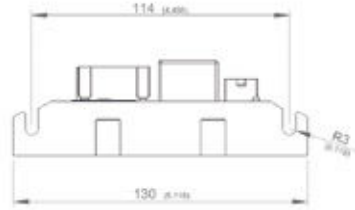
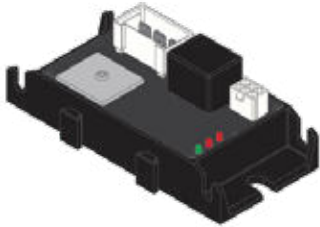
TECHNICAL DATA

OPERATING VOLTAGE	12 VDC / 24 VDC
VOLTAGE RANGE	11 VDC to 30 VDC
MAXIMUM VOLTAGE	32 VDC during 5 min
MAXIMUM CURRENT PER OUTPUT	15A
OUTPUT SHORT-CIRCUIT	Protected*
REVERSE POLARITY	Protected*
OPERATING TEMPERATURE	-40°C to +85°
STORAGE TEMPERATURE	-40°C to +85°C / -40°F to +185°F
TEMPERATURE SENSOR	N/A
PROTECTION DEGREE	IP 54
COMMUNICATION	N/A
MAXIMUM CURRENT CONSUMPTION	40mA @ 12VDC / 60mA @ 24VDC
STANDBY CONSUMPTION	N/A

* 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.



PWM MODULE PLASTIC



Approximated weight: 160g

CONNECTORS



FASTON 6 ways
Part Number: 0-280314-0
Terminal PN: 880645-6
Manufacturer: AMP

TECHNICAL DATA

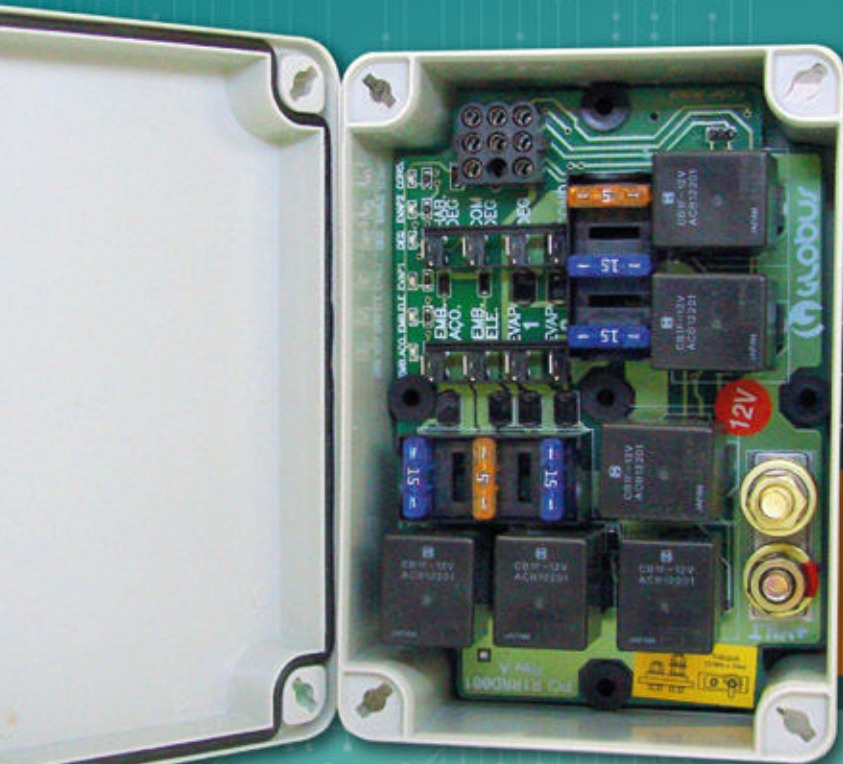
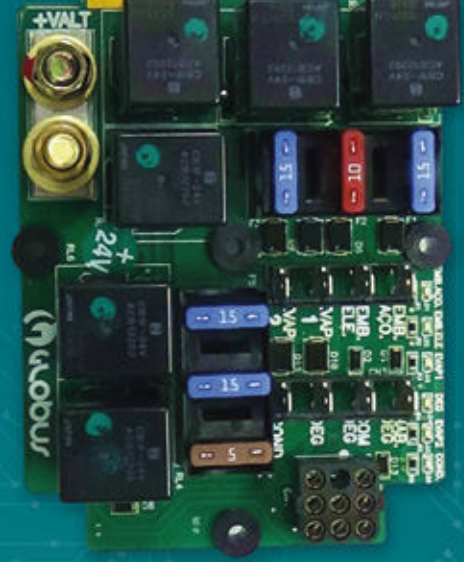
OPERATING VOLTAGE	12 VDC
VOLTAGE RANGE	10 VDC to 15 VDC
MAXIMUM VOLTAGE	17 VDC during 5 min
MAXIMUM CURRENT PER OUTPUT	15A
OUTPUT SHORT-CIRCUIT	Protected*
REVERSE POLARITY	Protected*
OPERATING TEMPERATURE	-40°C to +85°
STORAGE TEMPERATURE	-40°C to +85°C / -40°F to +185°F
TEMPERATURE SENSOR	N/A
PROTECTION DEGREE	IP 54
COMMUNICATION	One Wire
MAXIMUM CURRENT CONSUMPTION	110mA @ 12VDC
STANDBY CONSUMPTION	1,7mA

* 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.

