

Serial/Ethernet Converter

IE-CS-2TX-1RS232/485
IE-CST-2TX-1RS232/485
IE-CS-2TX-2RS232/485
IE-CST-2TX-2RS232/485

Hardware Installation Guide

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Please note:

This document, the **detailed manual and any further** product information - if available - can be downloaded at the internet link:

<http://www.weidmueller.com/downloads>

- For manual select <Print Media> then goto Section <Industrial Ethernet>
- For SE-Converter Administration Software, Windows Com-Port driver or Firmware Update select <Software> then goto Section <Industrial Ethernet>

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Weidmüller 

1. Overview

The Serial/Ethernet converters from Weidmüller deliver easy and reliable serial-to-Ethernet connectivity for the industrial automation market. The converters support several operation modes - TCP Server, TCP Client, UDP, Real COM, RFC2217, RTelnet, Pair Connection, and Ethernet Modem - ensuring the compatibility of network software, and are an ideal choice for connecting RS-232/422/485 serial devices, such as PLCs, sensors, meters, motors, drives, barcode readers, and operator displays.

2. Package Checklist

Before installing the Serial/Ethernet converter, verify that the package contains the following items:

- 1 Serial/Ethernet Converter
- Documentation and Software CD
 - **Please download CD-ROM content from Internet page <http://www.weidmueller.com/downloads>**
 - **For manual select <Print Media> then goto Section <Industrial Ethernet>**
 - **For Administration Software, Windows Com-Port driver or Firmware Update select <Software> then goto Section <Industrial Ethernet>**

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If any of these items are missing or damaged, please contact your Weidmüller customer service for assistance.

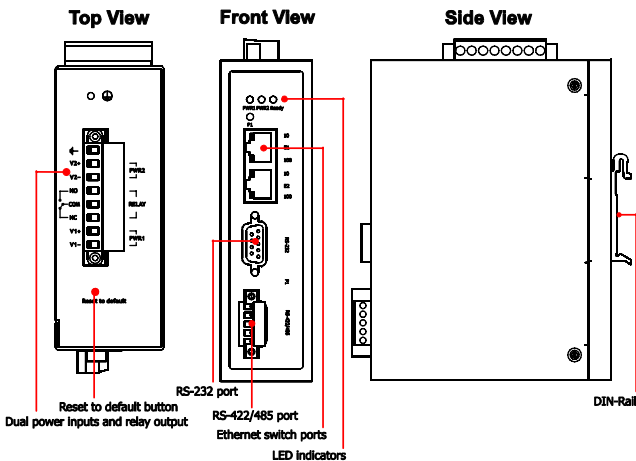
3. Hardware Introduction

The **IE-CS(T)-2TX-1RS232/485** is equipped with **one RS-232 DB9** serial port and **one RS-422/485** terminal block for serial data communication.

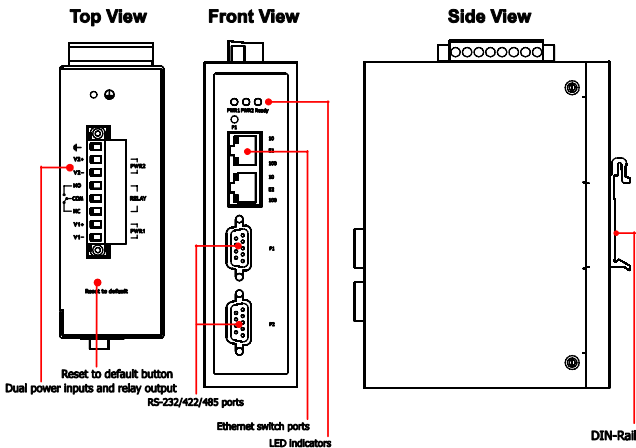
The **IE-CS(T)-2TX-2RS232/485** is equipped with **two RS-232/422/485 3-in-1 DB9** serial ports for serial data communication.

Each model has one 8-contact screw-type terminal block, which is located on the top for power input and relay output.

Appearance of the IE-CS(T)-2TX-1RS232/485



Appearance of the IE-CS(T)-2TX-2RS232/485



Reset to factory settings

To load the factory default settings depress the reset button for 5 continuous seconds. Use a pointed object, such as a straightened paper clip or toothpick, to depress the Reset button. This will cause the Ready LED to blink on and off. When the factory default settings are loaded then the Ready LED stops blinking (after about 5 seconds). At this point, you can release the Reset to default button.

