Installation Instruction for TK503/504 Programming Cable for Windows 7

USB Driver Installation guide

1. Introduction

The TK503/TK504 Programming Cable is used to transfer data between the PLC and a PC or laptop. It is a serial connection to use for PLC programming purpose.

2. Description

The TK503/TK504 Programming Cable can be used to operate and configure the PLC via a PC or laptop. In order to do this, the Automation Builder software, driver and utility programs must be installed and a TK503/TK504 Programming Cable must be connected between PLC and PC.



3. Installation Requirement

The following installation requirement must be fulfilled:

- Operation system: Microsoft Windows 7
- Administrator rights
- USB port available for connecting the USB-ROM Stick with Automation Builder V1.1 or later and the programming Cable TK503 or TK504



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4. Installation Package

The driver installer is built as a single executable that reference a file called **setup.ini**. This .ini file contains all of the settings used for driver installation and uninstallation. The **TK503_TK504_In-staller.exe** and **setup.ini** combo should exist in a directory alongside the .sys driver files, .inf in-stallation files.

The structure of TK503_TK504_Installer Driver Package for Windows XP/7 looks like this:

- TK503_TK504_Installer.exe
- setup.ini (customized setup values)
- x64 (driver and library files 64 bit)
- x86 (driver and library files 32 bit)
- slabvcp.inf (INF file for driver)
- slabvcp.cat

Folders in WinZip File ×	2	Name	Туре	Modified
[TK503_TK504 programming cable		III TK503_TK504_Installer.exe	Application	11/3/2011 4:38 PM
TK503_TK504_programming_c		labvcp.inf	Setup Inform	11/3/2011 4:37 PM
퉲 хб4		Slabvcp.cat	Security Cata	12/5/2011 12:29 PM
🎳 x86		setup.ini	Configuratio	11/3/2011 4:37 PM
		🕌 x86	Folder	11/3/2011 4:38 PM
		📙 x64	Folder	11/3/2011 4:37 PM

5. Installation/Update for TK503/504 driver:

Before you can use the Programming Cables TK503/TK504, the appropriate USB Driver must be installed on your PC or laptop. The driver for the Programming Cables can be found from this link:

http://www.abb.us/abblibrary/DownloadCenter/?CategoryID=9AAC177443&View=Result&Docu mentKind=Software&QueryText=PS501-UPDA+OR+DM-UPDA&SortBy=ScorePre-Installation of the driver on your PC using the program **"TK503/TK504_Installer.exe"**.

5.1 Installation of the new hardware in Windows after the TK503/504 Programming Cable is plugged in for the first time.



6. Driver Installation

After the TK503/TK504 Programming Cable is plugged in for the first time, Windows will detect and install it automatically and create a virtual communication port (COM Port).

All communication ports can be viewed under **Device Manager** -> **Ports**. Open the **Device Manager** by right clicking "**Computer**" on your Desktop and choose **Properties** -> **Hardware** -> **Device Manager** in the context menu.



Installation Directory Selection (Win 7)

If the Windows 7 is 32-bit/64-bit version, the driver installation steps are the same as in Windows XP system. Typical steps can be seen:

6.1 Right click "TK503_TK504_Installer.exe" and run as administrator.



6.2 The following windows will appear.

TK503_TK504 programming cable Driver I Scanning	nstaller 23	AB Success		
8	Driver Version 6.5	Installator C:\Prog	stallation completed successfully n 6.5	;
Please wait while system is scanned Change Install Location		Chang	ОК]

6.3 Insert the TK503_TK504 programming cable in your PC or laptop, the following window can be seen by right clicking "Computer" and choose Properities -> Device Manager -> Ports (COM & PT).

