



FS-485E

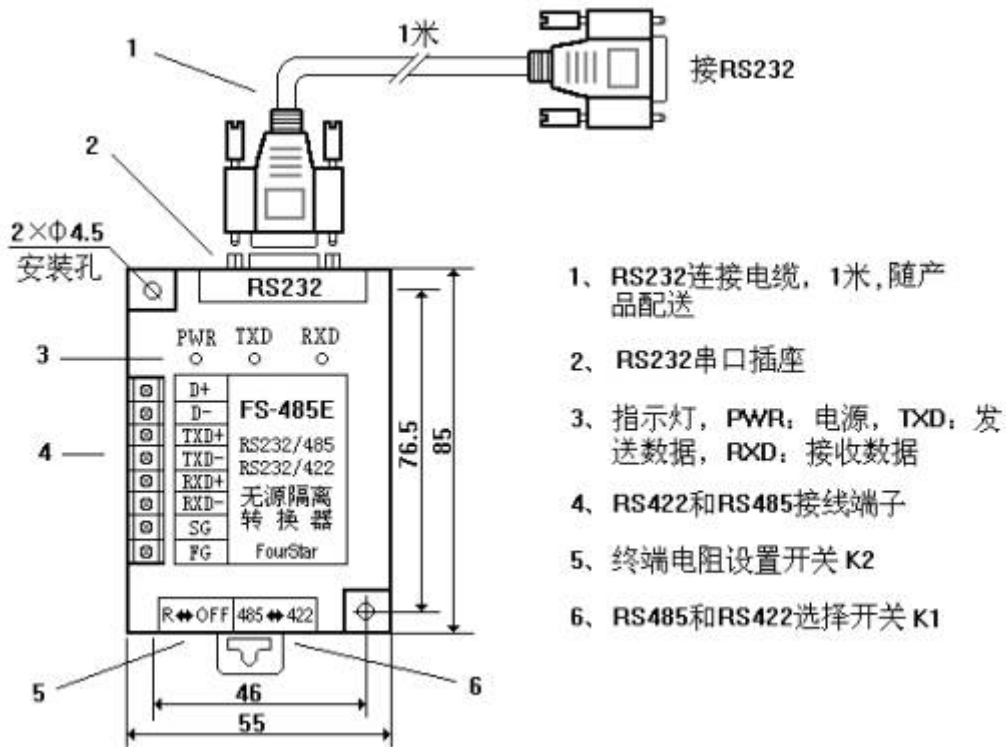
RS232/RS485/422 no-power isolated converters Manual

FS-485E is to realize communication conversion from RS232 to RS485 and RS422. The power of this product directly from RS232 serial port without additional power and can realize the photoelectric isolation from RS232 to RS485/422. Use the unique zero-delay automatic sending and receiving conversion technique and baud rate adaptive technique. Plug-and-play, suit for all software, the efficient circuit and the unique DC/DC isolation technique ensure this converter's normal work, and in the high resistance state when not sending data. Support multi-point communication, which is different from other similar cheap products in market. There is a built-in anti-static anti-lightning circuit in the product. Uniquely with power and sending/receiving indicator lights, the shape is the industrial structure of standard rail installation.

Technical details:

- 1, applies to all standard RS232 serial port, only use TXD, RXD, GND
- 2, output is the four-wire full-duplex RS422 interfaces and second-line half-duplex RS485 interfaces
- 3, External power, TXD power supply is ok, use RTS,DTR to help supply power
- 4, photoelectric isolated voltage: 1000VDC (up to 3000VDC, statement is needed when ordering)
- 5, use the shielded twisted pair whose sectional area is over 0.5 mm² as communication lines
- 6, the largest communication distance is 1.8km (9.6Kbps) 、1km (19.2Kbps) , need TXD、RTS、DTR power supply, the greatest communication distance is no more than 100m when only TXD supply power
- 7, the largest number of network site is 64.
- 8, the greatest communication rate is 115.2 Kbps, baud rate adaptive
- 9, a transient voltage suppression, can withstand the transient over-voltage whose power is up to 600 W and electrostatic discharge and lightning strikes impact
- 10, temperature: -20 ~ 70 °C
- 11, installation: installation of 35 mm standard rail and the bolt hole
- 12, Dimensions: 85 × 55 × 25

Products' shape and definition of video signals:



Signal definition of RS485/422 connection terminal

Signal-name	description
D+	RS485 signal positive
D-	RS485 signal is negative
TXD+	RS422 signal sending positive

TXD-	RS422 signal sending negative
RXD+	RS422 signal receiving positive
RXD-	RS422 signal receiving negative
SG	Signal ground
FG	Shielding ground (chassis ground)

