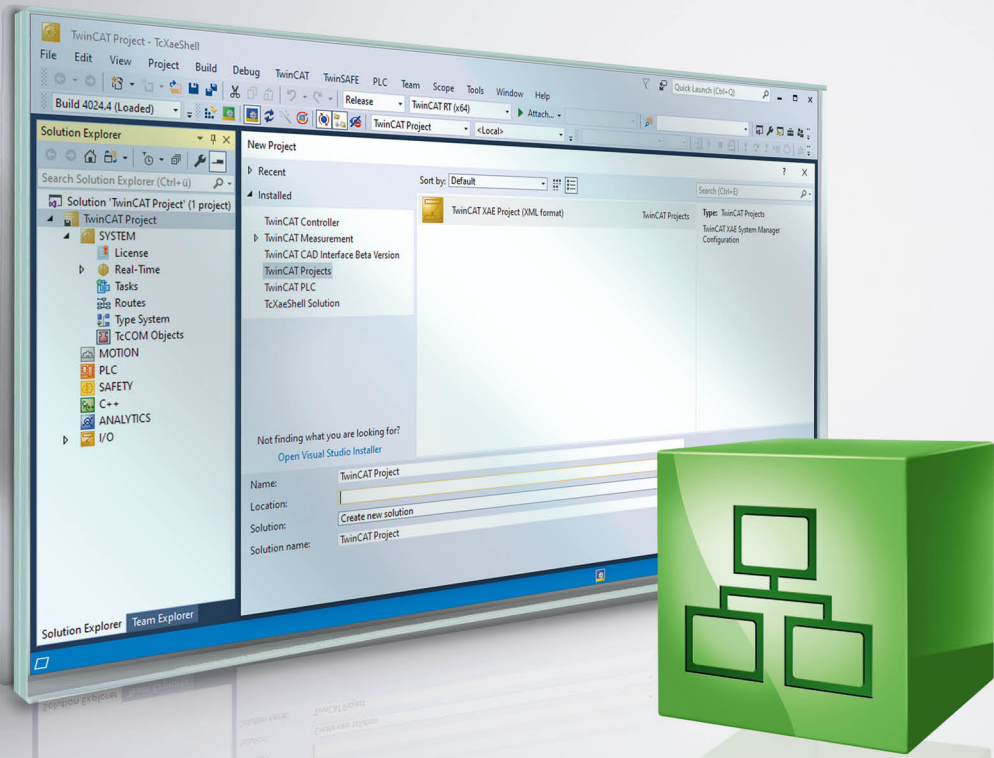


Manual | EN

# TF6010

TwinCAT 3 | ADS Monitor





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# 1 Foreword

## 1.1 Notes on the documentation

This description is only intended for the use of trained specialists in control and automation engineering who are familiar with applicable national standards.

It is essential that the documentation and the following notes and explanations are followed when installing and commissioning the components.

It is the duty of the technical personnel to use the documentation published at the respective time of each installation and commissioning.

The responsible staff must ensure that the application or use of the products described satisfy all the requirements for safety, including all the relevant laws, regulations, guidelines and standards.

### Disclaimer

The documentation has been prepared with care. The products described are, however, constantly under development.

We reserve the right to revise and change the documentation at any time and without prior announcement. No claims for the modification of products that have already been supplied may be made on the basis of the data, diagrams and descriptions in this documentation.

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### Patent Pending

The EtherCAT Technology is covered, including but not limited to the following patent applications and patents:

EP1590927, EP1789857, EP1456722, EP2137893, DE102015105702  
with corresponding applications or registrations in various other countries.

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## 1.2 Safety instructions

### Safety regulations

Please note the following safety instructions and explanations!  
Product-specific safety instructions can be found on following pages or in the areas mounting, wiring, commissioning etc.

### Exclusion of liability

All the components are supplied in particular hardware and software configurations appropriate for the application. Modifications to hardware or software configurations other than those described in the documentation are not permitted, and nullify the liability of Beckhoff Automation GmbH & Co. KG.

### Personnel qualification

This description is only intended for trained specialists in control, automation and drive engineering who are familiar with the applicable national standards.

### Description of symbols

In this documentation the following symbols are used with an accompanying safety instruction or note. The safety instructions must be read carefully and followed without fail!

#### **DANGER**

##### **Serious risk of injury!**

Failure to follow the safety instructions associated with this symbol directly endangers the life and health of persons.

#### **WARNING**

##### **Risk of injury!**

Failure to follow the safety instructions associated with this symbol endangers the life and health of persons.

#### **CAUTION**

##### **Personal injuries!**

Failure to follow the safety instructions associated with this symbol can lead to injuries to persons.

#### **NOTE**

##### **Damage to the environment or devices**

Failure to follow the instructions associated with this symbol can lead to damage to the environment or equipment.



