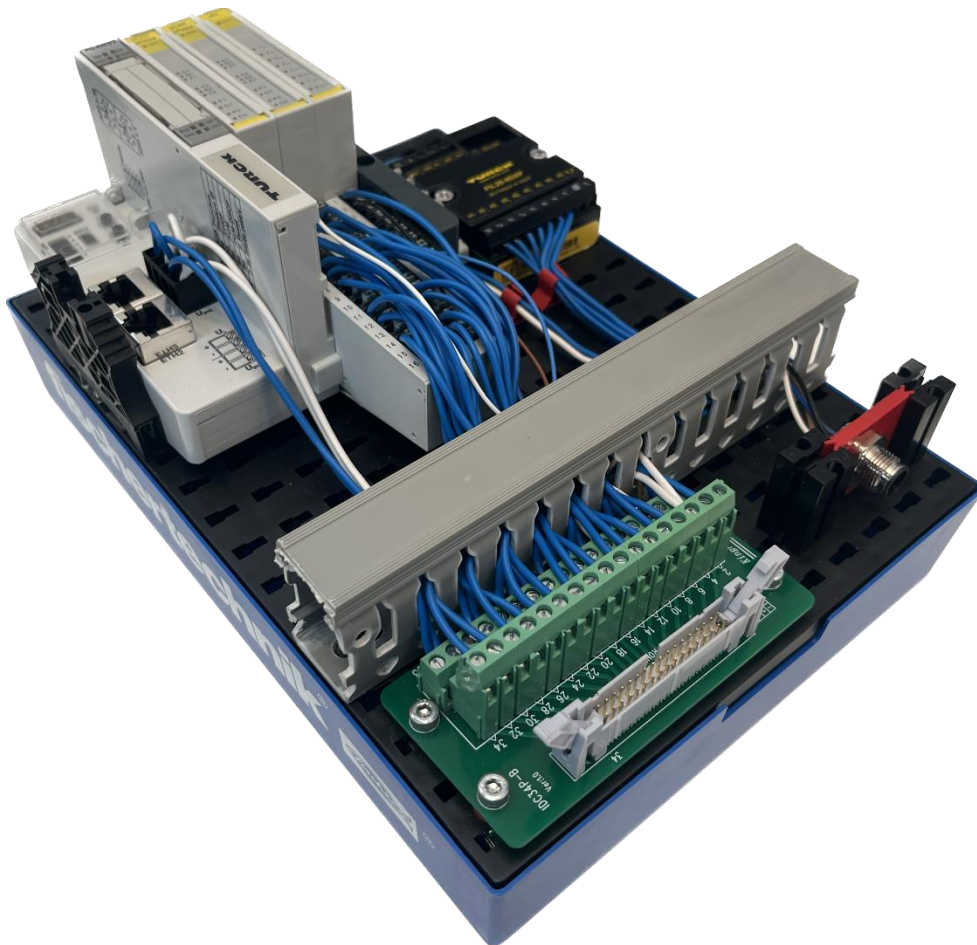# Turck 34Pins fischerTechnik controller

This document describes the use of the fischertechnik 34Pins stations with the Turck 34Pins Control Unit



**Description**

The Turck 34Pins fischerTechnik controller is capable of controlling four different stations. There are however some considerations when setting up the project. There are two different types of controllers. one type contains a programmable gateway. Another type is non-programmable and only functions as an IO module. This how to is based on the **Programmable gateway**.

The following stations can be operated with the Turck controller:
- 536630 | Vacuum Gripper Robot 24V
- 536631 | Automated High-Bay warehouse 24V
- 536632 | Multi Processing Station With Oven 24V
- 536633 | Sorting Line With Color Detection 24V

This document tries to give the user an idea as to how the Turck 34Pins controller is used in combination with one of the above fischerTechnik stations.

