Accessories Tde Macno

User's Manual

Usb RS485-232 converter (374I00070V)

Cod.MA00101E00V_1.4

BDF DIGITAL

ECS TDE MACNO

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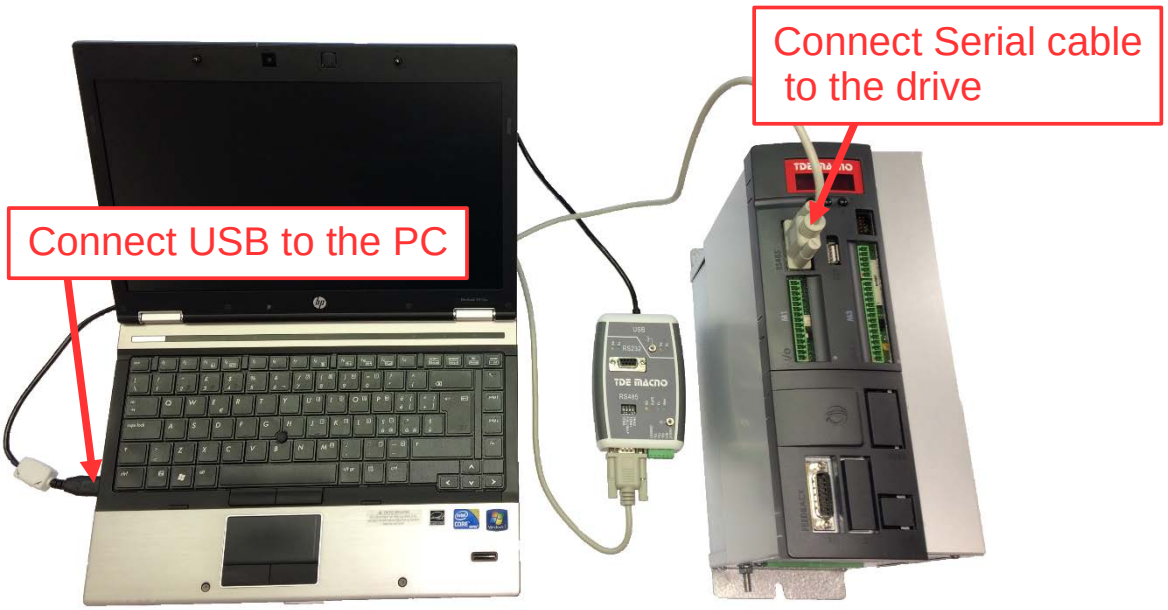
1 INSTALLATION DOCUMENTS

Follow this link: http://www.ftdichip.com/Documents/InstallGuides.htm
Drivers link: http://www.ftdichip.com/Drivers/VCP.htm

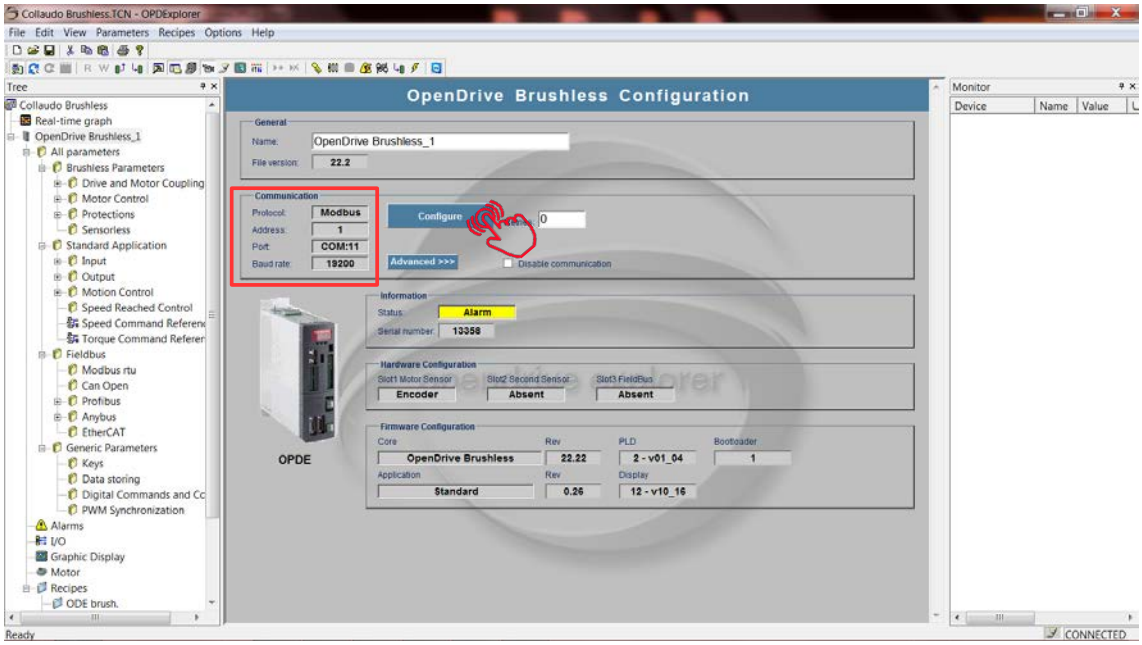
Drivers from TDEMACNO website (direct link): USB RS485-232 CONVERTER DRIVERS

