The Back-Spin Detection (B) option enables the 369 Relay to detect the flow reversal of a pump motor and enable timely and safe motor restarting. 369 Relay options are available when ordering the relay or as upgrades to the relay in the field. Field upgrades are via an option enabling passcode available from GE Multilin, which is unique to each relay and option.

1.1.2 Ordering

Select the basic model and the desired features from the selection guide below:

Table 1–1:

369	*	*	*	*	*	*	*	
369	|	|	|	|	|	|	|	Base unit (no RTD)
	HI	|	|	|	|	|	|	50-300 VDC / 60-265 VAC control power
	LO	|	|	|	|	|	|	20-60 VDC / 20-48 VAC control power
		R	|	|	|	|	|	Optional 12 RTD inputs (built-in)
		0	|	|	|	|	|	No optional RTD inputs
			M	|	|	|	|	Optional metering package
			B	|	|	|	|	Optional backspin detection (incl. metering)
			0	|	|	|	|	No optional metering or backspin detection
				F	|	|	|	Optional Fiber Optic Port
				0	|	|	|	No optional Fiber Optic Port
					E	|	|	Optional Modbus/TCP protocol interface
					P	|	|	Optional Profibus-DP protocol interface
					P1	|	|	Optional Profibus-DPV1 protocol interface
					D	|	|	Optional DeviceNet protocol interface
					0	|	|	No optional protocol interfaces
						H	|	Harsh environment option
						0	|	No Harsh environment option
							E	Enhanced diagnostics with Enhanced faceplate
							0	No Enhanced diagnostics with Basic faceplate

1. **One Analog Output is available with the 369 base model. The other three Analog Outputs can be obtained by purchasing the metering or backspin options.**
   The control power (HI or LO) must be specified with all orders. If a feature is not required, a 0 must be placed in the order code. All order codes have 10 digits. The 369 is available in a non-drawout version only.

   Examples: 369-HI-R-0-0-0-0-E: 369 with HI voltage control power and 12 RTD inputs, and enhanced diagnostics
   369-LO-0-M-0-0-0-E: 369 relay with LO voltage control power and metering option, and enhanced diagnotics

2. **Features available only in Enhanced option (E)**
   - Enhanced faceplate with motor status indicators
   - Motor Health Report
   - Enhanced learned data
   - Motor Start Data Logger
   - Enhanced event recorder
   - Security audit trail events

1.1.3 Accessories

EnerVista 369 Setup software: Setup and monitoring software provided free with each relay.

RRTD: Remote RTD Module. Connects to the 369 Relay via a fibre optic or RS485 connection. Allows remote metering and programming for up to 12 RTDs.

F485: Communications converter between RS232 and RS485 / fibre optic. Interfaces a PC to the relay.

CT: 50, 75, 100, 150, 200, 300, 350, 400, 500, 600, 750, 1000 (1 A or 5 A secondaries)

HGF: Ground CTs (50:0.025) used for *sensitive* earth fault detection on high resistance grounded systems.

515: Blocking and test module. Provides effective trip blocking and relay isolation.

DEMO: Metal carry case in which 369 is mounted.

FPC15: Remote faceplate cable, 15'.

1.1.4 Firmware History

Table 1–2: FIRMWARE HISTORY (Sheet 1 of 2)

FIRMWARE REVISION	BRIEF DESCRIPTION OF CHANGE	RELEASE DATE
53CMB110.000	Production Release	June 14, 1999
53CMB111.000	Changes to Backspin Detection algorithm	June 24, 1999
53CMB112.000	Changes to Backspin Detection algorithm	July 2, 1999
53CMB120.000	Capability to work with the Remote RTD module	October 15, 1999
53CMB130.000	Improvements to the Remote RTD communications	January 3, 2000
53CMB140.000	Changes to Backspin Detection algorithm and improved RS232 communications	March 27, 2000
53CMB145.000	Minor firmware changes	June 9, 2000
53CMB160.000	Profibus protocol, waveform capture, phasor display, single analog output, demand power and current, power consumption	October 12, 2000
53CMB161.000	Minor firmware changes	October 19, 2000
53CMB162.000	Minor firmware changes	November 30, 2000
53CMB170.000	Autorestart feature added	February 9, 2001
53CMB180.000	Modbus/TCP feature added	June 15, 2001

Table 1–2: FIRMWARE HISTORY (Sheet 2 of 2)