# Content

# 1 General information

## 1.1 Revision history and changes

| Revision | Date | Author | Changes |
|---|---|---|---|
| 1.0 | 07-02-23 | M. Bakker | Initial version |
| 1.1 | 13-02-23 | M. Bakker | Updated used hardware & software |
| | | | |
| | | | |
| | | | |
| | | | |

## 1.2 Specifications

### 1.2.1 Hardware

List of used Hardware and their firmware versions.

| Part no. | Type | Revision | Comment |
|---|---|---|---|
| fischerTechnik controller | 34Pins | n/a | Containing a **programmable** BL20 gateway (BL20-E-GW-EN, version 3.5.16.20) |
| fischerTechnik station | 536630, 536631, 536632 OR 536633 | n/a | |
| Windows PC | - | - | An ethernet adapter needs to be present, and needs to have a static IP (192.168.1.99) |

### 1.2.2 Software

List of used Software and their versions.

| Software | Revision | Comment |
|---|---|---|
| Turck Service Tool | Version >= 3.3.0 | Used for searching devices, and changing IP |
| CODESYS | V3.5 SP18 Patch 4 | Used for programming the stations |
| Turck fischerTechnik.projectarchive. | | The fischerTechnik program. |

# 2 Overview



Turck FIL20-8DXP.
IO-Link slave with 8 in-/outputs

Turck BL20 device, containing:
programmable gateway,
BL20-E-2CNT-2PWM,
BL20-E-4IOL-10

IDC connector, for connecting to
fischerTechnik station

Power in
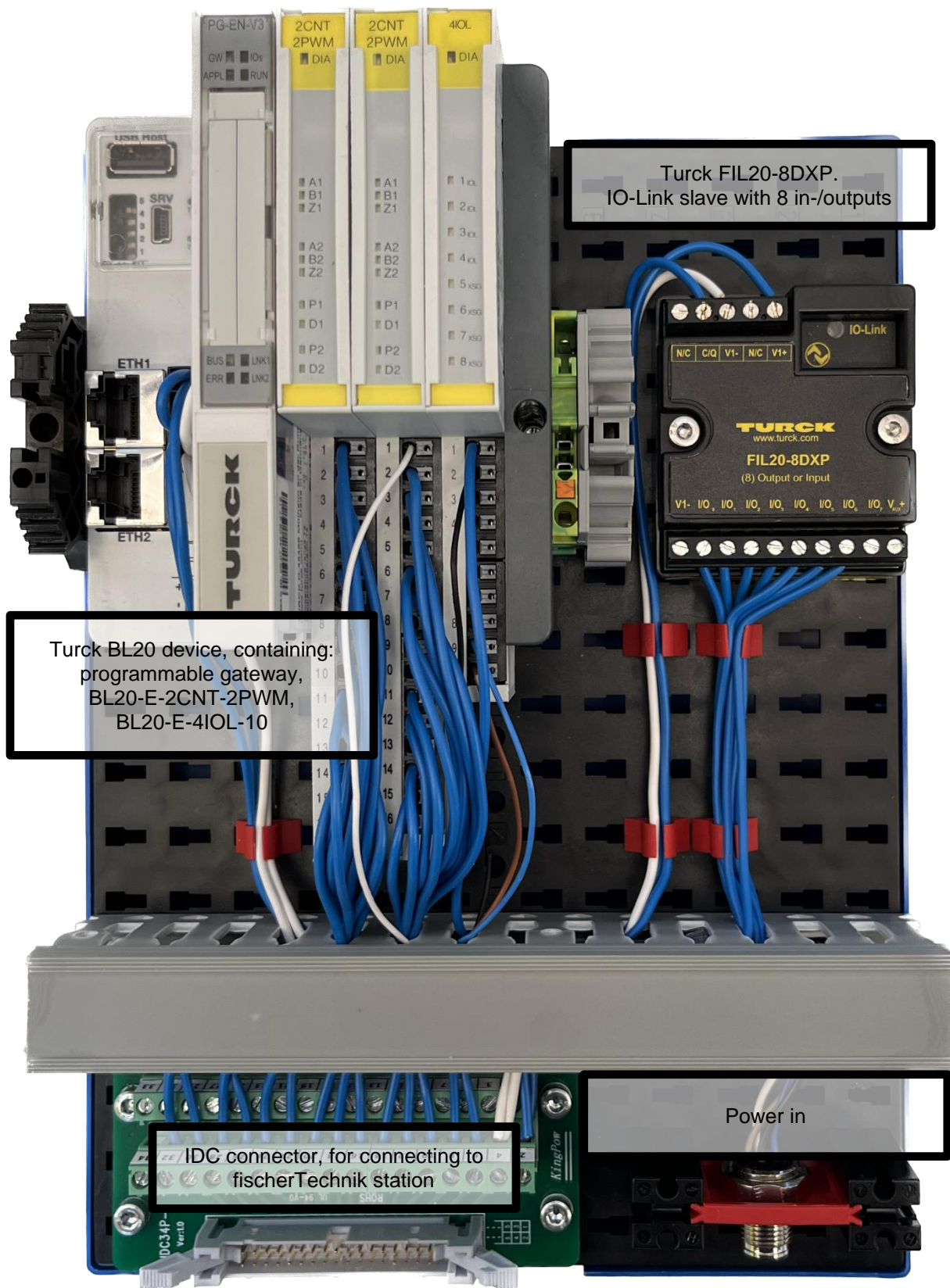
# 3    Setup of Turck 34Pins fischerTechnik Controller

