# EtherNet/IP™ Interface

*Interface for the 1280 and 880 Indicators*

# Installation and Programming Manual


**COMPATABILITY NOTICE:**
*If card no longer communicates correct data, change SWAP parameter to "BYTE" in the indicator*

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# Contents

**1.0 Introduction ..... 1**
1.1 Overview ..... 1
**2.0 Installation ..... 2**
2.1 LED Status Indicators ..... 6
**3.0 Configuring the Network Settings ..... 7**
3.1 Configuring a Generic EtherNet/IP Module ..... 8
3.2 Sample for BYTE Swapping in a PLC ..... 9
3.3 Sample BYTE Swapping ..... 10
**4.0 Commands ..... 11**
4.1 Output Data Format ..... 11
4.1.1 BYTE Swapping ..... 14
4.2 Input Data Format ..... 14
4.2.1 Command number ..... 15
4.2.2 Status Data ..... 15
4.2.3 Value ..... 17
4.2.4 Setting a Float Value ..... 17
4.2.5 Reading a Float Value ..... 17
4.3 Command Descriptions ..... 17
**5.0 Specifications ..... 26**


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# 1.0 Introduction

The EtherNet/IP Interface can be used to read and write data to the indicator using a PLC or another primary controller. This manual provides information for installation and use of this product.

The EtherNet/IP Interface is installed inside the indicator enclosure and installation in NEMA Type 4X stainless steel enclosures permits use in washdown environments.

See the indicator technical manual for additional installation information and detailed descriptions of indicator functions.

**WARNING** ***Some procedures described in this manual require work inside the indicator enclosure. These procedures are to be performed by qualified service personnel only.***

Manuals and additional resources are available on the Rice Lake Weighing Systems website at **www.ricelake.com**

Warranty information can be found on the website at **www.ricelake.com/warranties**

## 1.1 Overview

EtherNet/IP Interface (Ethernet Industrial Protocol) is an open industrial networking standard allowing control applications to make use of Ethernet communications components and physical media.

EtherNet/IP Interface is based on the IEEE 802.3 Ethernet standard, the TCP/IP protocol suite, and CIP™ (Common Industrial Protocol), the real-time I/O and information protocol used by both DeviceNet™ and ControlNet™ networks.

The EtherNet/IP Interface returns weight and status information from an indicator to the network and provides limited control of indicator functions to the programmer. Indicator configuration and calibration cannot be performed through the EtherNet/IP Interface.

# 2.0 Installation

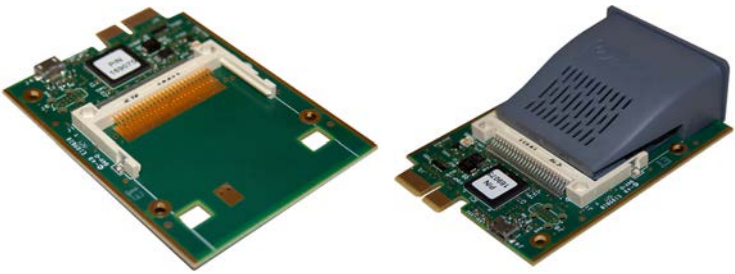
EtherNet/IP Interface specific functions are provided by an Etheret/IP module.

The module plugs into an open slot on the CPU board and provides power and access from the indicator bus to the module.

**IMPORTANT** ***See the indicator Technical Manual for installation instructions.***

The interface option cards of the 1280 Enterprise Series and 880 universal and panel mount indicators share the same carrier board (PN 164756). The carrier board plugs into an open slot on the CPU board and provides power and access from the indicator bus to the module.
The assembly steps of the carrier board and modules vary between the 1280, 880 universal mount, and 880 panel mount.

- 1280 interface option card kits are shipped with the module and the carrier board already assembled
- 880 interface option card kits are shipped with the module and carrier board separated
  - 880 universal mount module can be assembled to the carrier board before installing
  - 880 panel mount carrier board must be installed before assembling the module to the carrier board



**Carrier Board** **Carrier Board with Module**

*Figure 2-1. Interface Option Card Kit*

The indicator automatically recognizes all installed option cards when the unit is powered on. No hardware-specific configuration is required to identify an installed card to the system.

**WARNING** ***Always disconnect the power before opening an enclosure.***
***Interface option cards are not hot swappable.***

**CAUTION** ***A grounding wrist strap must be worn to protect components from electrostatic discharge (ESD) when working inside an enclosure or controller assembly.***

## 1280 Installation Instructions

1. Disconnect power to the indicator.
2. See the 1280 technical manual (PN 167659) to gain access to the Controller Assembly box for the specific model.
3. Remove the screw securing the intended slot cover plate of the Controller Assembly box, set the slot cover plate aside and save the screw.
4. Mount the faceplate on module and slide module board assembly into place within the slot.
5. Secure the faceplate and module board assembly into place with the previously removed screw.

