Instructional Leaflet **IL050015EN**

Effective September 2014
Supersedes July 2014

DeviceNet module for use with C440, S611, S811+, and as Stand-alone I/O

Installation

The DeviceNet module is designed to be used in industrial applications and installed in accordance with this document.

Mount the Module

This DeviceNet module is the stand-alone version. It can be used to interface a C440 motor protection OL relay, S611 or S811+ soft starters to DeviceNet or can be used as a stand-alone I/O module on DeviceNet.

To mount the stand-alone design in application field,

The stand-alone design provides 2 optional mounting methods for the customer.

- 35mm DIN Rail Mounting
- Panel mounting features 79x18mm with two # 10 screws.

Connect the DeviceNet Adapter to DeviceNet Network

Connect the DeviceNet cable to the 5-position connector located on the side of the module.

- The DeviceNet cable is color-coded and matches the colors on the 5- position connector located on the face of the module. The connector has screws for positive retention to eliminate accidental unplugging.
- Use one wire per terminal.

DeviceNet setup and configuration

The DeviceNet adapter requires no extra setup or configuration for normal operation other than setting the MAC ID and baud rate for DeviceNet. For more information on the DeviceNet attributes and how to modify them, refer to the C441 DeviceNet user manual, publication MN120004EN.

Set the DeviceNet address

The MAC ID and baud rate are set using DIP switches on the face of the module. The MAC ID is in binary using dip switc es 1-6.

Example: To set the MAC ID to 25, set the switches to OFF(32), ON(16), ON(8), OFF(4), OFF(2), ON(1) (16+8+1=25).

Table 1. DeviceNet MAC address configuration

Dip Switch	Value
6	32
5	16
4	8
3	4
2	2
1	1

The baud rate is set using the configuration switches B0 and B1.

Table 2. Configuration Switches

B0 (Sw7)	B1 (Sw8)	Baud
OFF	OFF	125k (Default)
ON	OFF	250k
OFF	ON	500k
ON	ON	Software configuration

Table 3. DeviceNet Communication Specifications
All Models (C440, S611, S811+)

Communication	Value
DeviceNet baud rates	125K, 250K, 500K

DeviceNet Codes

C440 Solid State Overload

C440 Solid State Overload	
Vendor ID	0 x 44 (68 Dec)
Device type	0 x 03 (3 Dec) overload
Product code	0 x 1110 (4368 Dec) C440 with 24V dc IO 0 x 1111 (4369 Dec) C440 with 120V ac IO

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Default input assembly 120 Dec	Word	Data Default	
	0	Device status	
	1	Present Faul Bits	
	2	Avgerage Current	
	3	Thermal Memory %	
Defaul Output Assembly 105 Dec	Byte	Data	
		Control Byte	
		Bit	Bit Definition
		0	Out 1
		1	Out 2
		2	Fault Reset
		5	Remote Trip

S611 Softstarter

Vendor ID	0 x 44 (68 Dec)
Device type	0 x 17 (23 Dec, Softstarter)
Product code	0 x 1119 (4377 Dec) S611 with 24V dc IO 0 x 111A (4378 Dec) S611 with 120V ac IO

Default input assembly 121 Dec	Word	Data Default	
	0	Device status	
	1	RMS Current Avg	
	2	RMS Voltage Avg	
	3	Overload Thermal Pile	
Defaul Output Assembly 106 Dec	Byte	Data	
		Control Byte	
		Bit	Bit Definition
		0	Run 1
		1	Permissive
		2	Fault Reset
		3-5	Reserved
		6	Out 1
		7	Out 2

S811+Softstarter

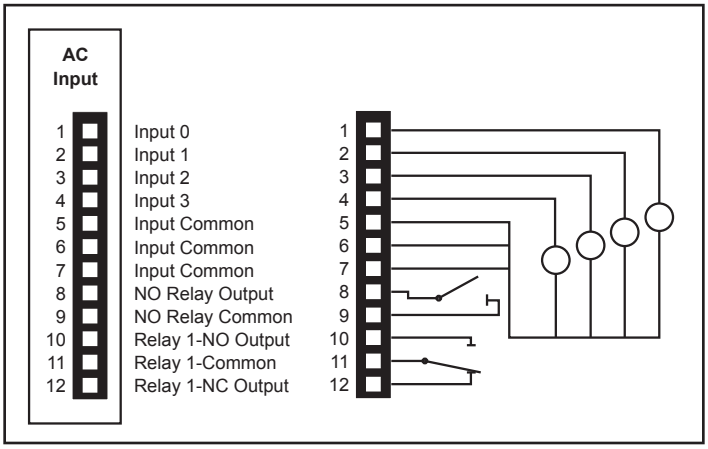
Vendor ID	0 x 44 (68 Dec)
Device type	0 x 17 (23 Dec, Softstarter)
Product code	0 x 1142 (4418 Dec) S811 with 24V dc IO 0 x 1143 (4419 Dec) S811 with 120V ac IO

