Instruction Leaflet IL04209008E

Effective February 2012
Supersedes February 2012

Ethernet module for use with C441 Motor Insight and S611 RVSS

(Modbus TCP & EtherNet/IP)

Installation

The Ethernet module is designed to be used in industrial applications and installed in accordance with this document. The device is intended for use in clean, dry environments.

Mount the module

To mount the Ethernet Adapter to C441 or S611 the following procedure must be performed.

- Place the tabs opposite the Ethernet connector into the lower slots provided.
- Pivot the module on the lower tabs.
- Gently press the module and base together.

Ethernet Port Connections

Connect the Ethernet cable to one of the Ethernet ports. This adapter has an internal embedded switch which provides two Ethernet ports. The two ports provide the ability to create a linear or ring configuration. In the star configuration either port can be used.

This adapter supports Modbus TCP, EtherNet/IP and HTTP.

Set the IP Address

The IP address is selected using the DIP switches. See table below for DIP switch behavior.

Table 1. Dip Switch Settings

DIP switch setting	Behavior
0	Use the static IP address of 192.168.1.254
1 to 253	Combine the upper three octets stored in NVMemory with the DIP switch setting. Example: If the static IP address programmed from the network is 100.100.100.0 and the DIP switch is set to 5, the final IP address will be 100.100.100.5.
254	Use the full IP address stored in NVMemory. The default NVMemory value is 192.168.1.254.
255	DHCP is used to define the IP address. (Default)

Web Page Access

To configure or monitor the device through a web browser, type the devices IP address into the web browser address bar.

C441 Solid State Overload

Vendor ID	0x44 (68d)
Device Type	0x03 (3 Dec) Overload
Product Code	0x112D - 24Vdc IO 0x112E - 120Vac IO

S611 Softstarter

Vendor ID	0x44 (68d)
Device Type	0x17 (23d) Softstarter
Product Code	0x1133 - 24Vdc IO 0x1134 - 120Vac IO

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Default EtherNet/IP Assemblies

Table 2. EtherNet/IP - C441 Default Assembly

Default Input Assembly 0x78 (100d)	Word	Data	
	0	Device status	
	1	RMS Current IA	
	2	RMS Current IB	
	3	RMS Current IC	
Default Output Assembly 0x69 (105d)	Byte	Data	
		Control Byte	
		Bit	Bit Definition
		0	Output1
		1	Output2
		2	Fault Reset
		3	Aux Relay Reset
		4	Reserved
		5	Remote Trip
		6-7	Reserved

* See Manual for full CIP Object Model.

Table 3. EtherNet/IP - S611 Default Assembly

Default Input Assembly 0x79 (121d)	Word	Data	
	0	Device Status	
	1	RMS Current Avg	
	2	RMS Voltage Avg	
	3	Latched Fault Bits	
Default Output Assembly 0x6A (106d)	Byte	Data	
	0	Control Byte	
		Bit	Bit Definition
		0	Run1
		1	Permissive
		2	Fault reset
		3-5	Reserved
		6	Out 1
		7	Out 2

* See Manual for full CIP Object Model.

Modbus Register Summary

Table 4. Modbus Registers - Adapter IO

Modbus Register	R/W	Description
1	R	Adapter Inputs
101	R/W	Adapter Relay Outputs

** See Manual for full Modbus register map.

Table 4. Modbus Registers - C441

Modbus Register	R/W	Description
300	R	Phase A RMS Current
301	R	Phase B RMS Current
302	R	Phase C RMS Current
303	R	Average RMS Current
304	R	Phase A RMS Voltage (L1-L2)
305	R	Phase B RMS Voltage (L2-L3)
306	R	Phase C RMS Voltage (L3-L1)
307	R	Average RMS Voltage
308	R	Motor Power (KW)
314	R	Motor Thermal Capacity %
400	R/W	Command Register 0x00AA - Reset Relay 0x00DD - Relay Off

** See Manual for full Modbus register map.

Table 5. Modbus Registers - S611

Modbus Register	R/W	Description
300	R	Motor Control Status
301	R	Current Scale Factor
302	R	Phase A RMS Current
303	R	Phase B RMS Current
304	R	Phase C RMS Current
305	R	Average RMS Current
306	R	Phase A RMS Voltage (L1-L2)
307	R	Phase B RMS Voltage (L2-L3)
308	R	Phase C RMS Voltage (L3-L1)
309	R	Average RMS Voltage
310	R	Motor Power (KW)
314	R	Motor Thermal Capacity %
400	R/W	Motor Control

