

CN-8022 DeviceNet Network Adapter

1 Module Feature

The CN-8022 network adapter module supports standard DeviceNet communication, with a maximum input of 254 bytes and a maximum output of 254 bytes, and supports 32 expansion IO modules.

2 Technical Parameters

General Parameters	
System Power	Power supply: 19.2 V DC ~28.8 V DC (Nominal: 24VDC) Protection: Anti-reverse connection protection
Module Consumption	60mA@24VDC
Internal Bus Supply Current	Max: 2.5A@5VDC
Isolation	System power to field power: isolation The isolation voltage between system power and filed power is AC 500V The isolation voltage between filed power and PE is AC 500V The isolation voltage between system power and PE is AC 500V
Filed Power	Power supply: 19.2 V DC ~28.8 V DC (Nominal: 24VDC) Protection: Anti-reverse connection protection
Filed Power Current	Max DC 8A
I/O Modules Supported	32
Wiring Diameter	Max.1.0mm ² (AWG 18) Min.0.2mm ² (AWG 24)
Installation	35mm DIN-Rail
Size	115 mm *51.5 mm *75 mm
Weight	130g
Environmental Parameters	
Operating Temperature of Vertical Installation	-35°C~70°C
Operating Temperature of Horizontal Installation	-35°C~60°C
Relative Humidity	5~95%RH (No Condensation)
Storage Temperature	-40°C~85°C
Storage Humidity	5~95%RH (No Condensation)
Manufacturing Test Temperature	-40°C~75°C
Ingress Protection Rating	IP20
Vibration Resistance	Comply with IEC 61131-2 and IEC 60068-2-6
Impact Resistance	Comply with IEC 61131-2 and IEC 60068-2-27
EMC Performance	Comply with IEC 61131-2 and IEC 61000-4
DeviceNet parameter	
Station Type	Remote equipment station
Node Address (Station Number)	DIP Settings (1-64) When the dial value is not 1-64, the station number is forced to be 1
I/O Data Capacity	Input Max: 254 Bytes Output Max: 254 Bytes
Transmission Rate	DIP settings (125 kbit/s, 250 kbit/s, 500 kbit/s)
Connection Interface	5 Pin terminal
Maximum Transmission Distance	125 kbit/s --500m; 250 kbit/s --250m; 500 kbit/s --100m;



THERE IS A RISK OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH.

Disconnect all devices from power, including connected devices, before removing any covers, or installing or removing any accessories, hardware, cables, or wires, except in specific circumstances specified in the appropriate hardware guidelines for this device.

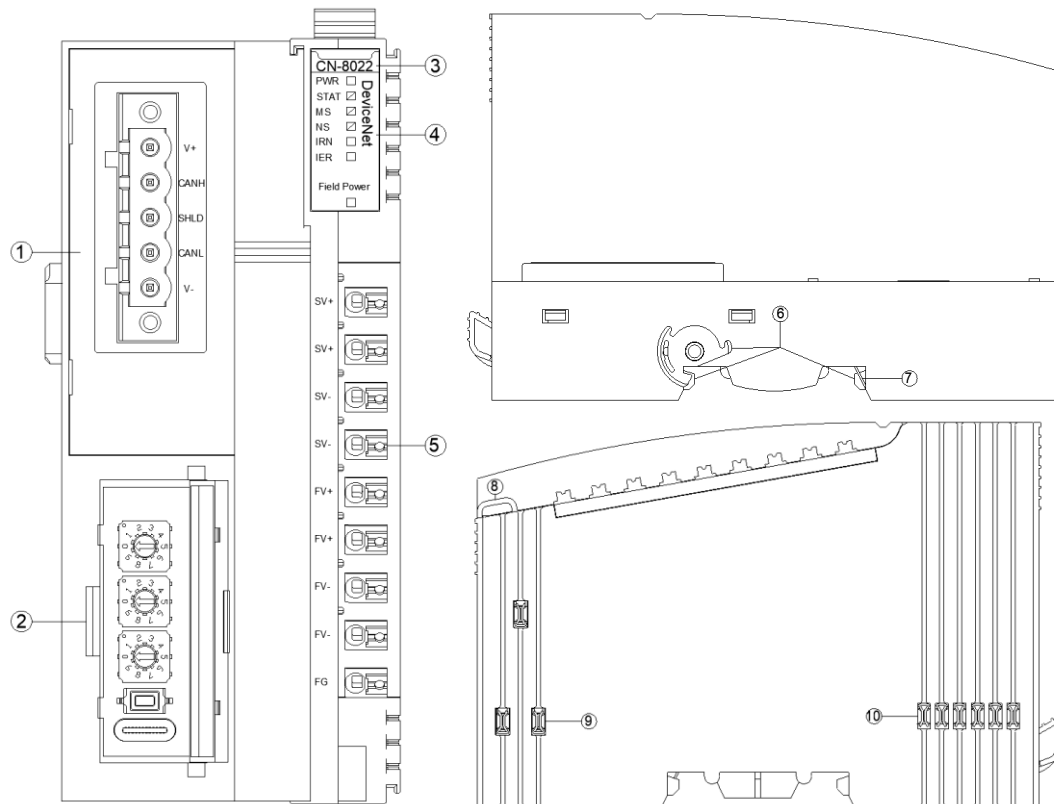
Always use a voltage sensing device with an appropriate rating to detect a power outage at the appropriate place and time, as instructed.

