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Digital Hazard Monitoring Revision Notes

- First Release - March 24, 2008
- Revised Release - June 21, 2010
- Revised Release - January 13, 2014
- Revised Release - September 8, 2016



Digital Hazard Monitoring Safety Warning

This system is Intrinsically Safe when installed per manufacturer's specification. Do not modify the system components in any way. Install the system using the drawings provided with the mBC081 Bus Converter Technical Manual. Do not install sensors or components other than those specified by the manual. Follow the field wiring instructions provided. Only use the wiring components and cabling specified in the manual.

Intrinsically Safe wiring must be fully segregated from all other wiring systems. Do not use the same cable trays, conduits or raceways for Intrinsically Safe cabling. Follow the requirements of the National Electric Code for all elements of the installation.

Do not attempt to service or repair individual components. Return defective components to *CONTROL STUFF INC* for repair.

**Failure to follow the installation instructions provided
in the mBC081 Technical Manual and the
requirements of the National Electric Code could
result in an explosion or fire.**



Digital Hazard Monitoring System Component Overview

CONTROL STUFF INC is a World Wide Distributor for CMC Industrial Electronics Facility Monitoring Equipment. Suitable for commercial, industrial and Hazardous Applications, these products provide a complete Facility Monitoring System. For parts repair, replacement or service please contact **CONTROL STUFF INC** at:

Business: 952-466-2175
Fax: 952-466-2177
Web: www.controlstuff.com
Email: stuff@controlstuff.com

The CMC Facility Monitoring Equipment System utilizes Dallas 1-Wire technology with a fully digital sensor network. Field interconnect boxes provide a digital bus backbone for the system, using CAT5 cabling and 110 punch down terminals. These field interconnect boxes include branch disconnect switches and bus activity indicators for easy troubleshooting. The plug and play sensors, plug into RJ11 connectors in the field interconnect boxes, allowing 2 to 6 connections to the digital bus.

Quality Features

- Complete line of products designed for Commercial and Industrial Applications
- Complete line of products designed for Hazardous Applications
 - Certified Intrinsically Safe for:
 - Class I, Group C & D, Divisions 1 & 2
 - Class II, Group E, F & G, Divisions 1 & 2

Featured Equipment

- Bearing Temperature Sensors
- Rub Temperature Sensors
- Relative Humidity Sensors
- Vibration Sensors
- Speed Sensors
- Analog Input Modules
- Thermocouple Converter Modules (Grain Temperature Cable)



Digital Hazard Monitoring Display Overview

- To access a specific Hazard Monitoring Screen, click the associated button.
- All Hazard Monitoring Screens display a representation of the piece of equipment. This representation has all monitored bearing and rub points, defined (Figure 1).