Note

***Interface cable is routed through a cord grip in Universal and Wall mount enclosures.***

***Alternately, a chassis mounted connect can be installed in the enclosure.***

6. See 1280 technical manual to reinstall the Controller Assembly box.

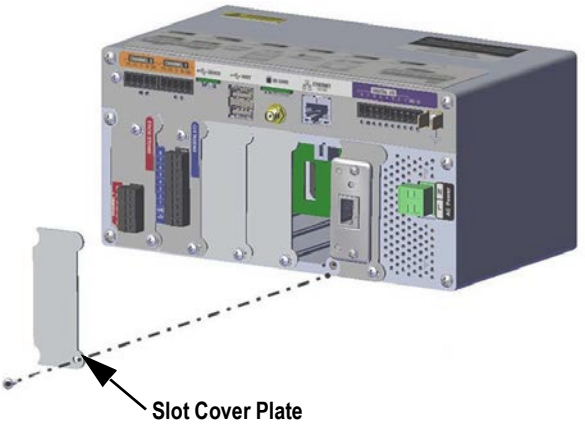



*Figure 2-2. Existing Cover Plate Removal*

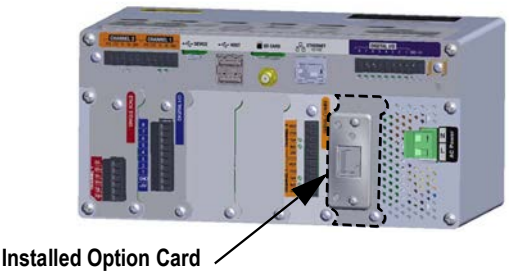



*Figure 2-3. Installed Interface Option Card*

## 880 Universal Installation Instructions

1. Disconnect power to the indicator.
2. Remove the backplate of the universal enclosure to access the CPU board.
3. Carefully slide the module into the J1 connector on the carrier board, ensuring that the pins of J1 are not bent.
4. Ensure that the module is fully seated in the carrier board with the board hooks on the bottom of the module aligned with the carrier board.
5. Tighten module screws on the front of the module to lock the board clamps of the module to the carrier board.

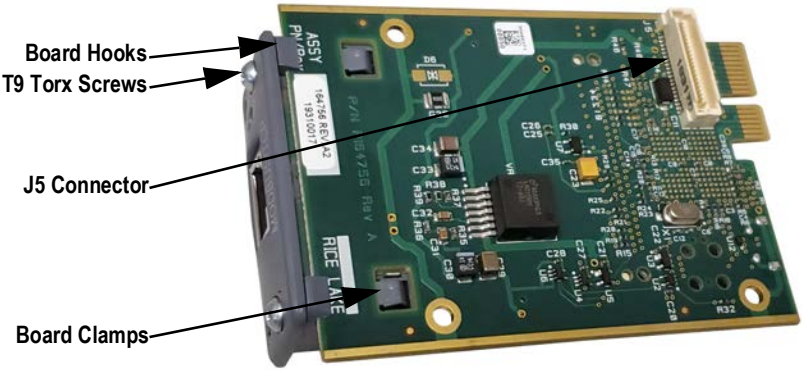



*Figure 2-4. Bottom of Carrier Card with Module Installed*

Note

***Screws are tightened with a T9 Torx bit.***

***If the module is not fully seated on the carrier board, the clamps will push the module away from the board rather than securing the board to the module. This can potentially cause damage to the connector.***

6. Carefully align the J5 connector on the bottom of the carrier board with the J8 option card slot on the CPU board.
7. Press down on the carrier board with module until it is seated on the CPU board connector.
8. Use the screws provided in the option kit to secure the carrier board to the threaded standoffs on the CPU board (faceplate not needed).
9. Connect and properly run necessary cable.
10. Reinstall the enclosure backplate.

## 880 Panel Mount Installation Instructions

1. Disconnect power to the indicator and then disconnect the display cable.
2. Remove the backplate of the panel mount enclosure to access the CPU board.
3. Carefully align the J5 connector on the bottom of the carrier board (module currently not attached) with J8 option card slot on the CPU board.
4. Press down on the carrier board until it is seated on the CPU board connector.
5. Use the screws provided in the option kit to secure the carrier board and faceplate to the threaded standoffs on the CPU board.
6. Carefully slide the module through the faceplate to the J1 connector on the carrier board, ensuring that the pins of J1 are not bent.
7. Ensure that the module is fully seated in the carrier board with the board hooks on the bottom of the module aligned with the carrier board.
8. Tighten T9 Torx screws on the front of the module to lock the board clamps of the module to the carrier board.

Note

***Screws are tightened with a T9 Torx bit.***

***If the module is not fully seated on the carrier board, the clamps will push the module away from the board rather than securing the board to the module.***

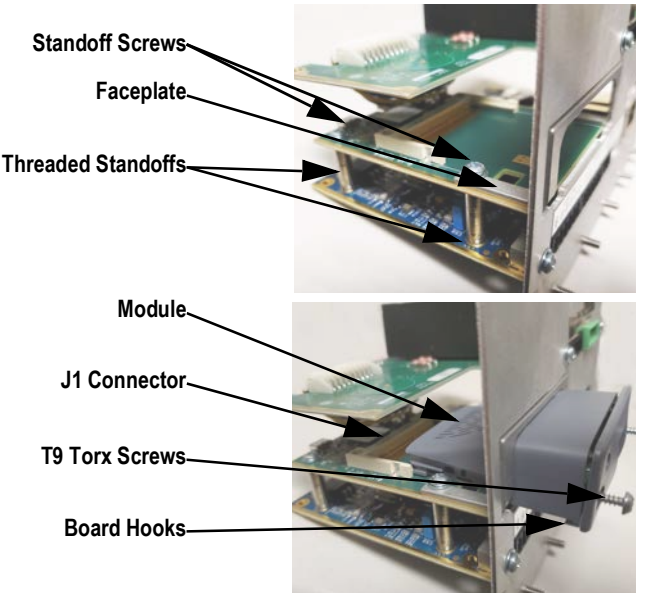



*Figure 2-5. 880 Panel Mount Interface Option Card Installation*

9. Reinstall the enclosure backplate and then reconnect the display cable.

## 2.1 LED Status Indicators

An LED array on the EtherNet/IP module provides status information for troubleshooting.


