Model: UT-5204

(Product Name：RS-232/RS-485 to 4 Ports RS-485 Hub)

Datasheet

1. Overview

UT-5204 is a hub special designed for RS-485 BUS under complicated electromagnetic field. The transmission rate for this hub is as high as 115.2KBPS. To ensure the safety and reliability of the data communication, RS-485 port adopts optoelectronic isolation technology to prevent from lightning and surge; the built-in optoelectronic isolator and 600W surge protection circuit can provide 2,500V isolated voltage for lightning and ESD protection. Meanwhile, it adopts external switch power, prevents from common ground interference; it is quite good for outdoor application.

Under RS-485 working mode, the distinguished circuit can automatically identify the direction of data flow, and switch it automatically, so as to control the circuit, solve RS-485 time delay problem. The transmission distance of RS-485 port is more than 1,200m. This model is widely used in highway toll system, road monitoring system, and power system.

UT-5204 RS-485 HUB supports star RS-485 BUS connection. Each port supports short-circuit, open-circuit protection, 2,500V optoelectronic isolation. User can easily change the structure of RS-485 BUS, divide the network segment, and improve the communication reliability. When the device breaks down, the network segment with problem will be isolated, so as to ensure other network segment working smooth; this performance greatly improve the reliability of RS-485, and shorten the maintenance time of the network.

2. Major Functions & Features

- Supports RS-232/RS-485 to 4 ports RS-485 hub

3. Technical Parameters

- Standards: RS-232C, RS-485 EIA/TIA
- Interface: RS-232C: 10-pin terminal block
- RS-485: 10-pin terminal block
- Transmission media: Twisted-pair or shielded cable
- Working mode: Asynchronous half-duplex
- Operating power: 9-30VDC/350mA
- LEDs for indicating PWR TXD, RXD, and E1-E4 activity
- Isolated voltage 2,500VRMS 500 DC, DC/DC module
- Baud rate: 300bps-115.2kbps
- Protection level: RS-232 ±15KV ESD protection
- RS-485 provides each wire with 600W lightning, surge protection
- Transmission distance: 0-5,000m (115,200-300bps)
- Dimension: 120×80×25mm
- Operating temperature: -40 °C to 85 °C
- Relative humidity: 5% to 95%
- Work with all communication software, plug & play

4. Interface Definition

RS-232C interface definition

10-position blocks	Definition	Signal description
1	GND	GND
2	GND	GND
3	GND	GND
4	RS-485-	RS-485- Input
5	RS-485+	RS-485+ Input
6	GND	GND
7	RXD	RS-232 Input
8	TXD	RS-232 Output
9	VCC	9-30CDC Input
10	GND	Power ground

RS-485 interface definition

10-position blocks	Definition	Signal description
1	T/R1+	RS-485+ Output
2	T/R1-	RS-485- Output
3	T/R2+	RS-485+ Output
4	T/R2-	RS-485- Output
5	T/R3+	RS-485+ Output
6	T/R3-	RS-485- Output
7	T/R4+	RS-485+ Output
8	T/R4-	RS-485- Output
9	GND	Isolated ground wire
10	GND	Isolated ground wire

5. Product View (Appearance)

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6. Structure dimensions
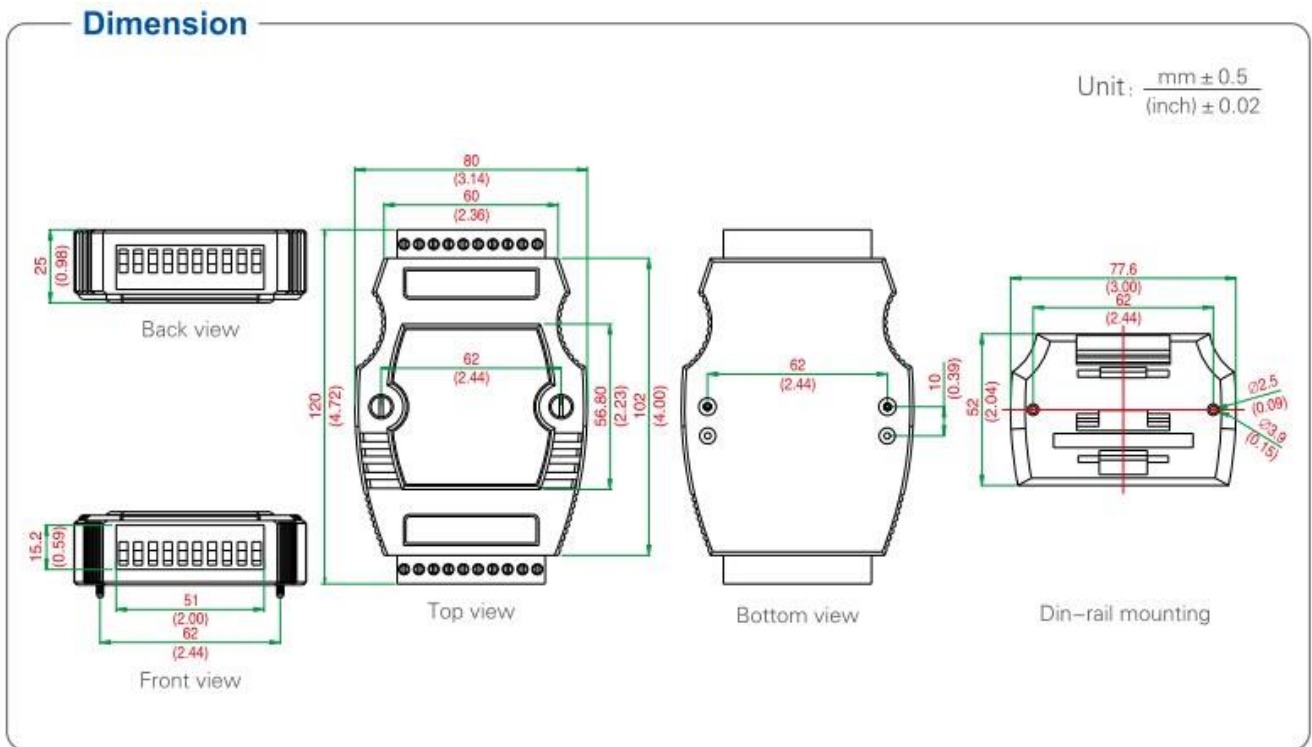
7. Ordering

Model	Signal/Port		Protection		Baudrate	Environment			Power	
	RS–232/485	RS–485				Temperature		Humidity		
	Terminal block	Terminal block	RS–232	RS–485/422		-25/70℃	-40/85℃	5–95%	Port-Powered	External Power
UT-5204	✓	✓	±15KV ESD	600W Surge	300bps–115.2kbps		✓	✓		9–30VDC
UT-5202	✓	✓	±15KV ESD	600W Surge	300bps–115.2kbps		✓	✓		9–30VDC

Accessaries: Din–rail mounting