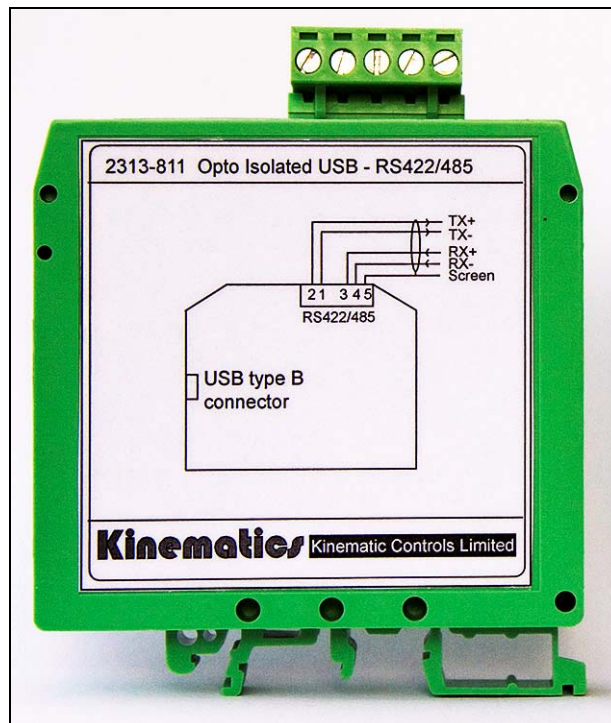


CommOptic Model 2313-811 Optically Isolated Din Rail Mounting USB to RS422/485 Protocol Converter

The CommOptic model 2313-811 provides conversion from USB to RS422/485 with optically isolated transmit and receive circuits. The mode of operation is configured by setting jumpers on internal links.



Specifications

Power Supply:

Powered via the USB connector

Max Baud Rate:

115,200 bps

USB Connector: type B

RS422/485 Connector: 5 way pluggable screw terminal

Direction Change for RS485 mode: automatic

Line Termination:

An internal receive line termination of 120ohms nominal is provided. This termination is enabled via an internal jumper link.

Indicators:

LED Indicators are provided for Transmit and Receive signals

Dimensions:

90mm high X 80mm width X 25mm thick (ie rail width)

Installation

The Model 2313 employs an FT232R series USB to serial device manufactured by FTDI. To install the Model 2313 as a VCP (Virtual COM Port) carry out the following setup according to the target operating system.

A. Windows XP or Vista

Connect via the USB cable to the PC and Windows should automatically find and configure the Model 2313 as a new serial port. If required a current set of drivers and setup guide can be found in the WinXP-Vista folder on the accompanying CD.

B. Windows 98

Connect via the USB cable to the PC and load the drivers in the Win98 folder on the accompanying CD. Refer to page 8 section 2.2 of the Windows 98 Installation guide for details on how to install as a VCP (Virtual COM Port). This installation guide can be found in the Win98 folder on the accompanying CD.

C. Other Operating Systems

For other operating system such as Mac OS, Linux, Windows CE etc refer to the VCP (Virtual COM Port) drivers section on the FTDI site <http://www.ftdichip.com/>. The site will have the most up to date and any new drivers.

Jumper Link Settings

Note: J3 is an optional line termination link and would normally be fitted only to the 2313 at each end of the transmission cable. Any more than two terminated devices in a system will cause the signal level to be attenuated.

The links LK1 and LK2 select the operation mode for the Transmitter and Receiver sections as per table 1 below.

| | |
|------------|--|
| LK1 – FULL | Transmitter always enabled |
| LK1 – HALF | Transmitter enabled during transmit only |
| LK2 – FULL | Receiver always enabled |
| LK2 – HALF | Receiver enabled when not transmitting |

Table 1.

Typically the half duplex settings would be used for RS422(4 wire) multidrop and for RS485 (2 wire) operation.

Recommended cable Manufactures and cable types

- A./ Twin twisted pair for RS422 connection
- MM Cables type B2002 CS
 - TYCAB AUSTRALIA type DPF4702

- B./ Single twisted pair for RS485 connection
- MM Cables type B2001 CS
 - TYCAB AUSTRALIA type DPF2702

