

Bently Nevada 3500 Series Service Manual

3500/33-01-00 149992-01

1. Description

Manufacturer : Bently Nevada

3. Product Information

Manufacturer : Bently Nevada

Product No. :3500/33-01-00 149992-01

Product type : 3500/33 16-Channel Relay Module

Made in U.S.A

Output Module : 01 = 16-Channel Relay Output Module

Agency Approval Option : CN = Approvals country specific (CN Approvals Option Quick Reference Guide and Field Notification Letter are in the download section)

Operating Temperature : -30 °C to +65 °C (-22 °F to +150 °F)

Storage Temperature : -40 °C to +85 °C (-40 °F to +185 °F).

Humidity : 95%, non-condensing.

Inputs

Power

Consumption 5.8 watts typical

Outputs

Front Panel LEDs

OK LED

Illuminated when the

3500/33 16-Channel Relay

Module is operating

properly.

TX/RX LED

Transmit and receive

flashes when the

3500/3316-Channel Relay

Module is communicating

with other modules in the

3500 rack.

CH Alarm LED Illuminated when Relay

channel is in an alarm state.

Relay Type Single-pole

Double-throw (SPDT)

Relay

Environmental

Sealing

Epoxy-sealed

Relay Arc

Suppressor

250 Vrms

Installed as standard

Relay Contact

Life 10,000 cycles

Relay

Operation

Four groups of four channels

are switch selectable for

Normally De-energized (ND)

or Normally Energized (NE)

operation.

Physical

Main Module

Dimensions

(height x width

x depth)

241 mm x 24.4 mm x 242 mm

(9.50 in x 0.96 in x 9.52 in)

Weight 0.7 kg (1.6 lb)

Rack Space Requirements

Main Module 1 full-height front slot

Contact Ratings for Standard

Systems

Standard Relays

Min Switched

Current 100 mA @ 5 Vdc

DC Specifications (Resistive Load)

Max Switched

Current 5 A

Max Switched

Power

70 W @ 24 Vdc

10 W @ 48 Vdc

9 W @ 60 Vdc

Max Switched

Voltage 125 Vdc

AC Specifications (Resistive Load)

Max Switched

Current 5 A

Max Switched

Power 1200 VA

Max Switched

Voltage 250 Vac

Contact Ratings for Failsafe

Systems and Hazardous Area

Systems

Standard Relays

Min Switched

Current 100 mA @ 5 Vdc

DC Specifications (Resistive Load)

Max Switched

Current 5 A

Max Switched

Voltage 30 Vdc

I Minimum switched load for standard

(silver) contacts is 100 mA @ 5 Vdc.

I Minimum switched load for Low Current

(gold-plated) contacts is 1 mA @ 1 Vdc.

Contact Ratings for Special Low

Current Relay Applications

Low Current Relays

DC Specifications (Resistive Load)

Min Switched

Current 1 mA @ 1 Vdc

Max Switched

Current 100 mA @ 48 Vdc

Specific to AC up to 120VAC:

I The Minimum switching current for Gold plated is 1m A

I The maximum switching current before damaging the Gold relays is 5m A

Ordering Considerations

I The 3500/33 16-Channel Relay Module requires the 3500 Rack Config, version 3.3 or later.

I The 3500/33 requires the 3500 Data Acquisition Software, version 2.40 or later.

I The 3500/33 16-Channel Relay Module requires the 3500 Data Display Software, version 1.40 or later.

I When ordered with the multiple approvals option (-02), the 3500 monitor

is certified to Zone 2 standards, including ATEX and North American zones.

I The Zone 2 standards specify increased spacing requirements at higher voltages.

The 3500/33 16-Channel Relay Module does not meet these spacing requirements. Thus, the module ordered with the multiple approvals option is limited to a lower voltage than those with the other approvals options.

I Using higher voltages violates the hazardous area certificates associated with the multiple approvals option.

I The North American Division 2 standards associated with the CSA-only approvals option (-01) have been de-rated to 30 Vrms to comply with 61010-1 type test requirements.

I If the 3500/33 16-Channel Relay Module is part of a functional safety (SIL) system, the functional safety certificate requires the restricted voltage. Higher voltages are not allowed for functional safety (SIL) systems.