MORE THAN 500 RELAY BOARD MODELS DEVELOPED BY



Globus
Electronics



- CUSTOMIZABLE
- EASY MAINTENANCE
- DIAGNOSTICS
- HIGH RELIABILITY
- FUNCTION IDENTIFICATION
- SIMPLIFIED INSTALLATION

CHOOSE A DEVELOPED
RELAY BOARD OR REQUEST
DEVELOPMENT ACCORDING
TO YOUR NEEDS.





BOARDS

EZ POWER

HVAC + R

STANDARD



MAIN FUNCTIONS

ACTIVATES MOTORS, COMPRESSORS,
FANS, SOLENOIDS, RESISTANCES

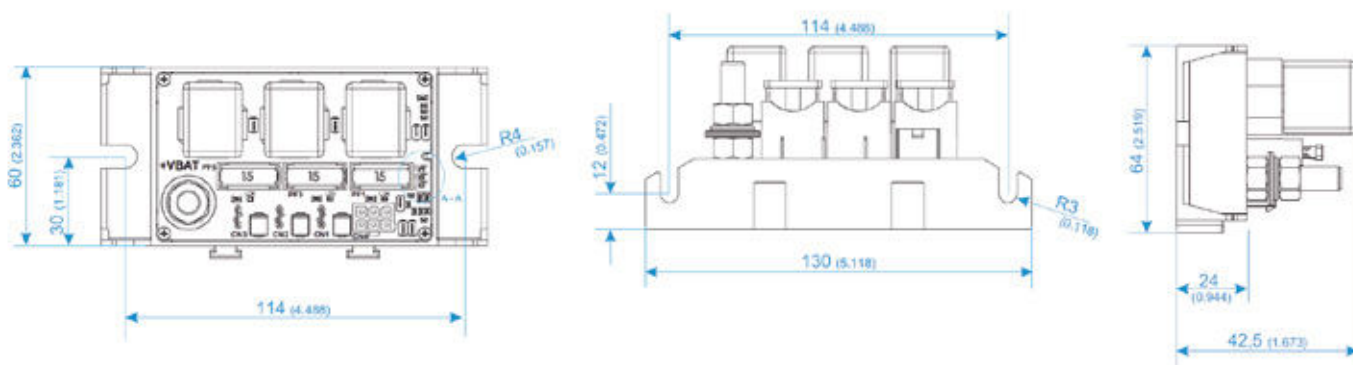
CHARACTERISTICS

- Innovative design
- Designed for heavy-duty applications
- Individual commands
- Automotive connector
- Modular (can be plugged in, reaching the number of relays the customer needs)
- Excellent cost-benefit ratio
- Compact size, simplifying installation

AVAILABLE FOR



TECHNICAL DATA



Approximated weight: 280g

CONNECTORS



MINI-FIT 6 ways
Part Number: 3901-2060
Terminal – PN: 3900-0038
Manufacturer: MOLEX



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



AUTOMOTIVE RELAY
PANASONIC 12VDC / 40A
Part Number: CB1F-12V
BLADE FUSE
Manufacturer: LITTELFUSE
PN: 0287015.PXCN

TECHNICAL DATA

	12 VDC	24 VDC
OPERATING VOLTAGE	12 VDC	24 VDC
OPERATING VOLTAGE RANGE	10 VDC to 15 VDC	18 VDC to 30 VDC
MAXIMUM VOLTAGE	17 VDC during 5 min	32 VDC during 5 min
MAXIMUM CURRENT PER OUTPUT	15A	15A
OUTPUT SHORT-CIRCUIT	Protected	Protected
REVERSE POLARITY	Not Protected	Not Protected
OPERATING TEMPERATURE RANGE	-40°C to +85°C	-40°C to +85°C
STORAGE TEMPERATURE	-40°C / + 125°C	-40°C / + 125°C
TEMPERATURE SENSOR	N/A	N/A
PROTECTION DEGREE	N/A	N/A
MAXIMUM CURRENT CONSUMPTION	N/A	N/A
STANDBY CONSUMPTION	N/A	N/A

* 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.