*Figure 2-6. EtherNet/IP Module*

**Note** ***A test sequence is performed on LED (item 1 and 2 below) during startup.***

### Network Status LED (Item 1)

| LED State | Description |
|---|---|
| Off | No power or no IP address |
| Green | Module is in Process Active or Idle state |
| Green, Flashing | Waiting for connections |
| Red | Duplicate IP address, FATAL event |
| Red, Flashing | Process Active Timeout |

*Table 2-1. Network Status LED*

### Module Status LED (Item 2)

| LED State | Description |
|---|---|
| Off | No power |
| Green | Normal operation |
| Green, Flashing | Not configured or Scanner in idle status |
| Red | Major fault; Module is in state EXCEPTION (or FATAL event) |
| Red, Flashing | Minor fault in diagnostic object; IP conflict |

*Table 2-2. Module Status LED*

### Link/Activity LED (Item 3)

| LED State | Description |
|---|---|
| Off | No link, no activity |
| Green | Link established |
| Green, Flickering | Activity |

*Table 2-3. Link/Activity LED*

### RJ45 Port (Item 4)

The EtherNet/IP interface supports 10/100Mbit, full or half duplex operation.

# 3.0 Configuring the Network Settings

Configuring the network setting is done using a web browser or Anybus IP configuration utility.

To set the network settings using a web browser.

1. Open a browser and type the IP address of the card.
2. Change any or all settings.
3. Click on **Store settings**.

To set the network settings using the Anybus IP Configuration program.

1. Open the configuration program found on the CD.
2. Click on **Scan** button if the device does not display in the menu.
3. Double click on the device. A menu is displayed with the current network settings.
4. Change any or all settings.
5. Click on the **Set** button.

The following are examples only, actual displays will vary:

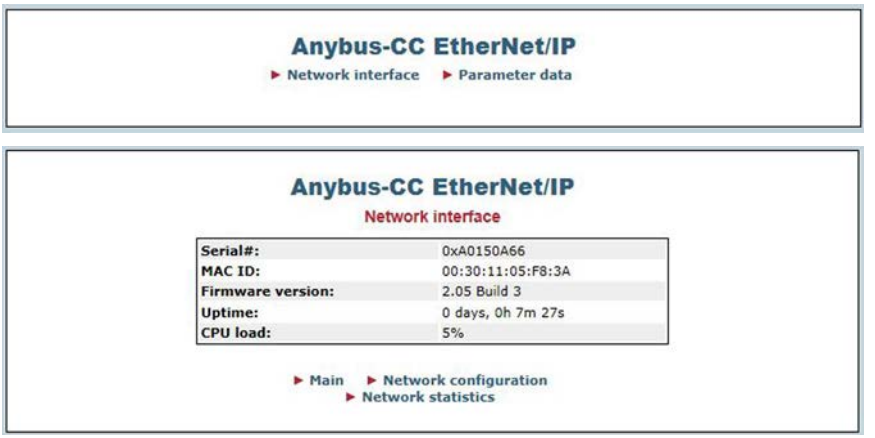



*Figure 3-1. EtherNet/IP Interface Display in a Web Browser*

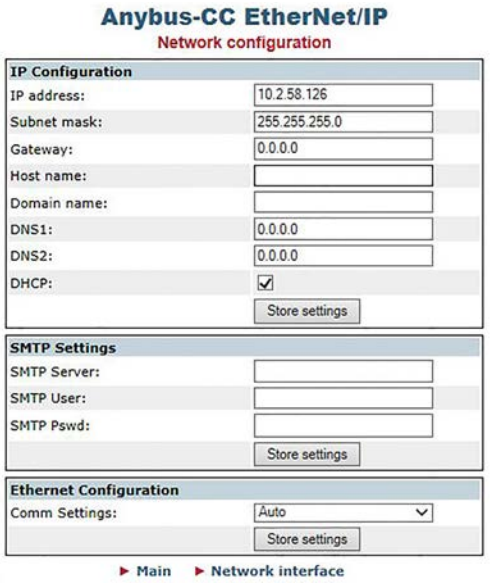



*Figure 3-2. EtherNet/IP Configuration in a Web Browser*

**IMPORTANT** ***The DHCP is set to on in the factory and there is not a default IP address.***

## 3.1 Configuring a Generic EtherNet/IP Module

See Figure 3-3 to configure a generic EtherNet/IP module in a CompactLogix or ControlLogix PLC.

