

# CABIN PRESSURE MONITORS

HMPS1000BKIT/HMPS3000KIT



**Hummingbird**  
Electronics

## KEEP YOUR OPERATORS SAFE

# CABIN PRESSURE MONITORS

HMPS1000BKIT/HMPS3000KIT

Mining vehicles operate in testing environmental conditions, with debris, dust, diesel particulates and pollutants that can create respiratory problems if breathed in by equipment operators.

The Panel Mount Cabin Pressure Monitor (HMPS3000KIT) provides a detailed colour display that informs operators when positive pressure reaches a critical level. The Configurable Cabin Pressure Monitor (HMPS1000BKIT) provides real-time feedback to operators in a convenient compact module.

Reducing dust from electrical or moving components ensures equipment works more efficiently for longer. The Cabin Pressure Monitors alert you to the environmental condition of the cabin, so you can ensure that cabin equipment is adequately cleaned and maintained.



### Look at the benefits:

- Keeps operators safe from dangerous dust and airborne contaminants by alerting them to unsafe cabin pressure
- Configurable warnings and alarms
- Multi voltage - 12/24 volt compatible
- Customisable output triggers for external devices, i.e. buzzers and lamps or the Audio Alert System
- Less machinery damage from dust resulting in less machine down time
- Touch screen

HMPS1000BKIT  
HMPS3000KIT

# CABIN PRESSURE MONITORS



- Keeps operators safe from dangerous dust and airborne contaminants
- Ensure systems keep performing at their best
- Configurable warnings and alarms
- Multi voltage - 12/24 volt compatible
- Customisable output triggers for external devices, i.e. buzzers and pilot lamps

Hummingbird Cabin Pressure Monitors have been engineered for simple installation and operation. They measure pressure in the cabin and compare it with atmospheric pressure. When pressure in the cabin is outside the safe range – either high or low cabin air pressure – the operator is alerted via a change of colour on the unit or display.

It is a significant OH&S requirement to provide quality sealed, pressurised and temperature-controlled cabins that create a dust free environment for operators.

## Ensuring positive pressure

By ensuring positive pressure, equipment will work better and require less maintenance.

Furthermore, operators will not only be healthier but also better able to perform their duties.

Reducing costs and providing a healthy work environment can go a long way toward the success of a mining organisation.

It's one thing to have an effective filtration system, however, you can ensure these systems keep performing at their best by incorporating a Hummingbird Electronics Cabin Pressure Monitoring System.

## Precision sensor

A precision sensor allows pressure to measure to a resolution of 0.1mm H<sub>2</sub>O.

The measured pressure is also temperature compensated to allow operation over a wide range of temperatures.

A high sensor burst pressure rating of 5000Pa means that door slams will not affect the sensor.

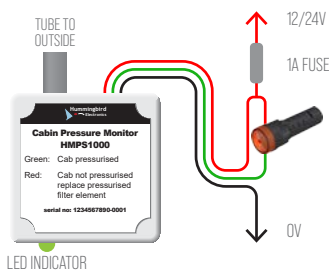
## Touch screen

The pressure measurement units and thresholds can be configured via the touch-screen and also allows other features such as screen brightness, password and outputs to be configured.

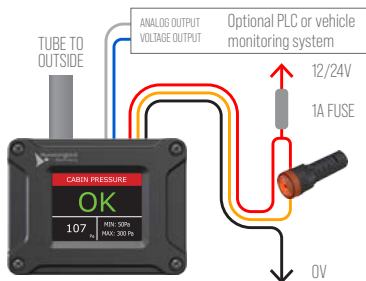




### Configurable installation HMPS1000BKIT



### Panel Mount installation HMPS3000KIT



Part number	Configurable HMPS1000BKIT	Panel Mount HMPS3000KIT
Operating pressure range	0-500Pa (0-50mm H <sub>2</sub> O)	0-500Pa (0-50mm H <sub>2</sub> O)
Sensor resolution	1Pa (0.1mm H <sub>2</sub> O)	1Pa (0.1mm H <sub>2</sub> O)
Sensor burst pressure	5000Pa	5000Pa
Temperature range	0-50 °C	0-50 °C
Input voltage	Minimum 9V Maximum 36V	Minimum 9V Maximum 36V
Current consumption	<100mA	Less than 2W (100mA at 12V, 50mA at 24V)
External output - inactive state	100kOhm pullup	High impedance (open collector)
External output - active state	Grounded	Grounded
External output - maximum sink current	120mA	120mA
Analog output	N/A	Range 0-10V, maximum 10mA output current
Voltage output	N/A	Low value 0V, high value 9V, maximum output current 10mA
Dimensions	22 x 50 x 50mm Base plate 66mm	90 x 76 x 33mm Panel cutout 77 x 57mm

Visit [hmbe.com.au/pressure-monitors](http://hmbe.com.au/pressure-monitors) for more information

## Cabin Pressure Monitors



### Configurable Cabin Pressure Monitor

HMPS1000KIT

The HMPS1000KIT measures pressure in the cabin and compares it with atmospheric pressure outside of the machine. When the pressure in the cabin drops to a level that is not high enough to prevent dust and other contaminants entering, a green light turns red.

If the pressure is low, a normally high output trigger from the device goes low allowing interfacing to external systems. High-pressure events are also monitored.

Using an internal rotary switch, it can be configured to alarm at low pressures between 10Pa and 90Pa (1mm to 9mm H<sub>2</sub>O). The cabin pressure alarm output is supplied pre-set to 50Pa (5mm H<sub>2</sub>O) low pressure and 300Pa high pressure.



### Panel Mount Cabin Pressure Monitor

HMPS3000KIT

The HMPS3000KIT provides a colour display letting operators and service personnel know when positive pressure in the cabin is too low or high. When the pressure inside the cabin falls below a preset value the display turns orange to alert the operator service is required. After a user-configured time, the display turns red, a warning is shown and, if optioned, an external alarm is triggered.

It provides adjustments of the 'units of measure' and 'thresholds' to be configured via the touch screen display.

The menu screen also features adjustments such as brightness, output trigger configuration and a password to limit unauthorised access.

## The Cabin Pressure Monitors work well with...



### Audio Alert System

HMMP3016

Provides vehicle operators clear and precise verbal alerts when an input trigger has been detected, for example "Warning - low cabin pressure detected".



### Combination Warning LED and Buzzer

HMAC001-12 (12 volt) / HMAC001-24 (24 volt)

Used as an alarm or indicator in automotive applications, when a DC voltage is applied, the LED and buzzer pulse for maximum impact.