

DeviceNet master module

CN

M3-61A

DeviceNet master module

- ▶ Monitor mode identifies and interrogates devices on the DeviceNet network; nodes selectable via on-board switches.
- ▶ Supports bit-strobe, poll, change-of-state, cyclic, and explicit messaging. 125K, 250K, and 500K baud rates are supported.
- ▶ ODVA compliant.

DeviceNet specifications

Number of ports	1
Connector	Pluggable screw-down 5-pin
Baud rate	125, 250, 500 KBaud
MAC ID range	0-63
Maximum cable trunk	500 m
Operating mode	Master
Message formats	Poll, change-of-state (COS), cyclic, explicit messaging, bit-strobe
Compliance	ODVA

Other specifications

Module size	2 rack slot (1.5"/38 mm)
Module weight	90 g
Bus power required (5 VDC)	0.26 mA
Isolation rating	500 VDC
Operating temperature	0 - 50°C
Horizontal installation	0 - 45°C
Vertical installation	
Storage temperature	-25 - 85°C
Humidity	5 - 95% non-condensing

Note:

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Minimum hardware revision	0, A
Minimum firmware revision	1.01
Minimum operating system revision	5.00.90R43
Documentation number: 950-536101-002	



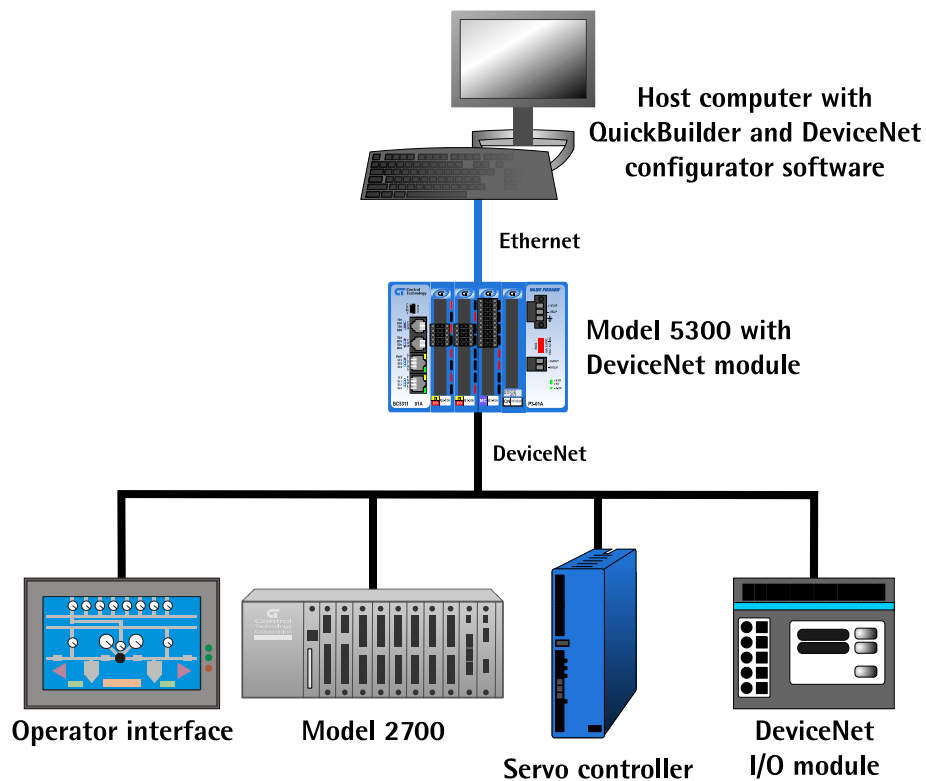
DeviceNet master module	CN	M3-61A
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The M3-61A module is a DeviceNet master. CTC's DeviceNet configurator software is used to create a network configuration and load it into the DeviceNet master residing on a Model 5300 automation controller. The master module then establishes links to each device on the network and masks the devices' I/O points and other resources locally for program access using QuickBuilder.

The configurator also has a monitor mode that identifies and interrogates any device on a DeviceNet network. This mode is especially useful when a device's documentation or electronic data sheet (EDS) is not readily available. Monitor mode can establish links, execute link commands, send and receive data, and generate a network traffic log.

The Model M3-61A supports bit-strobe, poll, change-of-state (COS), cyclic and explicit messaging. All three baud rates (125K, 250K, and 500K) are available, and node selection is available with simple on-board switches that are accessible via the front of the module.

The Model M3-61A is equipped with a 32-bit processor, allowing operation of the DeviceNet network at full rated speed without encumbering the controller's CPU. Complete messages are assembled locally on the Model M3-61A module and are then passed to the controller's processor for servicing.



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CN

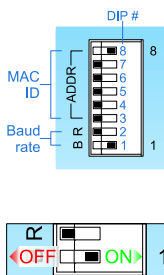
M3-61A

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Electrical specifications

Parameter	Min	Typ	Max
Power requirements (from controller)			
Logic supply (3.3V)		250 mA	400 mA
Auxiliary supply (24V from 24V bus)		0 mA	0 mA
DeviceNet power	11 VDC	24 VDC	28 VDC
DeviceNet load		100 mA	150 mA
DeviceNet miswiring protection			24 VDC

DeviceNet master module	CN	M3-61A



MAC ID settings

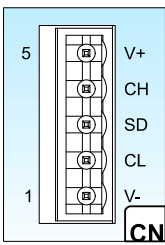
Address	DIP 3 - 8
0	000000
1	000001
2	000010
3	000011
...	
62	111110
63	111111

Baud rate settings

Baud rate (kBit/sec)	DIP 1 - 2
125	0 0
250	0 1
500	1 0
Reserved	1 1

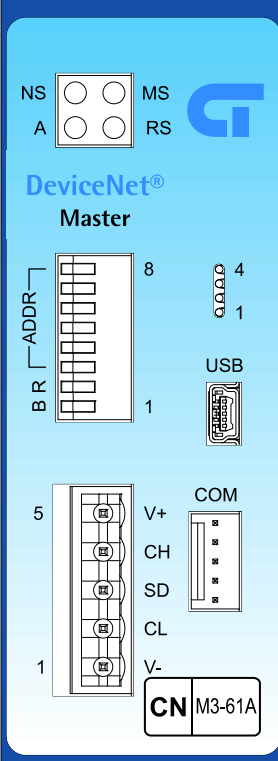
Off = 0 (left)
On = 1 (right)

DeviceNet pinouts



Pin #	Signal
5	V+ (Red)
4	CANH (White)
3	Shield
2	CAN-L (Blue)
1	V- (Black)

M3-61A Module



NS MS
A RS

DeviceNet® Master

B R ADDR 8 1

4 1

USB

5 1

V+ CH SD CL V-

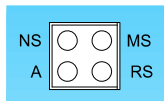
COM

CN M3-61A

Note

- LEDs 1-4, USB and COM port are reserved for future use.

Module LEDs



Name	States	
NS (Network status)	Off	Device is not powered (MS LED will be off in this case) or not online
	Green	Link OK. Online, connected
	Flashing green	Online, not connected
	Flashing red	Minor fault on one or more connections
	Red	Critical link failure
A	N/A	Reserved for future use
MS (Module status)	Off	No power or not initialized
	Green	Normal operating state
	Flashing green	Device in standby or needs commissioning due to configuration missing, incomplete or incorrect
	Flashing red	Recoverable fault
	Red	Unrecoverable fault
	Flashing red/green	Device in self test
RS (Run status)	Off	No power or not initialized
	Green	Run mode
	Flashing green	Idle mode