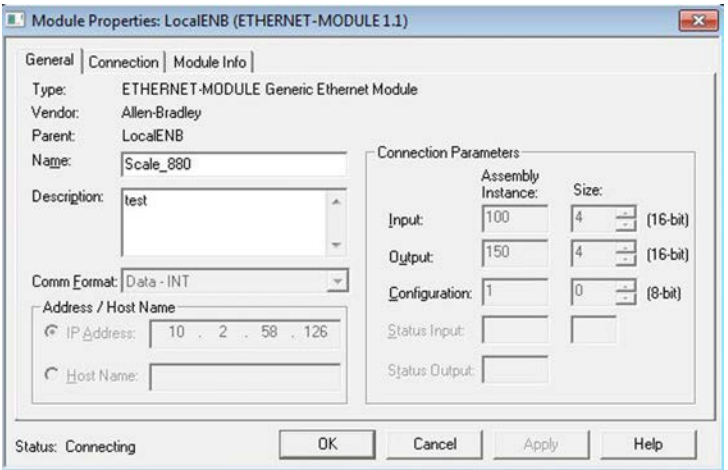



*Figure 3-3. Generic EtherNet/IP Module Screen*

## 3.2 Sample for BYTE Swapping in a PLC

See Figure 3-4 for an example of BYTE Swapping in a PLC when setting or reading a floating point value.

Use the following rungs when sending or reading floating point data:


*Figure 3-4. Ladder Logic for EtherNet/IP Page 1*

## 3.3 Sample BYTE Swapping

See Figure 3-5 for an example of BYTE Swapping for all other commands.

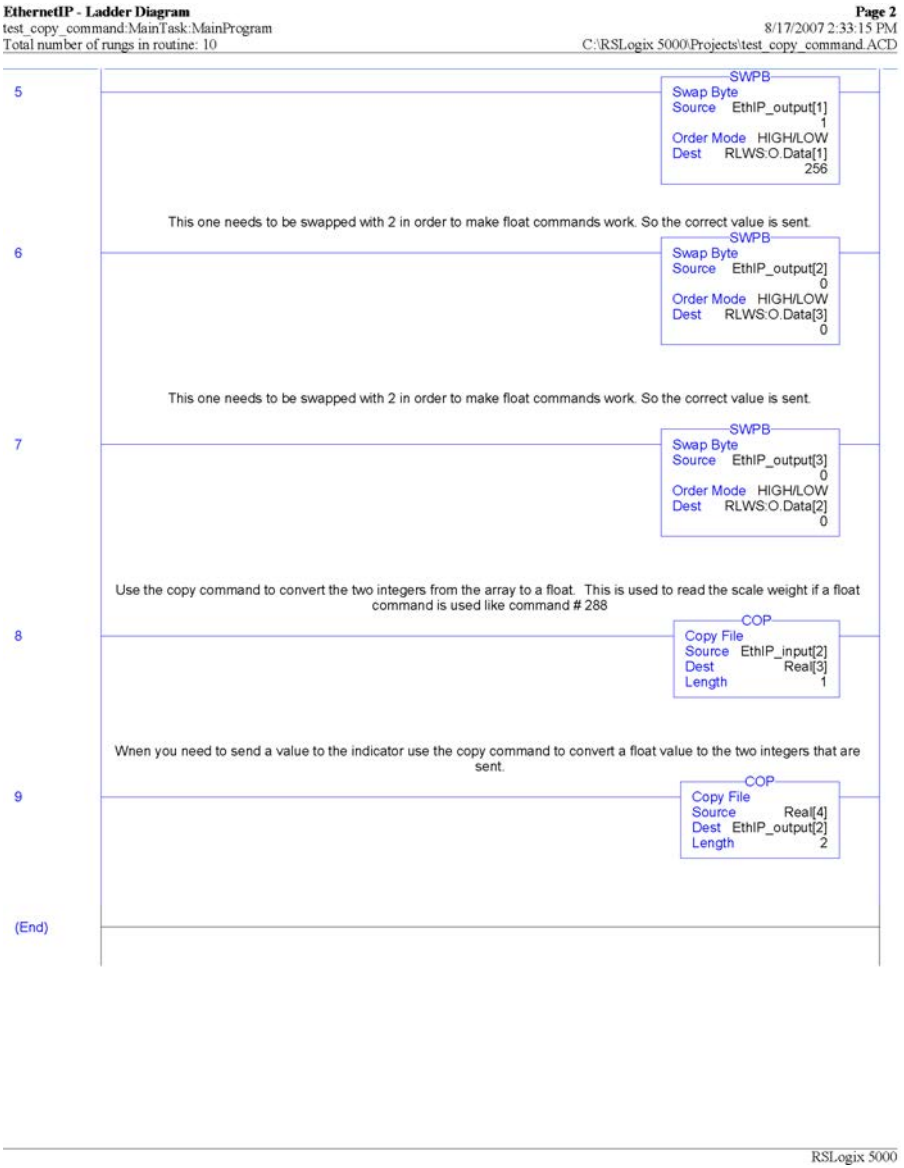



*Figure 3-5. Ladder Logic for EtherNet/IP Page 2*

# 4.0 Commands

Commands are used by the primary device to send and receive data from the interface as integer or floating-point data. The primary sends eight bytes in the output format to write commands to the indicator and reads eight bytes in the input format to read data from the indicator.

### Decimal Point Handling

Integer commands return no decimal point information to the primary.

For example, a value of 750.1 displayed on the indicator is returned to the primary as 7501.

Floating point commands support decimal point information with no special handling.