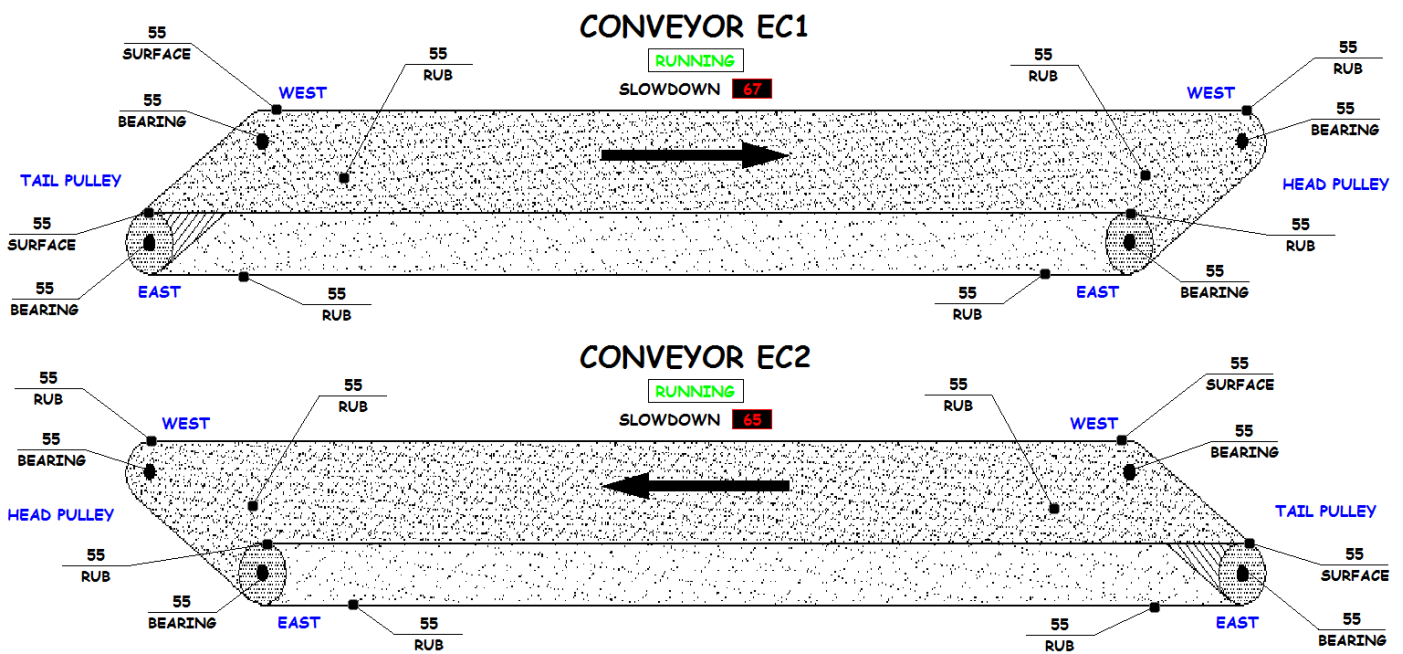


Figure 1 - Showing Hazard Monitoring Screens



Digital Hazard Monitoring Warning Setpoint

- If any point reaches the Feed Shutdown Setpoint (155° F), that point will flash Yellow (Figure 2).
- A visual alarm message will be displayed in the Alarm Window of all Hazard Monitoring Screens. This alarm message will remain in the Alarm Window until the alarm condition is corrected.
- An audible alarm will sound. This audible alarm will remain "on" until the Alarm Acknowledge button is pressed.

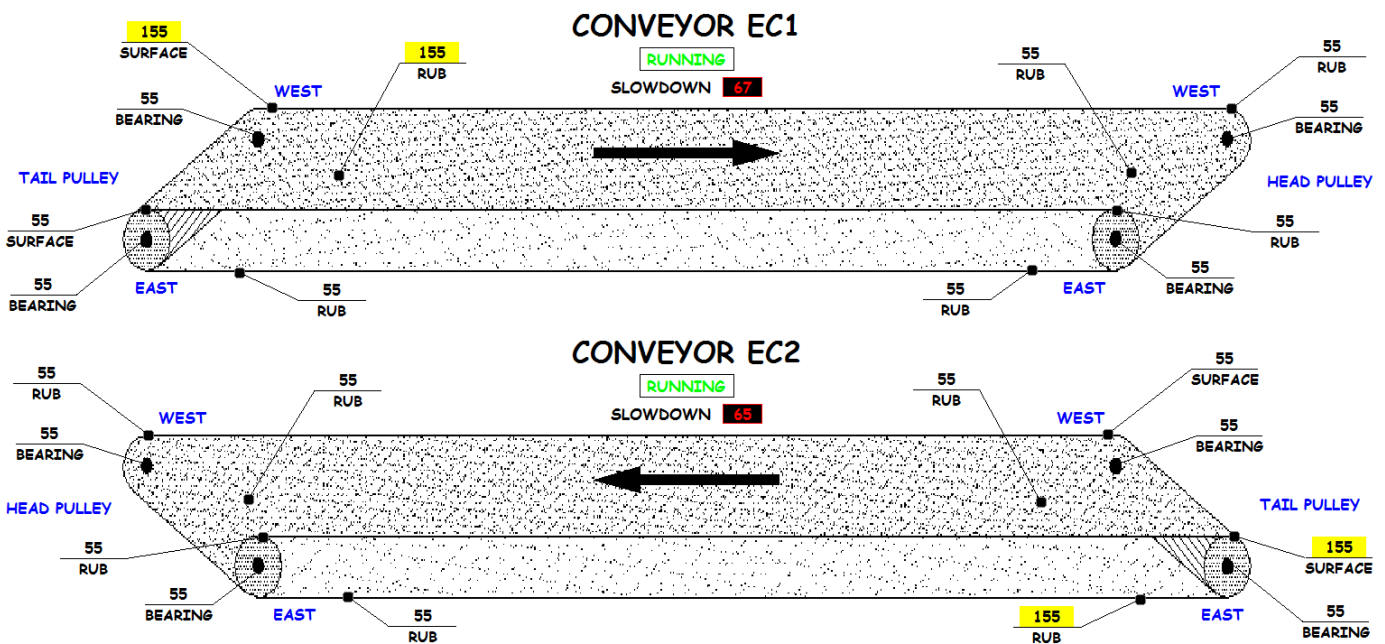


Figure 2 - Showing Hazard Monitoring Screens with Warning Setpoints reached.