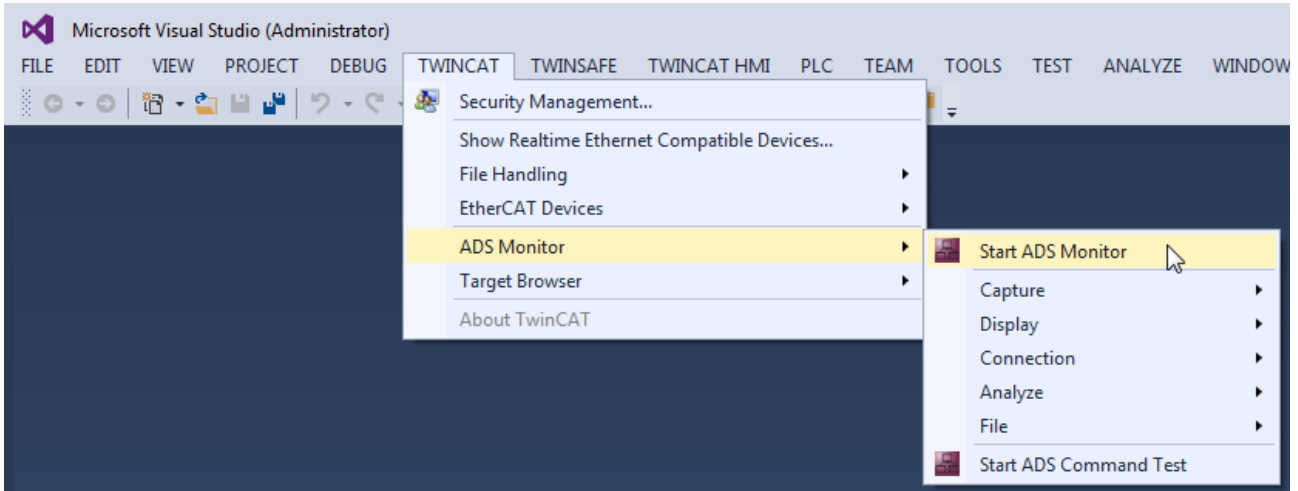
##### **Tip or pointer**

This symbol indicates information that contributes to better understanding.

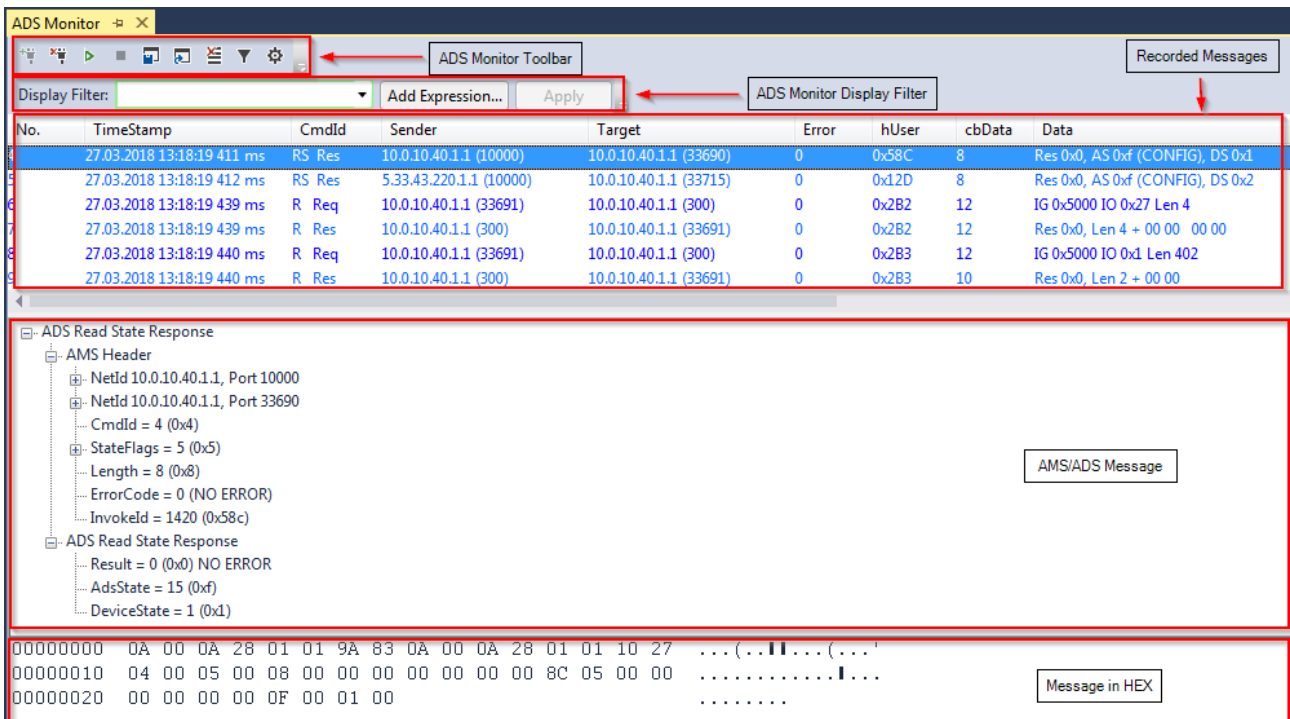
## 2 Overview

The TF6010 TC3 ADS Monitor records the ADS communication from the TwinCAT Message Router. This concerns as well the communication of ADS devices among each other, if they are on the local or on a remote system. The TwinCAT ADS Monitor can be downloaded from the [Beckhoff FTP Server](#).