FUNCTIONS UNDER REQUEST



WI-FI



BLUETOOTH



CELL PHONE
INTERFACE



CAN BUS



REMOTE I/O
NETWORK



DATA
LOGGER



CUSTOMIZABLE
INTERFACES



HMI



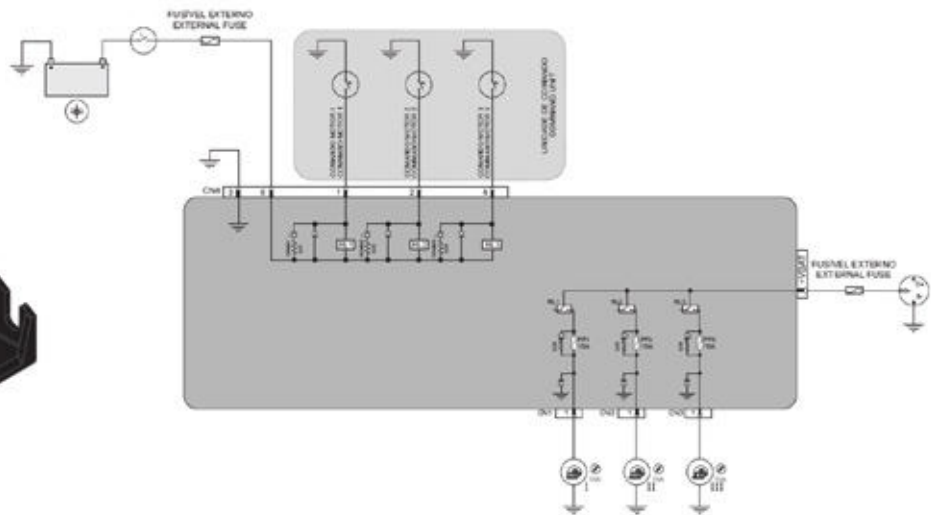
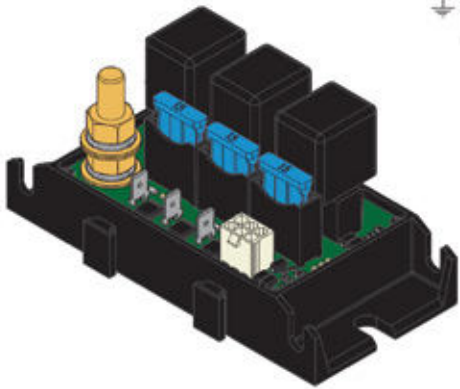
EZ POWER

HVAC + R

STANDARD

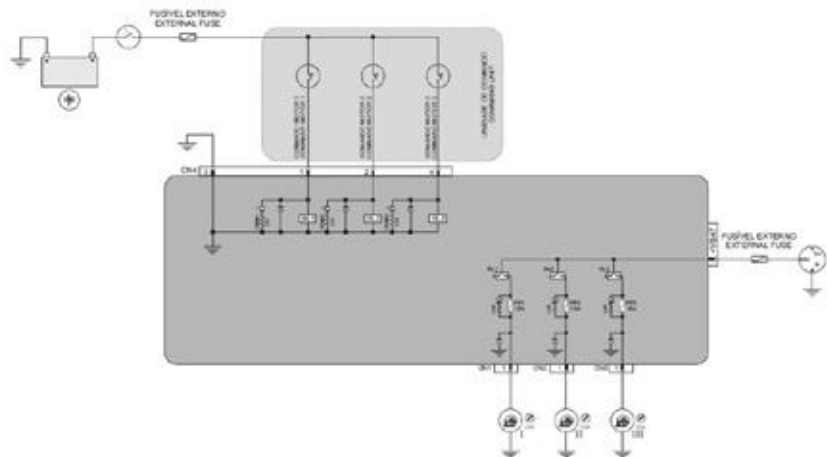
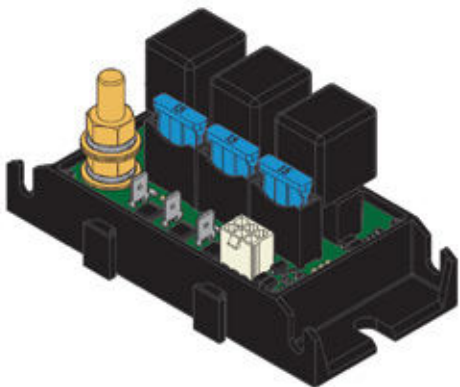
EZ POWER NEGATIVE ACTIVATION

GL-R1SGL001 (12 VDC) | GL-R2SGL001 (24 VDC)



