

GCAN-202

Ethernet-CAN converter

User Manual



Document version: V3.51 (2017/06/19)

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1. Introduction

1.1 Overview

The GCAN-202 is a converter that integrates two CAN interfaces and one Ethernet interface. Using GCAN-202, users can connect CAN-Bus network and Ethernet, extends the application scope of CAN-Bus.

1.2 Properties at a glance

- Power supply: 9~30V(50mA, 24V DC)
- Working temperature range from -40 to 85 °C
- CAN-Bus supports CAN2.0A and CAN2.0B frame format, conform to ISO/DIS 11898 standards
- CAN baud rates range from 5Kbps to 1Mbps
- CAN-Bus interface with electrical isolation
- CAN-Bus isolation module insulation voltage: DC 1500V
- Standard Ethernet interface: RJ45, supports 10 / 100M adaptive
- The working port, the target IP and the target port can be modified
- Support agreement: ETHERNET, ARP, IP, ICMP, UDP, DHCP, DNS, TCP
- Compatible with SOCKET work (TCP Server, TCP Client, UDP)
- Size:(L)118mm * (W)93mm * (H)23mm

2. Installation

2.1 Dimension drawings

The shell size of the GCAN-202 is shown in Figure 2.1.

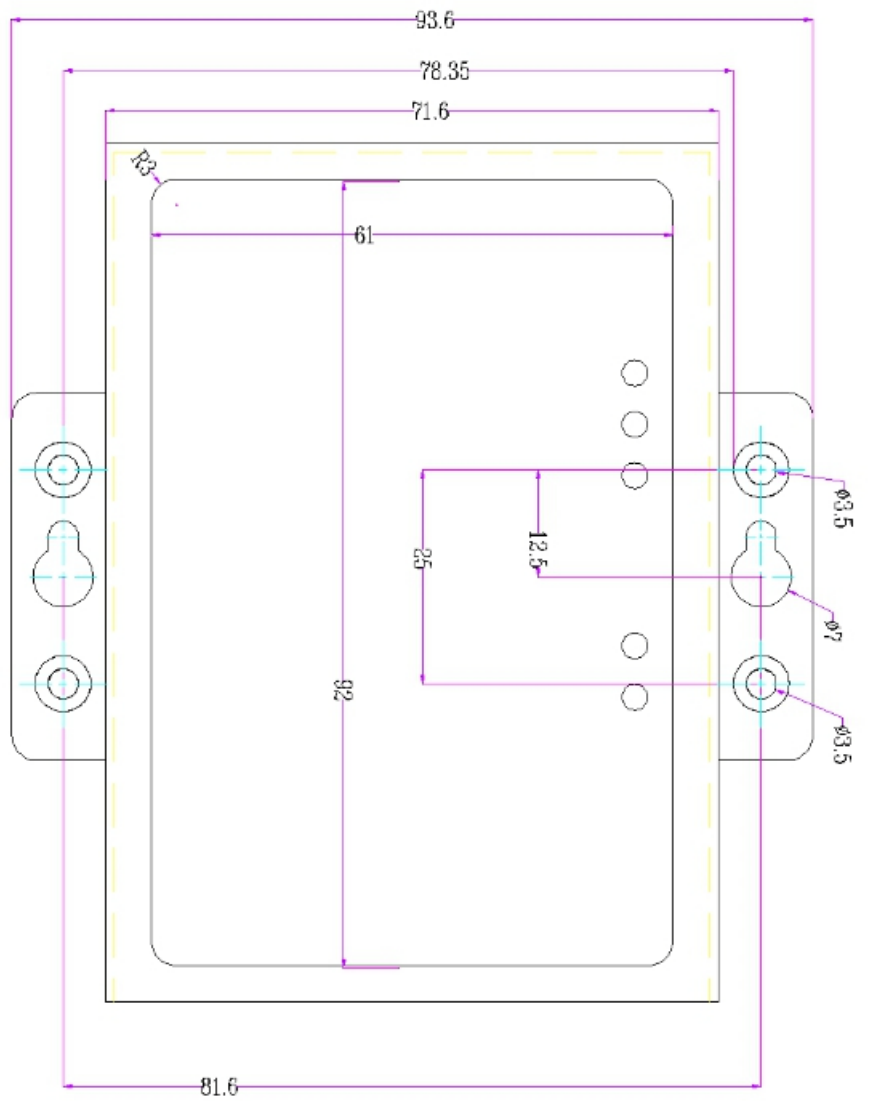


Figure 2.1 Dimension drawings

2.2 Connect to PC

Connect the converter to the computer with a network cable. Then GCAN-202 LAN interface can establish communication.