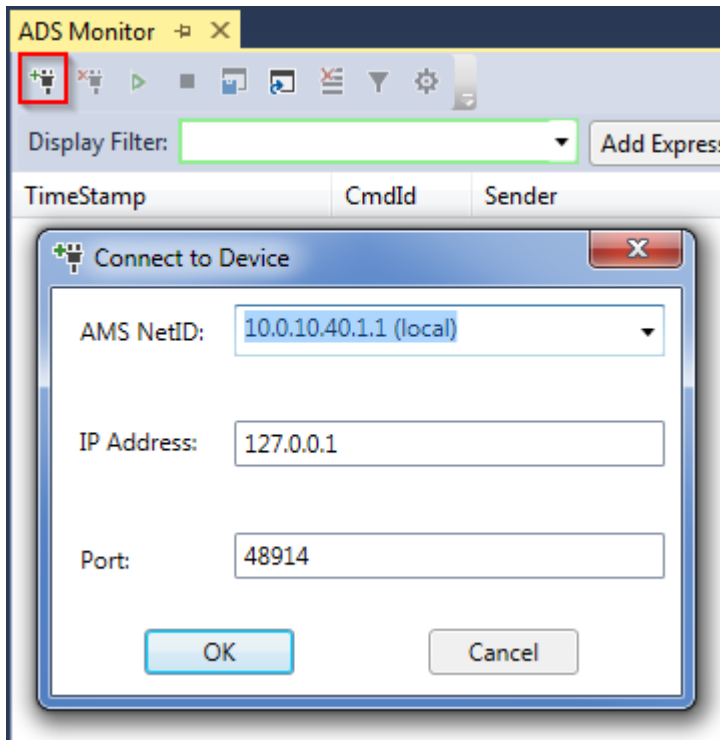
The ADS Monitor integrates into the TC3 XAE development in the Visual Studio Menu of TwinCAT.



The toolbar enables to start/stop recording of the ADS communication. By the selection of a recorded message the tool window will be splitted to display the ADS/AMS in clear text and in hex format.



The ADS Monitor connects to the local system when the tool window is opened. It is possible to connect to a remote target, if the ADS Monitor is installed and the TcAmsLog.exe is started on the remote target.

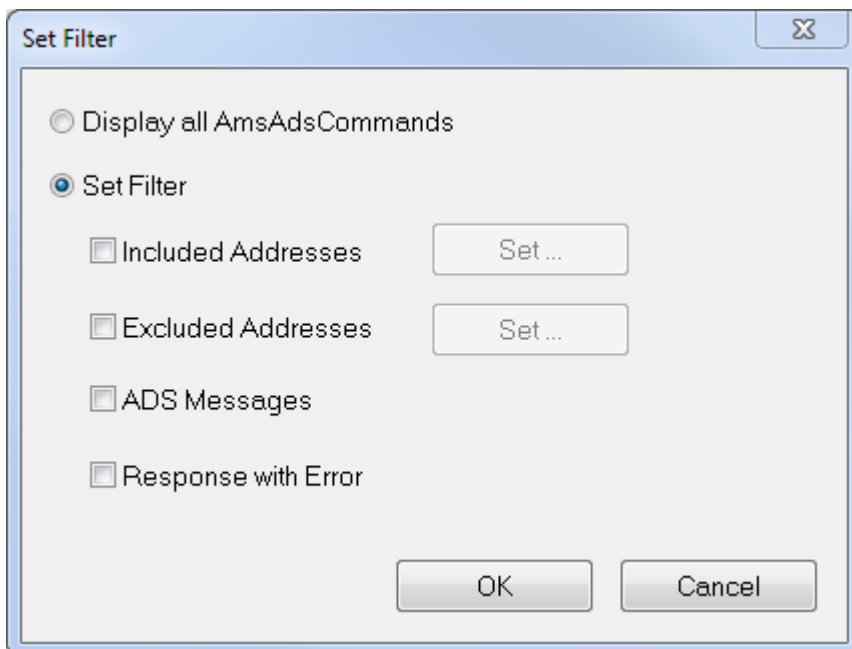


**Path to AMS/ADS Logger (TcAmslog.exe)**

Windows	C:\TwinCAT\Functions\TF6010-ADS-Monitor\Logger
Windows CE	/Hard Disk/System

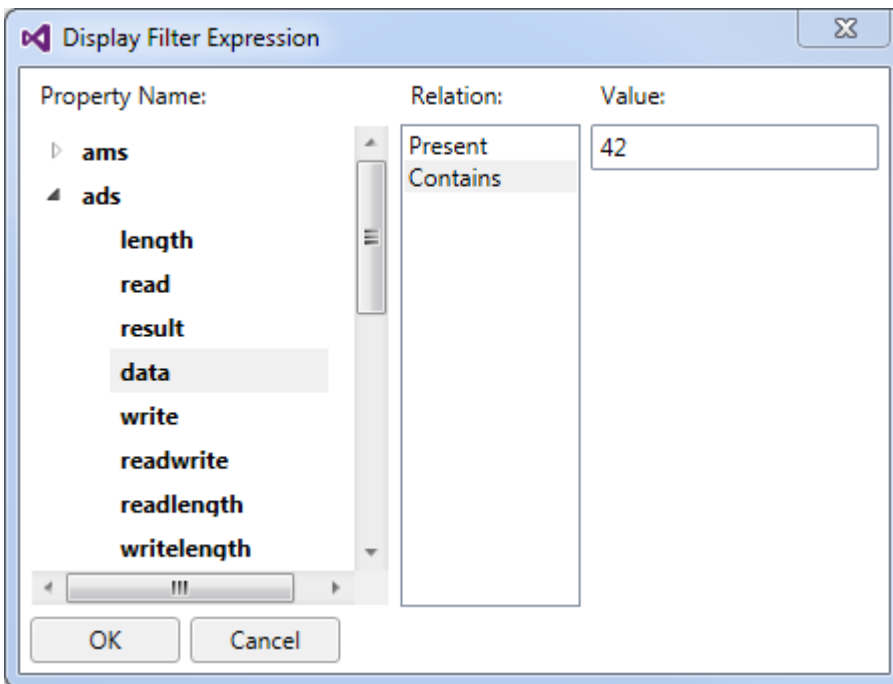
The ADS monitor provides to way to filter the messages:

Capture Filter: Allows to filter **during** recording for **AMS** information (e.g. NetId, Port)

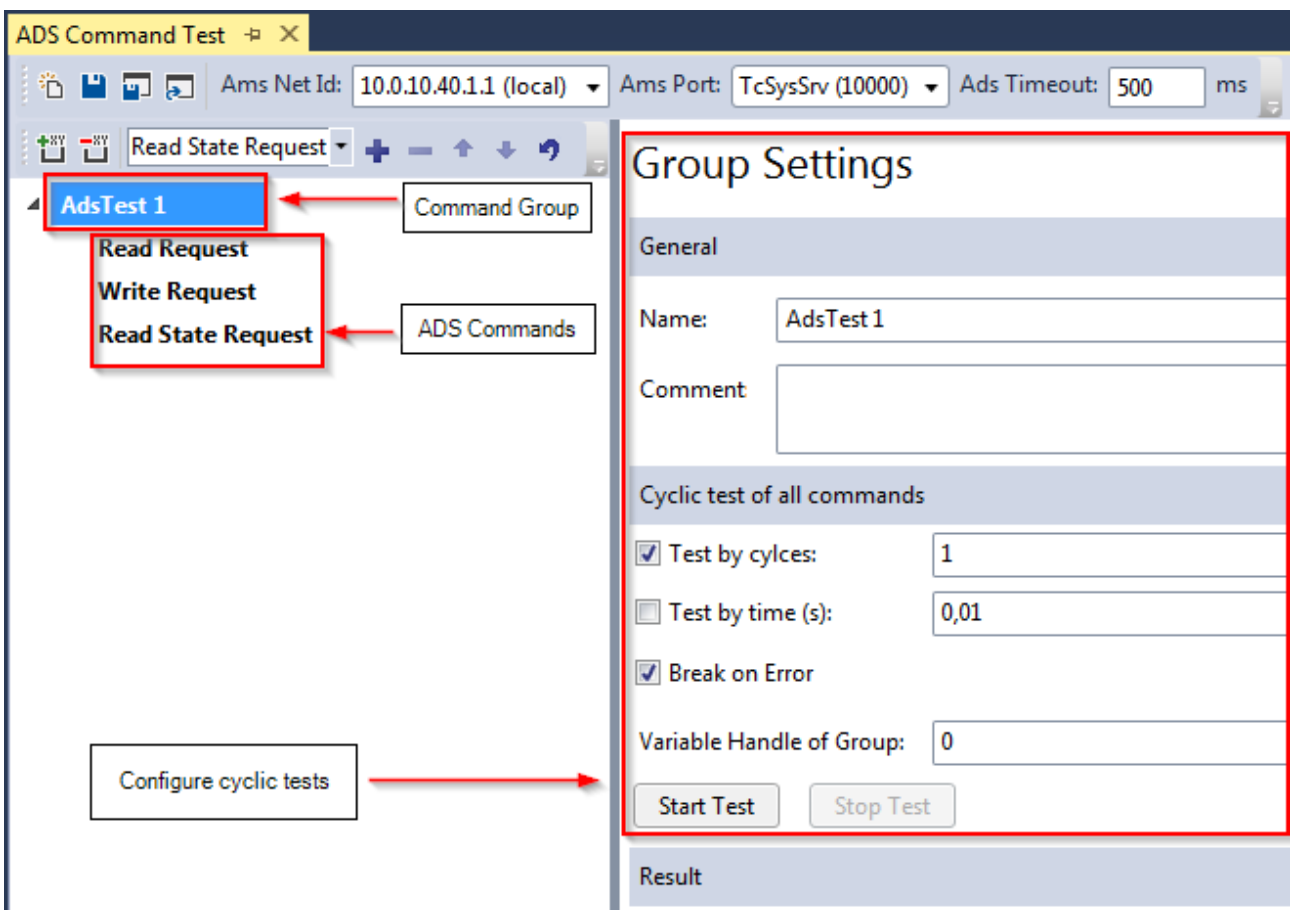


Display Filter: Allows to filter **after** recording for **AMS and ADS** information (e.g. Index-Group/Offset, Data)





The ADS monitor provides the possibility to send ADS commands to test ADS devices (e.g. PLC, NC) or custom ADS Servers. The ADS commands can be ordered in a command group and run cyclically.