EZ POWER POSITIVE ACTIVATION

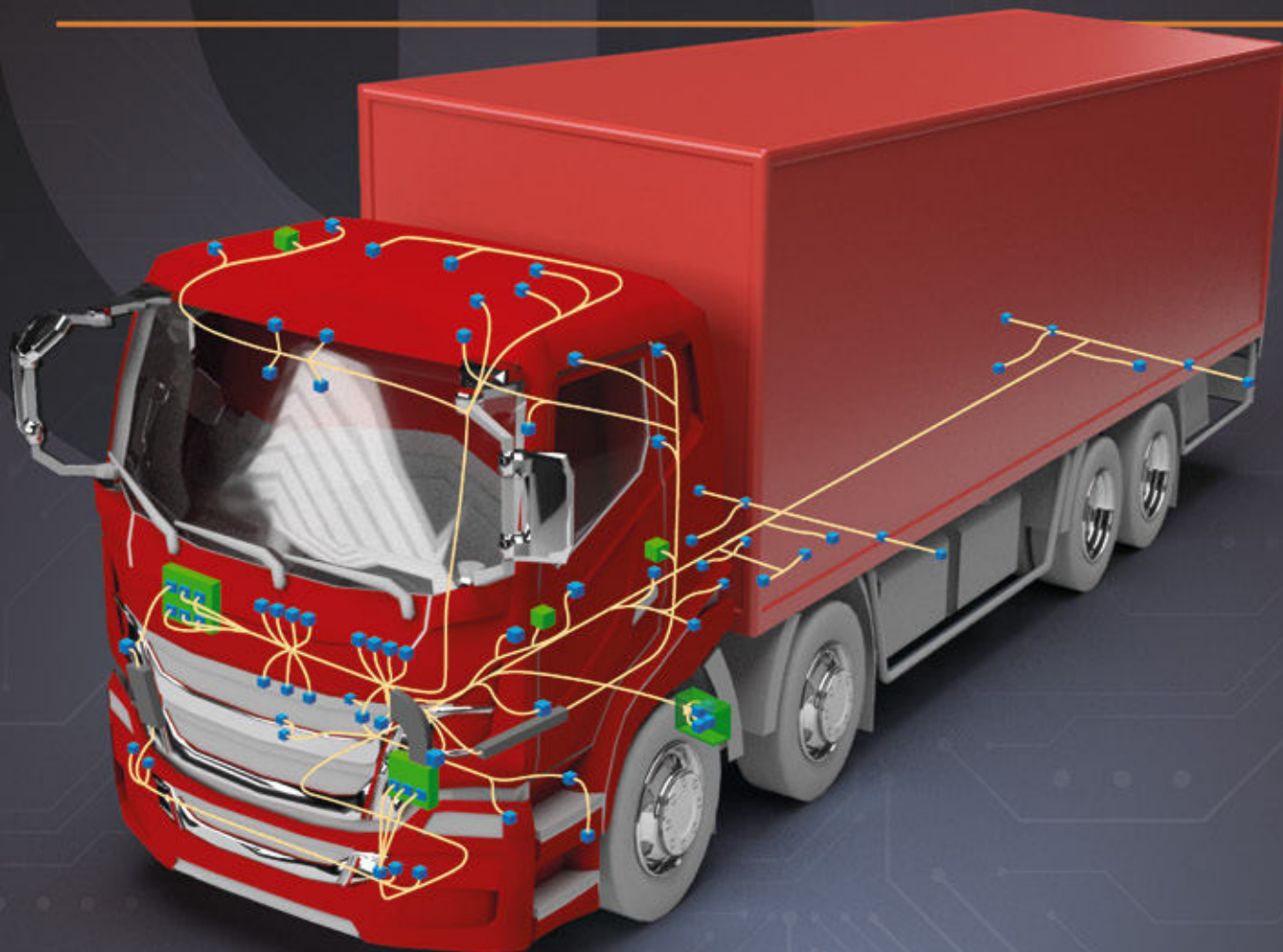
GL-R1SGL002 (12 VDC) | GL-R2SGL002 (24 VDC)





ACCESSORIES

CABLES AND WIRING HARNESSES



WITH THE OBJECTIVE OF OFFERING THE COMPLETE SOLUTION TO THE CUSTOMER, GLOBUS CABLES AND CONNECTIONS GUARANTEE

QUALITY

FUNCTIONALITY

SAFETY

RELIABILITY

IN THE VEHICLES' ELECTRICAL SYSTEMS,
MEETING THE ABNT/NBR TECHNICAL STANDARDS.

Product is not sold separately.

HVAC + R

STANDARD

TEMPERATURE SENSORS

Specially developed for low temperature and high humidity applications.



MAIN FUNCTIONS

NTC temperature sensors are manufactured from a thermally sensitive resistor element that has a negative coefficient (Negative Temperature Coefficient)

Offers mechanical, thermal, and electrical stability, along with a high degree of sensitivity. Acts in monitoring and warnings on the instrument panel are immediately triggered, detecting faults or unusual temperature changes

CHARACTERISTICS

TEMPERATURE SENSOR WITH ABS CAGE

Ideal for use in the return and air duct, in buses and minibuses.

STAINLESS STEEL TEMPERATURE SENSOR

Ambient, coil (freezing) and/or external sensor. It has a stainless steel encapsulation, a more robust cable with tinned copper wires and reinforced insulation at the cable junction.

ABS TEMPERATURE SENSOR

ABS encapsulated sensors ensure great durability in humid environments, often used for cold applications.

AVAILABLE FOR



TEMPERATURE SENSOR CAGE

TECHNICAL DATA

COLOR	WHITE / BLACK / GRAY
OPERATING TEMPERATURE	-50°C to 120°C / -58°F to 248°F
PROTECTION DEGREE	IP20
SENSOR - THERMISTOR	NTC 10KΩ +/- 0,5% @25°C / 77°F NTC 30KΩ +/- 0,5% @25°C / 77°F NTC 20KΩ +/- 0,5% @25°C / 77°F
RESPONSE TIME	<= 7s

GL-S010

10k



GL-S030

30k



SPECIAL MODELS UNDER REQUEST



WI-FI



BLUETOOTH



CELL PHONE
INTERFACE



CAN BUS



REMOTE I/O
NETWORK



DATA
LOGGER



CUSTOMIZABLE
INTERFACES



HMI

TEMPERATURE SENSOR

STAINLESS STEEL OR ABS PROBE

TECHNICAL DATA	
PROBE TYPE	Stainless Steel (AISI 304) / ABS
OPERATING TEMPERATURE	-50°C to 120°C / -58°F to 248°F -50°C to 105°C / -58°F to 221°F
PROTECTION DEGREE	IP 68
SENSOR - THERMISTOR	NTC 10KΩ +/- 1% @25°C / 77°F NTC 30KΩ +/- 1% @25°C / 77°F NTC 20KΩ +/- 1% @25°C / 77°F
RESPONSE TIME	10 seconds

STAINLESS STEEL



ABS



Available in various length and diameter sizes. For other connector options please check with our commercial technical department.

