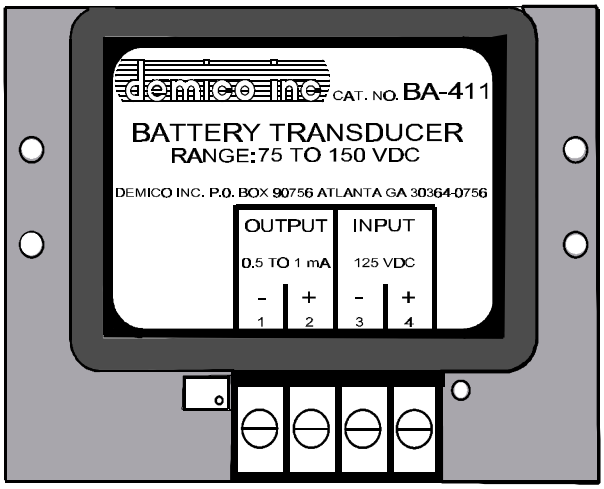
BATTERY VOLTAGE TRANSDUCER



- **ISOLATED ANALOG OUTPUT**
- **POWERED BY STATION BATTERY**
- **1% ACCURACY**
- **MULTITURN SETUP ADJUSTMENT**
- **0 TO 1mA OR 0 TO .5 mA OUTPUT**
- **MICROCOMPUTER CIRCUITRY**
- **LOW POWER CONSUMPTION**
- **L E D POWER INDICATOR**

APPLICATIONS

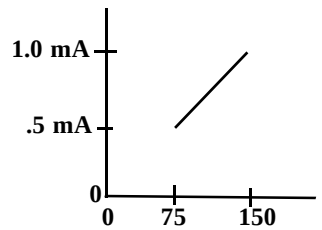
REMOTELY MONITORS ELECTRICAL SUBSTATION LEAD-ACID BATTERIES AND CHARGERS. DETECT DEFECTIVE BATTERIES, CHARGERS, CONNECTORS, AND WIRING WITH CONTINUOUS MONITORING

The Demico Battery Transducer is a unique Transducer which is powered from the battery it is monitoring, eliminating the need for an additional power source. This transducer operates down to approximately half of the maximum specified input voltage and the output is an isolated current source which is linearly proportional to the input voltage. 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.

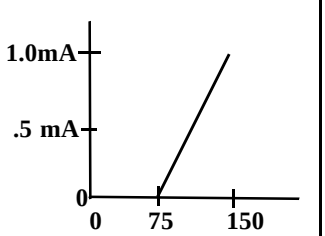
The BA series is available with five standard input ranges and is adaptable for other input ranges at no extra cost. (see ordering information) Two output options provide either 0.5 to 1.0 milliamp or 0 to 1 milliamp across the input range.

The chart and graph below illustrate the difference between the two output options for a BA411 and a BA412. Both transducers have an input range of 75 - 150 Volts, but the output currents are different as

INPUT VOLTAGE	BA411 OUTPUT CURRENT (MILLIAMPS)	BA412 OUTPUT CURRENT (MILLIAMPS)
75	0.50	0.00
100	0.667	0.333
125	0.833	0.667
150	1.00	1.00



Example: BA 411



Example: BA 412

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shown.

The transducer indicates properly up to 20% past the maximum of the specified input range. The Battery Transducer is accurate to within one percent across a wide operating temperature range to give dependable data year round even without a climate controlled environment.

A multi-turn potentiometer next to the terminal strip allows field adjustments to the output current to compensate for burden resistor and A/D variations. 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:

1. Boards are coated with a polyurethane coating.
2. Burn in for 100 hours at 110 degrees F.
3. Power cycled every 12 hours during burn in.
4. A 1500 Vac isolation test during final testing.

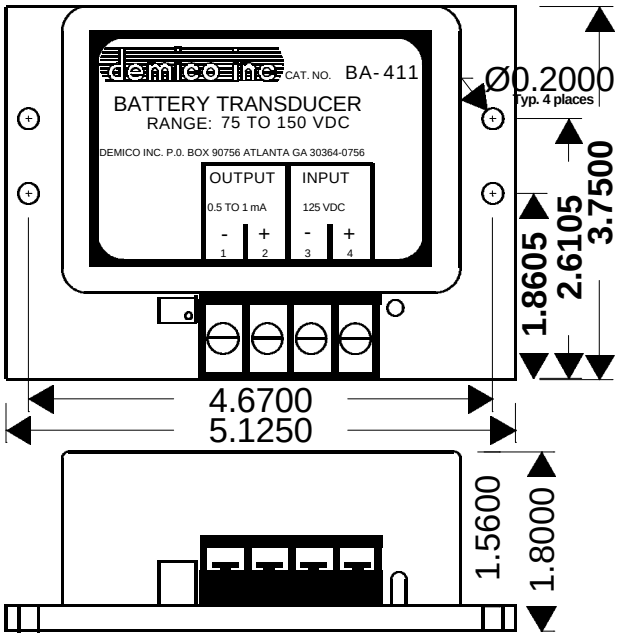
Demico takes these steps to ensure that our transducers provide good service over a long life. Demico's standard 1 year warranty includes parts and labor.

Demico's original Battery transducer was designed in 1980. It used precision analog circuitry which worked well and reliably. In 1996, we redesigned the transducer circuitry to incorporate a single chip microcomputer and regulated switching power supply. This design utilizes state of the art technology to reduce power consumption, improve stability, and continue to keep the transducer cost effective.

Note: For 24 V Ni-Cad Battery Applications, see our Battery Tester (BT) series. For general purpose DC voltage monitoring, see our DC voltage transducer (DV) series.

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	BA1__.023A/0.350 W
	BA2__.013A/0.375 W
	BA3__.008A/0.500 W
	BA4__.008A/1.250 W
	BA5__.010A/3.000 W
Tested Isolation	1500 Vac
Surge Withstand	ANSI 37.90.1-1989
Minimum Input Voltage	50% of Maximum
Enclosure	Black Phenolic
Terminals	8-32 with wire clamps
Warranty	1 year Parts & Labor



ORDERING INFORMATION

B A _ _ _

1ST LETTER = PRODUCT IDENTIFICATION LETTER
2ND LETTER = PRODUCT IDENTIFICATION LETTER
3RD NUMBER = INPUT VOLTAGE
4TH NUMBER = INPUT RANGE
5TH NUMBER = OUTPUT

BA INPUT	BA INPUT RANGE	BA OUTPUT
1 = 7.5 TO 15 VDC	1 = STANDARD	1 = 0.5 TO 1 mA OVER INPUT RANGE
2 = 15 TO 30 VDC	0 = SPECIFY	2 = 0 TO 1 mA OVER INPUT RANGE
3 = 30 TO 60 VDC		
4 = 75 TO 150 VDC		
5 = 150 TO 300 VDC		