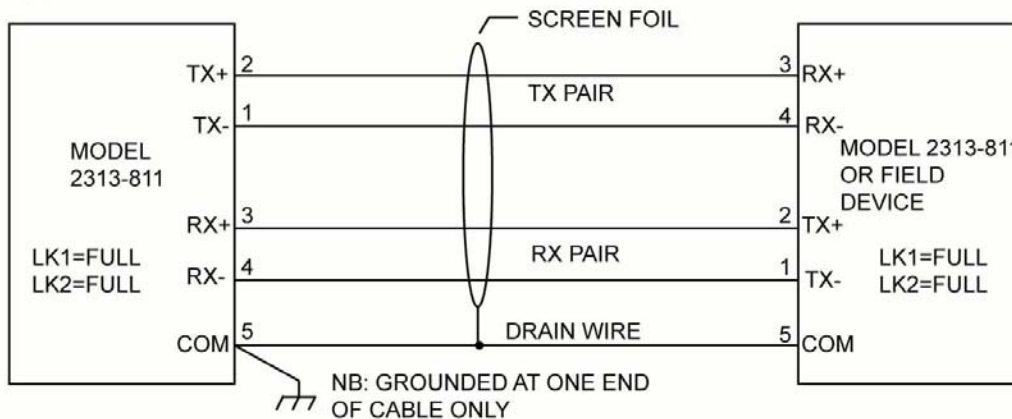
Connection Method

Connect the data cable as shown in the following sketches below.

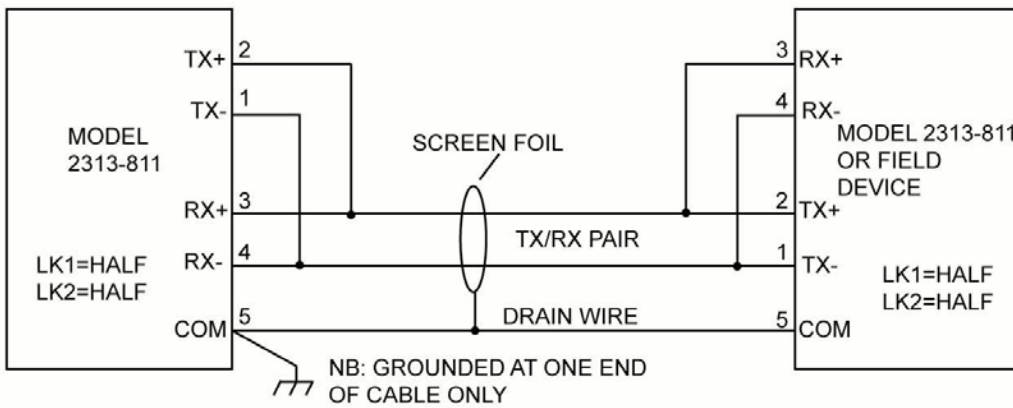
To minimise noise pickup the data cable should be separated from Power cables by a distance of 300mm. If the data cable has to pass over Power cables this should be at right angles where possible. Avoid running the data cable for long distances in trunking carrying power cables unless the above separation distance is made.

Limit the maximum data cable length to 1.2Km

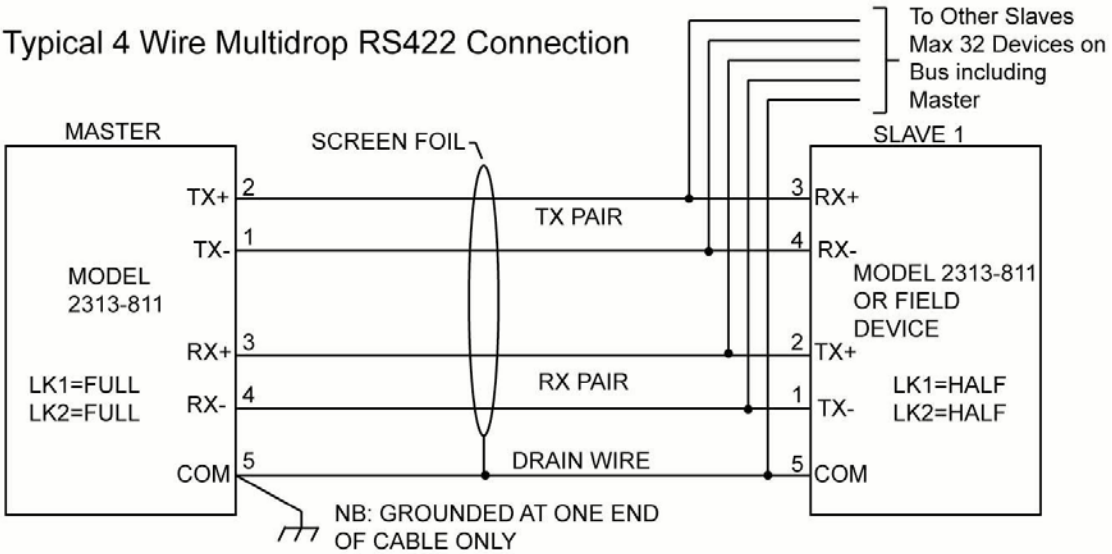
Typical 4 Wire RS422 Connection



Typical 2 Wire RS485 Connection



Typical 4 Wire Multidrop RS422 Connection



Typical 2 Wire Multidrop RS485 Connection