Replace and tighten all covers, accessories, hardware, cables, and wires, and confirm that the ground connection is correct before powering on the device.

When operating this equipment and related products, the specified voltage must be used.

Failure to follow instructions specified by the manufacturer may result in serious consequences such as death, personal injury, or damage to equipment since the protection provided by the equipment may be impaired.

3 Hardware interface



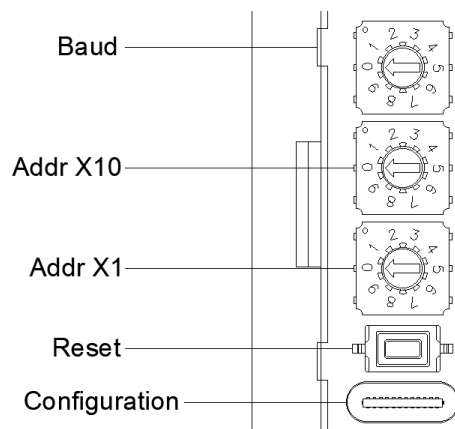
- ① Network interface
- ② Config interface
- ③ Module type
- ④ LED indicator
- ⑤ Wiring Terminal
- ⑥ Buckle
- ⑦ Grounding Spring Sheet
- ⑧ Fixed Wiring Harness
- ⑨ Field Power
- ⑩ Internal Bus

3.1 DeviceNet Interface

The device is using 5PIN terminals, and the terminal definitions are shown in the figure below:

NO.	Mark	Definition
1	V+	24VDC Power supply positive
2	CANH	CAN-H Signal line
3	SHLD	Input signal shielding
4	CANL	CAN-L Signal line
5	V-	24VDC Power supply negative

3.2 Configuration Interface



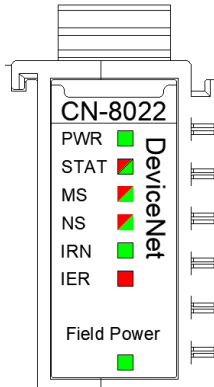
Baud: Used to set the communication baud rate, the baud rate is 125kbit/s when the DIP switch value is 0, the baud rate is 250kbit/s when the DIP value is 1, and the baud rate is 500kbit/s when the DIP value is 2.

Addr x1/x10: Used to set the station address of the adapter module, Addr x10 is high, and each adapter module has a unique station address (1~64);

Reset: Module reset button, press and hold the button for more than 5 seconds All module parameters will return to the default value. When pressing Reset is valid, a green light will light up in the upper left corner of the button;