S811+ Softstarter

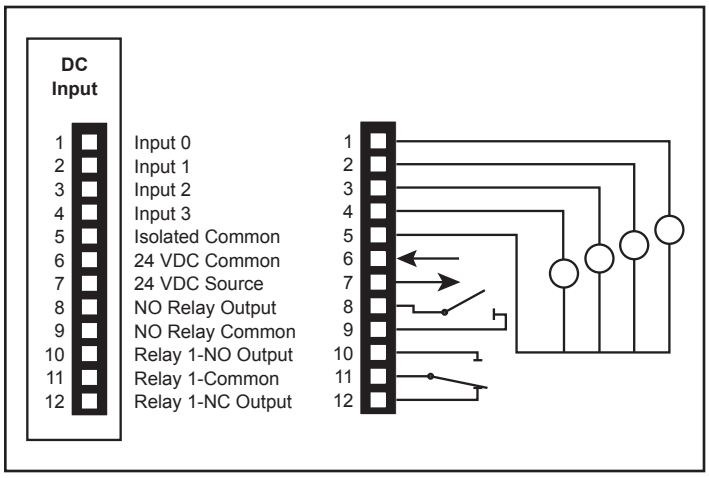
Default Input assembly 130 Dec	Word	Data Default
	0	Device Status
	1	3Ph RMS Line Current (amps)
	4	% Thermal Pile used
	5	Average current as % FLA
	6	3Ph RMS Mains Voltage
	9	Motor Control Faults
Default Output Assembly 101 Dec	Bit	Bit Definition
	0	Run 1
	1	Run 2 (Ramp 2)
	2	Fault Reset
	4	C441 Q1 Relay Out
	5	C441 Q2 Relay Out

C441K, C441KS – 120VAC Input specification

Specification	Value
Number of Inputs	4



Voltage Category	120VAC
Operating Range	80-140VAC
Operating Frequency	50/60Hz
Signal Delay Max	30ms
Input Type	IEC 61131-2, Type 1 Digital
Off State Voltage	0-30VAC
On State Voltage	79-140VAC
On State Current Max	15mA
Supply	External Supply



Specification	Value
Number of Inputs	4
Supply Voltage	24VDC
Type	Current Sinking
Input Type	IEC 61131-2, Type 1 Digital
On State Voltage	15V-30VDC
Steady State Current Max	15mA
Off State Voltage	0-5VDC
24VDC source current limit	50mA
Isolation Voltage	250VAC

Environmental Ratings of the Module

Transportation and Storage	Temperature	-50°C to 80°C (-58°F to176°F)
	Humidity	5-95% non-condensing
Operating	Temperature	-40°C to 55°C [-40°F to 131°F]
	Humidity	5-95% non-condensing
	Altitude	Above 2000 meters (6600 feet) consult factory
	Shock IEC 60068-2-27	15G any direction for 11 milliseconds
	Vibration IEC 60068-2-6	10-150Hz, 3G, 0.3mm Maximum Peak-to-Peak
	Pollution Degree	3

Approvals/Certifications

Electrical/EMC	
• Radiated and Conducted Emissions	EN 55011 Class A
• ESD Immunity (IEC61000-4-2)	+/- 8kV air, +/- 4kV contact (IEC61131-2)
• Radiated Immunity (IEC61000-4-3)	10V/m 80-1000 MHz, 80% amplitude modulation @ 1kHz (IEC61131-2)
• Fast Transient (IEC61000-4-4)	+/- 2kV supply and control +/- 1kv communications (IEC31161-2)
• Surge (IEC61000-4-5)	+/- 1kV line-to-line +/- 2kV line-to-ground (IEC61131-2)
• RF Conducted (IEC61000-4-6)	10V, 0.15 – 80MHz (IEC61131-2)
• Magnetic Field (IEC61000-4-8)	30 A/m, 50Hz (IEC61131-2)
• Ingress Protection Degree (IEC60947-1)	IP20
• Circuit Board Coating	Yes
Agency Certifications	cULus by UL to UL 508 CSA C22.2 No. 14 CE (Low Voltage Directive, EMC Directive) RoHS

Module Electrical Requirements

Voltage Range	Nominal 24VDC 18-30VDC
Current Draw	Approx. 30mA

Note: The device is for use with Eaton UL Listed Power Supply, Catalog Nos. PSG60E, PSG60F.

Any UL Listed isolated power supply with an isolated 28VDC output may be used, provided that a UL Listed or Recognized Fuse rated no more than 4A maximum be installed.

