

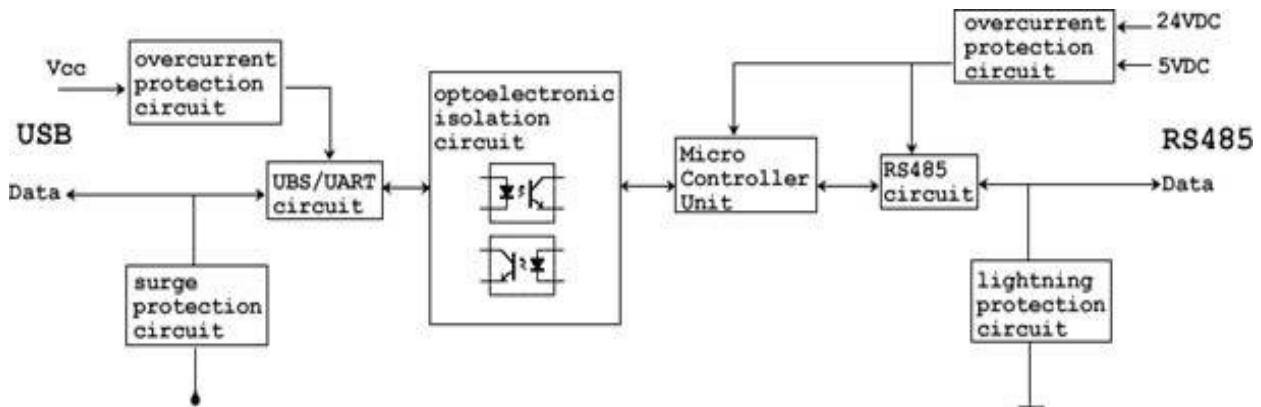
FEATURES

- **USB simulation as Virtual COM**
- **Fully compliant with USB V1.1 and USB V2.0**
- **Power supply by both USB main line and MPI programming port**
- **High optoelectronic isolation voltage**
- **Supports STEP7 V5.2 and higher**
- **Supports Windows2000 / Windows XP / Vista / Windows 7**



GENERAL DESCRIPTION

IC 3580-MPIVC is an isolated interface converter between USB port and asynchronous serial lines RS485 that guarantees a full isolation between USB and serial line RS-485, removing eventual ground-loop effects and allowing the use of the device even in the heavy environmental conditions. The device is protected by an anti-surge and an anti-lightning circuit for USB and RS485 interface. IC 3580-MPIVC supports communication between Siemens S7-300/400 series PLC or other equipments with MPI interface and computer via USB port. It support hot plug connection. IC 3580-MPIVC programming cable simulates USB port as traditional serial port (usually COM3) allowing programming softwares or SCADA applications to communicate with MPI devices through simulated COM port.



USER INSTRUCTIONS

Before installing the device, please read the "Installation Instruction" section.
 IC 3580-MPIVC can be connected directly to the SCADA, HMI or OPC-server software, that implement the MPI protocol via PC serial port (COM) .
 N.B. One USB adapter only can be linked to a PC.

TECHNICAL SPECIFICATIONS (Typical @ 25 °C and in the nominal conditions)

In compliance with USB 1.1 / 2.0 , EIA RS485			
USB interface		Power Supply	
Baud-rate	19.2Kbps~115.2Kbps	by both USB main line and MPI programming port with overcurrent protection and surge protection	
Connection	USB connector type "A"		
MPI (RS485) Interface		Power consumption	
Baud-rate	19.2Kbps~187.5Kbp	1W	
Connection	DB9	Isolations	
Number of modules in multipoint		USB / MPI (RS485)	
up to 32		1000 Vdc	
Internal terminator resistance (optional)		Temperature & Humidity	
120 Ohm		Operative temperature	
Maximum distance @ 187.5Kbps		-20 ÷ +75 °C	
1000 m (1)		Storage temperature	
		-40 ÷ +85 °C	
		Relative humidity (not condensed)	
		0 ÷ 90 %	
		Connection	
		USB	
		USB type "A" connector	
		MPI (RS-485)	
		DB9 male connector	
		Housing	
		Material	
		Self-extinguishing plastic	
		Dimensions in mm.(W x H x T)	
		100 x 50 x 20	
		Weight	
		about 100 gr.	
(1) – The maximum distance depends on number of devices connected, type of cabling, noises, etc...			

INSTALLATION INSTRUCTIONS

Before using IC 3580-MPIVC communication cable, USB device driver should be installed. After completing driver installation, the corresponding COM port for the IC 3580-MPIVC communication adapter will be displayed in the "Device Manager" of Window. The next step is just to select this COM port in programming or SCADA software and set other communication parameters settings (COM port baud rate and MPI port baud rate). Configuration is exactly the same as using traditional programming cables with RS232 interfaces.

If you meet problems using the virtual COM port, try to quit the software, to unplug the USB connector or re-install the USB driver.

STEP7 software settings:

Enter the main interface of STEP7 programming software (SIMATIC Manager), click on the "Set PG / PC Interface..." option under "Options" menu into the PG / PC interface settings.

