EtherCAT® 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

Contents

1.0   Introduction

The EtherCAT Interface allows the indicator to communicate with an EtherCAT network.

This manual provides information on the installation and use of this product.

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

See the indicator installation 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.*

IMPORTANT	*The EtherCAT card should not be used to communicate between buildings. The Ethernet port is not suitable for connection to circuits used outside the building and is subject to lightning or power faults.*

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

The EtherCAT communication module provides instant EtherCAT conformance tested connectivity via the Anybus-CompactCom host interface. Any device supporting this standard can take advantage of the features provided by the module, allowing seamless network integration regardless of network type.

2.0   Installation

EtherCAT Interface specific functions are provided by an EtherCAT 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
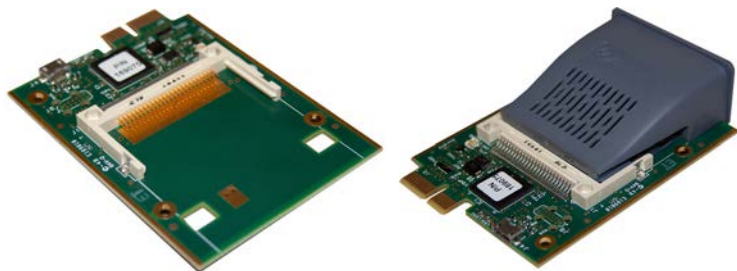
Carrier Board   **Carrier Board with Module**

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.*

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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.*

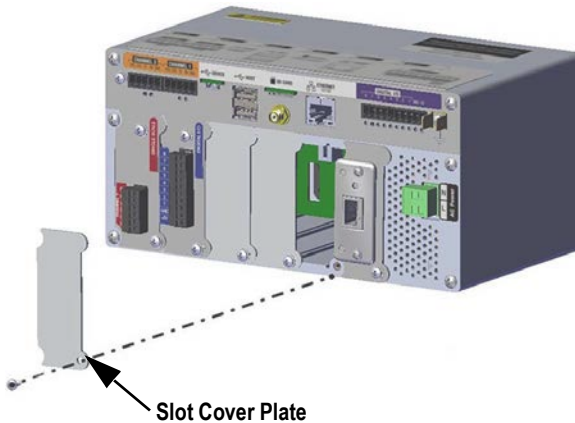6. See 1280 technical manual to reinstall the Controller Assembly box.

Slot Cover Plate

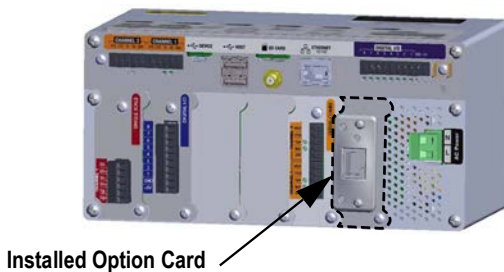*Figure 2-2. Existing Cover Plate Removal*

Installed Option Card

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.

Board Hooks
T9 Torx Screws

J5 Connector

Board Clamps

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.

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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.
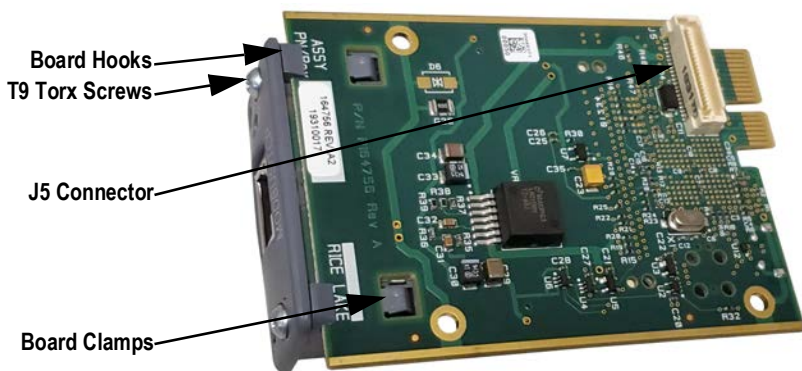
> **Note** *Screws are tightened with a T9 Torx bit.*
> *If the module is not fully seated on the carrier board, the clamps will push the module away from the board rather than securing the board to the module.*
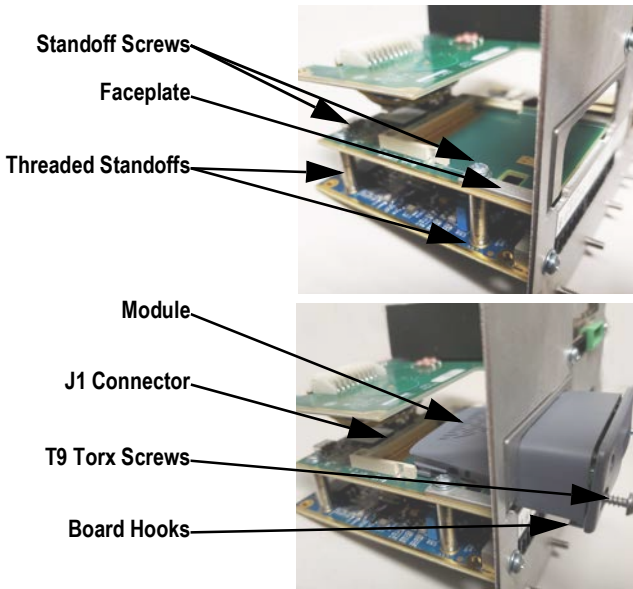
Figure 2-5. 880 Panel Mount Interface Option Card Installation

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

2.1   LED Status Indicators

An LED array on the EtherCAT Interface provides status information for troubleshooting.

