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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:
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!

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="DANGER" /></td>
<td>Serious risk of injury! Failure to follow the safety instructions associated with this symbol directly endangers the life and health of persons.</td>
</tr>
<tr>
<td><img src="image" alt="WARNING" /></td>
<td>Risk of injury! Failure to follow the safety instructions associated with this symbol endangers the life and health of persons.</td>
</tr>
<tr>
<td><img src="image" alt="CAUTION" /></td>
<td>Personal injuries! Failure to follow the safety instructions associated with this symbol can lead to injuries to persons.</td>
</tr>
<tr>
<td><img src="image" alt="NOTE" /></td>
<td>Damage to the environment or devices Failure to follow the instructions associated with this symbol can lead to damage to the environment or equipment.</td>
</tr>
</tbody>
</table>

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 Menue 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)

<table>
<thead>
<tr>
<th></th>
<th>Windows</th>
<th>Windows CE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C:\TwinCAT\Functions\TF6010-ADS-Monitor\Logger</td>
<td>/Hard Disk/System</td>
</tr>
</tbody>
</table>

The ADS monitor provides two ways 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.
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**.

![License Agreement dialog](image-url)
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.

![Installation dialog box](image)

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

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

![Confirmation dialog box](image)
7. Select **Finish** to exit the setup.

![Beckhoff Setup Completed](image)

- 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**

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

The TwinCAT 3 license manager opens.

5. 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").

6. 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.

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

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.