All base ADS commands can be configured and executed separately.

The screenshot displays the ADS Command Test application window. At the top, the title bar reads "ADS Command Test". Below it, the configuration bar shows "Ams Net Id: 10.0.10.40.1.1 (local)", "Ams Port: TcSysSrv (10000)", and "Ads Timeout: 500 ms". The main interface is split into two panes. The left pane, titled "AdsTest 1", contains a tree view with "Read Request", "Write Request", and "Read State Request" (the latter is selected). The right pane, titled "Read State Request", has a "General" tab and a "Transfer" button. Below the button is an "Output" section with the following data:

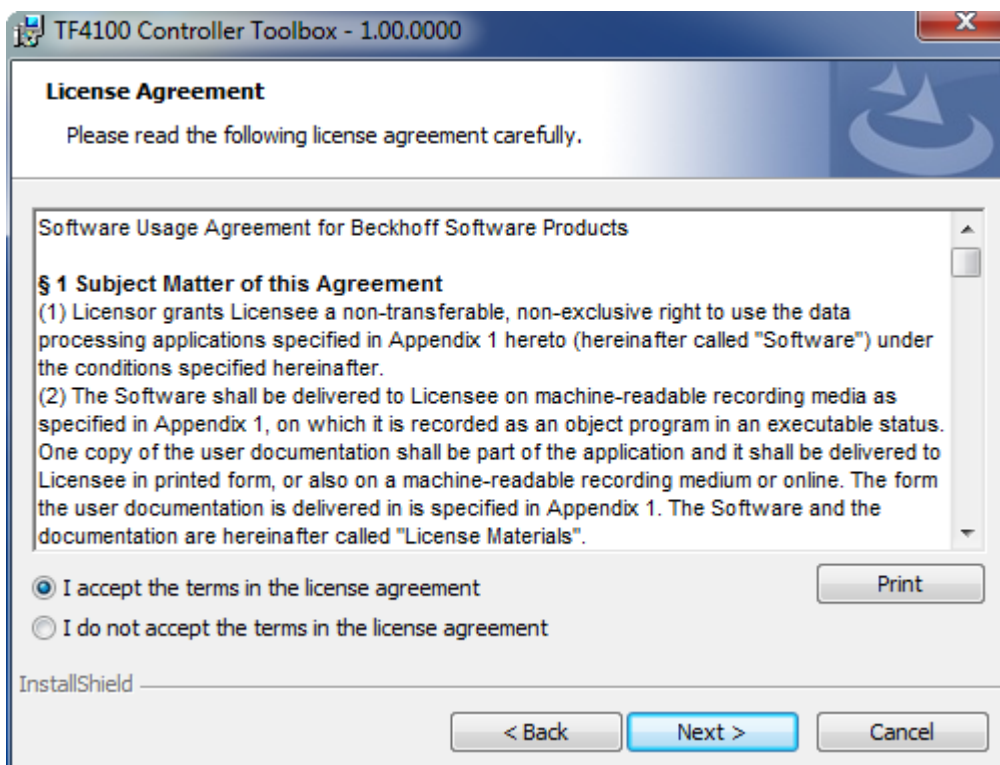
Transfer State:	Transfer successful!	
Ads State:	<input type="text" value="0xF"/>	<input type="button" value="Config"/>
Device State:	<input type="text" value="1"/>	

## 3 Installation

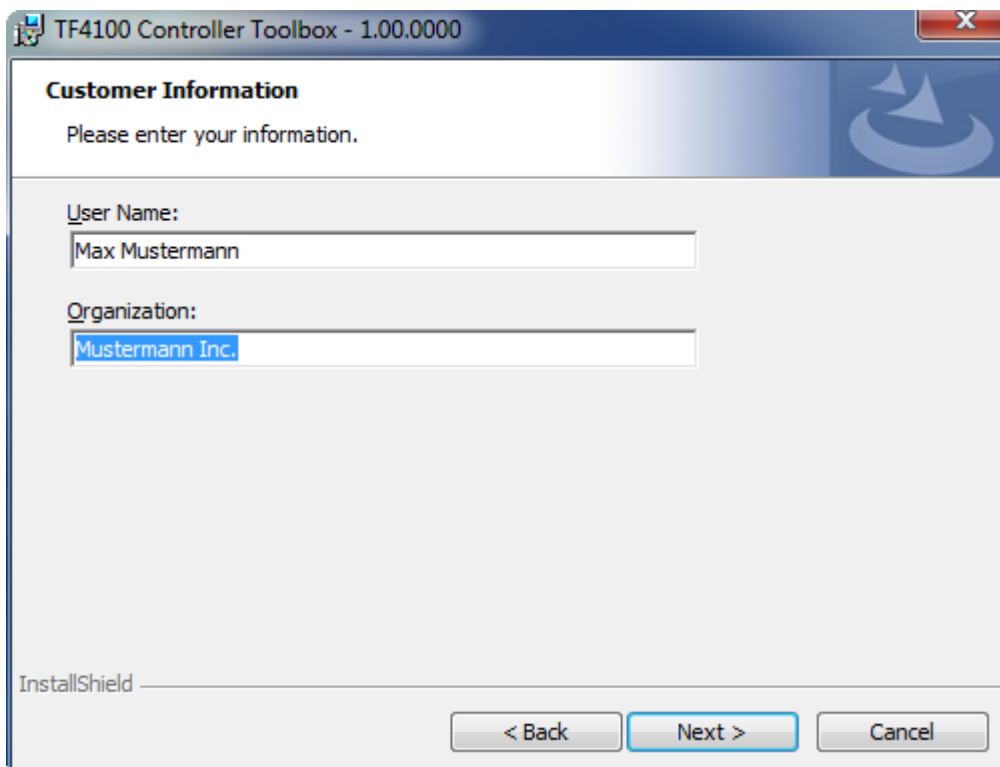
### 3.1 Installation

The following section describes how to install the TwinCAT 3 Function for Windows-based operating systems.