2.3 Connect to CAN-Bus

In practical use, most of the time just connected the CAN_H to CAN_H and CAN_L connected to CAN_L, then communication can be realized.

3. converter used

GCAN-202 converter uses a network cable to connect to PC, uses +9 ~ 30V DC power supply(recommended + 12V or + 24V power supply), uses the "CANet Config" software to configure.

3.1 Restore the factory settings

Default IP of GCAN-202 is 192.168.1.10, gateway is 255.255.255.0. If the user has modified the IP and forget it. By pressing the reset button, you can restore the factory settings.



After GCAN-202 is powered on, you can find the reset button as shown above. Then press the button for about 5-6 seconds. When the indicator flashes, the system is restored successfully.

Please note: PC and GCAN-202 must be in the same network segment.

3.2 The structure of CAN-Bus

This is CAN-Bus connection, as shown in figure 3. 2.

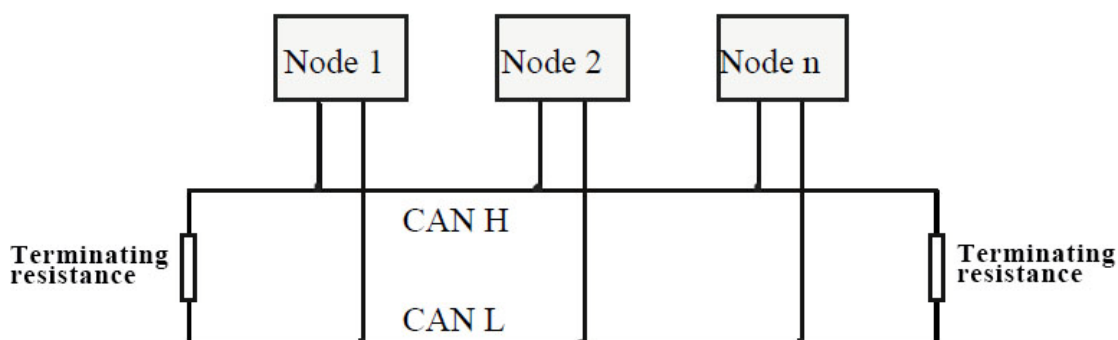


Figure 3.2 Topology structure of CAN-bus

3.3 Termination resistor

CAN-Bus requires two 120 Ω termination resistors in the furthest of the two

terminals, as shown in figure 3.3.

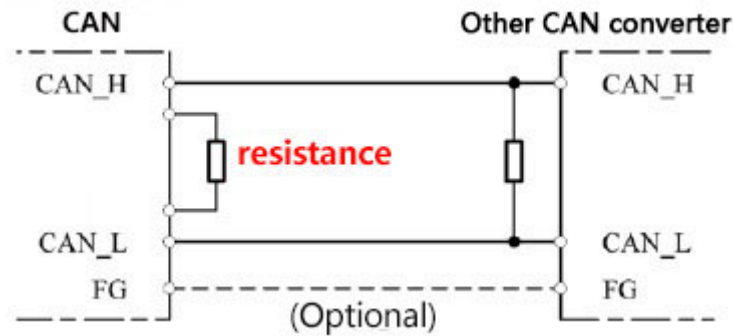


Figure 3.3 GCAN-204 connection to other CAN converter

Please note: you should connect the two ends of the resistor to CAN_L and CAN_H respectively.

3.4 Indicator light

GCAN-202 converter has one PWR indicator, one SYS indicator, one LAN indicator, two CAN indicator, to indicate the converter status. More functions are shown in table 3.2.