SPECIAL MODELS UNDER REQUEST



WI-FI



BLUETOOTH



CELL PHONE
INTERFACE



CAN BUS



REMOTE I/O
NETWORK



DATA
LOGGER



CUSTOMIZABLE
INTERFACES



HMI

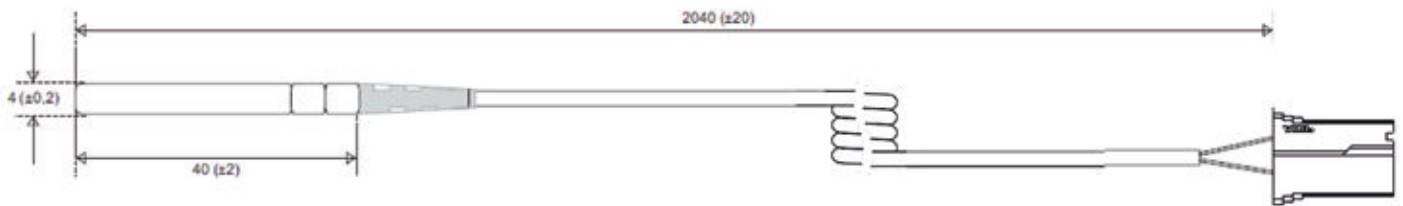


TEMPERATURE SENSOR

STAINLESS STEEL SENSOR

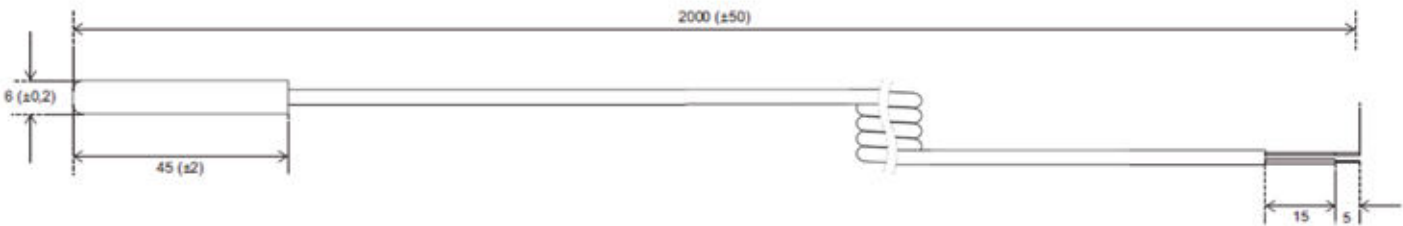
GL-A1SGL001

NTC 10K Ω
Cable Length: 2 m
Probe Length: 40mm
Cable 2x23awg



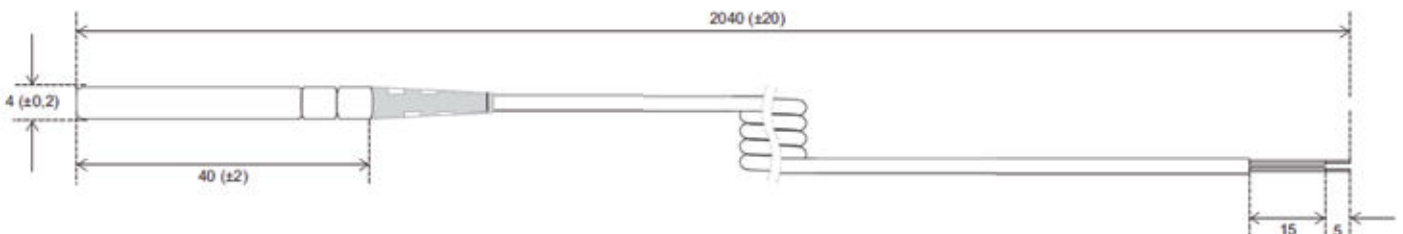
GL-A1SGL816

NTC 10K Ω
Cable Length: 2 m
Probe Length: 50mm
Cable 2x22awg



GL-A1SGL004

NTC 10K Ω
Cable Length: 2 m
Probe Length: 40mm
Cable 2x23awg

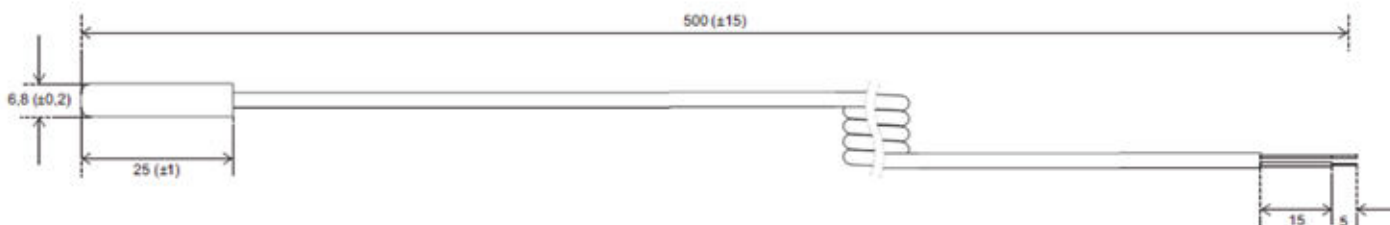


TEMPERATURE SENSOR