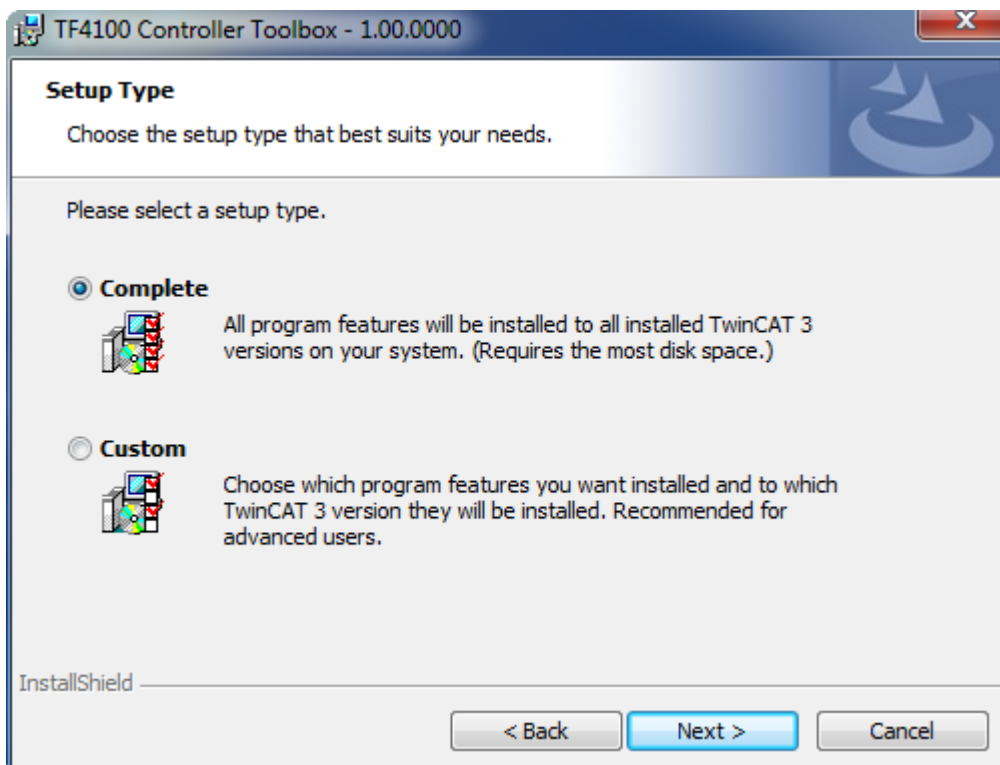
- ✓ The TwinCAT 3 Function setup file was downloaded from the Beckhoff website.
- 1. Run the setup file as administrator. To do this, select the command **Run as administrator** in the context menu of the file.
  - ⇒ The installation dialog opens.
- 2. Accept the end user licensing agreement and click **Next**.



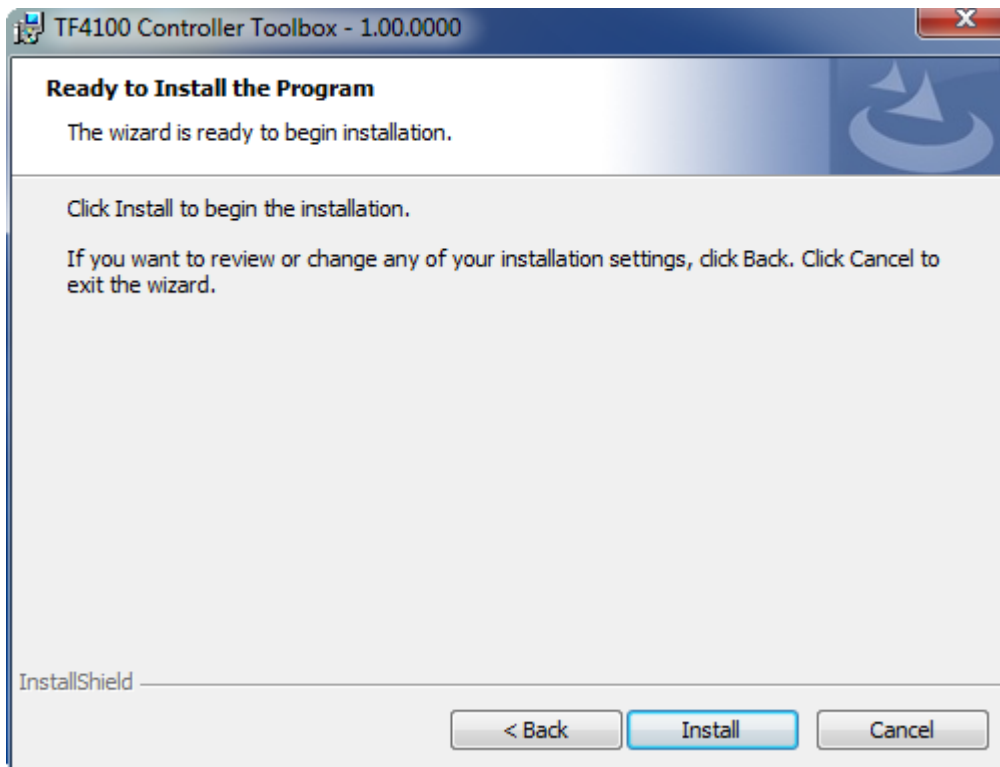
3. Enter your user data.



