

# 3500/91 EGD Communication Gateway Module

## Datasheet

Bently Nevada Machinery Condition Monitoring

165361 Rev. J



### Description

The 3500/91 EGD (Ethernet Global Data) Communication Gateway modules provide comprehensive communication capabilities of 3500 rack-monitored values and status. This Ethernet network path provides information with response times suitable for controller applications. Using the 3500/91 EGD Gateway provides for integration with EGD protocol compatible controllers.

Supported protocols include:

- EGD (version 2.01)
- Ethernet UDP/IP

The Ethernet standard supported by the 3500/91 I/O modules is IEEE802.3 for 10BASE-T and 100BASE-TX (twisted pair).



## Specifications

### Inputs

Power Consumption	7.4 watts typical
<b>Data Types</b>	
Producer Exchanges	<ul style="list-style-type: none"> <li>• Rack, Module, Channel and Data value Status</li> <li>• Data values (float)</li> <li>• Setpoints (float)</li> </ul>
Consumer Exchange	<ul style="list-style-type: none"> <li>• Group Reset</li> <li>• Group Trip Multiply</li> <li>• Group Alarm Inhibit</li> <li>• Group Special Alarm Inhibit</li> </ul>

### Outputs

<b>Front Panel LEDs</b>	
OK LED	Indicates when the 3500/91 is operating properly.
TX/RX LED	Indicates when the 3500/91 is communicating with other modules in the 3500 rack.

### Protocols

EGD	Version 2.01
Ethernet	IEEE 802.3 CSMA/CD
Communication Link	Ethernet, 10-Mbps and 100-Mbps, and conforms to IEEE 802.3 and IEEE802.3u
Protocol	Ethernet UDP/IP frame
Connection	RJ-45 jack for the Ethernet 10BASE-T/100BASE-TX I/O Module  MT-RJ jack for the Ethernet 100BASE-FX I/O Module

## 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%, noncondensing

## Physical

<b>Main Module</b>	
Dimensions (Height x Width x Depth)	241.3 mm x 24.4 mm x 241.8 mm (9.50 in x 0.96 in x 9.52 in)
Weight	0.79 kg (1.75 lbs.)
<b>I/O Modules</b>	
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	0.39 kg (0.85lbs.)
<b>Rack Space Requirements</b>	
Main Module	1 full-height front slot
I/O Modules	1 full-height rear slot

## Compliance and Certifications

### FCC

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

### EMC

European Community Directive:

EMC Directive 2014/30/EU

Standards:

EN 61000-6-2 Immunity for Industrial Environments

EN 61000-6-4 Emissions for Industrial Environments

### Electrical Safety

European Community Directive:

LV Directive 2014/35/EU

Standards:

EN 61010-1

### RoHS

European Community Directive:

RoHS Directive 2011/65/EU

### Maritime

ABS - Marine and Offshore Applications

DNV GL Rules for Classification – Ships, Offshore Units, and High Speed and Light Craft

## Hazardous Area Approvals



For the detailed listing of country and product specific approvals, refer to the *Approvals Quick Reference Guide* (108M1756) available from [Bently.com](http://Bently.com).

### CSA/NRTL/C

Class I, Zone 2: AEx/Ex nA nC ic IIC T4 Gc;

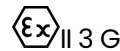
Class I, Zone 2: AEx/Ex ec nC ic IIC T4 Gc;

Class I, Division 2, Groups A, B, C, and D;

T4 @ Ta= -20°C to +65°C (-4°F to +149°F)

When installed per drawing 149243 or 149244.

### ATEX/IECEx

 II 3 G

Ex nA nC ic IIC T4 Gc

Ex ec nC ic IIC T4/T5 Gc

T4 @ Ta= -20°C to +65°C (-4°F to +149°F)

When installed per drawing 149243 or 149244.

Refer to our Network Accessories Datasheet (document 164466).