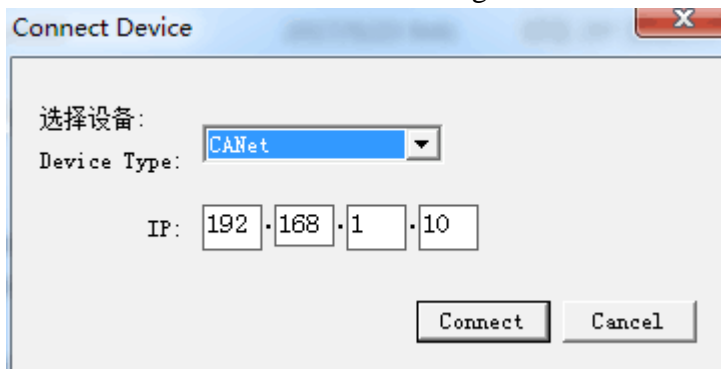
Indicator light	Status	Indicates the status
PWR	Bright	Power supply is normal
	OFF	Power supply failure
SYS	OFF	Converter initialization failed
	Blinking	Converter initialization pass, standby state
CAN1、CAN2	Red	CAN-Bus communication failure
	Green blinking	CAN-Bus has data transmission
	Blinking with SYS light alternately	The converter enters the reset state

Table 3.2 Status of the GCAN-202 indicator

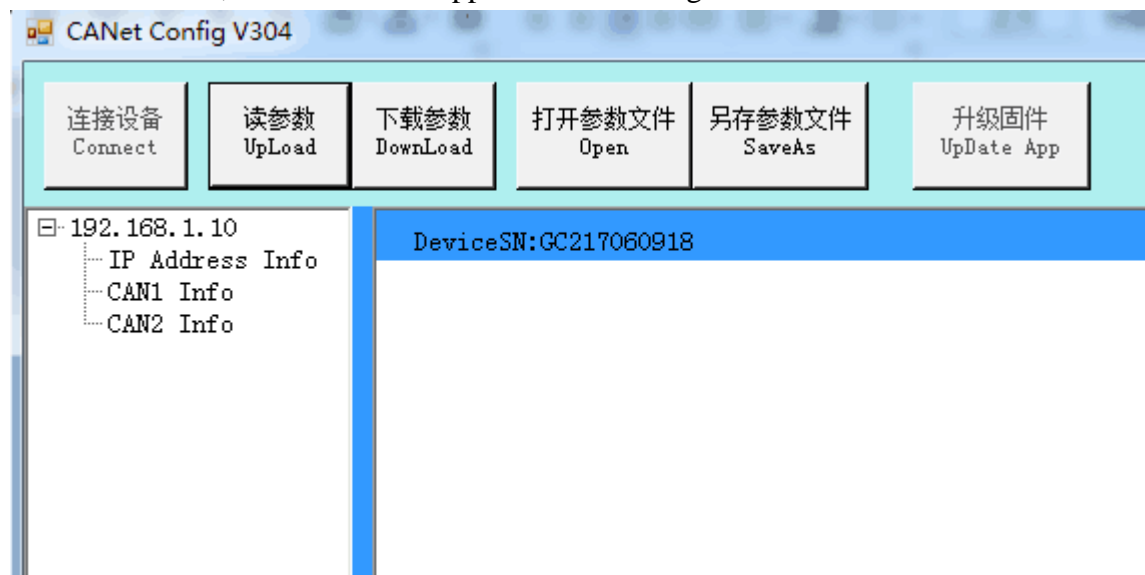
4. Configuration instructions

4.1 Connect the software

Software needs to fill in IP address when connecting to GCAN-202.