2 CONNECTIONS



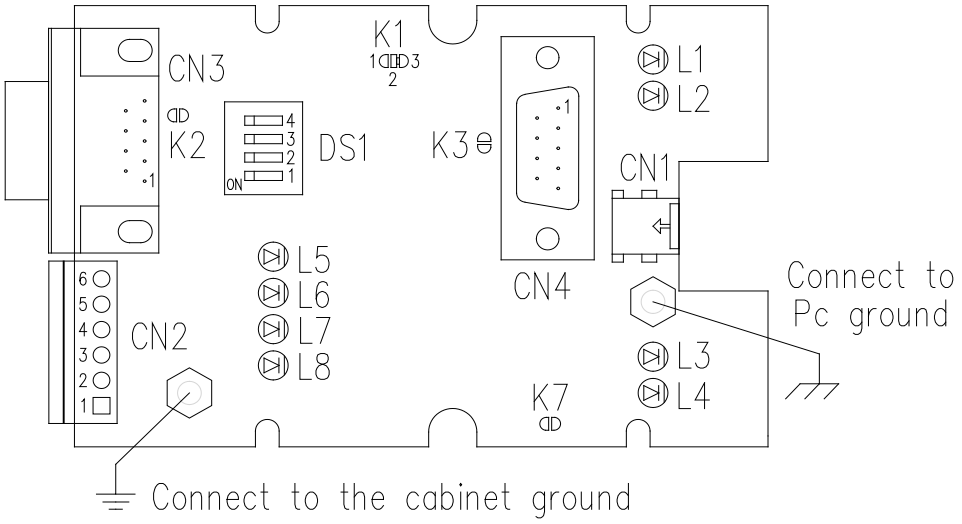
Connect the drive to the PC by RS485-232 converter and install the drivers in the PC. After that open the supervisor OPDExplorer and set the Modbus comunication with these info:

- COM port of the PC;
- Address (P92) of the drive;
- Baud rate (P93) of the drive.

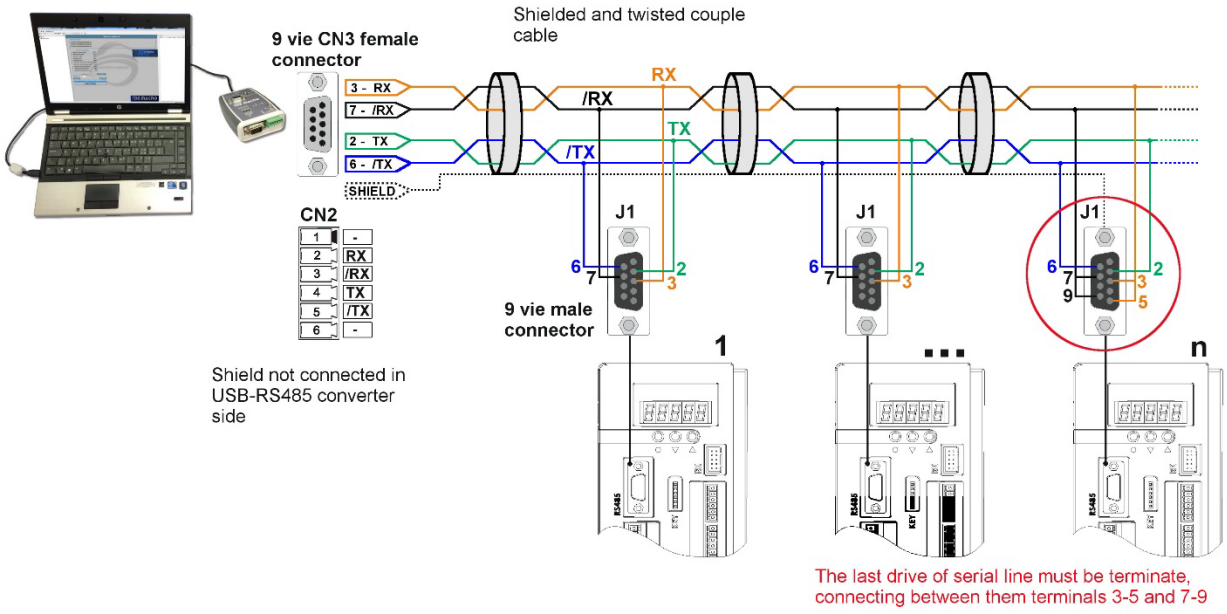


Now the PC is ready to be connected with the drive.

