3500/94M VGA Display Monitor

Datasheet

Bently Nevada Machinery Condition Monitoring

Description

The 3500/94M VGA module displays all 3500 machinery protection system information, including:

- System event list
- Alarm event list
- All module and channel data
- Alarm and OK status
- Nine custom display options

Use the 3500 Rack Configuration Software to configure up to nine custom screens. By default, one bar graph screen shows all of the 1X-filtered vibration measurements, while another shows the proximity transducer gap values.

You can organize custom screens into machine train groups. You can also organize system data into any pages on the custom screen.

System Components

The 3500/94M is comprised of:

- The 3500/94M VGA module
- An I/O module
- A 10" or 15" VGA touch screen display

You can mount the VGA display monitor using standard cables up to 6 m (20 ft) from a 3500 rack, or using a supported Keyboard Video Monitor (KVM) Extender, up to 10 km (6.2 miles) from the 3500 rack.

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Touch Screen Displays

Use either the 10" and 15" Advantech VGA touch screen displays. These compact, durable displays are designed for excellent viewing quality in industrial applications.

The 10" Advantech display is certified for hazardous environments. Each display requires a separate power supply. The 3500 Rack Configuration Software supports both display drivers.

Reduce the Number of Displays

Using a standard cable and the optional Display Router Box, you can view data from up to four 3500 racks on one display.

The alarm and OK status is continually displayed in the upper right corner of the VGA display. A rack select button changes color to indicate if any rack connected to the Display Router Box is Not OK or in Alarm status.

> ✎ Due to limitations imposed by the VGA standard, the Display Router Box must be located within 6 m (20 ft) of each connected 3500 rack. Longer cables are not recommended because they may degrade image quality. Noisy electronic environments also degrade image quality.

Access Data Remotely

If you need to display 3500 data at a greater distance, you have two options.

Distance from Display Router Box	Options	Notes
from 6.4–305 m (21–1,000 ft)	Wired CAT5 UTP Keyboard Video Monitor (KVM) Extender	Minor loss in image quality. The receiver is certified for Class I, Division 2 hazardous area installations in North America. When using the wired CAT5 UTP KVM Extender, you can tune image quality using a PS/2 keyboard (not supplied) as described in the *3500/94M VGA Display Module Operation and Maintenance Manual* (document 122M3218).
› 10 m –10 km (33 ft– 6.2 mi)	Single-mode, fiber optic (SM FO) Keyboard Video Monitor (KVM) Extender	No loss in image quality. Not certified for hazardous locations. Must be installed in a safe area or in an approved enclosure.

> ✎ Only the wired KVM receiver is certified for Class I, Division 2 hazardous area installations in North America. The transmitter is not and must be installed in a safe area or enclosed in an approved enclosure.

> ✎ The SM FO KVM receiver and transmitter are not certified for hazardous area installations. Both the receiver and the transmitter must be installed in a safe area or enclosed in an approved enclosure.

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Specifications

3500/94M VGA Display Unit

Inputs	
Power consumption	4.6 watts max.
High-speed network	Monitor status, data and values
RS232 port (I/0)	Touch controller data
Outputs	
OK LED	Indicates proper operation of the module
TX/RX LED	Indicates communications between other system modules
VGA port (I/O)	Analog red, green, blue and sync signals to the display
Front Port	24 Vdc Power out, VGA signal out, Touch commands in.

Environmental Limits

Operating Temperature	-20ºC to 65ºC (-22ºF to 149ºF)
Storage Temperature	-40ºC to 85ºC (-40ºF to 185ºF)
Humidity	95%, non-condensing

Compliance and Certifications

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.

2. This device must accept any interference received, including interference that may cause undesired operation.

EMC	Standards EN 61000-6-2 EN 61000-6-4
	Directive 2014/30/EU
Electrical Safety	Standards CSA C22.2 61010-1 UL EN 61010-1
	Directive 2014/35/EU
RoHS	Directive 2011/65/EU

⚠ **WARNING**

HAZARDOUS VOLTAGE

RISK OF ELECTRIC SHOCK, BURN OR DEATH.

Do not remove cover. No user servicable parts inside.

⚠ **WARNING**

EXPLOSION HAZARD

Refer to User Manual **BEFORE** making connections.

DO NOT DISCONNECT EQUIPMENT UNLESS POWER HAS BEEN SWITCHED OFF OR THE AREA IS KNOWN TO BE NON-HAZARDOUS.

AVERTISSEMENT – RISQUE D'EXPLOSION – AVANT DE DECONNECTER L'EQUIPMENT, COUPER LE COURANT OU S'ASSURER QUE L'EMPLACEMENT EST DESIGNE NON DANGEREUX.

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