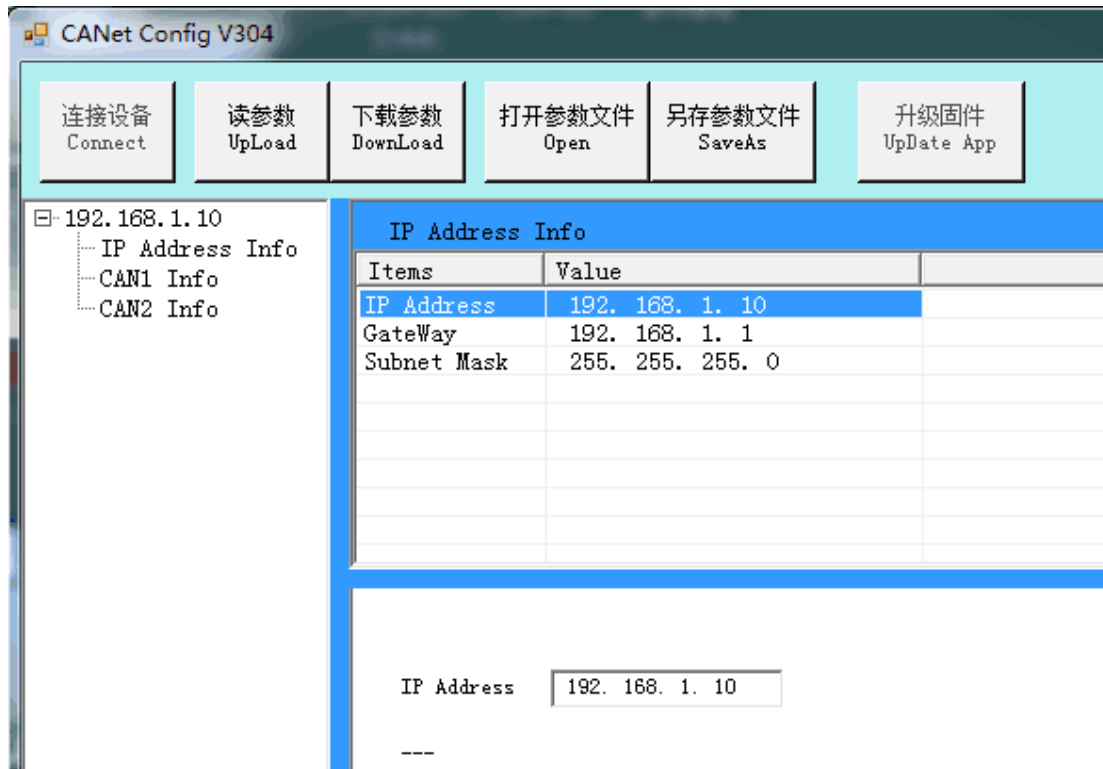
Click "Connect", and then it will appear the following software interface.



- "Connect" - connect the converter(Do not need to click again)
- "Upload" - read converter configuration information
- "DownLoad" - download the configuration information to the converter's Flash
- "Open" - open the configuration information file in the PC
- "SaveAs" - save the configuration information file to your computer
- "UpDate App" - upgrade the GCAN-202 firmware kernel. (Please use this function under guidance)

4.2 Basic information

After the connection is successful, click "UpLoad" to upload the parameters of the converter to the computer.