Figure 2-6. EtherCAT 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
Green, Single Flash	Device in safe-operational state
Red	Fatal event

Table 2-1. Network Status LED

Module Status LED (Item 2)

LED State	Description
Off	No power
Red, Blinking	Invalid configuration
Red, Double Flash	Application watchdog timeout
Red	Application controller failure

Table 2-2. Module Status LED

Link/Activity LED (Item 3 and 4)

LED State	Description
Off	No link
Green	Link established, no activity
Green, Flickering	Link sensed, activity detected

Table 2-3. Link/Activity LED

RJ45 Ports (Item 5 and 6)

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

Item No.	Description
5	Port 1
6	Port 2

Table 2-4. EtherCAT Interface Ports

3.0 Configuring Network Settings

Download the TwinCAT System Manager software from **www.ricelake.com/**.

Open the software by selecting after download completes. The file name is *1280_880 ecat.tsm* and follow the TwinCAT System Manager prompts to configure the software.
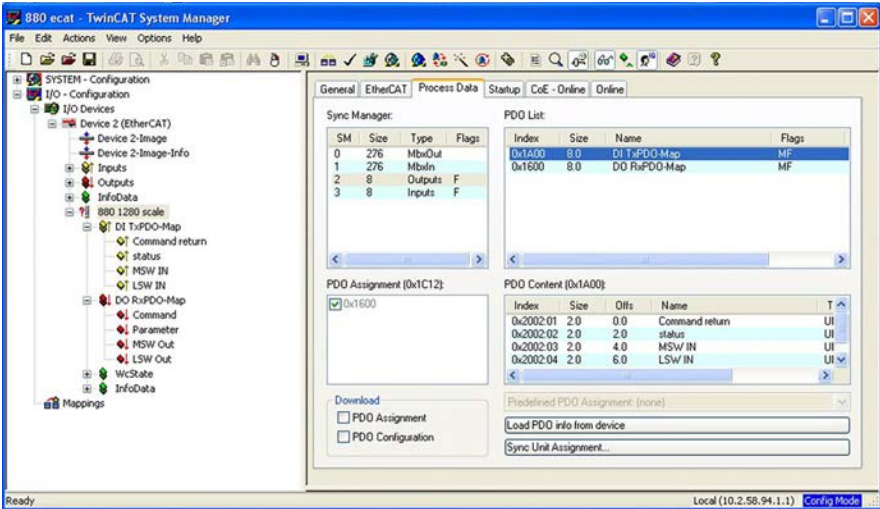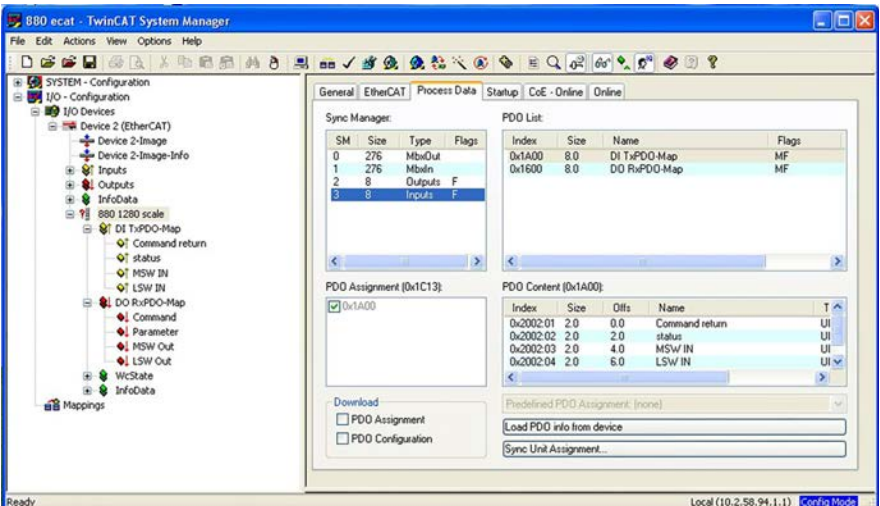

Figure 3-1. TwinCAT System Manager - PDO List

Figure 3-2. TwinCAT System Manager - Sync Manager

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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	Command Number
Byte 2	Parameter
Byte 3	Parameter
Byte 4	Value (MSW)
Byte 5	Value (MSW)
Byte 6	Value (LSW)
Byte 7	Value (LSW)

Table 4-2. 1280 Output Data Format

> **Note**
> *See Section 4.1.1 on page 12 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 10 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)

Table 4-3. Remote Commands

Decimal	Hex	Command
37	0x025	Return Current Display (integer)
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

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

The value type can be set for commands not specifying integer or floating point data by sending the command 0x000 to specify integer data, or sending command 0x100 to specify 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	Command Number
Byte 2	Status
Byte 3	Status
Byte 4	Value (MSW)
Byte 5	Value (MSW)
Byte 6	Value (LSW)
Byte 7	Value (LSW)

Table 4-5. 1280 Input Data Format

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

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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 14). 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 14)	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 **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

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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 EtherCAT 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

EtherCAT Network Communications

Twisted-pair cabling at 10 or 100Mbps

Environmental Specifications

Temperature	-10°–40° C (14°–104° F)

Conformance

CE

RICE LAKE
WEIGHING SYSTEMS

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W E I G H I N G   S Y S T E M S