File Action view Help	
⊿ 🛁 CN-L-0201024	
> Jar Batteries	
D Computer	
Disk drives	
Display adapters	
DVD/CD-ROM drives	
> 🕼 Human Interface Devices	
DE ATA/ATAPI controllers	
Imaging devices	
🖒 📲 Jungo	
Keyboards	
Mice and other pointing devices	
Monitors	
a 💽 Network adapters	
Cisco Systems VPN Adapter	
Intel(R) Centrino(R) Advanced-N 6205	
Microsoft Virtual WiFi Miniport Adapter	
Ports (COM & LPT)	
Technology SOL (COM3)	
TK503_TK504 programming cable (COM12)	
D Processors No	
D - D Security Devices	
SM Driver	
Sound, video and game controllers	
Image: A state of the state	
D - Universal Serial Bus controllers	
USB Virtualization	

6.4 Then right click "TK503_TK504 programming cable (COM12)" and you can see the device status is working properly.



ieneral	Port Settings D	Iriver Details	
	TK503_TK504 p	programming cable (COM12)	
	Device type:	Ports (COM & LPT)	
	Manufacturer:	ABB	
	Location:	Port_#0001.Hub_#0003	
- Devic This	ce status device is working	property.	*
This	e status device is working	property.	*
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This	xe status device is working	property.	*

6.5 Connect the TK503_TK504 programming cable to PLC, set communication between CoDeSys and PLC and login to CPU.

7. Using the Communication Port

7.1 How to change the COM Port Number in the Windows Device Manager

When the COM port of the driver can not be found in CoDeSys, then the COM port number must be changed. You can change the virtual COM port number in the "**Properities**" under "**Port Settings**" (the programming cable must be connected to a USB port of your computer).



• Click on the line "TK503/TK504 programming cable (COM...)" with the right mouse button and select "Properties" then select the tab "Port Settings" and set the COM Port Number under "Advanced".



TK503/TK504 programming cable (COM&) Properties	? ×		
General Port Settings Driver Details Power Management			
Bits per second: 9600			
Data bits: 8	•	Advanced Settings for COM3	? X
Parity: None	•		
Stop bits: 1	•	✓ Use FIFO buffers (requires 16550 compatible UART)	ОК
Flow control None	•	Select lower settings to correct connection problems.	Cancel
		Select higher settings for faster performance.	Defaults
Advanced Restore D	efaults	Receive Buffer: Low (1) High (14) (14)	
		Transmit Buffer: Low (1)	
	Canad	COM Port Number: COM3	

7.2 How to setup the TK503/504 driver in the 61131-3 Application (CoDeSys):

In CoDeSys the communication settings can be done via **Online -> Communication Parameters -> Port**, after that the TK503_TK504 programming cable can work properly to build up communication between CoDeSys and PLC.

- Install TK503_TK504 programming cable driver.
- Connect the TK503 programming cable or TK504 programming cable to PC.
- Windows detects the new hardware complete the installation.
- Start CoDeSys and open the project or create a new one.
- Create a new communication channel under "Communication Parameters".



• Set the new COM port.

Communication Parameters	×		
Channels Channels Console Cons	OK Cancel New Remove Gateway Update	Communication Parameters	Cancel Cancel Remove Gateway Update





The Port number here must be the same as the Port number list in the **Device manager** -> **Port** -> **TK503/TK504 Programming Cable (COMx)**, otherwise the communication cannot be established. Parameter "**Motorola byteorder**" must be set to **Yes**".

Login and Create the communication between CoDeSys and PLC.

Before excuting the login command please make sure the COM interface setting in *Automation Builder* software tool should be "COMx – Online Access".

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OUT	Download Rom Roop Reset Reset (chid) Reset (chid)		rs Sinets
	Togdé Unwigent Inniégent Dalog Step over Step n Single Gyde		ro Fait Re On PE
	Write Values Force Values Release Force Write Porce Stalog		0/4F7 F7 SHT+F7 0/4-9/64F7
	Show Call Stack Display Flow Cartrol		
	Simulation Mode Communication Parameters Send marked text to Remo	s ReControl Master (e.g	- as parameter)
	Greate boot project Write Rie to PLC Read File from PLC Show file of annotice		

What do you do if COM Port is not available?

• Right click "Computer" and choose Properties -> Device Manager, if you find the cable under "Other devices" as shown below:



It demonstrates that no driver was found for the TK503 programming cable. This could be the case if you have already connected the TK503 programming cable to your PC without pre-installation of driver on PC's operation system. In this case, proceeds as below:

- Right click the unrecognized device with the question mark symbol and select "Uninstall".
- Then carry out the pre-installation once more as described above before connecting the TK503 programming cable to your PC.