ABS SENSOR

GL-GS814

NTC 10K Ω
 Cable Length: 500mm
 Probe Length: 25mm
 Cable 2x26awg



GL-S033

NTC 30K Ω
 Cable Length: 540mm
 Probe Length: 25mm
 Cable 2x23awg



CONNECTORS



POSITIVE LOCK 12 ways
 Part Number: 926522-2

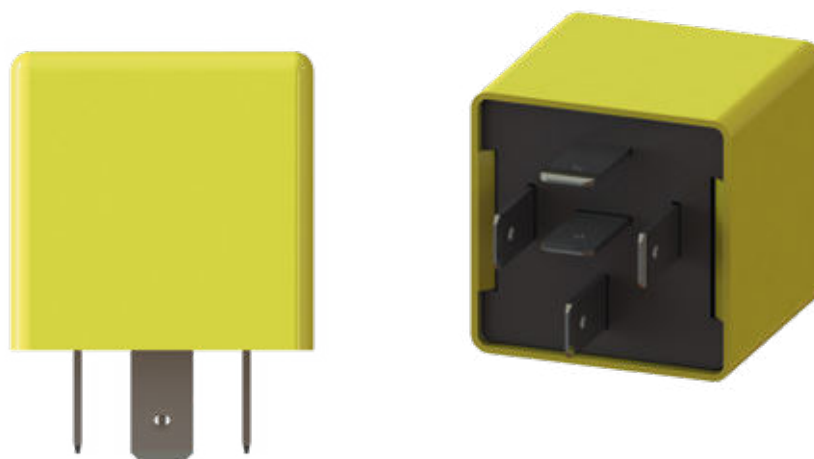
TERMINAL: POSITIVE LOCK
 CABLE 2,5 mm² PN: 880645-6



DAMPER CONTROL

HVAC + R

STANDARD



MAIN FUNCTIONS

FLAP ON /OFF CONTROL

AIR CONDITIONING

REFRIGERATION

FRONT BOX

CHARACTERISTICS

Microprocessor module for flap control.

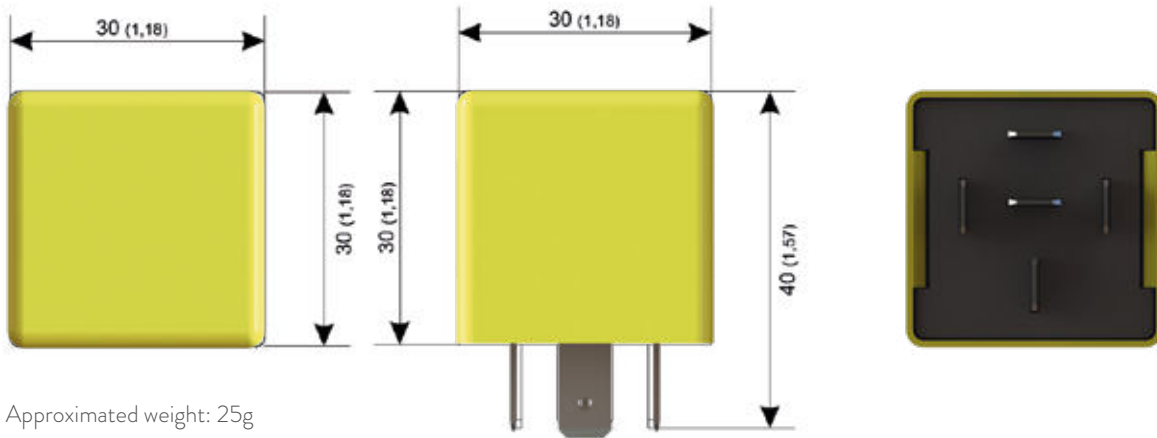
Controls a motor with a maximum current of 1A.

Motor short circuit protection.

