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

<table>
<thead>
<tr>
<th>Power Consumption</th>
<th>7.4 watts typical</th>
</tr>
</thead>
</table>

### Data Types

- **Producer Exchanges**:
  - Rack, Module, Channel and Data value Status
  - Data values (float)
  - Setpoints (float)

- **Consumer Exchange**:
  - Group Reset
  - Group Trip Multiply
  - Group Alarm Inhibit
  - Group Special Alarm Inhibit

### Outputs

#### Front Panel LEDs

- **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

<table>
<thead>
<tr>
<th>Protocol</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGD</td>
<td>Version 2.01</td>
</tr>
<tr>
<td>Ethernet</td>
<td>IEEE 802.3 CSMA/CD</td>
</tr>
<tr>
<td>Communication Link</td>
<td>Ethernet, 10-Mbps and 100-Mbps, and conforms to IEEE 802.3 and IEEE802.3u</td>
</tr>
<tr>
<td>Protocol</td>
<td>Ethernet UDP/IP frame</td>
</tr>
<tr>
<td>Connection</td>
<td>RJ-45 jack for the Ethernet I0BASE-T/100BASE-TX I/O Module</td>
</tr>
<tr>
<td></td>
<td>MT-RJ jack for the Ethernet 100BASE-FX I/O Module</td>
</tr>
</tbody>
</table>

### Environmental Limits

<table>
<thead>
<tr>
<th>Limit</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temperature</td>
<td>-30°C to +65°C (-22°F to +150°F)</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-40°C to +85°C (-40°F to +185°F)</td>
</tr>
<tr>
<td>Humidity</td>
<td>95%, noncondensing</td>
</tr>
</tbody>
</table>

### Physical

- **Main Module**
  - 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.)

- **I/O Modules**
  - 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 (0.85 lbs.)

### Rack Space Requirements

- **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


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 @ Tα = -20°C to +65°C (-4°F to +149°F)
When installed per drawing 149243 or 149244.

ATEX/IECEx

Ex II 3 G

Ex nA nc ic IIC T4 Gc
Ex ec nc ic IIC T4/T5 Gc
T4 @ Tα = -20°C to +65°C (-4°F to +149°F)
When installed per drawing 149243 or 149244.
## 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**

<table>
<thead>
<tr>
<th>A: Main Module Type</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0 1</td>
<td>EGD Communication Gateway Module</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B: I/O Module Type</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0 1</td>
<td>Ethernet 10BASE-T/100BASE-TX I/O Module</td>
</tr>
<tr>
<td>0 2</td>
<td>Ethernet 100BASE-FX I/O Module</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C: Agency Approval Option</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0 0</td>
<td>None</td>
</tr>
<tr>
<td>0 1</td>
<td>CSA/NRTL/C</td>
</tr>
<tr>
<td>0 2</td>
<td>CSA/A</td>
</tr>
</tbody>
</table>

### Spares

<table>
<thead>
<tr>
<th>161232</th>
<th>3500/91 User Guide</th>
</tr>
</thead>
<tbody>
<tr>
<td>161204-01</td>
<td>3500/91 EGD Gateway Module</td>
</tr>
<tr>
<td>161216-01</td>
<td>Ethernet 10BASE-T/100BASE-TX I/O Module</td>
</tr>
<tr>
<td>161216-02</td>
<td>Ethernet 100BASE-FX I/O Module</td>
</tr>
</tbody>
</table>

### Network Accessories

Refer to our Network Accessories Datasheet (document 164466).
Graphs and Figures

Figure 1: 3500/91 Front and Rear Views

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
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1631 Bently Parkway South, Minden, Nevada USA 89423
Phone: 1.775.782.3611 or 1.800.227.5514 (US only)
Bently.com