FIRMWARE REVISION	BRIEF DESCRIPTION OF CHANGE	RELEASE DATE
53CMB190.000	Number of Event Recorders increased to 250; Hottest Overall RTD value added	November 23, 2001
53CMB201.000	Added Starter Failure, MWhrs as analog output parameter, and Motor Load Averaging feature.	April 16, 2004
53CMB210.000	Added support for variable frequency drives; minor changes to Modbus TCP.	November 5, 2004
53CMB220.000	Implementation of DeviceNet protocol and starter operation monitor.	April 11, 2005
53CMB230.000	Implemented Profibus DPV1, Force Outputs and Protection Blocking.	September 19, 2005
53CMB240.000	Custom Curve enhancement, increase range from 0 to 32767 to 0 to 65534.	November 21, 2005
53CMB250.000	Implementation of start control relay timer setting for reduced voltage starting, additional Modbus address added for starts/hour lockout time remaining, correction to date and time Broadcast command Modbus addresses, fix for latched resets with multiple local/remote assigned relays, fix for repeated "Motor Stopped" and "Motor Running" events.	April 28, 2006
53CMC310.000	Profibus loss of trip, trip contact seal in undervoltage auto restart, Motor Health Report, Enhanced learned data, motor start data logger, enhanced event recorder, security audit trail events, DeviceNet enhanced polling.	June 7, 2007
53CMC320.000	2-speed motor feature, Datalogger feature, speed of last trip display, latched trip and alarm note.	March 20, 2008
53CMC330.000	Added Ethernet Loss of Comms Trip.	May 7, 2009
53CMC340.000	Added DeviceNet Loss of Comms Trip.	July 7, 2010

1.1.5 PC Program (Software) History

Table 1–3: SOFTWARE HISTORY

PC PROGRAM REVISION	BRIEF DESCRIPTION OF CHANGES	RELEASE DATE
1.10	Production Release	June 14, 1999
1.20	Capability to work with the Remote RTD module	October 15, 1999

Table 1–3: SOFTWARE HISTORY

PC PROGRAM REVISION	BRIEF DESCRIPTION OF CHANGES	RELEASE DATE
1.30	Capability to communicate effectively with version 1.30 firmware	January 3, 2000
1.40	Changes made for new firmware release	March 27, 2000
1.45	Changes made for new firmware release	June 9, 2000
1.60	Profibus protocol, waveform capture, phasor display, single analog output, demand power and current, power consumption	October 23, 2000
1.70	Changes made for new firmware release	February 9, 2001
1.80	Changes made for new firmware release	June 7, 2001
1.90	Changes made for new firmware release	November 23, 2001
2.00	Changes made for new firmware release	September 9, 2003
3.01	New features and enhancements	August 16, 2004
3.11	Added support for firmware revision 2.1x	November 16, 2004
3.20	Changes made for firmware revision 2.2x	April 13, 2005
3.30	Changes made for firmware revision 2.3x	September 19, 2005
3.40	Changes made for firmware revision 2.4x	November 25, 2005
3.50	Changes made for firmware revision 2.5x	May 15, 2006
3.70	Changes made for firmware revision 3.1x	June 7, 2007
3.80	Changes made for firmware revision 3.2x	March 20, 2008
3.90	Changes made for firmware revision 3.3x	May 7, 2009
4.00	Changes made for firmware revision 3.4x	July 7, 2010

1.1.6 369 Relay Functional Summary

The front view for all 369 Relay models is shown below, along with the rear view showing the Profibus port, the Modbus/TCP port, and the DeviceNet port.

