BE1-11*m* Motor Protection System

Overview

The BE1-11*m* Motor Protection System is designed with many features to address issues with reliability arising from the complexity of programming. With BESTspace™ files, multiple BESTlogic™Plus preprogrammed logic schemes, and associated application notes, you can be confident that you have the complete motor protection you need.

Features

- Proven algorithms based on more than 50 years of relaying experience and more than 30 years of reliable digital relaying design.
- One relay for most applications.
- One proven, stable firmware package for all BE1-11 series relays.
- An advanced thermal model provides accurate motor protection against thermal damage by high inertia starts, unbalanced voltages, and conditions of inadequate cooling.
- Captured motor start data provides the ability to improve motor protection settings by using learned data from previous motor starts.
- Motor maintenance data provides information to assist in scheduling maintenance based on motor usage to boost maintenance efficiency.
- Phase differential protection provided for internal motor faults with fault current too weak to be quickly picked up by 50/51 overcurrent protection.
- Power factor protection detects motors working at low power factor so appropriate action may be taken.
- Three Communication Ports: Front USB, rear RS-485 and Ethernet RJ45 or fiber optic are available for BESTCOMS*Plus*®, BESTnet™*Plus*, Modbus®, DNP, and IEC 61850 protocols, also featuring user configurable email notifications.
- Enhanced I/O options available with the J-style case: 10 inputs with 5 outputs or 7 inputs with 8 outputs.

Benefits

- The Offline Simulator, in BESTlogic™*Plus*, reduces commissioning errors by providing the ability to test and troubleshoot logic without the need for expensive physical hardware.
- Complete motor protection system for applications including utility power generation, water treatment, petroleum drilling and refining, pulp and paper mills, and chemical plants.
- BESTCOMS*Plus*® software, provided free of charge, makes it easy to enter protection settings with confidence with its intuitive settings, built-in error checking, and summary screens.
- Complex protection is easy to configure and understand with preprogrammed schemes, drag-and-drop logic, user labels, and notes provided by BESTlogic™*Plus*.
- Quick and reliable fault clearing with minimal false operations.
- Easily navigate settings and metering with the intuitive HMI menu and large display.
- Customize displayed information to meet different application needs with user-defined indicators and labels.
- Select and Operate buttons, on the front panel, provide direct control of internal logic.
- Optional remote RTD module provides RTDs and analog input and output channels for expanded protection and control possibilities.

Figure 1 - BE1-11*m* Device Functions

BE1-11*m* Motor Protection System

Specifications

Power Supply

Option 1:	48/125 Vac/dc	dc range 35 to 150 V ac range 55 to 135 V
Option 2:	125/250 Vac/dc	dc range 90 to 300 V ac range 90 to 270 V
Option 3:	24 Vdc	dc range 17 to 32 V*
	*(as low as 8 V for momentary dips)	
Burden:	10 W continuous, 12 W max (all options)	

Voltage Sensing (10 to 125 Hz)

Phase:	Metering:	50 to 250 Vac
	Continuous:	300 V, Line to Line
	One-second rating:	600 V, Line to Neutral
Vx:	Metering:	25 to 125 Vac
	Continuous:	150 V, Line to Line
	One-second rating:	600 V, Line to Neutral

Current Sensing (10 to 125 Hz)

5 A Nom:	Metering:	0.5 to 15 Aac
	Continuous:	20 Aac
	One-second rating:	400 Aac
1 A Nom:	Metering:	0.1 to 3 Aac
	Continuous:	4 Aac
	One-second rating:	80 Aac
SEF:	Metering:	0.01 to 3 Aac
	Continuous:	4 Aac
	One-second rating:	80 Aac

Communications

USB:	2.0, Type-B
RS-485	
Baud:	Up to 115,200
Protocols:	DNP Modbus®
	RTD Module
Ethernet	
Speed:	10/100 Mbit Copper 100 Mbit Fiber
Protocols:	BESTnet™*Plus* BESTCOMS*Plus*® DNP Modbus IEC 61850™ RTD Module

Agency/Certifications

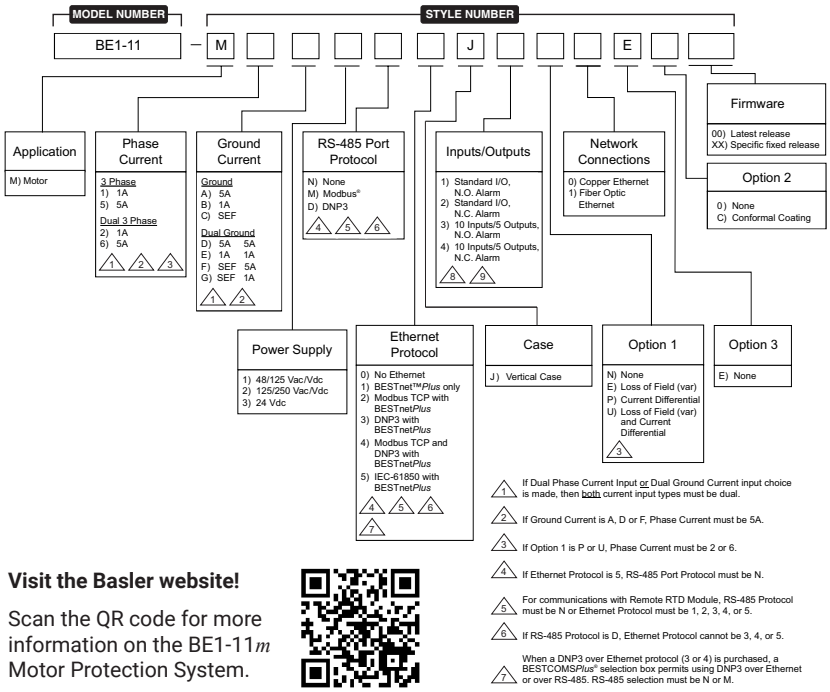
UL recongnized
CSA certified per Standard C22.2 No. 14
DNP3-2009, V2.6 compliant
KEMA certified per IEC 61850 Certificate Level A
CE and UKCA compliant
China RoHS compliant

Physical

Weight: 5.1 lb (2.3 kg)
IP class: IP50
Dimensions (WxHxD)
J case:
7.00 x 9.12 x 7.91 inches, with mounting flanges
(177.8 x 231.65 x 200.91 mm)
5.33 x 8.41 x 7.29 inches, behind panel
(135.38 x 213.61 x 185.17 mm)

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

Style Chart



Visit the Basler website!

Scan the QR code for more information on the BE1-11*m* Motor Protection System.

Related Products

BE1-FLEX Protection, Automation and Control System
Designed to be configurable for nearly any Power System Application.

BE1-64F Ground Fault Relay
This device is designed to detect unintentional grounding in field windings of a generator or motor.

DECS-250 Digital Excitation Control System
Provides precise voltage, var and Power Factor regulation, and exceptional system response, plus generator protection.

DGC-2020HD 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.

RTD Module
Provides up to 12 remote RTD inputs, four remote analog inputs, and four remote analog outputs.

(p/n 9444100100 - Ethernet, Copper)
(p/n 9444100101 - Dual Ethernet, Fiber & Copper)

Accessories

Test terminal block assembly kit for J case systems (p/n 9424226100)

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