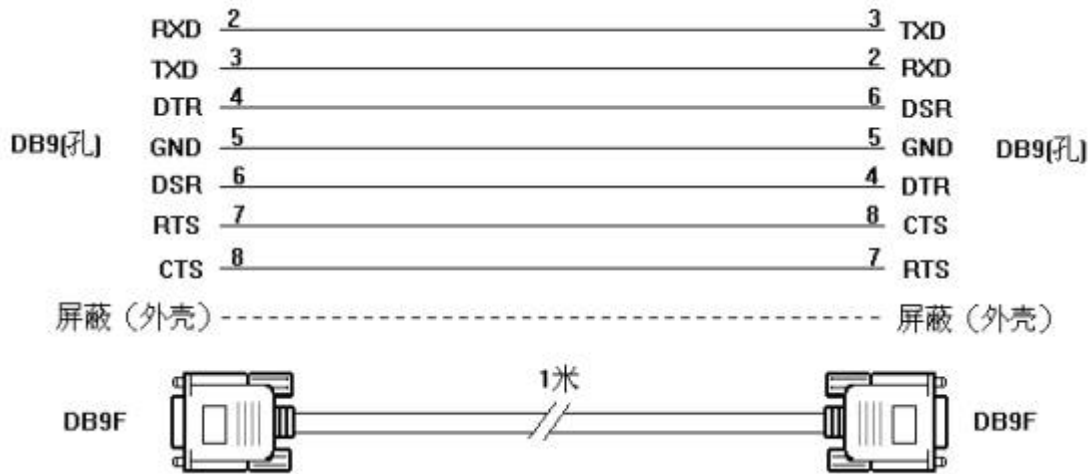
RS232 socket (DB9M)

Pin number	Signal-name	description
1	+5V	External connect 5V assistant power supply, use when the power supply of RS232 is not sufficient
2	RXD	RS232 signal receive

3	TXD	RS232 signal send
4	DTR	Get data terminal ready, have short connected with 6
5	GND	Signal ground
6	DSR	Get data device ready, have short connected with 4
7	RTS	Request to send, have short connected with 8
8	CTS	Allow to send, have short connected with 7
9	Not be used	Not be used

link of FS-485E and the RS232 interface of equipment:

FS-485E can connect any RS232 serial interface, the RS232 socket of this product is defined by standard DTE interface. cable can be used to connect standard DCE interface. A crossover cable is needed for the DTE interface such as computer, as shown below , and this cable is incidental with the product. For other RS232 mouth witch didn't array as standard signals, users should link sending to receiving, receiving to sending

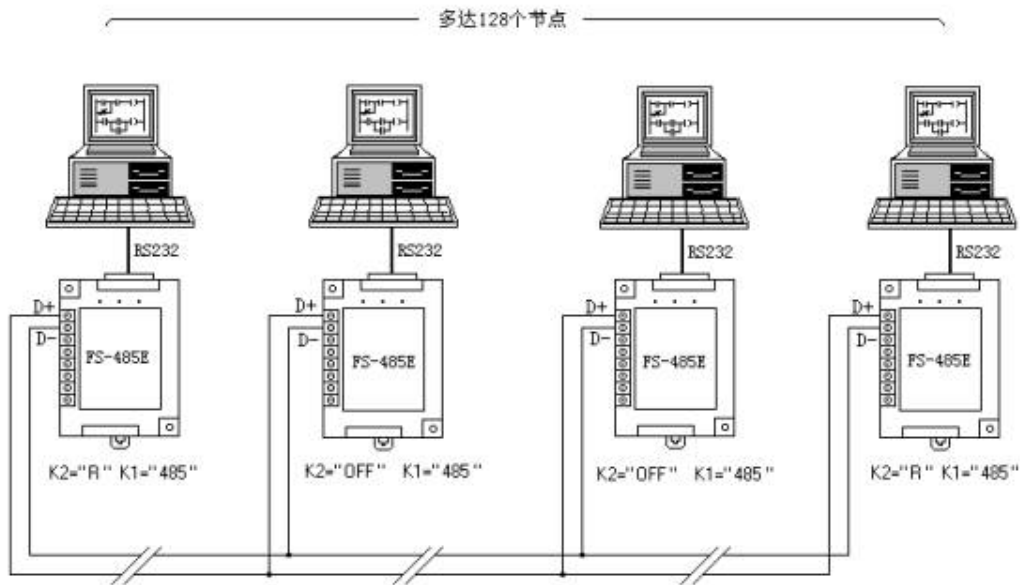


The application of products:

FS-485E can be used for point-to-point communications and multi-point communications. Except for linking several other RS485/422 interfaces, it can also make as many as 128 RS232 interfaces compose of RS485 or RS422 communication network, its communication range is up to 1.8 km. The addresses of each nodes are determined by the internal procedures of the equipment. Please connect the shield to the "FG" terminal of products when using shielded twisted pair,.

1, second-line half-duplex RS485 communication network:

Turn the RS485 and RS422 selection switch K1 of FS-485E converters to "485", the terminal resistance setting switch K2 on FS-485E of network's terminal and start to "R", the terminal resistance setting switch K2 on other FS-485E of the network to "OFF".



2, 4-wire full-duplex RS422 communication network

Turn the RS485 and RS422 selection switch K1 of FS-485E converters to "422", the terminal resistance setting switch K2 on FS-485E of network's terminal and start to "R", the terminal resistance setting switch K2 on other FS-485E of the network to "OFF".