## Ordering Information

### Ordering Considerations

Version 3.70 (release pending) or higher of 3500 Rack Configuration Software is required.

The 3500/91 EGD requires a 3500/22M TDI to communicate with monitor modules.

Only 1 EGD per rack is allowed.

Version 1.20 (release pending) or higher of TDI (3500/22M) firmware is required.

For consumed exchange support, version 2.21 (release pending) or higher of 4-Channel firmware is required.

## The 3500/91 EGD Communication Gateway

### 3500/91-AA-BB-CC

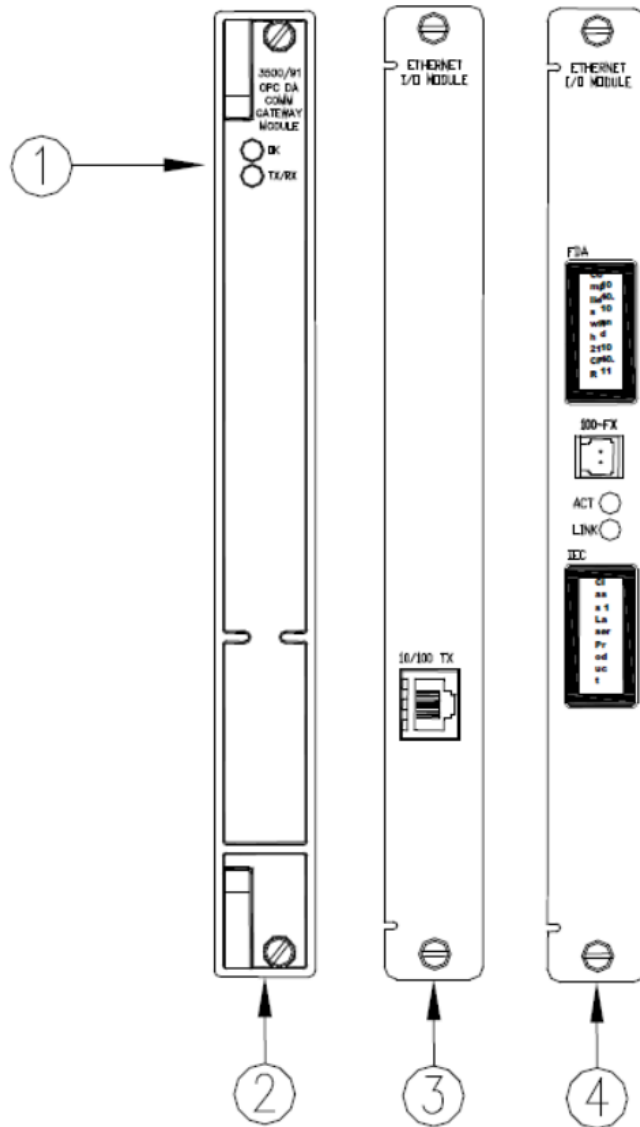
<b>A: Main Module Type</b>	
<b>0 1</b>	EGD Communication Gateway Module
<b>B: I/O Module Type</b>	
<b>0 1</b>	Ethernet 10BASE-T/100BASE-TX I/O Module
<b>0 2</b>	Ethernet 100BASE-FX I/O Module
<b>C: Agency Approval Option</b>	
<b>0 0</b>	None
<b>0 1</b>	CSA/NRTL/C
<b>0 2</b>	CSA/A

### Spares

161232	3500/91 User Guide
161204-01	3500/91 EGD Gateway Module
161216-01	Ethernet 10BASE-T/100BASE-TX I/O Module
161216-02	Ethernet 100BASE-FX I/O Module

### Network Accessories

## Graphs and Figures



1. Status LEDs
2. 3500/91 EGD Communication Gateway Module
3. Ethernet 10BASE-T/100BASE-TX I/O Module
4. Ethernet 100BASE-FX I/O Module

**Figure 1: 3500/91 Front and Rear Views**

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