

## SE-330 SERIES (NEW REVISION) ETHERNET/IP INTERFACE

Revision 3-E-121117



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## DISCLAIMER

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## 1. GENERAL

This document describes the EtherNet/IP features supported by the new revision SE-330, SE-330AU, and SE-330HV. Unless otherwise indicated, “SE-330” refers to all three monitor series in general. The SE-330 supports Explicit and Polled I/O messaging as defined by the ODVA EtherNet/IP Specification.

SE-330 ordering options 3, 4, and 5 include dual Ethernet ports with support for fiber-optic or RJ45 interfaces. See Figs. 1, 2, and 3.

There are some operational differences between the original SE-330 EtherNet/IP interface and the SE-330 EtherNet/IP (new revision). The operational differences are as follows:

- The device IP address is now set using SE-MON330
- Only one Input and one Output assembly is supported
- Assembly Class 4, Instance 101 and 102 is no longer supported
- Assembly Class 4, Instance 150 (Output) is identical except the “Clear Event Records” bit has been removed

## 2. SE-330 ETHERNET/IP INTERFACE

### 2.1 SE-330 NETWORK SETTINGS

The IP address, subnet mask, and gateway are configured using SE-MON330.

**NOTE:** EtherNet/IP is currently supported only on Port 1. The second port is available for using Modbus/TCP. Ensure that each port is configured with a unique IP address even if not used.

### 2.2 RSLOGIX5000 SETUP

Add a Generic EtherNet/IP Module as a New Module to the PLC. The Comm Format for the SE-330 is DATA-INT. The Input Assembly is instance 100 with a size of 6, the Output Assembly is instance 150 with a size of 1, and the Configuration Assembly is instance 1 with a size of 0.

### 2.3 LED INDICATION

Two LED’s on the top panel of the SE-330 indicate the network status of each port. The NS LED is OFF when EtherNet/IP is initializing. The NS LED flashes green after EtherNet/IP is initialized and is steady green when a connection is established. The NS LED flashes red when an I/O connection has timed out.

**NOTE:** On loss of an I/O connection, the NS LED remains flashing red until a new connection is established.

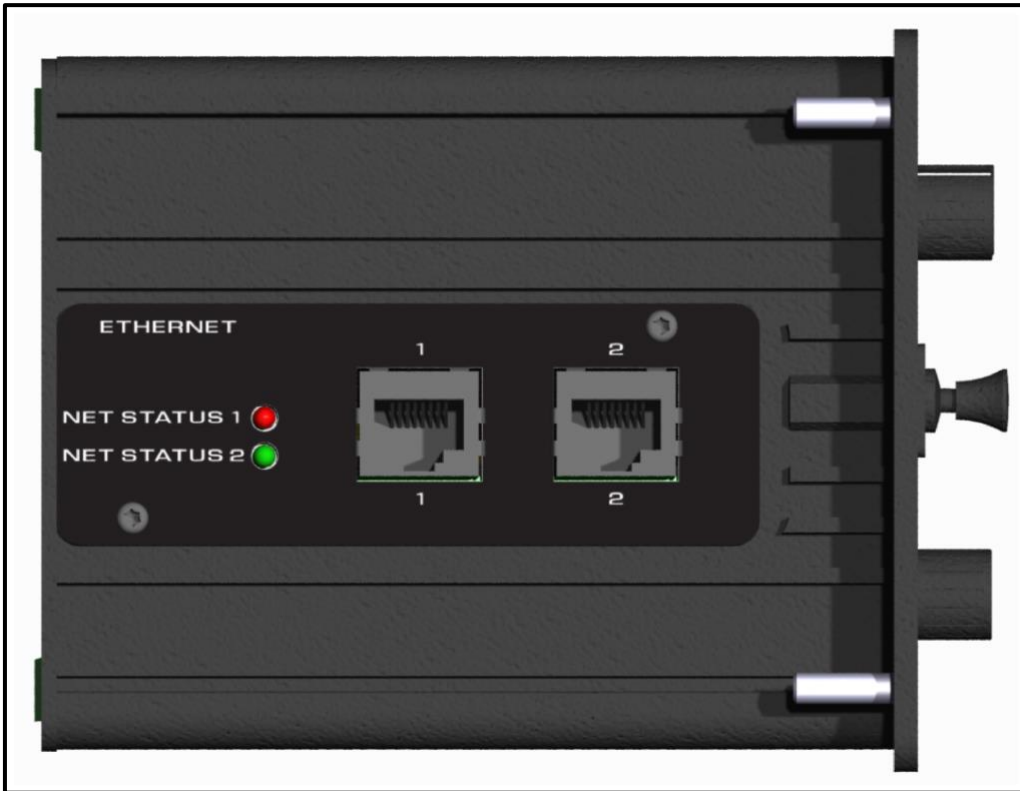


FIGURE 1. Top View of SE-330 (SE-330-X3-XX) with Dual RJ-45 Ethernet Network Communications.