AVAILABLE FOR



TECHNICAL DATA



Approximated weight: 25g

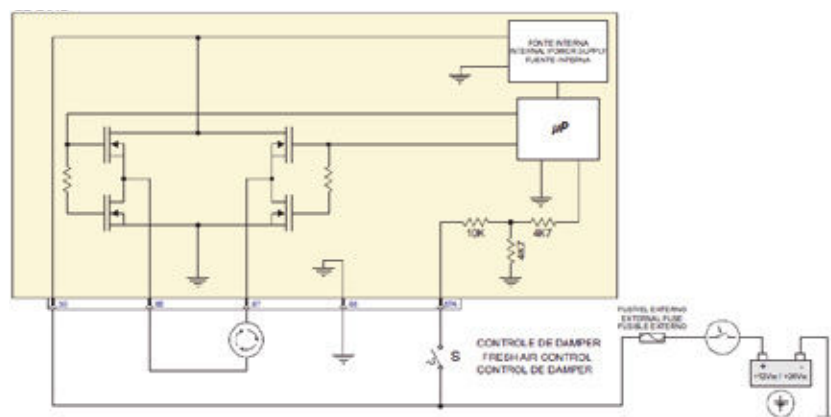
TECHNICAL DATA	
NOMINAL VOLTAGE	12 VDC / 24 VDC
VOLTAGE RANGE	10 VDC / 30 VDC
MAXIMUM VOLTAGE	32 VDC during 5 min
MAXIMUM CURRENT PER OUTPUT	500 mA
OUTPUT SHORT-CIRCUIT	Protected *
REVERSE POLARITY	Protected *
OPERATING TEMPERATURE	-40°C to +85°C
STORAGE TEMPERATURE	-40°C to +80°C / -40°F to +176°F
PROTECTION DEGREE	IP 50
CONNECTOR	Standard relay socket
MAXIMUM CURRENT CONSUMPTION	6mA @ 12VDC / 18mA @ 24VDC
STANDBY CONSUMPTION	N/A
Observations: MOTOR SUGGESTION: BOSCH (CODE:0 132 801 143) / ACTIVATION TIME: 5 SECONDS	

* 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.

DAMPER CONTROL / FRESH AIR CONTROL

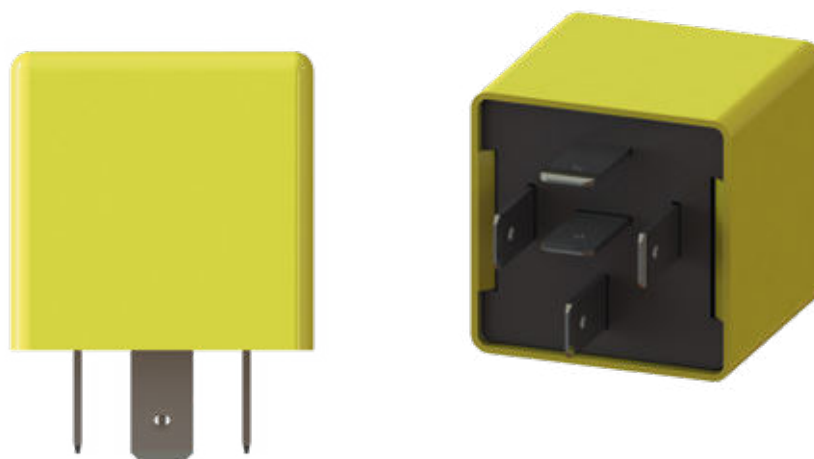
GL-M1HGL012



ELECTRONIC THERMOSTAT

HVAC + R

STANDARD



MAIN FUNCTIONS

COIL FREEZE PROTECTION

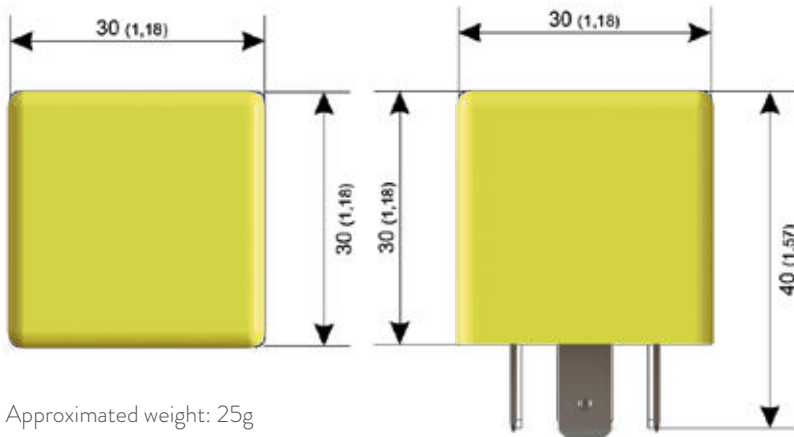
CHARACTERISTICS

- Plastic Housing
- Standard relay size
- 0.6°C (31°F) Switch-off temperature
- Reset temperature 3.9°C (39°F)
- 15s hysteresis to reset after switch-off
- 5s delay for voltage selection and output activation after power up
- Output shutdown in case of temperature sensor failure

AVAILABLE FOR



TECHNICAL DATA



Approximated weight: 25g



TECHNICAL DATA	
NOMINAL VOLTAGE	12 VDC / 24 VDC
OPERATING VOLTAGE RANGE	9 VDC to 30 VDC
MAXIMUM VOLTAGE	32 VDC during 5 min
MAXIMUM CURRENT PER OUTPUT	6A @ 12VDC / 3A @ 24VDC
OUTPUT SHORT-CIRCUIT	Not Protected *
REVERSE POLARITY	Protected *
OPERATING TEMPERATURE RANGE	-40°C to +85°C
STORAGE TEMPERATURE	-40°C to +85°C / -40°F to +185°F
PROTECTION DEGREE	IP 50
CONNECTOR	Standard relay socket
MAXIMUM CURRENT CONSUMPTION	37mA @ 12VDC / 40mA @ 24VDC
STANDBY CONSUMPTION	10mA @ 12VDC / 10mA @ 24VDC

* According to product configuration. ** Consumption may vary according to customer specifications.
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CONNECTORS