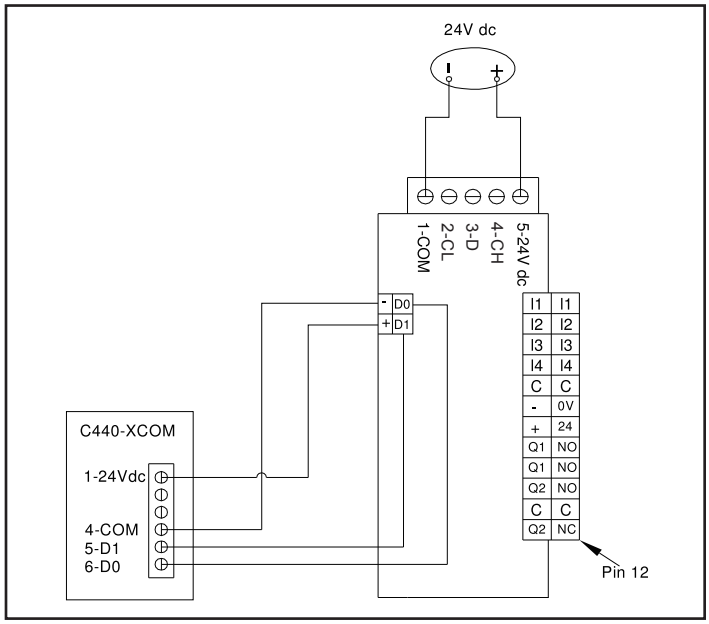


Figure 1. DeviceNet Module Wiring with C440

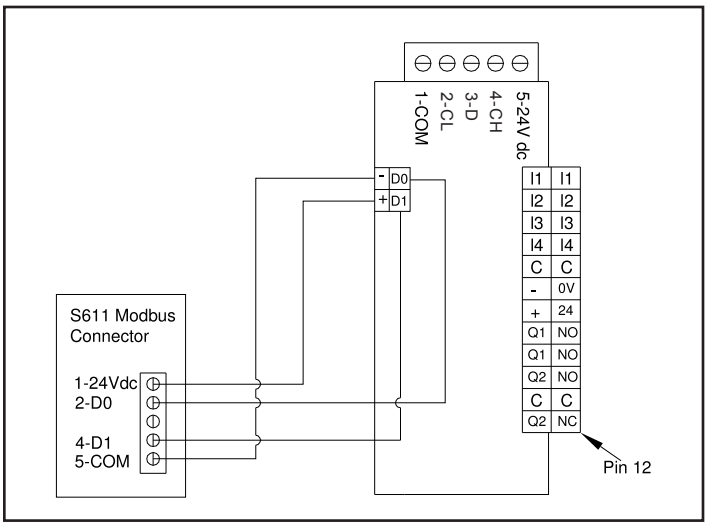


Figure 2. DeviceNet Module Wiring with S611

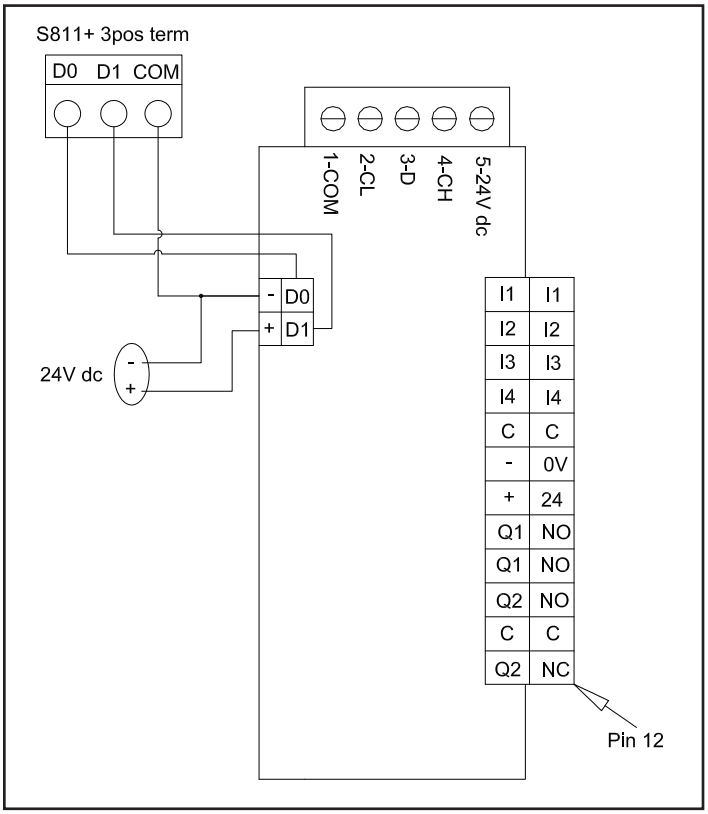


Figure 3. DeviceNet Module Wiring with S811+

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