FIGURE 2. Top View of SE-330 (SE-330-X4-XX) with Single Fiber SC and Single RJ-45 Ethernet Network Communications.

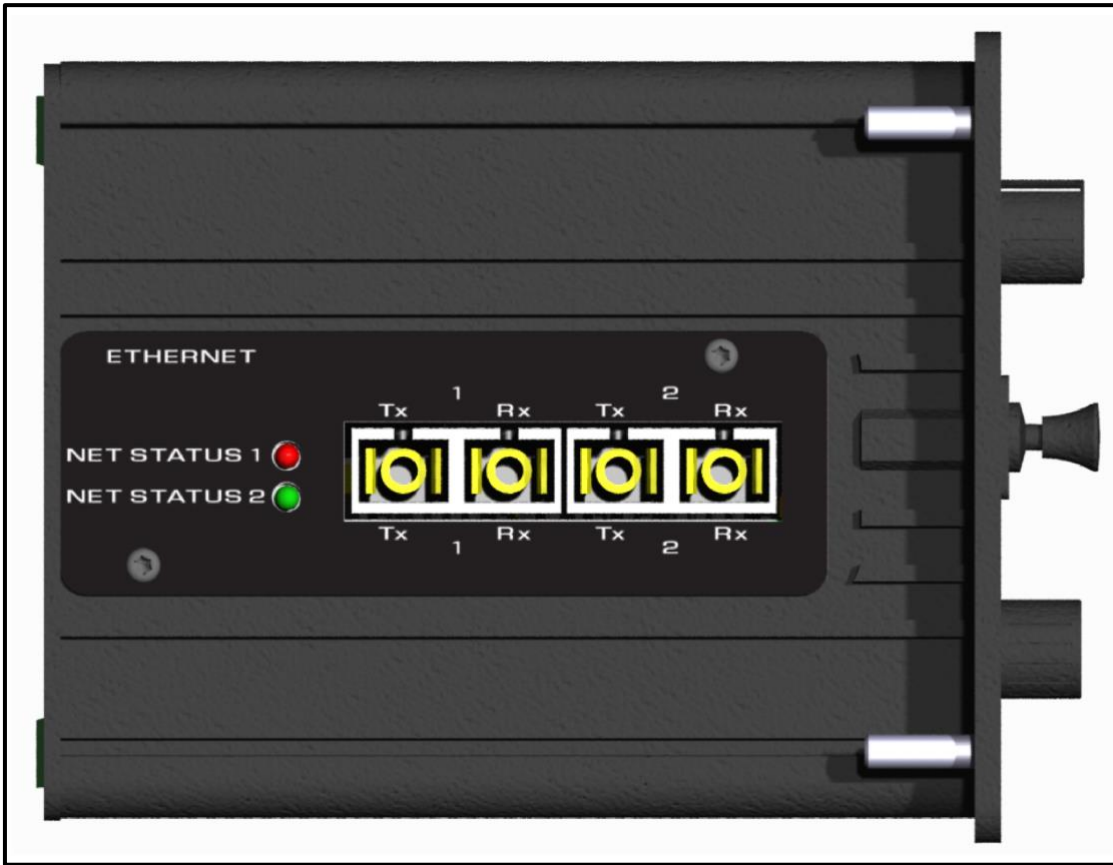


FIGURE 3. Top View of SE-330 (SE-330-X5-XX) with Dual Fiber SC Ethernet Network Communications.

### 3. ETHERNET/IP OBJECTS

The module supports the following objects:

TABLE 1. ETHERNET/IP OBJECTS

CLASS	DESCRIPTION
0x01	Identity
0x04	Assembly

#### 3.1 IDENTITY OBJECT

##### Identity Object Class Services

Get\_Attribute\_Single: Returns contents of specified attribute.

##### Identity Class 1, Instance 0 Attributes

ATTRIBUTE NUMBER	ATTRIBUTE NAME	SERVICES	DESCRIPTION	DEFAULT, MINIMUM, MAXIMUM	DATA TYPE
1	Revision	Get	Revision of this object.	1	UINT
2	Max Instance	Get	Maximum number of instances.	1	UINT

##### Identity Object Instance Services

Get\_Attribute\_Single: Returns contents of specified attribute.

Set\_Attribute\_Single: Modify the specified attribute.

Reset: Performs reset services based on the parameter.