Digital Hazard Monitoring Trip Setpoint

- If any point reaches the Trip Setpoint (175° F), that point will flash Red (Figure 3).
- A visual alarm message will be displayed in the Alarm Window of all Hazard Monitoring Screens. This alarm message will remain in the Alarm Window until the alarm condition is corrected.
- An audible alarm will sound. This audible alarm will remain "on" until the Alarm Acknowledge button is pressed.

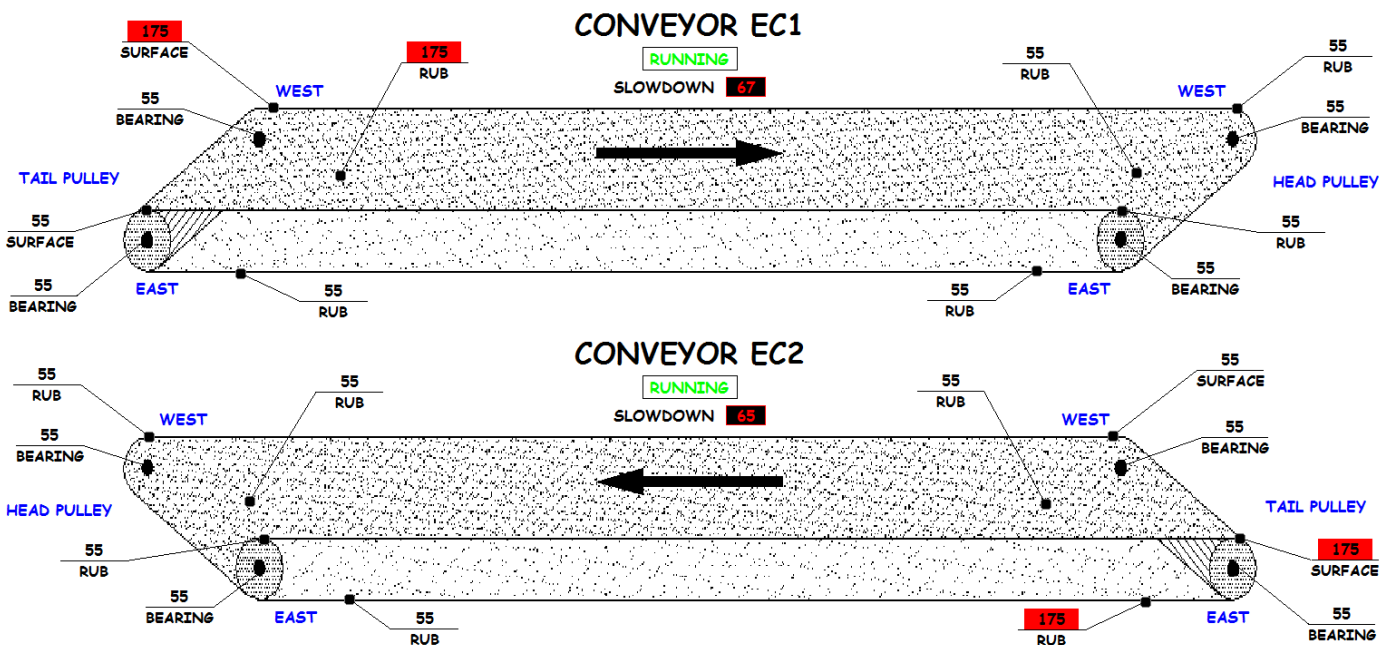


Figure 3 - Showing Hazard Monitoring Screens with Trip Setpoints reached.



