# BATTERY GROUND TRANSDUCER


- ISOLATED ANALOG OUTPUTS
- POWERED BY STATION BATTERY
- 1% ACCURACY
- ACCESSIBLE CAL ADJUSTMENTS
- 0.5 TO 1mA OR 0 TO 1.0 mA OUTPUT
- MICROCOMPUTER CIRCUITRY
- LOW POWER CONSUMPTION
- L E D POWER INDICATOR

## APPLICATIONS

**Dual Monitor - Remotely monitors electrical substation lead-acid batteries and chargers. Detect defective batteries, chargers, connectors, and wiring with continuous monitoring. Protect personnel, equipment, and data integrity by maintaining battery power isolation from earth ground in the substation. Detect and troubleshoot battery terminal to ground shorts.**

The Demico Battery Ground Transducer is a unique dual function transducer. The transducer powers itself from the battery being monitored so no extra power supply is required. The two analog outputs are galvanically isolated from the battery circuit providing safety and preventing grounding issues.

One of two output curves is switch selectable for the Battery Voltage output as shown below. One selection provides a 0-1mA output linearly proportional to the input Voltage across the full input range as in our BA_11 series. The other selection offsets the 0-1mA, starting at half the maximum value of the Voltage input range as in our BA_12 series.

The other analog output is proportional to the Voltage difference between the earth ground terminal and the battery terminals. The output signal is bipolar as shown in the graph below. If there is an external path from the positive battery terminal to ground, then the Battery Ground output will be in the range of positive 0-1mA. If there is an external path from the negative battery terminal to ground, the output will be in the range of negative 0-1mA.

The industry standard 0-1mA output allows easy interfacing to RTU's. A simple resistor from 0 to 10,000 ohms is all that is required to scale and interface to a standard RTU analog input. The transducer output's galvanic isolation from the battery eliminates ground loops and ground referenced noise. This transducer operates within accuracy and linearity specifications to

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Since 1978

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Preliminary

approximately 50% of the maximum specified input Voltage.

The BG series is available with four standard input ranges as shown in the graphs below. Custom ranges may be accommodated.

The transducer indicates properly up to 110% of the maximum specified input Voltage. The outputs are compliant within specifications up to 1.1mA.

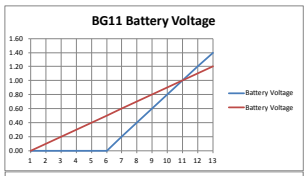
The Battery Ground Transducer series is accurate to within one percent across a wide operating temperature range to give dependable data year round even without a climate controlled environment.

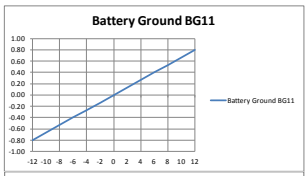
Two potentiometers next to the terminal strip allows field calibration adjustments to the outputs..

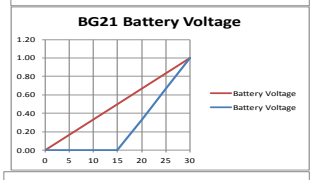
The low profile phenolic case mounts easily with two screws, and the terminal strips have built in wire clamps for quick and reliable connections.

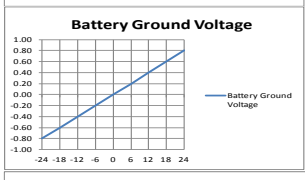
The label clearly indicates the input range and the numbered input and output terminals for easy installation.

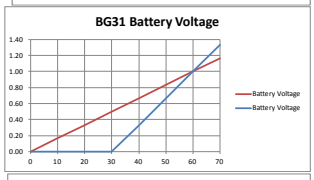
The transducer is designed for use in the electrically noisy substation environment and meets the surge withstand requirements of ANSI standard 37.90.1-1989. The manufacturing process for Demico transducers include:

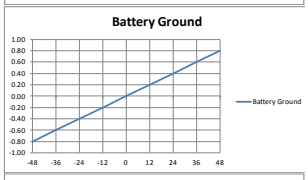


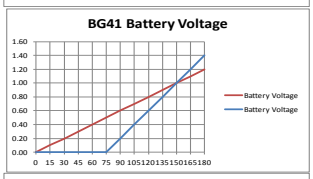



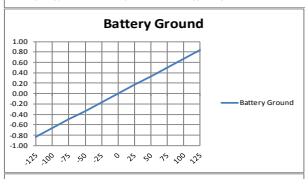



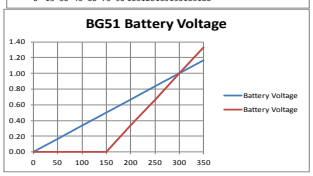



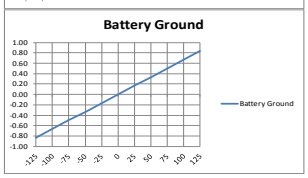



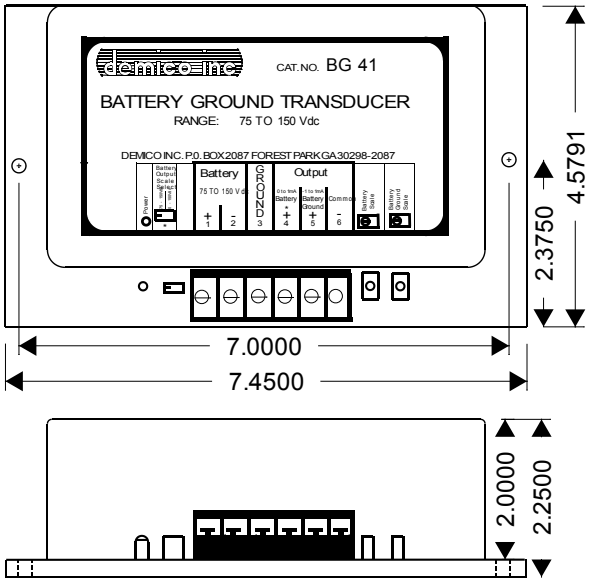



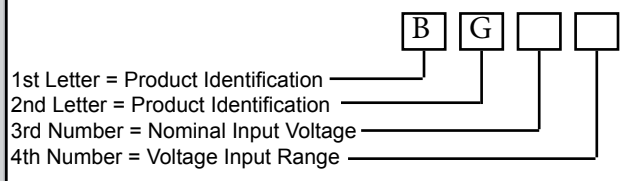




## Specifications

| | |
|---|---|
| Accuracy | +/- 1% of full scale |
| Output compliance burden | 0 to 10,000 ohms |
| Setup Adjustment Range | +/- 10% |
| Operating Temperature | -30 to +70 degrees C |
| Humidity | (polyurethane coated) |
| Maximum Battery Burden | BG1 0.050A/0.75W |
| | BG2 0.035A/1.0 W |
| | BG3 0.035A/2.1 W |
| | BG4 0.025A/3.75 W |
| Tested Isolation | 1500 Vac |
| Surge Withstand | ANSI 37.90.1-1989 |
| Minimum Input Voltage | 50% of Maximum |
| Enclosure | Black Phenolic |
| Terminals | 6-32 with wire clamps |
| Warranty | 1 year Parts & Labor |




## Ordering Information




| BG Nominal Input | BG Input Range |
|---|---|
| 1 = 7.5 to 15Vdc<br>2 = 15 to 30Vdc<br>3 = 30 to 60Vdc<br>4 = 75 to 150Vdc | 1 = Standard<br>2 = Custom, Specify |