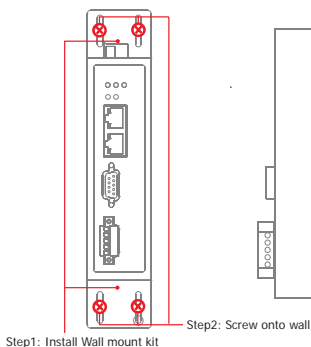
Serial/Ethernet Converter LED Indicators (front panel)

| Name | Color | Function |
|------------|--------|---|
| PWR1, PWR2 | Red | Power is being supplied to power input PWR1 or PWR2 |
| Ready | Red | Steady on: Power is on and the Serial/Ethernet Converter is booting up. Blinking: Indicates an IP conflict, the DHCP or BOOTP server did not respond properly, or a relay output occurred. |
| | green | Steady on: Power is on and the Serial/Ethernet Converter is functioning normally. Blinking: The Serial/Ethernet Converter has been located by the Administrator's "Locate" function. |
| | off | Power is off, or a power error condition exists. |
| E1, E2 | orange | 10 Mbps Ethernet connection. |
| | green | 100 Mbps Ethernet connection. |
| | off | Ethernet cable is disconnected, or has a short. |
| P1, P2 | orange | Serial port is receiving data. |
| | green | Serial port is transmitting data. |
| | off | No data is being transmitted or received through the serial port. |

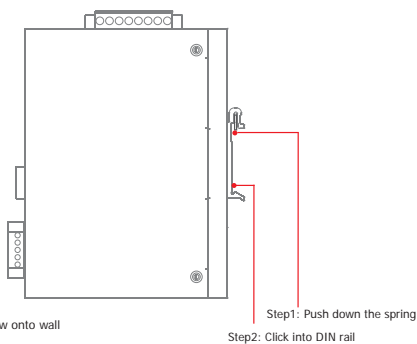
4. Hardware Installation Procedure

- STEP 1: After removing the Serial/Ethernet Converter from the box, first connect the power adaptor. Connect the 12-48 VDC power line with the terminal block, or connect the DIN-Rail power supply with the Serial/Ethernet Converter's terminal block.
- STEP 2: Connect the Serial/Ethernet Converter to a network. Use a standard straight-through Ethernet cable to connect to a Hub or Switch. When setting up or testing the Serial/Ethernet Converter, you might find it convenient to connect directly to your computer's Ethernet port. Use a cross-over Ethernet cable if the PC don't support autocrossing.
- STEP 3: Connect the Serial/Ethernet Converter's serial port to a serial device.
- STEP 4: The Serial/Ethernet Converter is designed to be attached to a DIN-Rail or mounted on a wall. For DIN-Rail mounting, push down the spring and properly attach it to the DIN-Rail until it "snaps" into place. For wall mounting, install a wall mount kit first, and then screw the device onto the wall. The following figure illustrates the two mounting options:

Wall Mount Installation



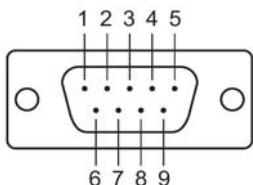
DIN-Rail Installation



5. Software Installation Information

Install the Weidmüller SE-Converter Administration tool either from the software CD or download it from the Weidmüller website <http://www.weidmueller.com/downloads>. Once the installation window opens, click on the Installation button and follow the instructions on the screen. If you need detailed information about using the SE-Converter Administration, please take a look into the Online-Help of the software.

6. Pin Assignments and Cable Wiring



RS-232/422/485 (Male DB9) Pinouts

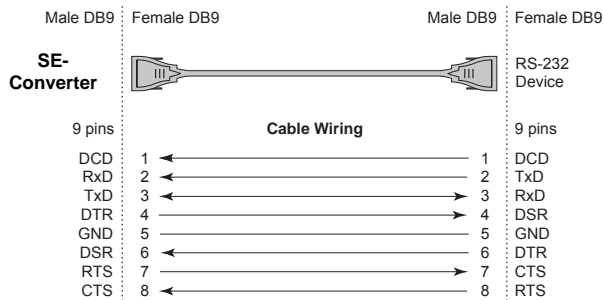
| PIN | RS-232 | RS-422/ RS-485 (4-wire) | RS-485 (2-wire) |
|-----|--------|----------------------------|-----------------|
| 1 | DCD | TxD-(A) | --- |
| 2 | RXD | TxD+(B) | --- |
| 3 | TXD | RxD+(B) | Data+(B) |
| 4 | DTR | RxD-(A) | Data-(A) |
| 5 | GND | GND | GND |
| 6 | DSR | --- | --- |
| 7 | RTS | --- | --- |
| 8 | CTS | --- | --- |
| 9 | --- | --- | --- |

Pinouts of the Terminal Block (RS-422 / RS-485)

