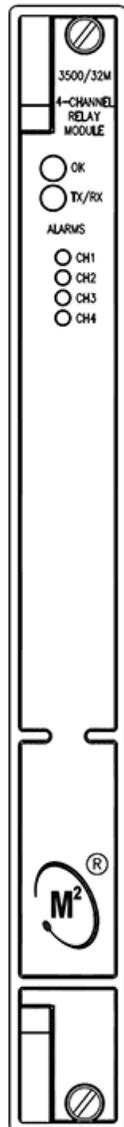


# 3500/32M 4-Channel Relay Module

## Product Datasheet

Bently Nevada\* Asset Condition Monitoring



## Description

The 4-Channel Relay Module is a full-height module that provides four relay outputs. Any number of 4-Channel Relay Modules can be placed in any of the slots to the right of the Transient Data Interface Module. Each output of the 4-Channel Relay Module can be independently programmed to perform voting logic.

Each relay utilized on the 4-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 the specification and ordering Information for the 3500/34 for details.



imagination at work

Part Number 141533-01

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# 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	Each relay of the four channels is 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

## Compliance and Certifications

### EMC

Standards	EN 61000-6-2 Immunity for Industrial Environments EN 55011/CISPR 11 ISM Equipment EN 61000-6-4 Emissions for Industrial Environments
European Community Directives	EMC Directive 2014/30/EU

### Electrical Safety

Standards	EN 61010-1
European Community Directives	LV Directive 2014/35/EU

For further certification and approvals information, visit the following website:

[www.GEmeasurement.com](http://www.GEmeasurement.com)

### Hazardous Area Approvals

For a detailed listing of country and product specific approvals, refer to the Approvals Quick Reference Guide (document 108M1756) located at the following website: [www.GEmeasurement.com](http://www.GEmeasurement.com).

#### Note

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

For further certification and approvals information, visit the following website:

[www.GEmeasurement.com](http://www.GEmeasurement.com)

## Contact Ratings for Standard Systems

### Standard Relays

Minimum switched current	100 mA @ 12 Vdc
DC specifications (Resistive load)	
Maximum switched current	2 A @ 0V to 30 Vdc
	0.75 A @ 48 Vdc 0.2 A @ 125 Vdc
Max switched voltage	125 Vdc
AC specifications (Resistive load)	
Maximum switched voltage	250 Vac
Maximum switched current	2 A
Maximum switched power	450 VA

## Contact Ratings For Functional Safety Systems and Hazardous Area Systems

### Standard Relays

Minimum switched current	100 mA @ 12 Vdc
DC specifications (Resistive load)	
Maximum switched current	2 A @ 0V to 30 Vdc
Maximum switched voltage	30 Vdc
AC specifications (Resistive Load)	
Maximum Switched Voltage	30 Vac
Maximum Switched Current	2 A



### WARNING



**Due to the potential for varying voltage levels, please review the following:**

- 3500 monitors ordered with the multiple approvals option (-02) are certified to Zone 2 standards (including ATEX and North American Zones). The Zone 2 standards specify increased spacing requirements at higher voltages, and the 3500/32M relays do not meet these spacing requirements. For this reason, 3500/32M relays



### WARNING

ordered with the multiple approvals option have historically been limited to a lower voltage than those ordered with the other approvals options. Using higher voltages would violate the hazardous area certificates associated with the multiple approvals option.

2. If the 3500/32M 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.

3. It is possible to connect field wiring to the 3500/32M relays such that conductors are exposed to potential human contact. This could present a shock hazard at high voltages. Customers shall only use the 3500/32M relays at the voltages specified. Appropriate safety precautions must be taken with respect to the shock hazard.

## 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)	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.)

## Rack Space Requirements

Main Module	1 full-height front slot.
I/O Modules	1 full-height rear slot.

# Ordering Considerations

00580453	Connector Header, Internal Termination, 16-position, Green
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- The 3500/32M requires 3500 Rack Configuration software, version 4.5 or later.
- The 3500/32M requires 3500 Data Acquisition software, version 2.40 or later.
- The 3500/32M 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.

## Ordering Information

For a detailed listing of country and product specific approvals, refer to the Approvals Quick Reference Guide (document 108M1756) located at the following website: [www.GEmeasurement.com](http://www.GEmeasurement.com).

### 3500 4-Channel Relay Module

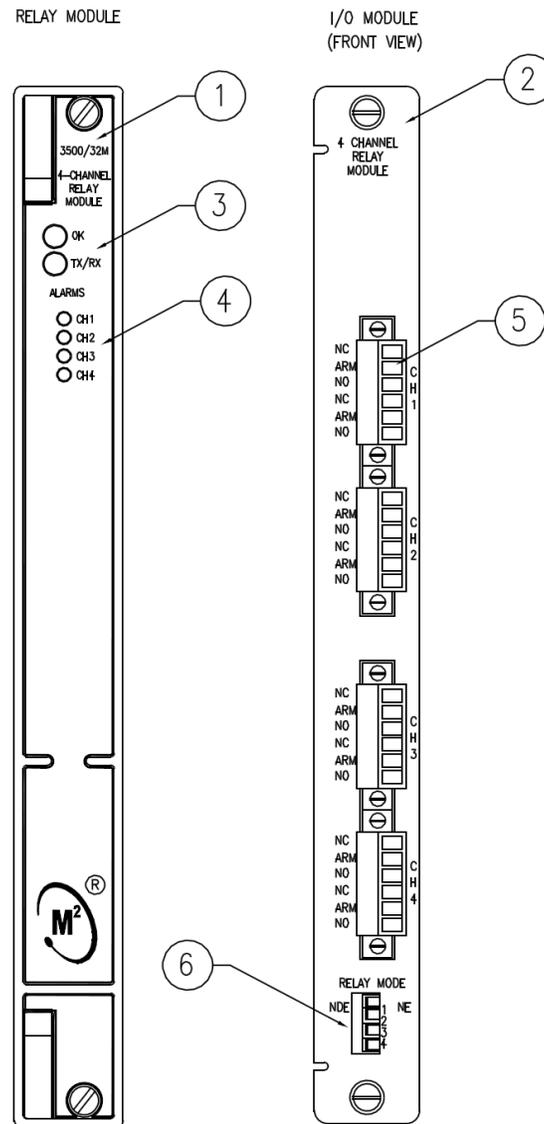
#### 3500/32 -AXX-BXX

- A:** Output Module
- 01** 4-Channel Relay Output Module
- B:** Agency Approval Option
- 00** None
  - 01** CSA/NRTL/C (Class I, Div 2)
  - 02** ATEX/IECEX/CSA (Class I, Zone 2)

### Spares

149986-02	Spare 4-Channel Relay Control Module
125720-01	Spare 4-Channel Relay Output Module for hazardous area systems and functional safety systems
125720-02	Spare 4-Channel Relay Output Module for standard systems
04425545	Grounding Wrist Strap (single use)
129771-01	3500/32 and 3500/32M 4-Channel and 3500/34 TMR Relay Modules Manual

# Graphs and Figures



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

**Figure 1: Front and rear view of the 4-Channel Relay Module**

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