

3500/33 16-Channel Relay Module

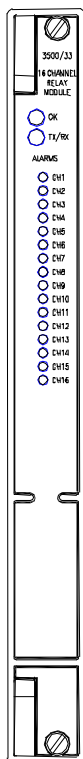
Bently Nevada™ Asset Condition Monitoring

Description

The 16-Channel Relay Module is a full-height module that provides 16 relay outputs. Any number of 16-Channel Relay Modules can be placed in any of the slots to the right of the Rack Interface Module. Each output of the 16-Channel Relay Module can be independently programmed to perform needed voting logic.

Each relay utilized on the 16-Channel Relay Module includes "Alarm Drive Logic". Programming for the Alarm Drive Logic uses AND and OR logic, and can use alarming inputs (Alert and Danger statuses), Not OK, or individual PPLs from any monitor channel or any combination of monitor channels in the rack. Users program this Alarm Drive using the 3500 Rack Configuration Software to meet the specific needs of the application.

Note: Triple Modular Redundant (TMR) applications must use the 3500/34 TMR Relay Module. Consult our Specification and Ordering Information document number 141534-01 for details.



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Specifications and Ordering Information
Part Number 162301-01
Rev. B (03/07)

Specifications

Inputs

Power Consumption:

5.8 watts typical.

Outputs

OK LED:

Illuminated when module is functioning properly.

TX/RX LED:

Transmit and Receive. Flashes to indicate proper communications between this module and other modules within the rack.

CH ALARM LED:

Illuminated to indicate that the Relay Channel is in an alarm state.

Relays

Type:

Single-pole, double-throw (SPDT) relays.

Environmental Sealing

Epoxy-sealed.

Arc Suppressor

250 Vrms, installed as standard.

Contact Life

100,000 cycles @ 5 A, 24 Vdc or 240 Vac.

Operation

Four groups of four channels are switch selectable for Normally De-energized or Normally Energized.

Environmental Limits

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.

CE Mark Directives

EMC Directives:

EN50081-2:

Radiated Emissions

EN 55011, Class A

Conducted Emissions

EN 55011, Class A

EN50082-2:

Electrostatic Discharge

EN 61000-4-2, Criteria B

Radiated Susceptibility

ENV 50140, Criteria A

Conducted Susceptibility

ENV 50141, Criteria A

Electrical Fast Transient

EN 61000-4-4, Criteria B

Surge Capability

EN 61000-4-5, Criteria B

Magnetic Field

EN 61000-4-8, Criteria A

Power Supply Dip

EN 61000-4-11, Criteria B

Radio Telephone

ENV 50204, Criteria B

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**Low Voltage
Directives:
Safety
Requirements**

EN 61010-1

Hazardous Area Approvals

CSA/NRTL/C

**Approval Option
(01)**

Class I, Div 2
Groups A, B, C, D
T4 @ Ta = -20 °C to +65 °C
(-4 °F to +150 °F)

*Certification
Number*

CSA 150268-1002151 (LR 26744)

**Approval Option
(02)**

A/Ex nC[L] IIC
Class I, Zone 2
Class I, Div 2, Groups A,B,C,D
T4 @ Ta = -20 °C to +65 °C
(-4 °F to +150 °F)

*Certification
Number*

CSA 1389797 (LR 26744-211)

ATEX

**Approval Option
(02)**

**For Selected Ordering Options
with ATEX/CSA agency
approvals:**



II 3/(3) G

EEx nCAL[L] IIC

T4 @ Ta = -20 °C to +65 °C

(-4 °F to +150 °F)

*Certification
Number*

LCIE 04 ATEX 6161X

Note: When used with Internal Barrier I/O Module, refer to
specification sheet 141495-01 for approvals information.

Contact Ratings

Resistive load:

**Max switched
power:**

dc: 160 W

ac: 1500 VA

**Minimum
switched
current:**

100mA @ 12 Vdc

**Max switched
current:**

6 A

**Max switched
voltage:**

dc: 300 Vdc

ac: 400 Vac

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.).