4. If you want to install the full version of the TwinCAT 3 Function, select **Complete** as installation type. If you want to install the TwinCAT 3 Function components separately, select **Custom**.

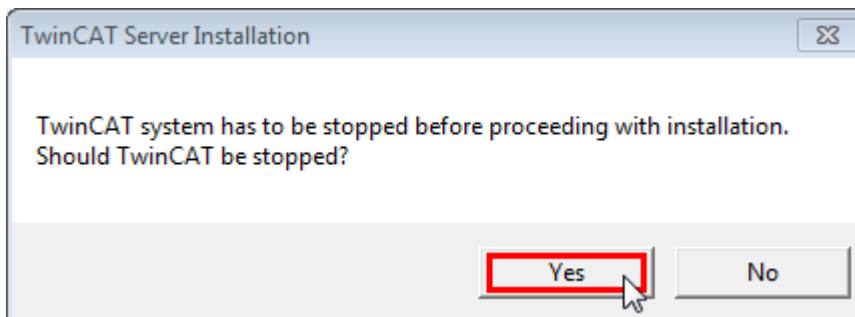


5. Select **Next**, then **Install** to start the installation.

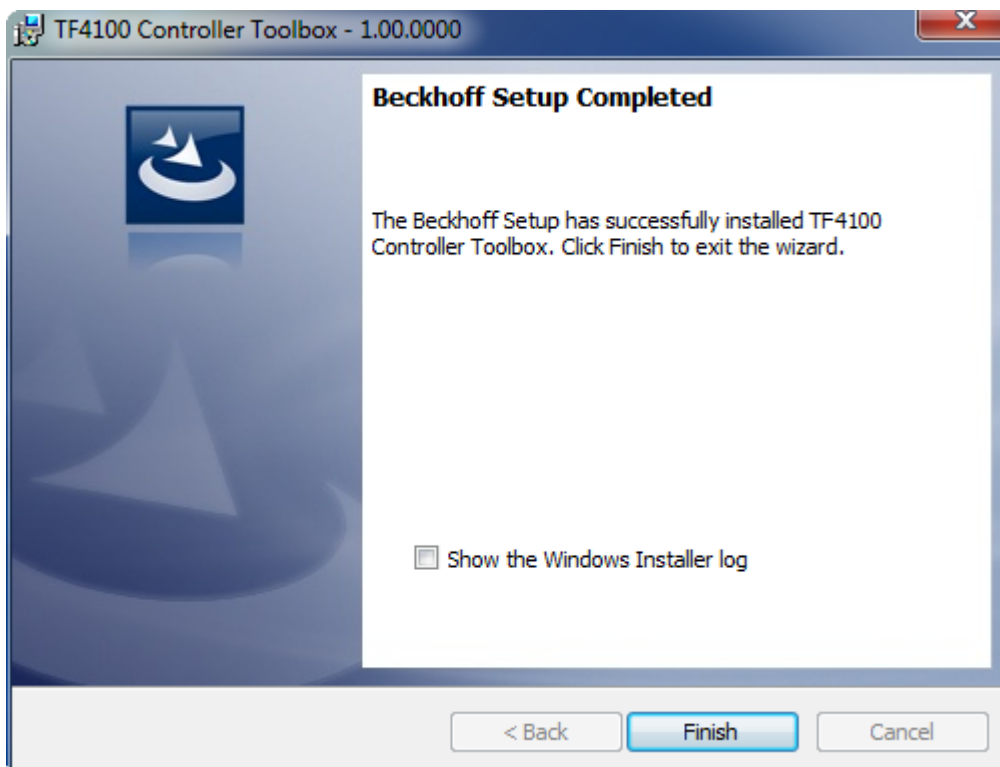


⇒ A dialog box informs you that the TwinCAT system must be stopped to proceed with the installation.

6. Confirm the dialog with **Yes**.



7. Select **Finish** to exit the setup.



⇒ The TwinCAT 3 Function has been successfully installed and can be licensed (see [Licensing \[▶ 14\]](#)).

## 3.2 Licensing

The TwinCAT 3 function can be activated as a full version or as a 7-day test version. Both license types can be activated via the TwinCAT 3 development environment (XAE).