## 4.1 Output Data Format

To perform a command, the primary uses the output command format to send four 16-bit words to the interface. These four words contain the command and the necessary parameters to execute it. The output command format is shown in Table 4-1.

| Word | Description |
|---|---|
| Word 1 | Command Number |
| Word 2 | Parameter |
| Word 3 | Value (MSW) |
| Word 4 | Value (LSW) |

*Table 4-1. 880 Output Data Format*

| Byte | Description |
|---|---|
| Byte 0 | Command Number |
| Byte 1 | |
| Byte 2 | Parameter |
| Byte 3 | |
| Byte 4 | Value (MSW) |
| Byte 5 | |
| Byte 6 | Value (LSW) |
| Byte 7 | |

*Table 4-2. 1280 Output Data Format*


***See Section 4.1.1 on page 14 for BYTE swapping parameters.***
***A lockout feature, incorporated into the indicator receive mechanism, looks for change in the output format data to prevent inundation by the same command. See affected commands noted in Table 4-3 on page 12 with an (*).***
***Repeated commands must be separated by any other valid command/parameter/value combination.***

## Parameter Value

In communication with a multi-scale indicator, the scale number is sent in the second word of the output command format. Zero (0) represents the current scale. Certain commands require a parameter other than a scale number, such as a slot number, setpoint number, or other selection parameter. See the command descriptions for specific command requirements.

## Value

The third and fourth words of the output format are used to pass value data on certain commands. Values entered in these words are treated as unsigned long integers or floating-point values, depending on the command.

## Command Number

The number representing the indicator command is sent in the first word. Table 4-3 lists the commands that can be specified for indicators.

Some commands may not be available on all indicators.

| Decimal | Hex | Command |
|---|---|---|
| 0 | 0x000 | Return Status and Weight (integer) |
| 1 | 0x001 | Display Channel |
| 2 | 0x002 | Display Gross Weight |
| 3 | 0x003 | Display Net Weight |
| 9 | 0x009 | Gross/Net key press (toggle) |
| 10 | 0x00A | Zero* |
| 11 | 0x00B | Display Tare* |
| 12 | 0x00C | Enter Tare* |
| 13 | 0x00D | Acquire Tare* |
| 14 | 0x00E | Clear Tare* |
| 16 | 0x010 | Primary Units |
| 17 | 0x011 | Secondary Units |
| 18 | 0x012 | Tertiary Units |
| 19 | 0x013 | Units key press (toggle units) |
| 20 | 0x014 | Print Request |
| 21 | 0x015 | Display Accumulator |
| 22 | 0x016 | Clear Accumulator |
| 23 | 0x017 | Push Weight to Accumulator |
| 32 | 0x020 | Return Gross (integer) |
| 33 | 0x021 | Return Net (integer) |
| 34 | 0x022 | Return Tare (integer) |
| 37 | 0x025 | Return Current Display (integer) |

*Table 4-3. Remote Commands*

| Decimal | Hex | Command |
|---|---|---|
| 38 | 0x026 | Return Accumulator (integer) |
| 39 | 0x027 | Return Rate of Change (integer) *1280* only |
| 95 | 0x05F | Set Batching State |
| 96 | 0x060 | Batch Start |
| 97 | 0x061 | Batch Pause |
| 98 | 0x062 | Batch Reset |
| 99 | 0x063 | Batch Status |
| 112 | 0x070 | Lock Indicator Front Panel |
| 113 | 0x071 | Unlock Indicator Front Panel |
| 114 | 0x072 | Set Digital Output ON |
| 115 | 0x073 | Set Digital Output OFF |
| 116 | 0x074 | Read Digital I/O Status |
| 128 | 0x80 | Enable Bus Command Handler |
| 253 | 0x0FD | No operation |
| 254 | 0x0FE | Reset Indicator |
| 256 | 0x100 | Return Status and Weight (float) |
| 268 | 0x10C | Enter Tare (float) |
| 288 | 0x120 | Read Gross (float) |
| 289 | 0x121 | Read Net (float) |
| 290 | 0x122 | Read Tare (float) |
| 293 | 0x125 | Read Current Display (float) |
| 294 | 0x126 | Read Accumulator (float) |
| 295 | 0x127 | Read Rate of change (float) *1280* only |
| 304 | 0x130 | Set Setpoint Value (float) |
| 305 | 0x131 | Set Setpoint Hysteresis (float) |
| 306 | 0x132 | Set Setpoint Bandwidth (float) |
| 307 | 0x133 | Set Setpoint Preact (float) |
| 320 | 0x140 | Read Setpoint Value (float) |
| 321 | 0x141 | Read Setpoint Hysteresis (float) |
| 322 | 0x142 | Read Setpoint Bandwidth (float) |
| 323 | 0x143 | Read Setpoint Preact (float) |

*Table 4-3. Remote Commands (Continued)*

### 4.1.1 BYTE Swapping

**Note** ***See the Ports Menu in the indicator manual.***

The indicator sends and receives data in integer format.

The standard format is as follows for all input and output values:

High BYTE – Low BYTE

If the indicator FLDBUS/SWAP parameter is set to YES, then the BYTE order changes to:

Low BYTE – High BYTE

*Example: If the weight on the scale reads 10 lbs and a value of 2560 is displayed in the PLC, either swap the BYTES in the PLC or change the SWAP parameter to YES.*

## 4.2 Input Data Format

In response to a command, the interface returns data and status information to the primary as four 16-bit words. This information is returned in the input command format shown in Table 4-4.

