

BE1-59NC Neutral Overvoltage Relay



Overview

The BE1-59NC relay provides sensitive protection for capacitor banks.

Features

- Sensing circuit rejects harmonics and noise to achieve higher sensitivity to 50/60 Hz neutral voltage.
- Includes an early warning alarm output on minor unbalances such as a blown fuse.
- Can be set to trip when voltage across any capacitor exceeds 110% of nominal.

Benefits

- Helps avoid cascading capacitor failures.
- Minimized PT 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.

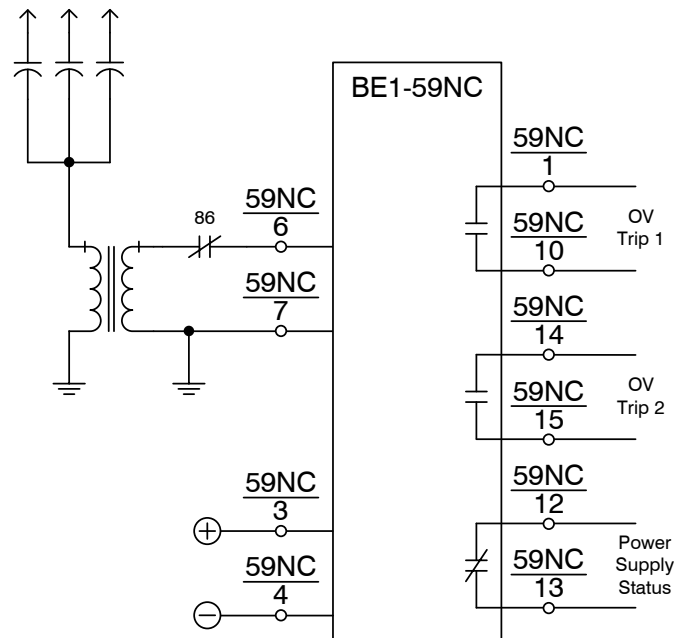


Figure 1 - BE1-59NC Connection Diagram for a Typical Application

Specifications

Power Supply (Nominal)

AXE-XXJ-X0SXX:	125 Vdc/120 Vac (2.8 W/12.4 VA)
AXE-XXK-X0SXX:	48 Vdc (2.5 W)
AXE-XXL-X0SXX:	24 Vdc (2.7 W)
AXE-XXY-X0SXX:	48/125 Vdc (2.5 W/ 2.8 W)
AXE-XXZ-X0SXX:	250 Vdc/240 Vac (3.0 W/19.7 VA)

Voltage Sensing (Single-Phase)

Maximum Continuous Voltage:	100/120 Vac Input: 360 V
	200/240 Vac Input: 480 V
Burden:	2 VA maximum

Sensing Input Ranges

Ranges 1 and 5:	1 to 20 Vac pickup
Ranges 2 and 6:	10 to 50 Vac pickup
Ranges 3 and 7:	2 to 40 Vac pickup
Ranges 4 and 8:	20 to 100 Vac pickup

Pickup Accuracy

Ranges 1, 3, 5, and 7:	±2.0% or 100 mV*
Ranges 2, 4, 6, and 8:	±2.0% or 200 mV*

*whichever is greater

Dropout

98% of pickup within 7 cycles

Timing Characteristics

Definite:	0.1 to 99.9 s, ±2% accuracy
Inverse:	99 curve settings, ±5 accuracy

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)
Shock:	15 G in three perpendicular planes
Vibration:	2 G in three perpendicular planes, 10 to 500 Hz for six sweeps, 15 minutes each sweep
Isolation:	IEC 255-5, IEEE C37.90
Surge Withstand:	Qualified to IEEE C37.90.1

RFI: Field tested using 5-Watt transceiver operating at random frequencies centering around 144 MHz and 440 MHz, 6 in. from relay in horizontal and vertical planes.

Agency/Certifications

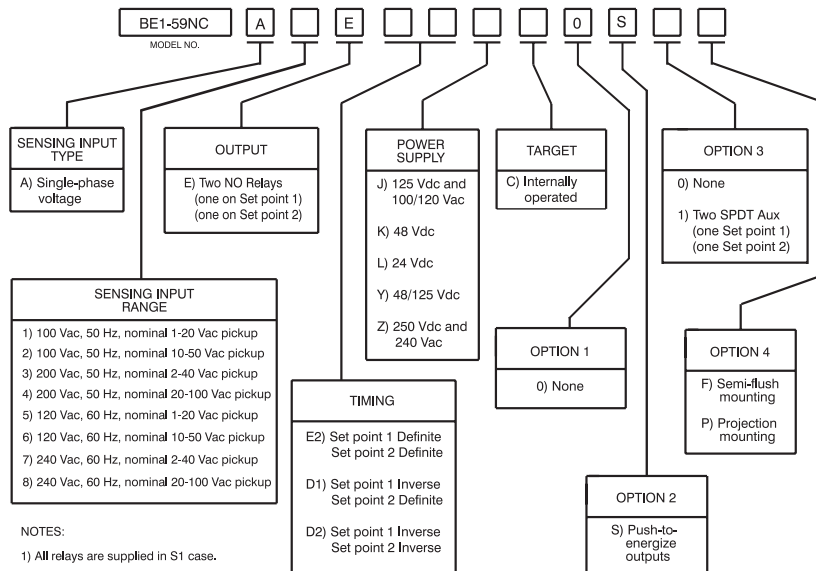
UL recognized

Physical

Weight:	13.5 lb (6.12 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.

BE1-700V Voltage-Only Digital Protective Relay

A compact, economical multifunction protective relay available in either current-only or voltage-only styles for multiple applications including bus, feeder, generator/motor, and cogeneration applications.

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 Electric P/N 10095 (order 2 plugs).