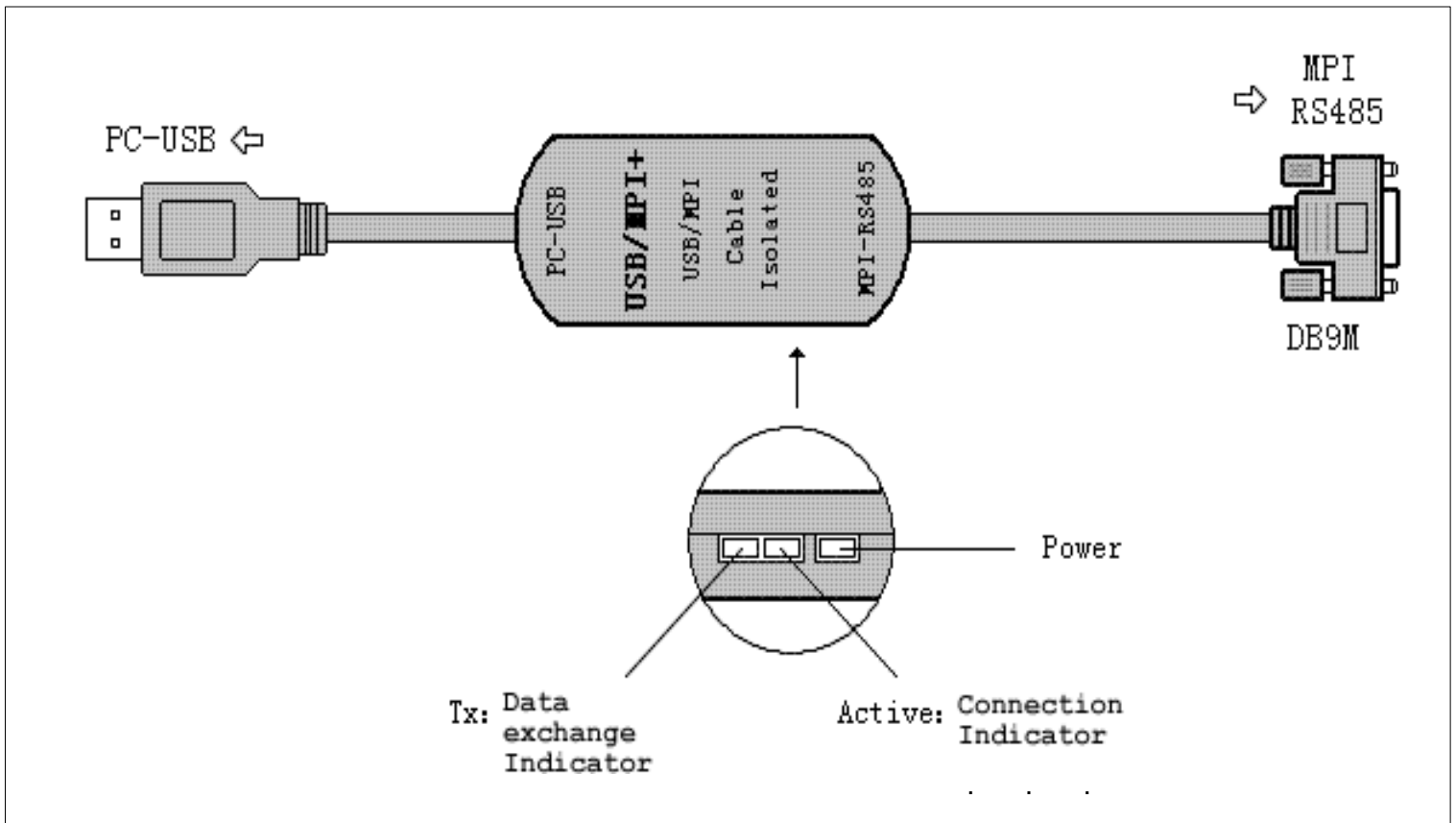
- 1) Double-click on "PC Adapter (MPI)" to set the parameters of COM port and MPI port. The adapter does not support "PC Adapter (PROFIBUS)" option.
- 2) Click on "Local Connection" section to set COM port parameters, choose the correct COM port in the equipment manager and select 9200 bps or 38400 bps as COM Communication baud rate. IC 3580-MPIVC will automatically adapt to the baud rate choice.
- 3) Click on "MPI" section to set MPI adapter parameters and select 187.5 Kbps or 19.2 Kbps as MPI baud rate, IC 3580-MPIVC adapter will automatically adapt to the baud rate choice. Set the other parameters as default.

Long distance communications:

RS485 interface allows, using certified cables, to communicate up to a distance of 1000m at a communication speed of 187.5Kbps. To reach this distance, it is necessary to introduce 120ohm terminal resistance between pin 3 and 8 on the RS485 port (DB9 Male) to eliminate signal reflection and to connect 24VDC power between pin 7 and 2

Please Note: USB interface cable cannot be extended

CABLING



MPI / RS485 (DB9M) SIGNAL DEFINITION

PIN	SIGNAL	DESCRIPTION
1	NC	Not Used
2	M24V	24VDC Power Negative
3	B	RS485 Positive Signal
4	RTSAS	Received Data Control
5	GND	RS485 Ground Signal
6	NC	Not Used
7	P24V	24VDC Power Positive
8	A	RS485 Negative Signal
9	RTS_PG	Sent Data Control

LIGHT SIGNALLING

LED	ON	BLINK	OFF
Power	Power On	Error	Error Or Power Off
Active	Connected	Data Exchange	Not Connected
Tx	Error	Data Exchange	No Data Exchange