

869 Advanced Motor Diagnostics – A Comprehensive Diagnostics Solution for Safe Motor Operation

8 Series Mini Paper



Health Report

The motor health report quickly provides a motor operation summary with information in the following seven categories.

- **Device Overview:** gives general information about the motor
- **Status Overview:** summarizes the historical learned data and gives an evaluation of the status of the motor
- **Trip Summary:** presents a summary of the events that caused motor trip
- **Operating History:** counts events associated with different motor operating conditions
- **Starting Learned Data:** collects and displays the start learned data
- **Start Records:** presents the 60-second long detailed start data
- **Stopping/Tripping:** gives details on the events that are specifically related to the stopping and tripping of the motor


The purpose of the health report is to:

- Provide visual representation and trend values of motor historical data
- Present a quick snapshot of the motor operating and diagnostic information
- Help users quickly identify process issues and maintenance requirements

869 Motor Health Report

OVERVIEW

Requested Period	Aug 20, 2014 12:00 AM - Aug 20, 2014 11:59 PM	Generated At:	Aug 21, 2014 03:42 PM
Report Created By	Users		
Motor Name	Relay 1		
Protection Device	869-EP5P5G5HRAANGMPFC2ESWBN		
Firmware Version	1.20		
Motor FLA	400.0 A		
Rated Voltage	13800 V		
Phase Rotation	ABC		
System Frequency	50 Hz		
Motor Running Time	4 days 16 hours		



Status Overview

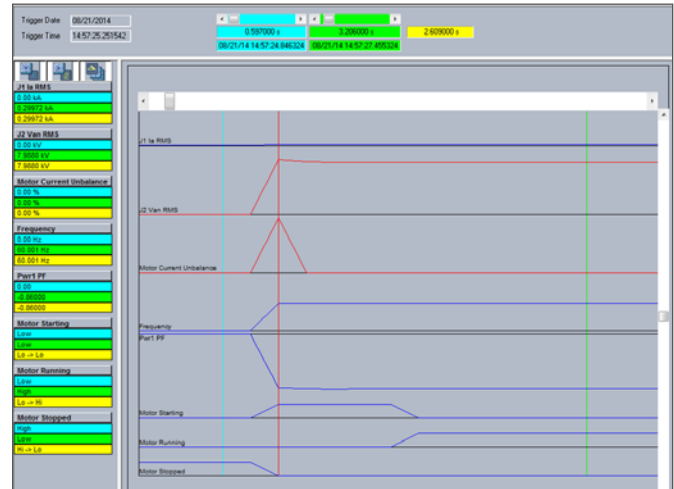
Available Time Range: There are no Learned Data records for the reporting period

Status	Parameter	% Change		
	Acceleration Time		---	---
	Starting Current		---	---
	Starting Capacity		---	---
	Average Motor Load		---	---
	Run Time After Start		---	---
	Average kW		---	---
	Average kvar		---	---
	Average PF		---	---

Start Records

A total of six start records are used to give a comprehensive view of motor starting, each of them providing 60-second data throughout the full starting cycle, where:

- 1-second pre-trigger data and 59-second post-trigger data are recorded;
- The sampling rate is one sample every 200ms
- Stored quantities include RMS values of currents and voltages, current unbalance, powers, power factor, thermal capacity used, frequency and motor status.



The users can examine the 60-second start data to:

- Understand the starting process
- Investigate the cause of an unsuccessful start
- Analyze effects of source disturbances caused by starting of a large motor
- Coordinate the starting sequence of multiple large motors

Learned Data

Learned Data recorder stores the following quantities upon a successful motor start.

- Last learned acceleration time, starting current, starting capacity used (TCU)
- Average load, power, power factor and running hours of the last running state
- Maximum temperature of each RTD

Learned Data Records // Quick Connect: Quick Connect Device: Records

File Name: C:\Users\Public\Documents\GE Power Management\8SeriesPC\Data\Device Files\Quick Connect

Date / Time of Last Clear: Monday, August 11, 2014 14:51:22

Records Since Last Clear: 3

Record Number	Date	Item Name	Value	Value
3	Aug 21 2014	Learned Acceleration Time	0.0 s	0.0 s
2	Aug 18 2014	Learned Start Current	0.0 xFLA	0.0 xFLA
1	Aug 14 2014	Learned Start TCU	0 %	0 %
		Last Acceleration Time	0.0 s	0.0 s
		Last Starting Current	0.0 xFLA	0.0 xFLA
		Last Start TCU	0 %	0 %
		Learned Average Load	0.00 xFLA	0.00 xFLA
		Learned Average KW	0.00 KW	0.00 KW
		Learned Average Kvar	0.00 Kvar	0.00 Kvar
		Learned Average PF	0.00	0.00
		Average Run Time (Days)	1 days	0 days
		Average Run Time (Hr/Min)	03:10 hr/min	00:00 hr/min

Up to 250 learned data records can be used to evaluate the changes/trends of motor starting and operating conditions over time.

Data Logger

Comprehensive data logger provides:

- Recording of 16 analog values selected from any analog value
- Seven selectable capture rates: 1 cyc, 1 sec, 30 sec, 1 min, 15 min, 30 min, 1 hr
- Data storage capacity ranging from 273 seconds to 2730 days, depending on the number of channels and rate.



This data capture flexibility allows operators to enable long period monitoring, analyze the historic data over several hours or even days in detail and take corrective actions as required.



imagination at work

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