Digital Hazard Monitoring Sensor Fault

- If any point fails to return a valid reading that point will flash RED and display "FAULT" (Figure 4). This indicates that the sensor has been damaged or is faulted.
- A visual alarm message will be displayed in the Alarm Window of all Hazard Monitoring Screens. This alarm message will remain in the Alarm Window until the alarm condition is corrected.
- An audible alarm will sound. This audible alarm will remain "on" until the Alarm Acknowledge button is pressed.

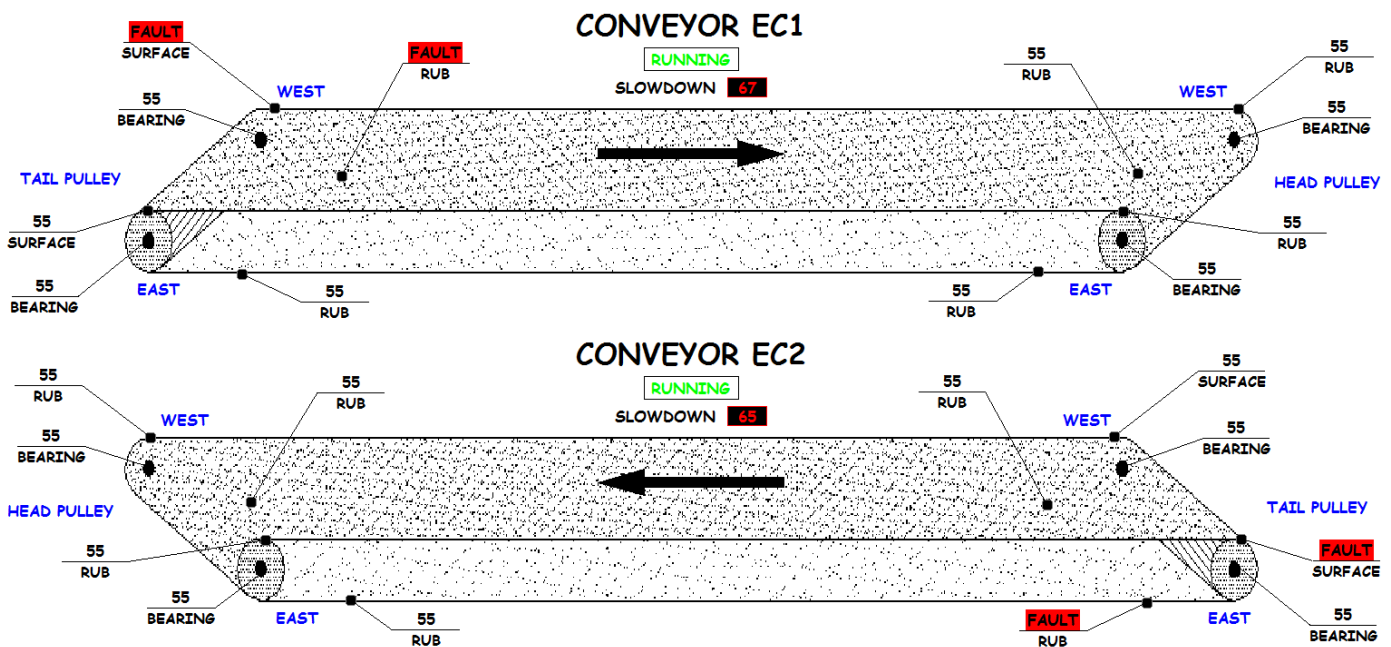


Figure 4 - Showing Hazard Monitoring Screens with Faulted Sensors.



Digital Hazard Monitoring Rate of Rise Warning Setpoint

- If any point reaches the Rate of Rise Warning Setpoint (rise of 3° F in 10 seconds, when the temperature is over 100° F), that point will flash Yellow (Figure 5).
- A visual alarm message will be displayed in the Alarm Window of all Hazard Monitoring Screens. This alarm message will remain in the Alarm Window until the alarm condition is corrected.
- An audible alarm will sound. This audible alarm will remain "on" until the Alarm Acknowledge button is pressed.