CN3 *RS422/RS485*	**CN2** *RS422/RS485*	**CN4** *RS232*
1: GNDExt	1:+5Ext	1:n.c.
2: RX+	2: RX+	2:TX-232
3: TX+	3: RX-	3:RX-232
4: K2=close Term -	4: TX+	4:n.c.
5: Term +	5: TX-	5:GNDExt
6: RX-	6: GNDExt	6:n.c.
7: TX-		7:n.c
8: PROG pin		8:n.c
9: Term -.		9:(opt “MONITOR”=RX-USB)



3 SERIAL LINE



The serial line present on OPDE / MiniOPDE drives has connection capability for “4-wire” data transmission and therefore it can communicate in full-duplex mode. As a fact, by virtue of the protocol used (MODBUS RTU), it always communicates in “half-duplex” mode, wherefore you can make the connection with just “two wires” by connecting RX and TX and /RX and /TX between them.

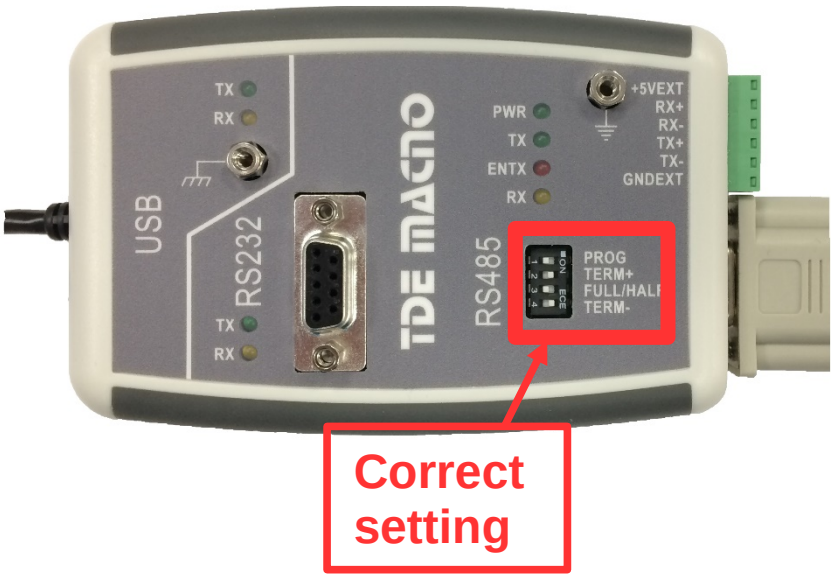
In connector J1 (OPDE) / J3 (MiniOPDE), RX and /RX signals are the reception signals for the drive, while TX and /TX are the transmission signals.
Impedances are fitted inside the drive to “terminate” the connection (120Ω) and polarize the line. To use this terminal, connect between them terminals 5 - 3 and 9 - 7 of connector J1 (OPDE) / J3 (MiniOPDE) (**for the last drive in the line only**).

Communication wires must be twisted.

4 LED DESCRIPTIONS

LED	Descriptions
L1	RX-RS232
L2	TX-RS232 (option “MONITOR”=RX-USB)
L3	RX-USB
L4	TX-USB
L5	RX-RS422/RS485
L6	ENABLE TX-RS422/RS485
L7	TX-RS422/RS485
L8	POWER SUPPLIES +5VExt

5 DIPSWITCH DESCRIPTIONS



N.PIN	Descriptions
1	PROG. -> On=Converter in program mode Off= terminal mode
2	**Term+ ON = Term+ and PullUp on the rx+ line (only in the first and the last receivers)**
3	ON = RS485 2wire OFF= RS422 4wire
4	**Term- ON = Term- and PullDw on the rx- line (only in the first and the last receivers)**

Open/Close both dip2 and dip4 together for bus termination.
Be carefull do not leave the floating potential GNDExt but fix it on the ground in just only one point.