The value type can be set for those commands that do not specify integer or floating point data by sending a command 0x000 to specify integer data or command 0x100 for floating-point data. The value type is returned in the status word (bit 14) of the input format.

| Word | Description |
|---|---|
| Word 1 | Command Number |
| Word 2 | Status |
| Word 3 | Value (MSW) |
| Word 4 | Value (LSW) |

*Table 4-4. 880 Input Data Format*

| Byte | Description |
|---|---|
| Byte 0 | Command Number |
| Byte 1 | |
| Byte 2 | Status |
| Byte 3 | |
| Byte 4 | Value (MSW) |
| Byte 5 | |
| Byte 6 | Value (LSW) |
| Byte 7 | |

*Table 4-5. 1280 Input Data Format*

**Note** ***See Section 4.1.1 for BYTE swapping parameters.***

### 4.2.1 Command number

The first word echoes the command number. If the command fails or is not recognized, the negative of the command number is returned to signal the error.

### 4.2.2 Status Data

Indicator status data is returned in the second word (Table 4-6). Batch commands return batch status in place of the low byte (Table 4-7 on page 16). Setpoint commands return batch status in the low byte of the status word and the setpoint number in the high byte.

| Word 2 Bit | Indicator Status Data | |
|---|---|---|
| | Value=0 | Value=1 |
| 00 | Error ** (Bit-0 Errors on page 16) | No error |
| 01 | Tare not entered | Tare entered |
| 02 | Not center of zero | Center of zero |
| 03 | Weight invalid | Weight OK |
| 04 | Standstill | In motion |
| 05 | Primary units | Other units |
| 06 | Tare not acquired | Tare acquired |
| 07 | Gross weight | Net weight |
| 08 | Channel number<br>***NOTE: Least significant bit first.*** | |
| 09 | | |
| 10 | | |
| 11 | | |
| 12 | | |
| 13 | Not used | |
| 14 | Integer data | Floating point data |
| 15 | Positive weight | Negative weight |
| This error condition does not necessarily mean the weight being reported is invalid. Refer to the “Weight invalid” bit. | | |

*Table 4-6. Indicator Status Data Format*

## Bit-0 Errors

- PLC command failed to execute
- No configuration has taken place
- Scale parameter is out of range
- Print error has occurred
- Load error has occurred
- Memory error has occurred
- Analog to digital converter error
- Tare error
- Scale over range error
- Scale under range error
- Non-recoverable configuration store error
- Indicator in configuration mode

| Word 2 Bit | Batch Function Status Data | |
|---|---|---|
| | Value=0 | Value=1 |
| 00 | Digital input 4 OFF | Digital input 4 ON |
| 01 | Digital input 3 OFF | Digital input 3 ON |
| 02 | Digital input 2 OFF | Digital input 2 ON |
| 03 | Digital input 1 OFF | Digital input 1 ON |
| 04 | Batch not paused | Batch paused |
| 05 | Batch not running | Batch running |
| 06 | Batch not stopped | Batch stopped |
| 07 | Alarm OFF | Alarm ON |
| 08 | Setpoint number | |
| 09 | | |
| 10 | | |
| 11 | | |
| 12 | | |
| 13 | Not used | |
| 14 | Integer data | Floating point data |
| 15 | Positive weight | Negative weight |

*Table 4-7. Batch Function Status Data Format*

### 4.2.3 Value

Weight data is returned to the primary in the third and fourth words of the input command format, depending on the command and the value type. The weight data returned is the displayed weight after the command is executed, unless the command specifies otherwise. A negative value is returned in the two's compliment format.

### 4.2.4 Setting a Float Value

Setting a float value in a setpoint requires the value to be sent in two separate integer values. Most PLCs have a mechanism to take a float value and separate it into to integer values.

*Example: The following must be sent in the output words to set the value of Setpoint #1 to 10000.*

Command word = 304

Parameter word = 1

MSW = 17948

LSW = 16384

### 4.2.5 Reading a Float Value

When a float value is read it will be returned in two integers representing the float value. The PLC must combine MSW and LSW integer values back into a float value.

*Example: The following is returned in the input words if the weight on the scale is 800.5.*

Command Word = 288

Status word = Scale status

MSW= 17480

LSW = 8192

## 4.3 Command Descriptions

### Return Status and Current Weight as Integer

Command: 0, 0x000

Parameter: Scale number

Command 0 returns the status and gross or net scale weight (per scale configuration) of the specified scale in integer format, without changing the display. This command also causes the format-independent commands to return a value in the integer format.

### Display Channel

Command: 1, 0x001

Parameter: Scale number

Command 1 causes the weight of the specified scale to be displayed and returned in its current mode and format.

## Display Gross Weight

Command: 2, 0x002

Parameter: Scale number

Command 2 causes the gross weight of the specified scale to be displayed and returned.

## Display Net Weight

Command: 3, 0x003

Parameter: Scale number

Command 3 causes the net weight of the specified scale to be displayed and returned.

## Gross/Net Key Press (Toggle Mode)

Command: 9, 0x009

Parameter: Scale number

Command 9 toggles between gross and net mode (and count mode, if enabled).
If a scale number other than 0 is specified, the action will not be seen until the specified scale is displayed.

## Zero

Command: 10, 0x00A

Command 10 performs a **ZERO** operation on the current scale.

## Display Tare

Command: 11, 0x00B

Parameter: Scale number

Command 11 causes the tare weight on the specified scale to be displayed.
If a scale number other than 0 is specified, the indicator first causes the specified scale to be displayed. Display returns to the prior mode after checking the indicator.