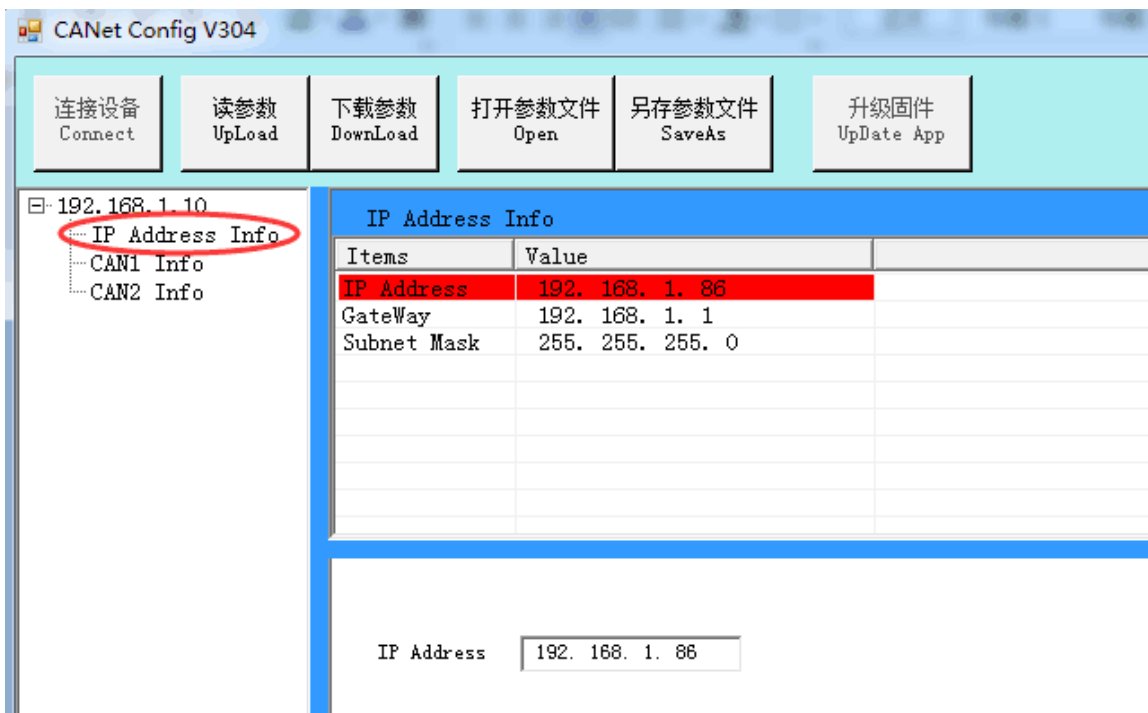


"IP Address Info" - Ethernet-side parameter setting

"CAN1 / CAN2 Info" - CAN bus parameter setting

4.2.1 Ethernet parameter settings

Click "IP Address Info" to enter the Ethernet parameter setting interface



"IP Address Info" - set the GCAN-202 IP address

"GateWay" - set the GCAN-202 gateway

"Subnet Mask" - set the GCAN-202 subnet mask

4.2.2 CAN-Bus parameter setting

Click "CAN1 / CAN2 Info" to enter the CAN-Bus parameter setting interface.



"TCP Port" - set the CAN-Bus communication port

"CAN Baud" - sets the CAN-Bus communication baud rate

"CAN Mode" - set the CAN-Bus operating mode

"CAN Filter" - not open, the default is set to 0

"TCP Mode" - set the TCP operating mode

"Remote IP" - set the destination host IP address

"Remote Port" - set the port number of the destination host

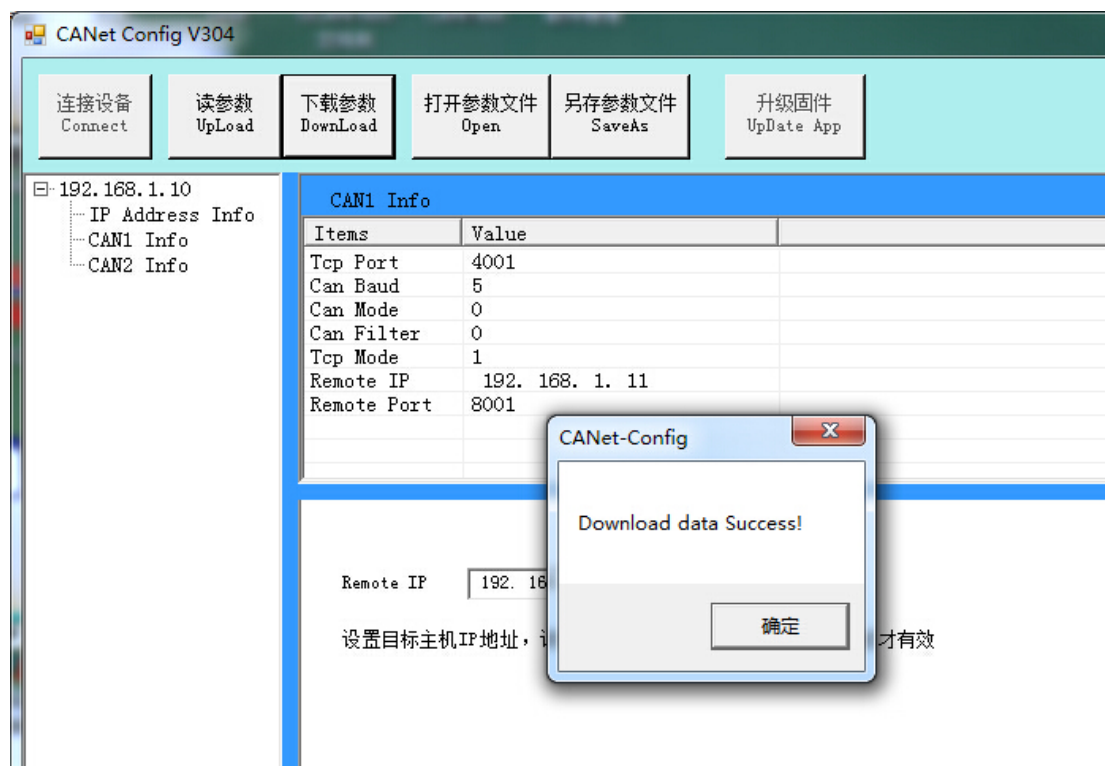
Note: "Remote IP", "Remote Port" is valid only in TCP Client mode and UDP mode.