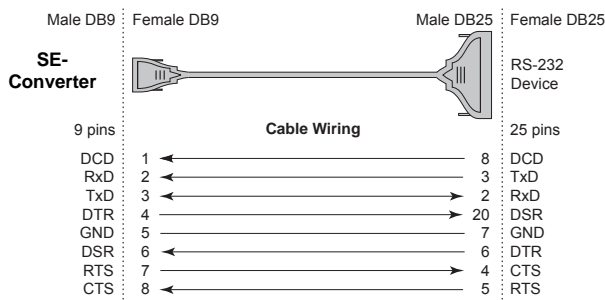


| PIN | RS-485 2-wire | RS-422/ RS-485 4-wire |
|-----|------------------|--------------------------|
| 1 | --- | TxD+(B) |
| 2 | --- | TxD-(A) |
| 3 | Data+(B) | RxD+(B) |
| 4 | Data-(A) | RxD-(A) |
| 5 | GND | GND |

Female DB9 to Male DB9



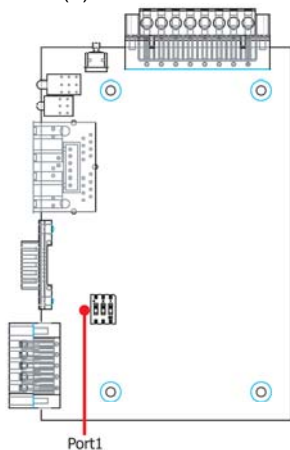
Female DB9 to Male DB25



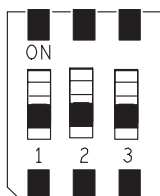
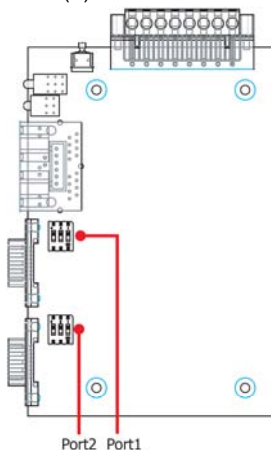
7. Pull-high, Pull-low, and Terminator for RS-485

Remove the Serial/Ethernet Converter's top cover and you will find DIP switches to adjust each serial port's pull-high, pull-low, and terminator.

IE-CS(T)-2TX-1RS232/485



IE-CS(T)-2TX-2RS232/485



| SW | 1 | 2 | 3 |
|-----|------------------------------|------------------------------|-------------------|
| | ON | Pull-high | Pull-low resistor |
| ON | 1 K Ω | 1 K Ω | 120 Ω |
| OFF | 150 K Ω ¹⁾ | 150 K Ω ¹⁾ | --- ¹⁾ |

1) Default

8. Specifications

Power requirements IE-CS(T)-2TX-1RS232/485:
12 to 48 VDC, 220 mA@12 VDC; 110 mA@24VDC

IE-CS(T)-2TX-2RS232/485:
12 to 48 VDC, 250 mA@12 VDC; 125 mA@24VDC

Operating temp. 0 to 60°C (32 to 140°F) for standard models
-40 to 75 °C (-40 to 167 °F) for extended temperature models

Operating humidity 5 to 95% RH

| | |
|-----------------------|---------------------------------------|
| Dimensions | 36 x 105 x 140 mm |
| (W×D×H) | 1.42 x 41.34 x 55.12 in |
| Surge protection | 1 KV for serial ports |
| | 1 KV for LAN ports |
| ESD protection | 15 KV for all signals |
| Magnetic isolation | 1.5 KV for Ethernet |
| Power line protection | 4 KV Burst (EFT), EN61000-4-4 |
| | 2 KV Surge, EN61000-4-5 |
| Regulatory approvals | CE/FCC Class A, UL 508, ATEX, Class 1 |
| | Div. 2 / Zone 2 |
| Warranty | 5 years |

Weidmüller gives a 5 year warranty on this product in accordance with the warranty terms as described in the general conditions of sale of the Weidmüller company which has sold the products to you. Weidmüller warrants to you that such products the defects of which have already existed at the time when the risk passed will be repaired by Weidmüller free of charge or that Weidmüller will provide a new, functionally equivalent product to replace the defective one. Safe where expressly described otherwise in writing in this catalogue/product description, Weidmüller gives no warranty or guarantee as to the interoperability in specific systems or as to the fitness for any particular purpose. To the extent permitted by law, any claims for damages and reimbursement of expenses, based on whatever legal reason, including contract or tort, shall be excluded. Where not expressly stated otherwise in this warranty, the general conditions of purchase and the expressive liability commitments therein of the respective Weidmüller company which has sold the products to you shall be applicable.

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