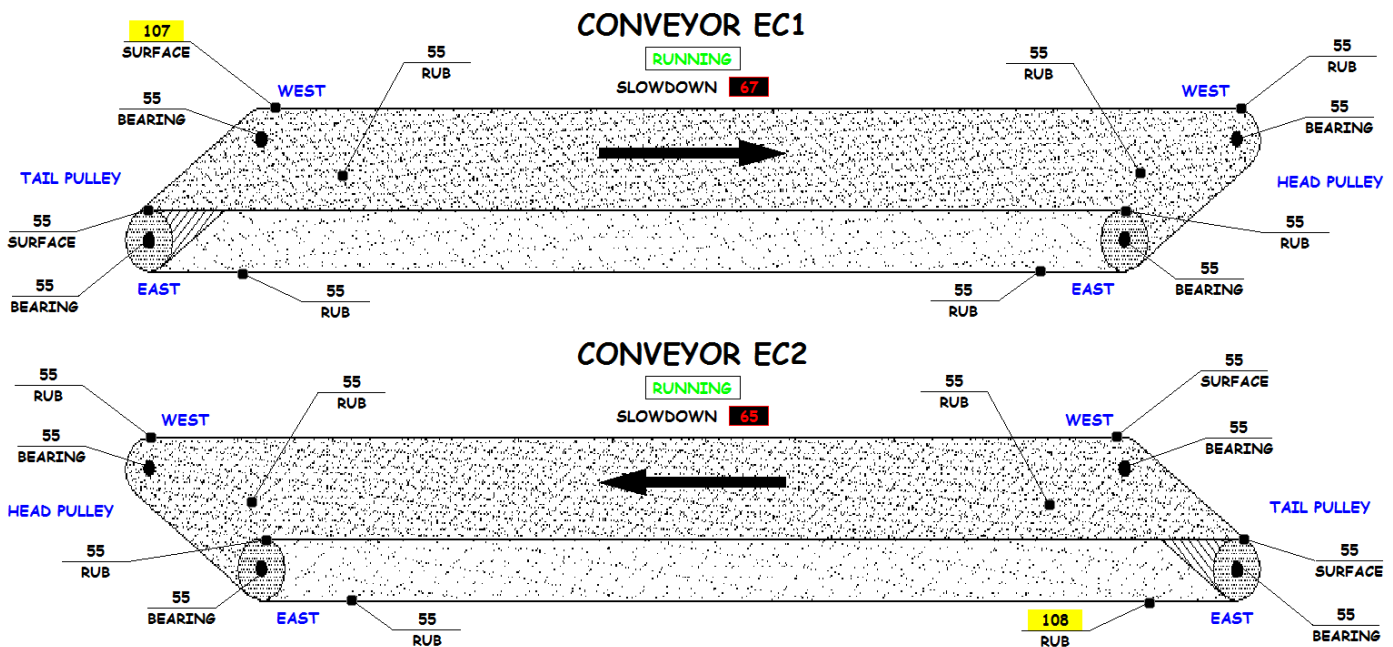


Figure 5 - Showing Hazard Monitoring Screens with Rate of Rise Warning Setpoint reached.



Digital Hazard Monitoring Rate of Rise Alarm Setpoint

- If any point reaches the Rate of Rise Alarm Setpoint (rise of 5° F in 10 seconds), that point will flash Red (Figure 6).
- A visual alarm message will be displayed in the Alarm Window of all Hazard Monitoring Screens. This alarm message will remain in the Alarm Window until the alarm condition is corrected.
- An audible alarm will sound. This audible alarm will remain "on" until the Alarm Acknowledge button is pressed.

