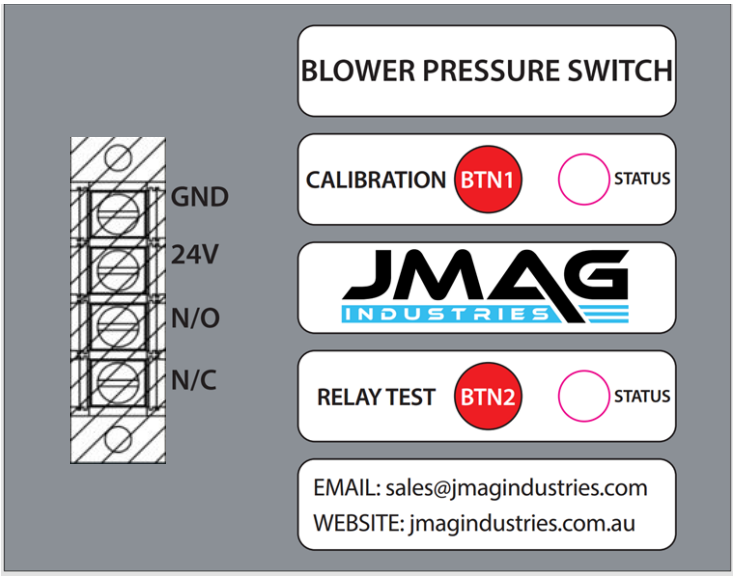
Website: jmagindustries.com.au
Email: sales@jmagindustries.com

JMAG BPS SENSOR - INSTRUCTIONS

Installation - Follow all Site Procedures for Isolation and Testing

1. Mount bracket with BPS to truck and connect wiring as required. If bracket is not required, remove it (the mounting holes on the BPS enclosure may need to be enlarged). Ensure all truck covers are fitted.



2. When the unit is first installed and powered on, the **Calibration LED** should display a **solid red**, and the **Relay Test LED** should be **off**.
   - If the Relay Test LED is **solid green**, this indicates the unit has previously been calibrated. Since this is a first-time installation, recalibration is required.
   - If the Relay Test LED is **solid red**, this indicates a fault. Power the unit off and back on to attempt recovery.

Calibration – V1 UNIT

Calibrating the Unit to the Desired Pressure Point:

A. Switch the ignition to the "On" position without starting the engine.

B. Press and hold the Calibration Button (BTN1) for a minimum of 10 seconds. The Calibration LED will begin to flash slowly in red, indicating that the system has entered calibration mode.

C. Release the Calibration Button. The Calibration LED will then flash rapidly, signifying that the calibration process is underway. At this stage, close the cabinet door on either the axle box or the LEMS unit.

> ⚠ *The next step requires engine to be running.*

D. From within the truck cabin, gradually increase the engine speed to approximately 1100 RPM. Maintain this RPM for no less than 5 seconds.

> ⚠ *Note: If the engine speed exceeds 1100 RPM, the calibration process must be repeated. Proceed to the next step once RPM is stable.*

E. Allow the engine to return to idle speed. Then, return to the pressure switch and press the Calibration Button (BTN1) once to complete the calibration process. The current pressure value will be recorded.

F. If calibration is successful, the Calibration LED will illuminate solid green, confirming completion. The truck may now be switched off.

> ⚠ ***If the LED does not turn green and is solid red or the RPM exceeded 1100****, repeat the calibration process.*

Relay Output Test

A **Relay Output Test function** has been added to verify whether the relay is operational—either during fault diagnostics or as part of routine maintenance.

If the system is not registering pressure (e.g. due to a **blocked pipe or no airflow**), you can use the **Relay Test Button** (BTN2) to confirm whether the issue lies with the **relay or elsewhere in the system**.

To perform a Relay Output Test:

A. **Press the Relay Test Button (BTN2)** on the unit.

B. The **Relay Test LED** will illuminate **green for 1 second**, indicating the relay has activated.

C. The relay will then **deactivate for 1 second**, and the LED will turn **off**, confirming it is not stuck on.

D. The relay will then **reactivate for another 1 second**, and the LED will again illuminate **green**, confirming proper operation.

E. If the relay activates as described, this confirms the relay is functioning correctly. In this case, any issue is likely related to **airflow, piping, or pressure input**.

F. If the relay does **not activate**, it may be **faulty or require further inspection**.

Standard Operation

Once the unit has been successfully calibrated, it will operate as follows:

- The **relay will activate** when the **measured pressure exceeds the calibrated setpoint**.
- The **relay will deactivate** when the **pressure falls below the setpoint**.

This automatic switching ensures the system responds accurately to pressure changes under normal operating conditions.

LED Status

Calibration LED

- **LED Off** – No power to the unit.
- **LED Solid Red** – Unit is **not calibrated**, or the **stored pressure value has been lost**. Recalibration is required.
- **LED Flashing Red (Slow)** – Calibration **mode has been entered** (button held long enough).
- **LED Flashing Red (Fast)** – Calibration is **in progress**.
- **LED Solid Green** – Calibration **completed successfully** and the pressure setpoint has been **saved in memory**.

Relay Test LED

- **LED Off – Relay is off.**
- **Solid Green – Relay is on and functioning.**
- **Solid Red – Internal fault detected. Power the unit off and back on to attempt recovery.**