### Licensing the full version of a TwinCAT 3 Function

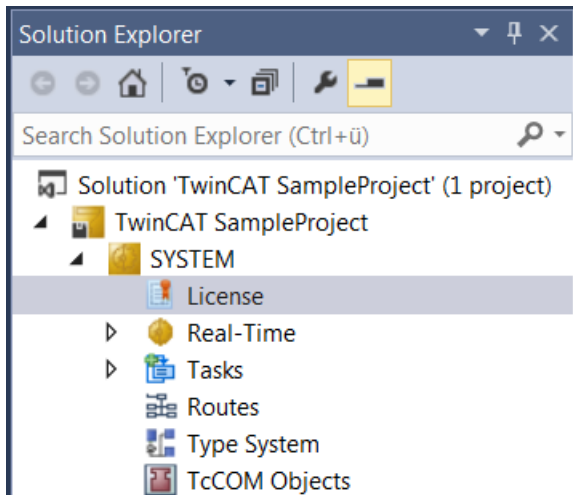
A description of the procedure to license a full version can be found in the Beckhoff Information System in the documentation "[TwinCAT 3 Licensing](#)".

### Licensing the 7-day test version of a TwinCAT 3 Function

**i** A 7-day test version cannot be enabled for a TwinCAT 3 license dongle.

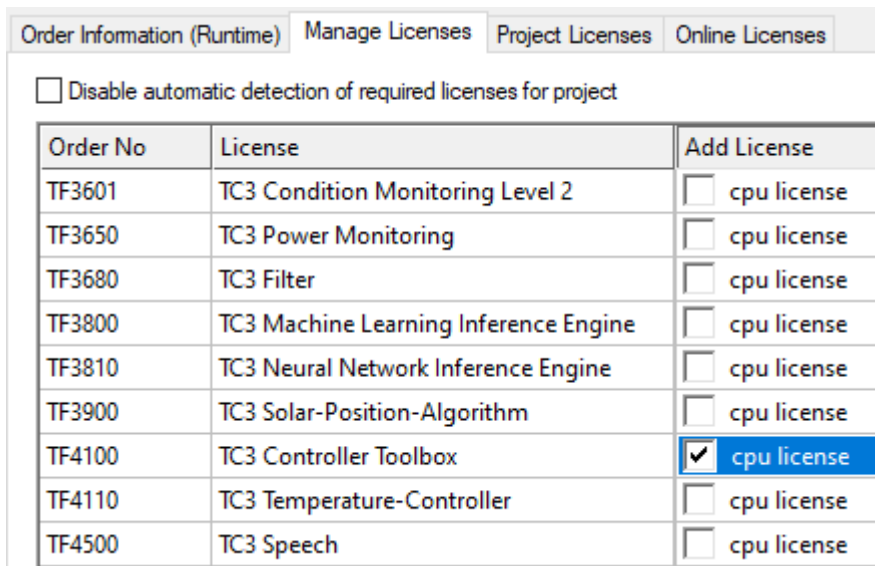
1. Start the TwinCAT 3 development environment (XAE).
2. Open an existing TwinCAT 3 project or create a new project.
3. If you want to activate the license for a remote device, set the desired target system. To do this, select the target system from the **Choose Target System** drop-down list in the toolbar.
  - ⇒ The licensing settings always refer to the selected target system. When the project is activated on the target system, the corresponding TwinCAT 3 licenses are automatically copied to this system.

- In the **Solution Explorer**, double-click **License** in the **SYSTEM** subtree.



⇒ The TwinCAT 3 license manager opens.

- Open the **Manage Licenses** tab. In the **Add License** column, check the check box for the license you want to add to your project (e.g. "TF6420: TC3 Database Server").



- Open the **Order Information (Runtime)** tab.
  - ⇒ In the tabular overview of licenses, the previously selected license is displayed with the status "missing".

7. Click **7-Day Trial License...** to activate the 7-day trial license.

The screenshot shows a software interface with several sections:

- Order Information (Runtime)**: Includes tabs for 'Manage Licenses', 'Project Licenses', and 'Online Licenses'.
- License Device**: A dropdown menu set to 'Target (Hardware Id)' with an 'Add...' button.
- System Id**: A text field containing '27A8E382-5115-364F-CE96-DE17942299A5'.
- Platform**: A dropdown menu set to 'other (91)'.
- License Request**: Includes a 'Provider' dropdown set to 'Beckhoff Automation', a 'Generate File...' button, and empty fields for 'License Id', 'Customer Id', and 'Comment'.
- License Activation**: This section is highlighted with a red box and contains two buttons: '7 Days Trial License...' and 'License Response File...'.

⇒ A dialog box opens, prompting you to enter the security code displayed in the dialog.

The dialog box is titled 'Enter Security Code' and contains the following elements:

- A prompt: 'Please type the following 5 characters:'
- A text field containing the security code 'Kg8T4'.
- An empty text input field with a vertical cursor, highlighted with a red box.
- 'OK' and 'Cancel' buttons.

8. Enter the code exactly as it is displayed and confirm the entry.
9. Confirm the subsequent dialog, which indicates the successful activation.  
 ⇒ In the tabular overview of licenses, the license status now indicates the expiry date of the license.
10. Restart the TwinCAT system.  
 ⇒ The 7-day trial version is enabled.





More Information:  
**[www.beckhoff.com/tf6010](http://www.beckhoff.com/tf6010)**

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