AMP Faston – 5 ways
Part Number: 10763622
Terminal - PN: 735222-2
Fabricante: AMP Faston

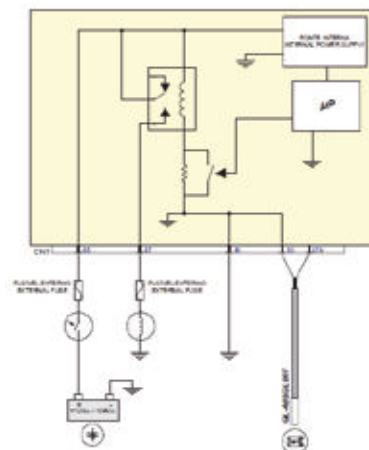


TEMPERATURE SENSOR 10K
Part Number: GL-AOSGL007
Manufacturer: GLOBUS

CONNECTOR + TERMINAL + SENSOR SOLD TOGETHER WITH THERMOSTAT

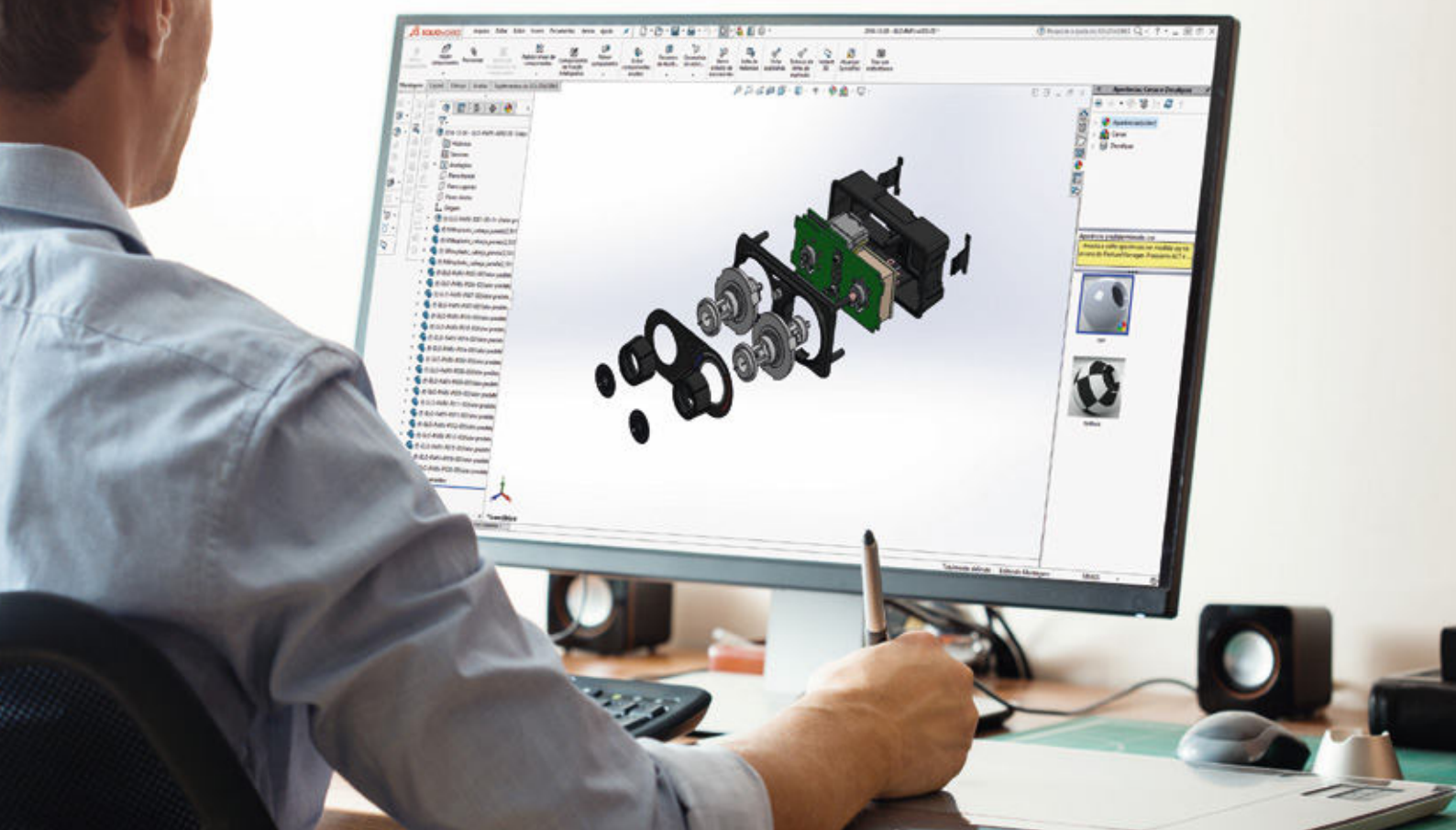
ELECTRONIC THERMOSTAT

GL-M1HGL006



A hand in a white shirt is pointing towards the center of the frame. Overlaid on the image is a network diagram consisting of several circular nodes connected by dashed white lines. One node at the top center is highlighted with a bright white glow and concentric circles. An orange line with a dot at its end extends from the right side of the word 'CUSTOMIZE' across the page.

CUSTOMIZE



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