Bently Nevada 3500 Series Service Manual

3500/94M-04-00-02

1. Description

Manufacturer : Bently Nevada

3. Product Information

Manufacturer : Bently Nevada

Product No. :3500/94M-04-00-02

Product type : VGA Display Module

Made in U.S.A

Ordering Information

System Display

3500/94M-AA-BB-CC

Display Size and Mounting :04 = 10" display, independent

mount

KVM Extender and Display Router Box Cables : 00 = None

Agency Approval Option 02 = Multi (CSA/ATEX/IECEx) (only available for the 10" display)

Weight : 1.07 Kg

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

-20°C to 65°C

(-22°F to 149°F)

Storage

Temperature

-40°C to 85°C

(-40°F to 185°F)

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

Physical Characteristics

3500/94M VGA Display Module

Dimensions

(height x

width x

depth)

241.3 mm x 24.4 mm x 241.8 mm

(9.5 in x 0.96 in x 9.52 in)

Weight 0.73 kg (1.6 lb.)

I/O Module

Dimensions

(height x

width x

depth)

241.3 mm x 24.4 mm x 99.1 mm

(9.50 in x 0.96 in x 3.90 in)

Weight 0.34 kg (0.75 lb.)

15" Advantech Display (FPM-8151)

Dimensions

(width x

height x

depth)

422 mm x 338 mm x 68 mm

16.61 in x 13.31 in x 2.68 in

Display

screen

(diagonal)

381 mm (15 in)

Weight 8.5 kg (18.75 lb)

Rack Space Requirements

Monitor Module

Rack space 1 full-height front slot

I/O Module

Rack space 1 full-height rear slot

Keyboard Video Monitor (KVM) Extender

Mounting Shelf top

Power input 12 Vdc and 5 Vdc

Agencies UL certification for North

America only

Temperature

range

0ºC to 45ºC

(32ºF to 113ºF)

Humidity 80%, non-condensing

Class I,

Division 2

The KVM Extender Receiver is

approved for Class I, Division

2 hazardous areas in North

America.

The KVM Extender Transmitter

is not certified for hazardous

usage and must be installed
in a safe area or enclosed in
an approved enclosure (such
as a purged housing or
cabinet).
NEMA 4X Not approved
Advantech 15” Display
(FPM-8151H)
Screen Size 15” diagonal
Type LCD with LED backlight
Industrial
hardened Yes
Mounting
Styles
19” Rack Mount
Panel Mount
Power 24 Vdc power supply
included. (Permissible
voltage range 12 Vdc to 24
Vdc)
Inrush Current: 2.62 A @ 24 V
(< 500 µs)
Operating Current: < 500 mA
IP65 Yes
Agencies CE, UL
Class 1, Div 2 Yes
Temperature 0 to 60°C (32°F to 140°F)
Operating Temperature.
The minimum temperature rating is
0ºC (32°F) for the screen, front
bezel, and rear electronics. When
the screen or front bezel is exposed
to temperatures below 0ºC (32°F) ,
a heated enclosure is required.
Humidity 95% RH
Touch
Interface
Resistive
Manufacturer Advantech
Dimensions (W
x H x D) inches
422 mm (16.61 in) x 338 mm
(13.31 in) x 68.0 mm (2.68 in)
Panel Cutout: 396 mm (15.59
in) X 296 mm (11.65 in)
Weight
Shipping
8.5 kg (18.74 lb)
Warranty Two years
Recommended for industrial use.
Not certified for hazardous
locations.
Ordering Considerations
Firmware, Software, and Hardware
Requirements
The 3500/94M requires the 3500/22 Transient
Data Interface (TDI) module. It also requires
these or newer versions of the following
firmware and software:

3500/94M Firmware 4.06, Rev. C

3500/22 Firmware (TDI) Rev 1.71

3500/01 Software (Rack
Config) Rev 5.6

3500/02 Software (Op
Display) Rev 2.21

3500/03 Software (Data
Acquisition) Rev 1.22

The 3500/94M requires the following hardware:

3500/22 TDI - Transient Data Interface

Rack Space Requirements

Monitor Module

Rack space 1 full-height front slot

I/O Module

Rack space 1 full-height rear slot

Keyboard Video Monitor (KVM) Extender

Mounting Shelf top

Power input 12 Vdc and 5 Vdc

Agencies UL certification for North
America only

Temperature
range

0ºC to 45ºC
(32ºF to 113ºF)

Humidity 80%, non-condensing

Class I,
Division 2

The KVM Extender Receiver is
approved for Class I, Division
2 hazardous areas in North
America.

The KVM Extender Transmitter
is not certified for hazardous
usage and must be installed
in a safe area or enclosed in
an approved enclosure (such
as a purged housing or
cabinet).

NEMA 4X Not approved

Display Monitor Specifications

Advantech 10” Display
(ANA-D3510-100-A1)

Screen Size 10” diagonal

Type LCD with LED back light

Industrial hardened Yes

Mounting Styles Face Mount
19” Rack Mount
Panel Mount;
Independent Mount.

Power 24 Vdc power supply
included. (Permissible
voltage range 10 Vdc to 28
Vdc)

Inrush Current: 3.5 A @ 24 V
(< 500 µs)

Operating Current: < 500 mA

Agencies CE, UL, CUL

IP54 Designed for.

Class I, Div 2 Yes

ATEX/IECEx Yes

Temperature -20°C to 65°C (-4°F to 149°F)

Operating Temperature.

Humidity 10% to 85% RH noncondensing

Touch

Interface

GFG Resistive Touch Screen

Manufacturer Advantech

Dimensions

(W x H x D)

387.4 mm (15.25 in) x 248.9 mm (9.8 in) x 49.0 mm (1.93 in)Panel Cutout: 342.9 mm (13.5 in) x 228.6 mm (9.0 in)

Weight Shipping

4.0 kg (8.78 lb)

Warranty One year