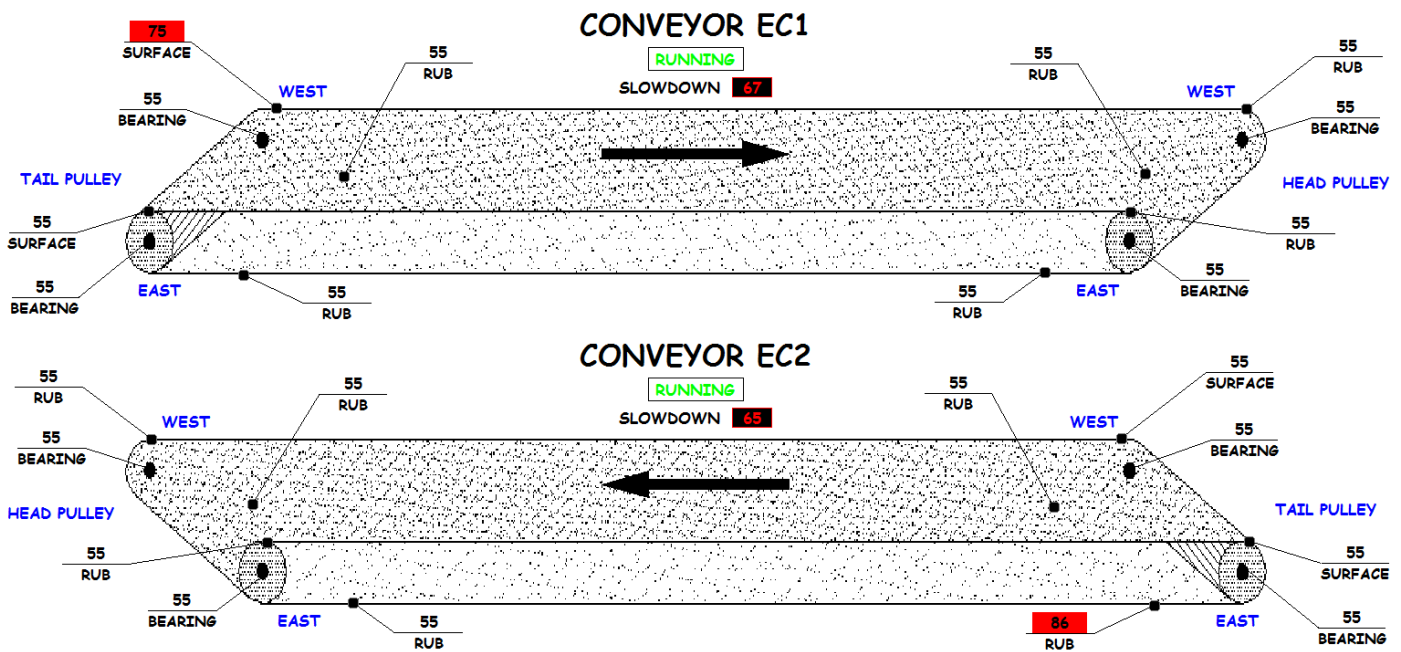


Figure 6 - Showing Hazard Monitoring Screens with Rate of Rise Alarm Setpoint reached.



Digital Hazard Monitoring Alarm History

- To access the Alarm History, click the associated Alarm History Button.
- All Hazard Monitoring Alarms, within the last ninety (90) days, are displayed in the Alarm History Window (Figure 7).
- All Hazard Monitoring Alarms are searchable by date.
- All Hazard Monitoring Alarms are available for printing.
 - To print Hazard Monitoring Alarms, click on the printer icon on the top row of icons. Follow standard Windows Printing Procedures to select the printer and print the document. (This printer must be local to the PC)
- All Hazard Monitoring Alarms are available for saving if the PC has PDFCreator.
 - To save Hazard Monitoring Alarms, click on the printer icon on the top row of icons. Follow standard Windows Procedures to print as PDF. Select the file name and destination.

Event Time	Message	User Comment
9/5/2016 3:11:46 PM	CO2 AIR QUALITY FOR 64 HOUSE IS OUT OF THE TOLERANCE RANGE (0.5) (AUTOMATION)	
9/3/2016 8:38:39 AM	LEG 64 SLOWDOWN TRIPPED (0) (AUTOMATION)	
9/3/2016 8:38:39 AM	LEG 64 SLOWDOWN WARNING (0) (AUTOMATION)	
9/2/2016 12:50:29 PM	77 SHIPPING LEG TAIL NORTH WEST RUB RATE-OF-RISE ALARM (102.8) (HAZMON)	
9/2/2016 12:50:24 PM	77 SHIPPING LEG TAIL NORTH WEST RUB RATE-OF-RISE WARNING (101.0) (HAZMON)	
9/2/2016 12:50:15 PM	77 SHIPPING LEG TAIL NORTH WEST RUB RATE-OF-RISE ALARM (97.1) (HAZMON)	
9/2/2016 12:46:12 PM	SHIPPING LEG 77 SLOWDOWN WARNING (54) (AUTOMATION)	
9/1/2016 7:14:36 AM	LEG 64 SLOWDOWN TRIPPED (0) (AUTOMATION)	
9/1/2016 7:14:36 AM	LEG 64 SLOWDOWN WARNING (0) (AUTOMATION)	

Events: 9 Filter: (Custom)

START DATE: 9/1/2016 END DATE: 9/8/2016 SEARCH TERM: [] REFRESH

Figure 7 - Showing the Alarm History Window.