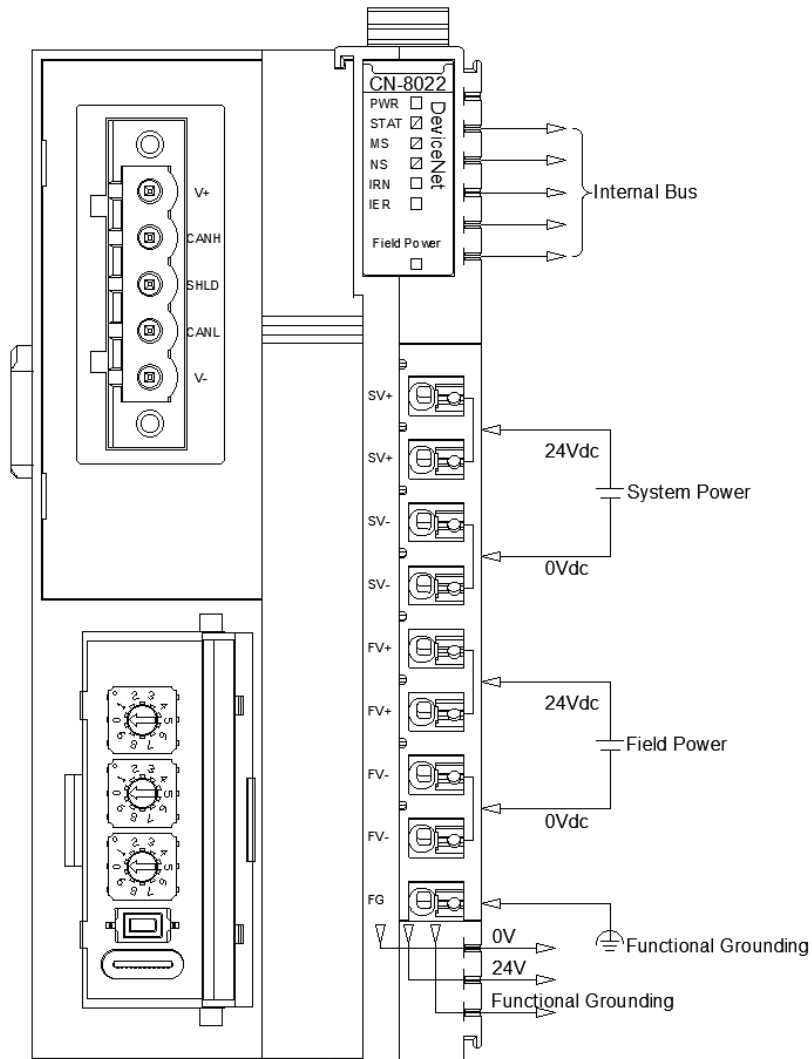
Config: Configuration port, standard Type-C interface, used to configure device parameters and firmware upgrades.

3.3 LED Indicator Definition



PWR Power indicator (Green)	Definition
ON	The system power supply is normal
OFF	The system power supply is abnormal
STAT Module state indicator (Red /Green)	Definition
Flash 2 times (Red)	The module exception has been soft-restarted
ON (Green)	Operating mode
Single flash (Green)	Stop mode
Slow flash (Red /Green)	Upgrading mode
Fast flash (Red /Green)	Firmware Upgrading
MS Slave status indicator (Red /Green)	Definition
OFF	Module not powered on
ON (Green)	Normal operation
Flash (Green)	Baud rate detection
ON (Red)	Unrecoverable fault is detected
Flash (Red)	Recoverable fault is detected
Flash (Red /Green)	Self-inspection in progress
NS Network status indicator (Red /Green)	Definition
OFF	The module is not powered on or not online
ON (Green)	Modules are online, and one or more connections are established
Flash (Green)	The module is online and no connection is established
ON (Red)	Critical link failures
Flash (Red)	Connection timeout
Flash (Red /Green)	Self-inspection in progress
IRN IO operation indicator (Green)	Definition
ON	IO initialization is normal
OFF	IO initialization is abnormal
IER IO error indicator (Red)	Definition
OFF	I/O communication is normal
Flash 2 times	IO communication error
Field Power indicator (Green)	Definition
ON	The field power supply is normal
OFF	The field power supply is abnormal

4 Wiring



NOTICE

UNEXPECTED DEVICE OPERATION

Inside the module, two terminal blocks SV+ have been shorted, two terminal blocks SV - have been shorted, two terminal blocks FV+ have been shorted, and two terminal blocks FV - have been shorted. Externally, only one system power supply and one field power supply need to be connected.

The wire should be copper wire with a core greater than 0.2mm² and less than 1mm², and the impedance is less than 10Ω.