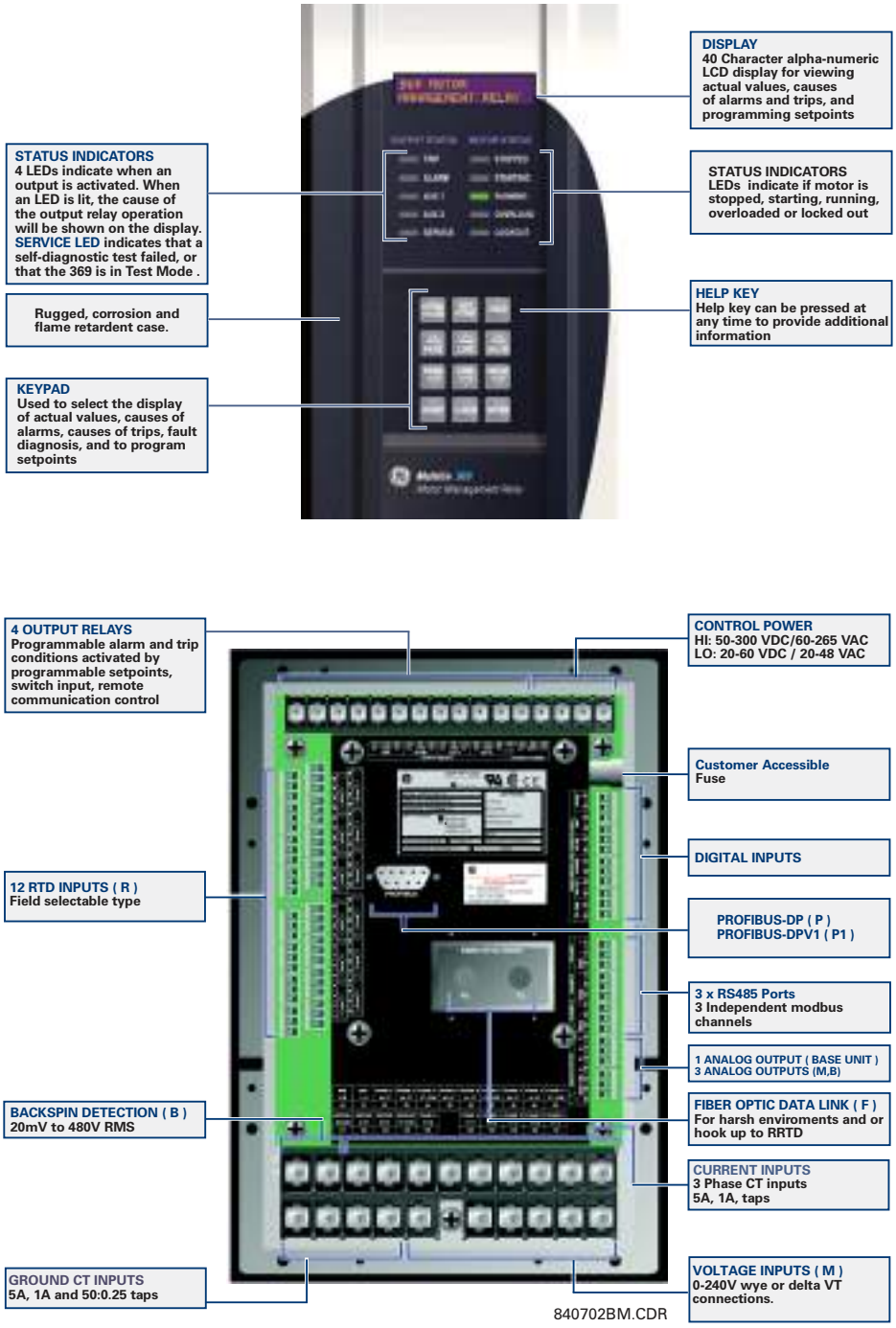


FIGURE 1–1: Front and Rear View

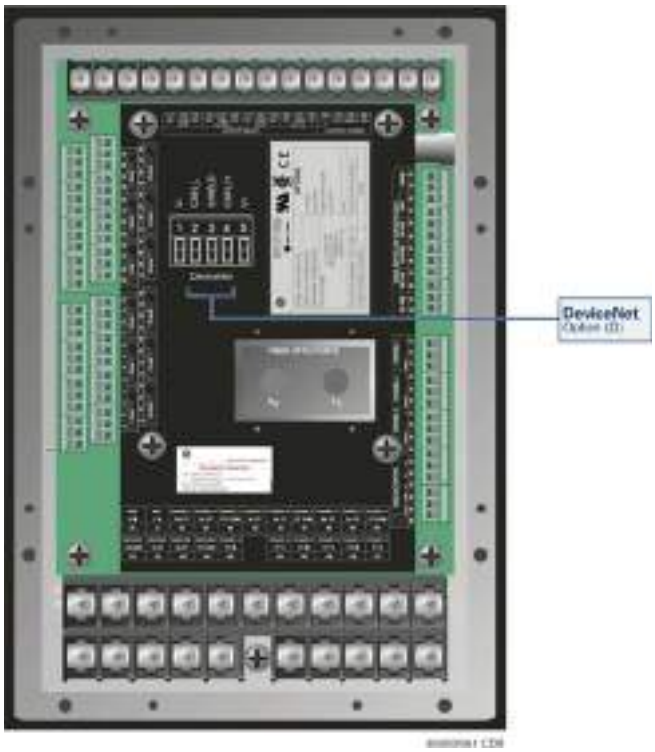


FIGURE 1–2: DeviceNet Model

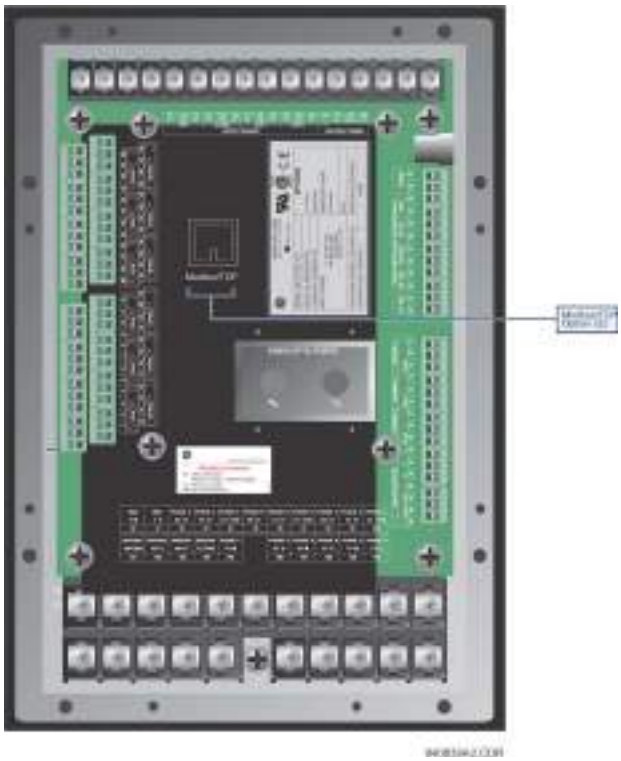
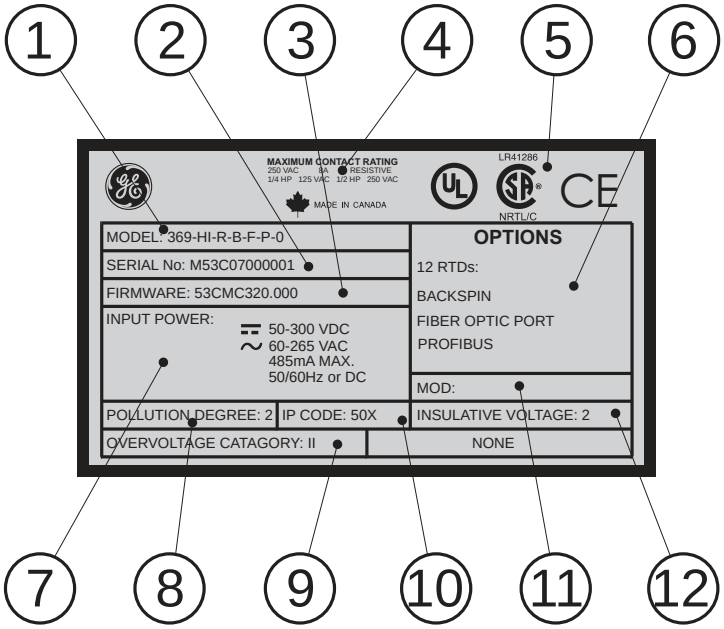


FIGURE 1–3: Rear View (Modbus/TCP Model)

1.1.7 Relay Label Definition



840350AA.CDR

1. The 369 Relay order code at the time of leaving the factory.
2. The serial number of the 369 Relay.
3. The firmware installed at the factory. Note that this may no longer be the currently installed firmware as it may have been upgraded in the field. The current firmware revision can be checked in the actual values section of the 369 Relay.
4. Specifications for the output relay contacts.
5. Certifications the 369 Relay conforms with or has been approved to.
6. Factory installed options. These are based on the order code. Note that the 369 Relay may have had options upgraded in the field. The actual values section of the 369 can be checked to verify this.
7. Control power ratings for the 369 Relay as ordered. Based on the HI/LO rating from the order code.
8. Pollution degree.
9. Overvoltage category.
10. IP code.
11. Modification number for any factory-ordered mods.
12. Insulative voltage rating.