** See Manual for full Modbus register map.

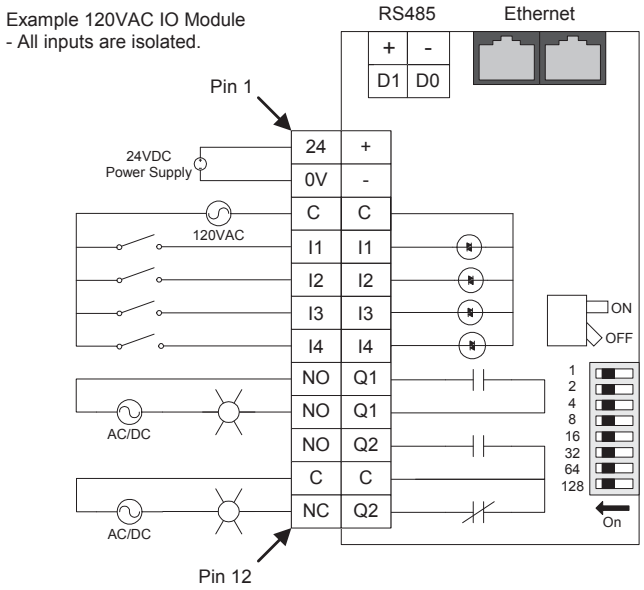

Figure 1. C441R—120 Vac Input Specification

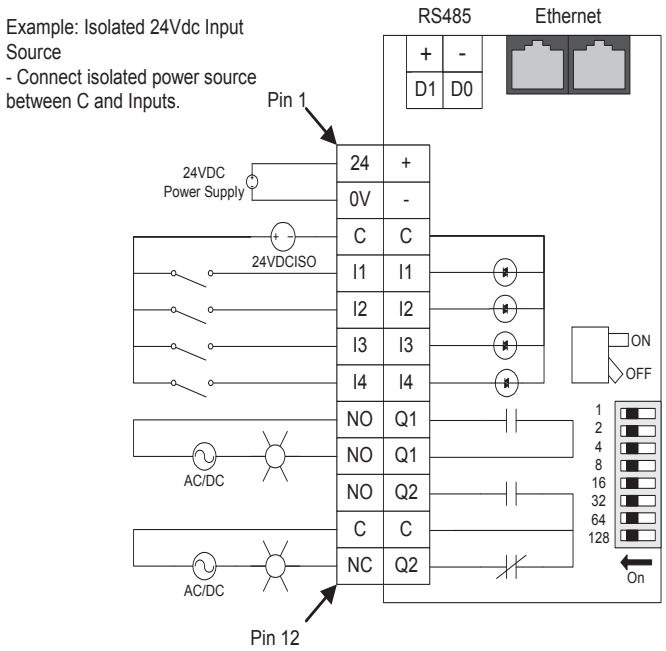

Figure 2. C441T 24 Vdc Input Specification - Isolated

Table 6. 120 Vac Inputs

Specification	Value
Number of inputs	4
Nominal voltage	120V ac
Nominal current	15 mA
Type	50/60 Hz
Input type	IEC 61131-2, type 1 digital

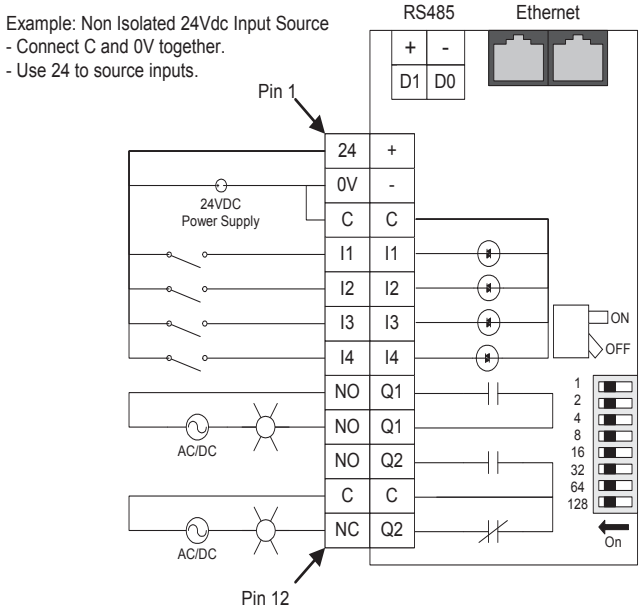

Figure 3. C441T 24 Vdc Input Specification - Non-Isolating

Table 7. 24 Vdc Inputs

Specification	Value
Number of inputs	4
Nominal voltage	24V dc
Nominal current	5 mA
Type	Current Sinking
Input type	IEC 61131-2, type 1 digital

Certifications	
Agency certifications	UL® 508
	cUL® (CSA® C22.2 No. 14)
	CE (low voltage directive)
	EtherNet/IP conformance tested

Table 8. Environmental Ratings of the Module

Description		Rating
Transportation and Storage	Temperature	-40°C to 85°C (-40°F to 185°F)
	Humidity	5-95% non condensing
Operating	Temperature	-20°C to 55°C (-4°F to 131°F)
	Humidity	5-95% non condensing
	Altitude	Above 6600 ft (2000m) Consult factory
	Shock IEC 60068-2-27	15G any direction for 11 ms
	Vibration IEC 60068-2-6	5-150 Hz, 3G, 0.42mm peak-to-peak
	Pollution Degree	3

Table 9. Module Electrical Requirements

Description	Requirement
Voltage range	18–30 Vdc
Current draw	Approx. 50 mA

Notes:
For use with Eaton UL Listed Power Supply Catalog Nos. PSS55A, PSS55B, PSS55C or PSS160E.

Any UL Listed isolated power supply with a maximum of 30 Vdc output may be used, provided that a UL Listed or Recognized Fuse rated no more than 3 A maximum be installed.

Reference

C441/Standalone I/O Manual	MN04201001E
S611 Manual	MN03902011E

EtherNet/IP™ conformance tested

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