## Enter Tare (Integer)

Command: 12, 0x00C

Parameter: Scale number

Value: Tare weight

Command 12 enters a tare for the scale selected. Tare data must be in integer format. The indicator continues to return weight data in the current mode for the specified scale.

## Acquire Tare (Simulate TARE Key Press)

Command: 13, 0x00D

Parameter: Scale number

Command 13 acquires a tare based on the weight currently on the specified scale. The indicator continues to return weight data in the current mode for the specified scale.

## Clear Tare

Command: 14, 0x00E

Parameter: Scale number

Command 14 clears the tare for the specified scale. The indicator continues to return weight data in the current mode for the specified scale.

## Primary Units

Command: 16, 0x010

Parameter: Scale number

Command 16 switches the current format of the specified scale to the primary units configured for that scale.

## Secondary Units

Command: 17, 0x011

Parameter: Scale number

Command 17 switches the current format of the specified scale to the secondary units configured for that scale.

## Tertiary Units

Command: 18, 0x012

Parameter: Scale number

Command 18 switches the current format of the specified scale to the tertiary units configured for that scale, if available.

## Units Key Press (Toggle Units)

Command: 19, 0x013

Parameter: Scale number

Command 19 toggles between primary and secondary units of the specified scale.

## Print Request

Command: 20, 0x014

Parameter: Scale number

Command 20 causes the indicator to execute a print command for the current scale.

## Display Accumulator

Command: 21, 0x015

Parameter: Scale number

Command 21 causes the value of the accumulator for the specified scale to be displayed and returned. This command is valid only when the accumulator for the specified scale is enabled.

## Clear Accumulator

Command: 22, 0x016

Parameter: Scale number

Command 22 clears the value of the accumulator for the specified scale.
This command is valid only when the accumulator for the specified scale is enabled.

## Push Weight to Accumulator

Command: 23, 0x017

Parameter: Scale number

Command 23 adds the net weight on the specified scale to the value of the accumulator for the specified scale. The scale must return to net zero between accumulations. The indicator returns the accumulated weight data for the specified scale. This command is valid only when the accumulator for the specified scale is enabled.

## Return Gross as Integer

Command: 32, 0x020

Parameter: Scale number

Command 32 returns the gross weight value for the specified scale as an integer.

## Return Net as Integer

Command: 33, 0x021

Parameter: Scale number

Command 33 returns the net weight value for the specified scale as an integer.

## Return Tare as Integer

Command: 34, 0x022

Parameter: Scale number

Command 34 returns the tare weight value for the specified scale as an integer.

## Return Current Display as Integer

Command: 37, 0x025

Parameter: Scale number

Command 37 returns the weight value for the specified scale as currently displayed. This may include gross, net, tare, or accumulator values, as enabled.

## Return Accumulator as Integer

Command: 38, 0x026

Parameter: Scale number

Command 38 returns the accumulator value for the specified scale.
This command is valid only when the accumulator for the specified scale is enabled.

## Return Rate of Change as Integer

Command: 39, 0x027

Parameter: Scale number

Command 39 returns the current rate of change value for the specified scale.

This command is valid only for the 1280.

## Set Batching State

Command: 95, 0x05F

Parameter: State (0 = off; 1 = auto; 2 = manual)

Command 95 sets the batching (BATCHNG) parameter.
Indicator status is returned with the current weight for the last scale specified.

## Batch Start

Command: 96, 0x060

Parameter: Scale number

Command 96 starts a batch program from the current step after a stop, pause, or reset. Batch status is returned with the current weight for the specified scale.

## Batch Pause

Command: 97, 0x061

Parameter: Scale number

Command 97 pauses a batch program at the current step.
Batch status is returned with the current weight for the specified scale.

## Batch Reset

Command: 98, 0x062

Parameter: Scale number

Command 98 stops a batch program and resets it to the first batch step.
Batch status is returned with the current weight for the specified scale.

## Batch Status

Command: 99, 0x063

Parameter: Scale number

Command 99 returns the status of a batch. Batch status is returned with the current weight for the specified scale.

## Lock Front Panel of Indicator

Command: 112, 0x070

Parameter: Scale number

Command 112 disables all the keys on the front panel of the indicator.
Indicator status is returned with the current weight for the specified scale.

## Unlock Front Panel of Indicator

Command: 113, 0x071

Parameter: Scale number

Command 113 re-enables all the keys on the front panel of the indicator.
Indicator status is returned with the current weight for the specified scale.

## Set Digital Output ON

Command: 114, 0x072

Parameter: Slot number

Value: Bit number

Command 114 sets the specified digital output ON (active). Use slot number 0 for onboard digital outputs. Indicator status is returned with the current weight for the last scale specified.

## Set Digital Output OFF

Command: 115, 0x073

Parameter: Slot number

Value: Bit number

Command 115 sets the specified digital output OFF (inactive). Use slot number 0 for onboard digital outputs. Indicator status is returned with the current weight for the last scale specified.

## Read Digital I/O

Command: 116, 0x074

Parameter: Slot number

Command 116 returns the status for all digital I/O in the specified slot in words 3 and 4. Use slot number 0 for onboard digital I/O. Indicator status is returned in the status area for the last scale specified.

## Enable Bus Command Handler

Command: 128, 0x80

Parameter: None

Command 128 enables the bus command handler in a user program.
While this handler is enabled, all other PLC commands are disabled.