##### Identity Class 1, Instance 1 Attributes

ATTRIBUTE NUMBER	ATTRIBUTE NAME	SERVICES	DESCRIPTION	DEFAULT, MINIMUM, MAXIMUM	DATA	SE-330 REGISTER
1	Vendor ID	Get	Identification of each vendor by number.	691	UINT	
2	Device Type	Get	Generic	43	UINT	
3	Product Code	Get	SE-330 Platform	SE-330 – 301 SE-330AU – 3301 SE-330HV – 3302	UINT	0
4	Revision	Get	Major revision must match the eds value (Major.Minor).		A2 02 C6 C6	
5	Status	Get	Summary Status of the device.	0, 0, 255	WORD	
6	Serial Number	Get	Serial number of SE-330.	N/A, 0, 999999999	UDINT	2/3
7	Product Name	Get	Human readable identification.	“Littelfuse SE-330”	SHORT_STRING	



### 3.2 ASSEMBLY OBJECT

#### Assembly Class (4), Instance (0) Attributes

ATTRIBUTE NUMBER	ATTRIBUTE NAME	SERVICES	DESCRIPTION	DEFAULT, MINIMUM, MAXIMUM	DATA TYPE
1 0x01	Revision	Get_Attribute_Single	Revision of this object.	1, 1, 1	UINT

#### 3.2.1 INPUT ASSEMBLY

#### Assembly Class (4), Instance (100), Attribute (3) – Input 1 (6 Words)

WORD	BIT9	BIT8	BIT7	BIT6	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0
0	0	Hardware Trip	Remote Trip	Internal Error	EEPROM Error	NER/NGR Volts	ADC Error	CAL Error	RF Trip	EF/GF Trip
1	Flash Upgrade Error	SD Card Error	CT Latch	CT Error	EEPROM Error	NER/NGR Detect	ADC Detect	CAL Detect	RF Detect	EF/GF Detect
2	Diagnostic State <sup>(1)</sup>									
3	NER/NGR Current (% of CT Rating)									
4	NER/NGR Voltage (% of Setting)									
5	Delta Ohms (Ohms)									

\* Bits 10 – 15 are zero.

<sup>(1)</sup> Diagnostic state:

- 0 = None
- 1 = Calibration
- 2 = Remote Trip
- 3 = CT Latch Error
- 4 = ADC Error
- 5 = SD Card Error
- 6 = Watchdog Trip
- 7 = Hardware Error
- 8 = NVRAM Error
- 9 = Flash Upgrade Error
- 10 = USB Error

#### 3.2.2 OUTPUT ASSEMBLY

#### Assembly Class (4), Instance (150), Attribute (3) – Output 1 (1 Word or 2 Bytes)

WORD	BIT7	BIT6	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0
0	0	0	0	0	0	Remote Calibration	Remote Trip	Fault Reset

### 4. SPECIFICATIONS

Protocol ..... EtherNet/IP  
 Ports ..... 2, EtherNet/IP on port 1 only  
 IP Addresses ..... 1 per port  
     Port 1 Default ..... 192.168.1.100  
     Port 2 Default ..... 192.168.2.100  
 Number of Connections ..... 8 total  
 Connectors ..... Copper and/or fiber, refer to Figs. 1, 2, and 3 and ordering information in the product manual

#### Copper:

Connector ..... RJ45  
 Cable ..... CAT5  
 Length ..... 100 m (328')  
 Interface ..... 10BASE-T, 100BASE-Tx

#### Fiber:

Connector ..... SC  
 Cable ..... SC Multimode  
 Length ..... 2,000 m (6,561') per segment  
 Interface ..... 100BASE-Fx  
 Center Wavelength ..... 1300 nm  
 Operating Wavelength ..... 1270 to 1380 nm

**APPENDIX A  
SE-330 SERIES (NEW REVISION) ETHERNET/IP INTERFACE REVISION HISTORY**

MANUAL RELEASE DATE	MANUAL REVISION
December 11, 2017	3-E-121117
June 25, 2015	3-D-062515
July 17, 2014	3-C-071714
February 3, 2014	3-B-020314
November 29, 2013	3-A-112913

**MANUAL REVISION HISTORY**

**REVISION 3-E-121117**

**SECTION 2**

Note updated.

**SECTION 4**

Specifications updated.

**REVISION 3-D-062515**

**SECTION 4**

IP Addresses updated.

**REVISION 3-C-071714**

Remote calibration feature added.

**SECTION 2**

Input assembly instance 100 size changed to 6.

**SECTION 3**

Input and Output assembly sections added.

**REVISION 3-B-020314**

**SECTION 2**

Figs. 1, 2, and 3 added.

**SECTION 4**

Specifications added.

**REVISION 3-A-112913**

Initial release.