

BE1-60 Voltage Balance Relay



Overview

BE1-60 relays provide reliable instantaneous response to block other devices from incorrect operation resulting from a blown fuse or other fault in a potential transformer circuit.

Features

- Pickup adjustable in 5% increments over a range of 5 to 50% of nominal voltage.
- Single-phase to single-phase, single-phase to three-phase, or three-phase to three-phase sensing.
- Maximum trip time of 100 milliseconds for voltage differences greater than three times the setting.
- Low sensing and supply burdens.

Benefits

- Flexible pickup adjustable over a range of 5 to 50% of nominal voltage.
- Easily meet system configuration with single-phase and three-phase input configurations.
- Minimized PT (potential transformer) costs as a result of low sensing burden.
- Reduced battery load with low burden power supply.
- Accurate, repeatable, and reliable operation.
- Simple HMI provides clear and intuitive settings for easy configuration.
- LED targets provide clear annunciation of status.
- Easily perform in-case system and device tests using test plugs.

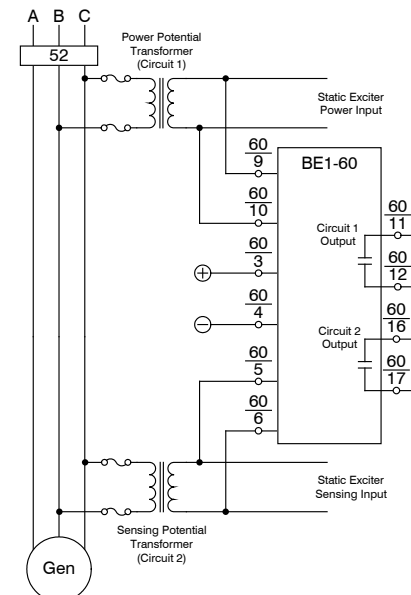


Figure 1 - BE1-60 Connection Diagram for a Typical Application

Specifications

Power Supply (Nominal)

X1X-A1P-XXXXX:	125 Vdc/120 Vac (1.4 W/11.2 VA)
X1X-A10-XXXXX:	48 Vdc (1.1 W)
X1X-A1R-XXXXX:	24 Vdc (1.2 W)
X1X-A1S-XXXXX:	48/125 Vdc (1.1 W/ 1.4 W)
X1X-A1T-XXXXX:	250 Vdc/240 Vac (1.6 W/18.8 VA)

Voltage Sensing

Nominal:

3-Phase Wye:	208 V L-L
3-Phase Delta:	120 V L-L
1-Phase:	120 Vac

Range: 60 to 125% of nominal

Max Continuous: 160% of nominal

Burden: <1 VA per phase

Frequency: 45 to 65 Hz (60 Hz nominal)

Pickup

Range: 5 to 50% of nominal

Accuracy: 1 V or 5% of setting

Increment: 5%

Dropout: 90% of pickup or greater

Timing Characteristics

150 ms or less for voltage differences greater than three times the setting

Output Contacts

Resistive:

120 Vac:	Make, break, and carry 7 Aac continuously.
250 Vdc:	Make and carry 30 Adc for 0.2 s, carry 7 Adc continuously, break 0.3 Adc.
500 Vdc:	Make and carry 15 Adc for 0.2 s, carry 7 Adc continuously, break 0.3 Adc.

Inductive:

120 Vac, 125 Vdc, 250 Vdc: Break 0.3 A (L/R=0.04)

Environmental

Operating Temp: -40°C to 70°C (-40°F to 158°F)

Storage Temp: -65°C to 100°C (-85°F to 212°F)

Dielectric Strength: IEC 255-5, IEEE C37.90

Radio Frequency Interference:

Type tested using a 5 W handheld transceiver in the ranges of 144 to 440 MHz with the antenna placed within six inches (152 mm) of the relay.

Surge Withstand: Qualified to IEEE C37.90

Fast Transient: Qualified to IEEE C37.90

Impulse Test:	Qualified to IEC 255-5
Surge Requirements:	Qualified to IEC 255-5/6
Shock:	15 G in three perpendicular planes
Vibration:	2 G in each of three perpendicular planes, 10 to 500 Hz for six sweeps, 15 minutes each sweep

Agency/Certifications

UL recognized

Physical

Weight: 14.25 lb (6.46 kg)

S1 Case Dimensions (WxHxD):

Double Ended, Semi-Flush Mount:

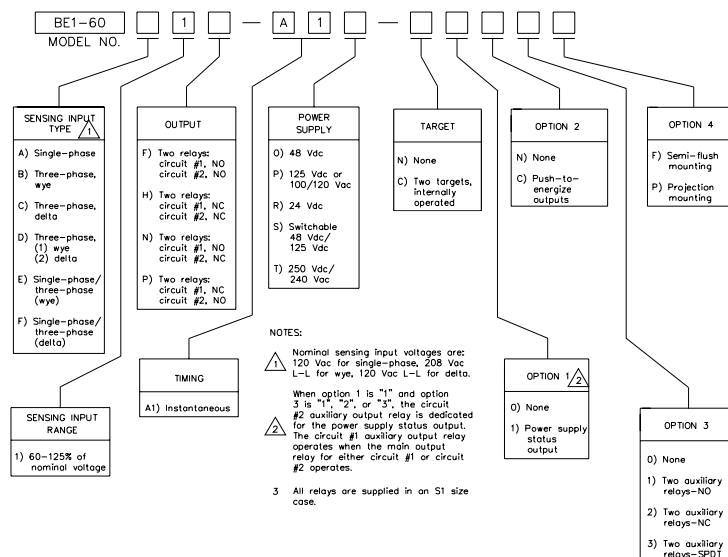
5.56 x 8.68 x 6.94 inches
(141.2 x 220.5 x 176.3 mm)

Double Ended, Projection Mount:

5.56 x 8.68 x 8.14 inches
(141.2 x 220.5 x 206.8 mm)

For complete specifications, download the instruction manual at www.basler.com.

Style Chart



Related Products

BE1-FLEX Protection, Automation and Control System

Designed to be configurable for nearly any Power System Application.

DECS-250 Digital Excitation Control System

Provides precise voltage, var and Power Factor regulation, exceptional system response, and generator protection.

DECS-450 Digital Excitation Control System

A versatile digital excitation control system for synchronous generators and motors.

DECS-2100 Digital Excitation Control System

An extremely powerful and flexible excitation system that precisely controls, protects, and monitors synchronous generators and motors.

Accessories

Cases, Covers, Connectors, Mounting, Misc.

Designed for adaptive customization with your protective device.

Test Plugs

To allow testing of the relay without removing system wiring. Basler ElectricP/N 10095 (order 2 plugs).