CAN-Bus baud rate	Corresponding figures	CAN-Bus baud rate	Corresponding figures
1 M bit/s	0	100 k bit/s	8
800 k bit/s	1	80 k bit/s	9
666 k bit/s	2	50 k bit/s	10
500 k bit/s	3	40 k bit/s	11
400 k bit/s	4	20 k bit/s	12
250 k bit/s	5	10 k bit/s	13
200 k bit/s	6	5 k bit/s	14
125 k bit/s	7		

Table 4.1 CAN-Bus baud rate and corresponding digital comparison table

4.3 Finish the configuration

When the configuration is complete, click "DownLoad" to download the configuration information into the "Flash" of GCAN-202 .



Please note: power-on again after the completion of the download, and then the new configuration will take effect.

4.4 Save / load the configuration file

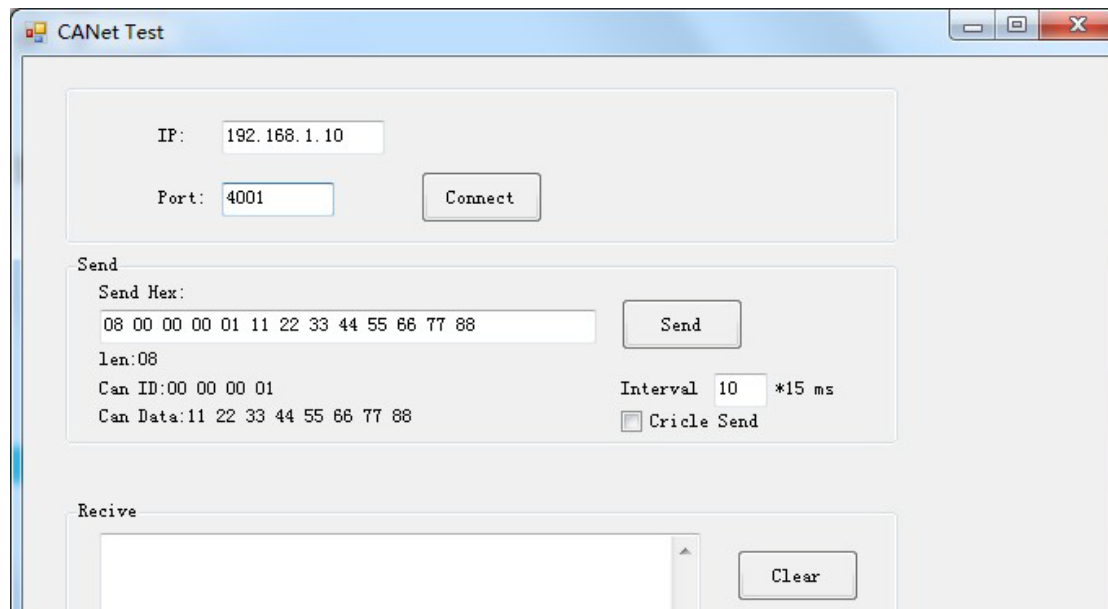
You can click "SaveAs", save the data in the computer. This configuration file can also be opened by the button "Open" for later use.

4.5 Upgrade GCAN-202(use this function under guidance)

If you need to upgrade, please contact us.

5. Simple test

GCAN-202 simple test software is use for testing GCAN-202 in the "TCP Server" mode.



You can enter the IP address of the GCAN-202 at "IP", enter the port number of the CAN channel in "Port", and click "Connect" to connect the converter.

If the CAN bus send the data, the software will automatically receive, and display in the interface of "Receive" . If you want to send data to the CAN bus, edit the data in the "Send" in accordance with the rules.

6. Technical specifications

Connection	
PC interface	Ethernet interface, RJ45
CAN interface	Terminal blocks
Interface characteristics	
Ethernet interface	10 / 100M adaptive
CAN interface	ISO 11898 standard, CAN2.0A/B
CAN baud rate	5Kbit/s~1Mbit/s
Electrical isolation	1500V, DC-DC
CAN termination resistor	Has been integrated, through the DIP switch to select whether to enable
Power supply	
Power supply voltage	+9~30V DC
Power supply current	50mA (24V DC)
Environmental testing	
Power supply voltage	-40℃~+85℃
Power supply current	15%~90%RH, no condensation
EMC test	EN 55024:2011-09 EN 55022:2011-12
Protection grade	IP 20
The basic information	
Outline size	118mm *93mm *23mm
Weight	220g

Sales and service

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