

BE1-64F Ground Fault Relays



Overview

The BE1-64F relays are designed to detect unintentional grounding in field windings of a synchronous generator or motor. Two fixed levels of ground detection are provided: a prealarm level and a trip level. Each level has an independent LED indicator and output contact.

Features

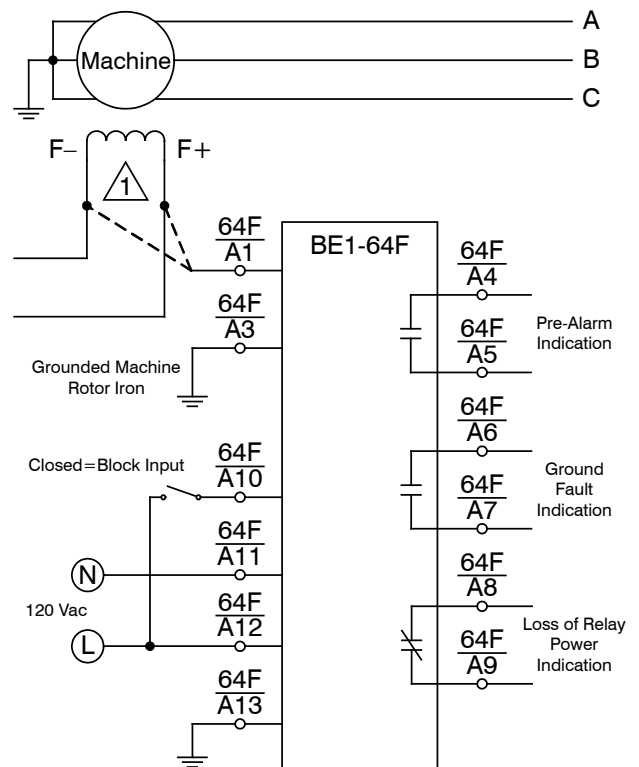
- BE1-64F models with connections to either the positive or negative side of the exciter or main field of the machine are available.
- Detects field grounds on motors and generators.
- Two-level detection for pre-alarm and trip.
- Compact, draw-out case.
- Test function.
- Nonvolatile storage of trip target state.

Part Number	Connection Type*	Trip/Test Pushbutton
9367200103	F-	Yes
9367200104	F-	No
9367200201	F+	Yes
9367200203	F+	No

* BE1-64F relays with an F- connection are compatible only with applications that have access to the negative side of the exciter or main field of the machine. BE1-64F relays with an F+ connection are only compatible with applications that have access to the positive side of the exciter or main field of the machine.

Benefits

- Pre-alarm allows action to prevent a trip.
- Accurate, repeatable, and reliable operation.
- Simplified installation with no settings required.
- Retrofit into cutout made for ITE/BBC/ABB/GE field ground relays.



Connect terminal A1 to F- for models 9367200103 and 9367200104. Connect terminal A1 to F+ for models 9367200201 and 9367200203.

Figure 1 - BE1-64F Connection Diagram for a Typical Application

Specifications

Power Supply

Nominal:	120 Vac
Range:	90 to 132 Vac
Frequency:	50/60 Hz
Burden:	150 mAdc nominal 200 mAdc maximum

Field Voltage Input

Continuous Rating:	600 Vdc
Forcing (one minute):	750 Vdc
Negative Forcing (one minute):	1,200 Vdc

Block Input

Turn-On Threshold:	70 Vac, ± 20 Vac
Operating Range:	90 to 132 Vac
Frequency:	50/60 Hz
Burden:	2 mAdc

Operating Time

At 95% of Trip Value:	≤ 1 s
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Sensitivity

Expressed as resistance from field negative lead to ground.

Trip Function:	5,000 Ω , ± 200 Ω
Pre-alarm Function:	20,000 Ω , $\pm 1,000$ Ω

Output Contacts

Type:	Form A, B
Make:	30 Adc/Aac
Carry:	5 Adc/Aac
Break:	0.3 Adc/1.0 Aac inductive
Ground Trip:	Form A, close on ground trip condition, terminals A6, A7
Pre-Alarm:	Form A, close on pre-alarm condition, terminals A4, A5
Power Fail:	Form B, close on loss of operating power, terminals A8, A9

Agency/Certifications

UL recognized, CE, UKCA, EMC, LVD, RoHS 2 compliant, China RoHS compliant

Environmental

Operating Temp:	-40°C to 70°C (-40°F to 158°F)
Storage Temp:	-40°C to 85°C (-40°F to 185°F)
Shock:	IEC 255-21-2
Vibration:	IEC 255-21-1
Surge Withstand:	IEEE C37.90.1
Radio Interference:	IEC 61000-4-3
ESD:	IEC255-22-2
Isolation:	Power, Block inputs withstand 1,500 Vac for one minute. Output contact sets withstand 2,000 Vac for one minute. Field connection tested to IEEE 421.3.

Physical

Weight:	4.65 lb (2.11 kg)
Dimensions (WxHxD):	7.0" x 4.88" x 8.69" (177.8 mm x 123.8 mm x 220.8 mm)

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

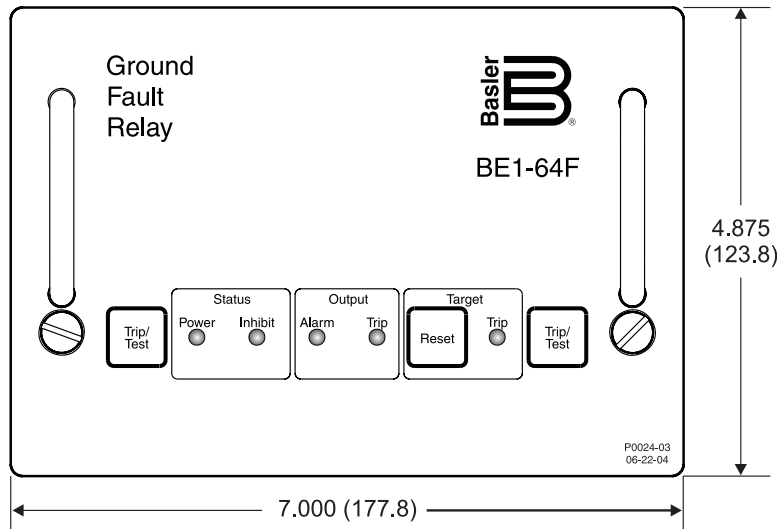


Figure 2 - BE1-64F Dimensions in Inches (Millimeters)

Related Products

BE1-FLEX Protection, Automation and Control System

Designed to be configurable for nearly any Power System Application.

BE1-25 Sync-Check Relay

Monitors both sides of a circuit breaker and determines that proper conditions exist prior to allowing the breaker to be closed.

DECS-2100 Digital Excitation Control System

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

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.

DGC-2020 Digital Genset Controller

Provides genset and transfer switch control, metering, protection, and programmable logic in a simple, easy to use, reliable, rugged, and cost effective package.

Accessories

Cases, Covers, Connectors, Mounting, Misc.

Designed for adaptive customization with your protective device.