

How to Tune the ECMSet Pro Adjustable Dial

SENAVA'S NEW! ECMSET PRO SENSOR DESIGNED WITH ECTUNE TECHNOLOGY

The ECMSet Pro sensor is specifically engineered to address the unique monitoring challenges posed by ECMs in HVAC systems. With an adjustable turn-on threshold that can be set as low as 30 mA, the ECMSet Pro offers dependable detection of "ON" and "OFF" states, even for motors that operate at low current levels. This product is designed to provide precise calibration through its adjustable turn-on set-point, which helps prevent false "ON" alarms caused by residual current.

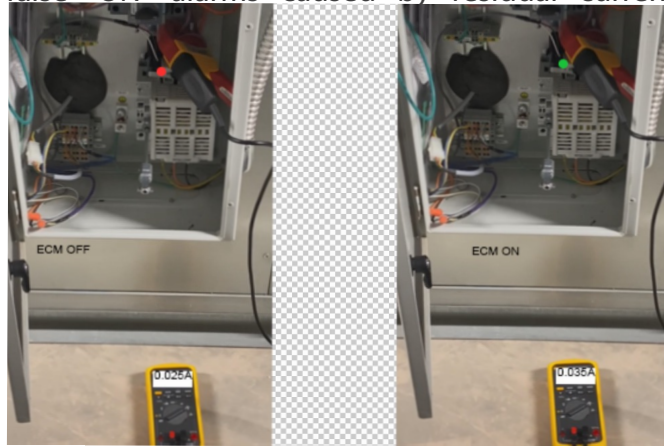


Figure 1: High sensitivity between active and idle motor state

The ECMSet Pro's high sensitivity, down to 5 mA, accurately distinguishes between active and idle motor states, with LED indicators providing immediate feedback—green for "ON" and red for "OFF." Calibration is streamlined with a single-turn knob, allowing quick adjustments without tools, even in live enclosures. This tool-free setup is designed for safety and convenience, letting technicians make precise calibrations using gloved fingers. Not needing a screwdriver reduces the risk of slips or shorts, ensuring more controlled, secure adjustments in tight spaces. The sensor's stable engineering prevents erratic signals, enabling



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Senva's adjustable turn-on set-point is ideal for repeat installations. After calibrating first sensor, set each additional sensor to dial and avoid the need to calibrate in live enclosure. Learn more here: <https://www.senvainc.com/en/products/current-sensing/ecmset-pro-current-switch>

ECMSET PRO INSTALLATION AND CALIBRATION BEST PRACTICES

The adjustable turn-on set-point of the ECMSet Pro sensor enables installers to fine-tune its calibration in real-time, matching the specific characteristics of the EC motor by setting the detection threshold above the motor's standby current. This setup process uses a scaled dial to allow for precise calibration according to the motor's actual operational current, effectively distinguishing between active motor operation and residual standby currents. By accurately setting the turn-on point, the sensor avoids false "ON" readings and ensures reliable monitoring of the motor's active state. This calibration method streamlines installation, saves time, and enhances the precision of motor monitoring.



Figure 2: Close up of adjustable dial on ECM Set Pro

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STEP-BY-STEP CALIBRATION GUIDE

1. To scale the dial for pre-set values, start by using the provided table to match the dial positions (A-K) to common motor models.

- If the motor is not listed, set initial dial position to Setpoint A as the baseline.

2. Power On the Motor

- Start the motor at the desired operational level for detection.

3. Observe LED Feedback

- Verify whether the LED indicator turns ON when the motor is powered and OFF when the motor stops.
- If detection does not occur, proceed to the next step.

4. Adjust the Setpoint

- Incrementally move the dial one setpoint at a time(e.g A • B • C).
- After each adjustment, test the motor operation and check LED feedback.

5. Fine-Tune Detection

- Continue adjustments until the LED reliably turns ON and OFF with motor operation.
- If necessary, move backward or forward through the dial settings to refine performance.

6. Final Verification

- Test the full operational range of the motor (from low to high speeds) to confirm proper detection.
- Ensure the sensor consistently detects current at desired thresholds.

7. Document Settings

- Record the final setpoint used and any observations for future reference or troubleshooting.

Manufacturer	Model Number	Dial Setting
EBM Papst	R3G250-RE21-08	A
EBM Papst	R3G220-R	A
EBM Papst	W3G250-HK35-11	A
Delta	AFL22AUHW-P1	A



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