Failure to follow instructions specified by the manufacturer may result in serious consequences such as death, personal injury, or damage to equipment since the protection provided by the equipment may be impaired.

5 Process Data Definition

5.1 Adapter Process Data Definition

Input Data								
Bit No	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Byte 0	Reserved					Detection of out of limit output data capacity of slave station	Detection of out of limit input data capacity of slave station	IC state check
Byte 1~8	Reserved							
Output data								
Byte 0~8	Reserved							

Data description:

IC state check: Detects whether the slave starts normally, corresponding to the bit value of 1 when the slave fails to start successfully, and the bit value is 0 when the slave is successfully started.

0: Slave starts normally

1: Slave startup exception

Detection of out of limit input data capacity of slave station: The total number of bytes of input data in the module configuration is more than 254 bytes, and the position 1 is not exceeded, but not 0.

0: The total length of the input data is less than 254 bytes

1: The total length of the input data is more than 254 bytes

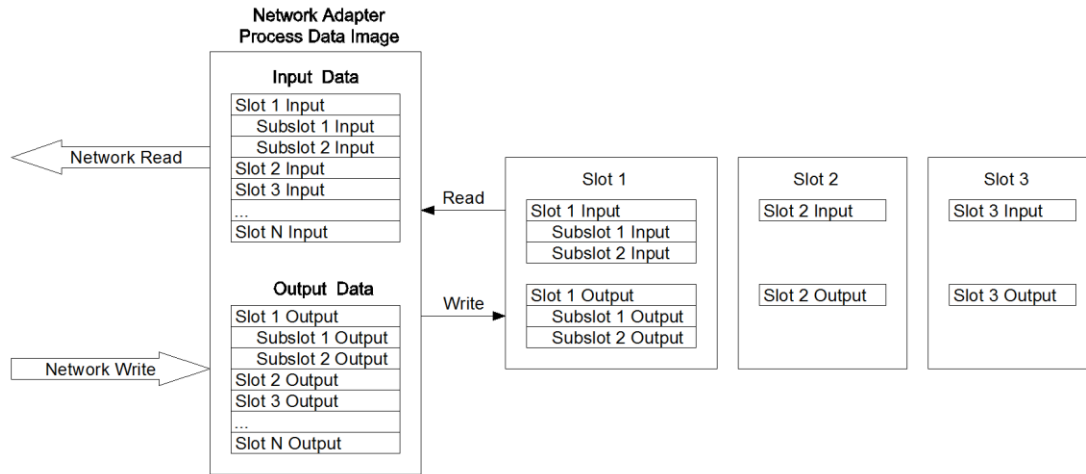
Detection of out of limit output data capacity of slave station: The total number of bytes of output data of the detection module configuration exceeds 254 bytes at position 1 and does not exceed 0 at this position.

0: The total length of the output data does not exceed 254 bytes

1: The total length of the output data is more than 254 bytes

5.2 IO module process data mapping

The network adapter reads and writes the input and output process data of the input and output of the IO module in real time through the internal bus, and its data mapping model is shown in the following figure:



6 Configure Parameter Definition

Configuration Parameter								
Bit No	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Byte 0	Reserved					Fault action for output	Fault action for input	Source of Configuration Data
Byte 1	Slave ID							
Byte 2	DeviceNet baudrate							
Byte 3	Input data length							
Byte 4	Output data length							

Data description:

Source of Configuration Data: Device parameter configuration method (Default value: 0).

- 0: Configuration Software
- 1: Filed bus

Fault action for input: Input data processing method in case of IO failure (default value: 0)

- 0: Cleaning input value
- 1: Hold the last input value

Fault action for output: Output data processing method in case of IO failure (default value: 1)

- 0: Hold the last output value
- 1: Cleaning output value

Slave ID: DeviceNet slave ID number, hardware dial settings, 1-63 (read-only, default: 1).

DeviceNet baudrate: DeviceNet bus baud rate setting (read-only).

- 0: 125 kbit/sec
- 1: 250 kbit/sec
- 2: 500kbit/sec

Input data length: DeviceNet input data length configuration (read-only).

Output data length: DeviceNet output data length configuration (read-only).

A Dimension

