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
l Minimum switched load for standard
(silver) contacts is 100 mA @ 5 Vdc.
l 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:
l The Minimum switching current for Gold
plated is 1m A
l The maximum switching current before
damaging the Gold relays is 5m A
Ordering Considerations
l The 3500/33 16-Channel Relay Module
requires the 3500 Rack Config, version 3.3
or later.
l The 3500/33 requires the 3500 Data
Acquisition Software, version 2.40 or later.
l The 3500/33 16-Channel Relay Module
requires the 3500 Data Display Software,
version 1.40 or later.
l When ordered with the multiple
approvals option (-02), the 3500 monitor

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

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