6 SOLDER SWITCH

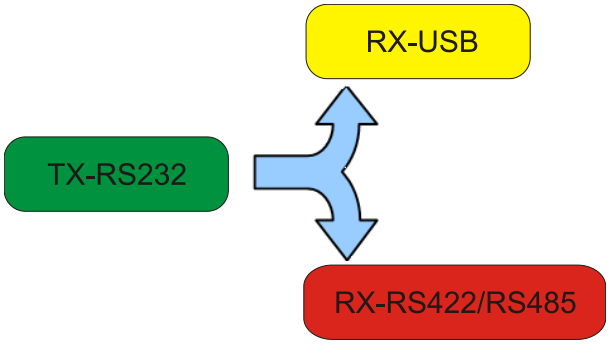
Solder switch monitor options	Default = RS232	Monitor options
K1	1-2 Closed / 2-3Open	1-2 Open / 2-3 Closed
K3		Closed

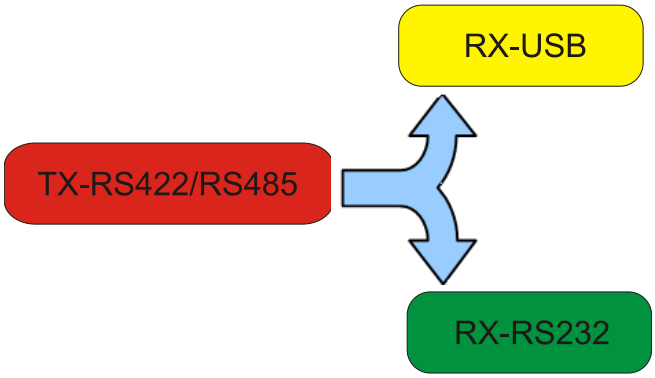
Solder switch	Descriptions
K2	Close only for compatibility with old OPD
K7	Power supplies from USB when use RS232 to RS422 without USB initialization/use

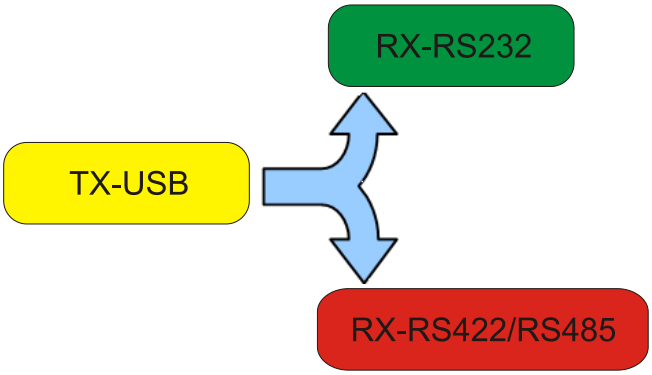
7 THE CONCEPT OF THE SISTEM

7.1 WHEN A TX DATA AS TRANSMITTED BOTH THE OTHERS PORTS RECEIVE THAT DATA

These three examples show the relationship between the sender and who receivers.
If we don't use the USB connector the converter need an external 5V on USB connector or from the pin1-6 of CN2.It is possible to use a normal USB power supplies on the USB cable but the internal K7 solder switch must be close.

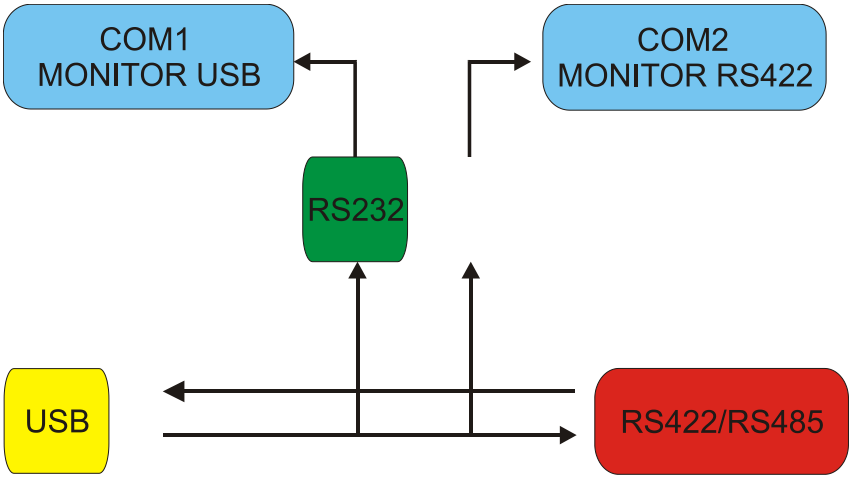






8 OPTION “MONITOR”

The "Monitor" option allows to receive on the RS232 pin2 connector the data transmitted from the RS485 and, on the pin9, the data from USB. To do this, please close K3 and open (with a cutter) the short circuit K1 (1-2) and closed K1 (2-3).



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