I/O Module:

**Dimensions
(Height x Width
x Depth):**

241 mm x 24.4 mm x 99.1 mm
(9.50 in. x 0.96 in. x 3.90 in.).

Weight:

0.4 kg (1.0 lb.).

Specifications and Ordering Information
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Rev. B (03/07)

Rack Space Requirements

Main Module:

1 full-height front slot.

I/O Modules:

1 full-height rear slot.

Ordering Considerations

- The 3500/33 requires 3500 Rack Configuration software, version 3.3 or later
 - The 3500/33 requires 3500 Data Acquisition software, version 2.40 or later
 - The 3500/33 requires 3500 Data Display software, version 1.40 or later
 - When used with a 3500/93 LCD Display module, the 3500/93 will require firmware revision P or later.
 - When used with a 3500/94 VGA Display module, the 3500/94 will require firmware revision C or later.
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Ordering Information

3500 16-Channel Relay Module
3500/33 -AXX-BXX

A: Output Module

01 16-Channel Relay Output Module

B: Agency Approval Option

00 None
01 CSA/NRTL/C (Class 1, Div 2)
02 ATEX/CSA (Class 1, Zone 2)

Spares

149986-01

Spare 16-Channel Relay Control Module

149992-01

Spare 16-Channel Relay Output Module

04425545

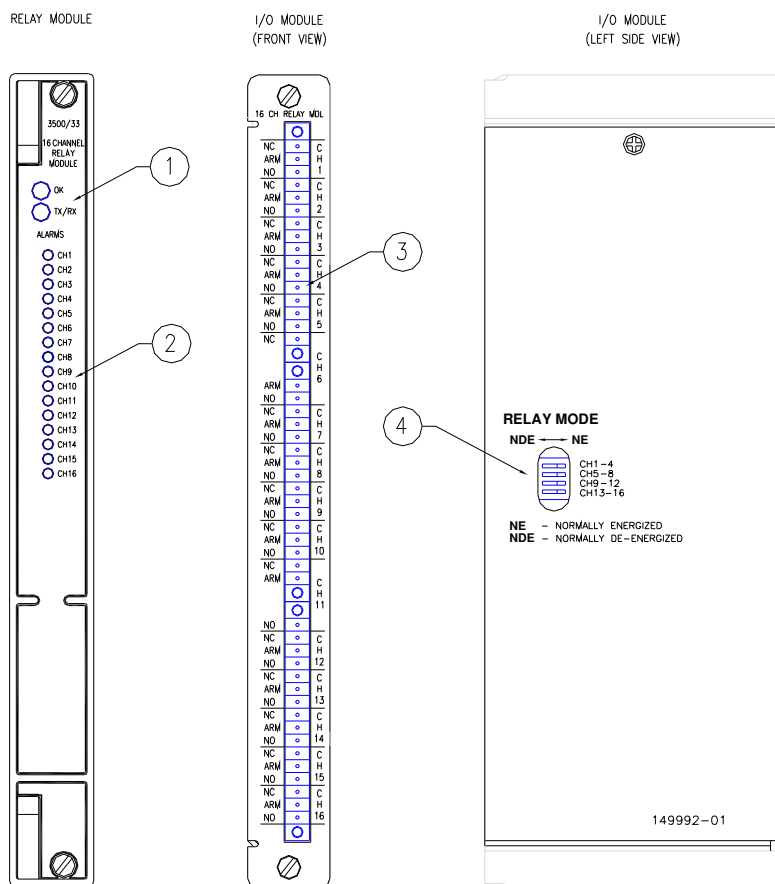
Grounding Wrist Strap (single use)

162291-01

16-Channel Relay Module Manual

00580453

Connector Header, Internal Termination, 16-position, Green



1. Relay module
2. I/O module
3. Status LEDs
4. Relay channel LEDs
5. Relay contacts
6. Relay mode selection switches

Figure 1: Front and rear view of the 16-Channel Relay Module

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