## No Operation

Command: 253, 0x0FD

Parameter: Scale number

Command 253 provides a command to use between operations, as necessary, without causing the indicator to perform any action. Indicator status and weight for the specified scale is returned.

## Reset Indicator

Command: 254, 0x0FE

Parameter: None

Command 254 provides a command to remotely reset the indicator.
No data is returned.

## Return Status and Current Weight as Float

Command: 256, 0x100

Parameter: Scale number

Command 256 returns the status and weight of the specified scale in floating-point format, without changing the display. This command also causes the format-independent commands to return a value in the floating-point format.
Returns current weight at a floating-point format.

## Enter Tare as Float

Command: 268, 0x10C

Parameter: Scale number

Value: Tare weight

Command 268 enters a tare for the scale selected in floating-point format.
The indicator returns the tare weight as taken, or 0 for no tare.

## Read Gross Weight as Float

Command: 288, 0x120

Parameter: Scale number

Command 288 returns the gross weight value for the specified scale in floating-point format.

## Read Net Weight as Float

Command: 289, 0x121

Parameter: Scale number

Command 289 returns the net weight value for the specified scale in floating-point format.

## Read Tare as Float

Command: 290, 0x122

Parameter: Scale number

Command 290 returns the tare weight value for the specified scale in floating-point format.

## Read Current Display as Float

Command: 293, 0x125

Parameter: Scale number

Command 293 returns the weight value for the specified scale as currently displayed in floating-point format. This may include gross, net, tare, or accumulator values, as enabled. The weight value is returned in the mode used to display a scale widget.

## Read Accumulator as Float

Command: 294, 0x126

Parameter: Scale number

Command 294 returns the accumulator value for the specified scale in floating-point format. Batch status is returned in place of the indicator status.

## Read Rate of Change as Float

Command: 295, 0x127

Parameter: Scale number

Command 295 returns the current rate of change value for the specified scale in floating-point format. This command is valid only for the 1280.

## Set Setpoint Value as Float

Command: 304, 0x130

Parameter: Setpoint number

Value: Setpoint value

Command 320 sets the setpoint value for the specified setpoint in floating-point format. This command is valid only when the setpoint is configured and requires a setpoint value. Batch status is returned in place of the indicator status.

## Set Setpoint Hysteresis as Float

Command: 305, 0x131

Parameter: Setpoint number

Value: Hysteresis value

Command 305 sets the hysteresis value for the specified setpoint in floating-point format. This command is valid only when the setpoint is configured and requires a hysteresis value. Batch status is returned in place of the indicator status.

## Set Setpoint Bandwidth as Float

Command: 306, 0x132

Parameter: Setpoint number

Value: Bandwidth value

Command 306 sets the bandwidth value for the specified setpoint in floating-point format. This command is valid only when the setpoint is configured and requires a bandwidth value. Batch status is returned in place of the indicator status.

## Set Setpoint Preact as Float

Command: 307, 0x133

Parameter: Setpoint number

Value: Preact value

Command 307 sets the preact value for the specified setpoint in floating-point format. This command is valid only when the setpoint is configured and requires a preact value. Batch status is returned in place of the indicator status.

## Read Setpoint Value as Float

Command: 320, 0x140

Parameter: Setpoint number

Command 320 returns the target value for the specified setpoint in floating-point format. This command is valid only when the setpoint is configured and requires a target value. Batch status is returned in place of the indicator status.

## Read Setpoint Hysteresis as Float

Command: 321, 0x141

Parameter: Setpoint number

Command 321 returns the hysteresis value for the specified setpoint in floating-point format. This command is valid only when the setpoint is configured and requires a hysteresis value. Batch status is returned in place of the indicator status.

## Read Setpoint Bandwidth as Float

Command: 322, 0x142

Parameter: Setpoint number

Command 322 returns the bandwidth value for the specified setpoint in floating-point format. This command is valid only when the setpoint is configured and requires a bandwidth value. Batch status is returned in place of the indicator status.

## Read Setpoint Preact as Float

Command: 323, 0x143

Parameter: Setpoint number

Command 323 returns the preact value for the specified setpoint in floating-point format. This command is valid only when the setpoint is configured and requires a preact value. Batch status is returned in place of the indicator status

# 5.0 Specifications

### Power Requirements

Bus Adapter Card with EtherNet/IP Module, DC Power

| | |
|---|---|
| Supply Voltage | 6 VDC |
| Typical Current Draw | 270 mA |
| Power Consumption | 1.62 W |
| Maximum Current Draw | 500 mA |
| Maximum Power | 3 W |

### Communications Specifications

EtherNet/IP Network Communications

Twisted-pair cabling at 10 or 100Mbps

### Environmental Specifications

| | |
|---|---|
| Temperature | -10°–40° C (14°–104° F) |

### Conformance

EtherNet/IP conformance tested

The EtherNet/IP Interface has been tested by ODVA's independent test lab and found to comply with the ODVA composite conformance test, revision 3.

CE

The EtherNet/IP Interface has been found in accordance with EMC directive 89/336/EEC for European standards EN 50081-2 and EN 61000-6-2.




230 W. Coleman St. • Rice Lake, WI 54868 • USA
U.S. 800-472-6703 • Canada/Mexico 800-321-6703 • International 715-234-9171 • Europe +31 (0)26 472 1319