## 3.1    Setting an IP with the Turck Service Tool

With the Turck service tool it is possible to assign an IP-address to the BL20 device. By default there is no IP-address assigned to the device, by searching and changing the device it's possible to change the IP-address. In this example we're going to set the IP to 192.168.1.10.
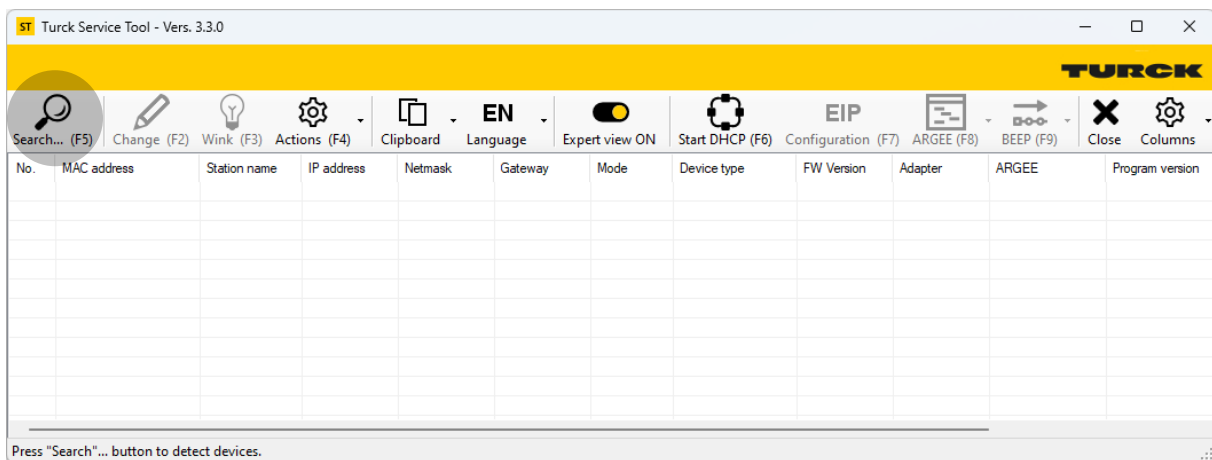
The Turck Service Tool can be downloaded from the Turck website free of charge:
https://www.turck.nl/attachment/SW_Turck_Service_Tool.zip.

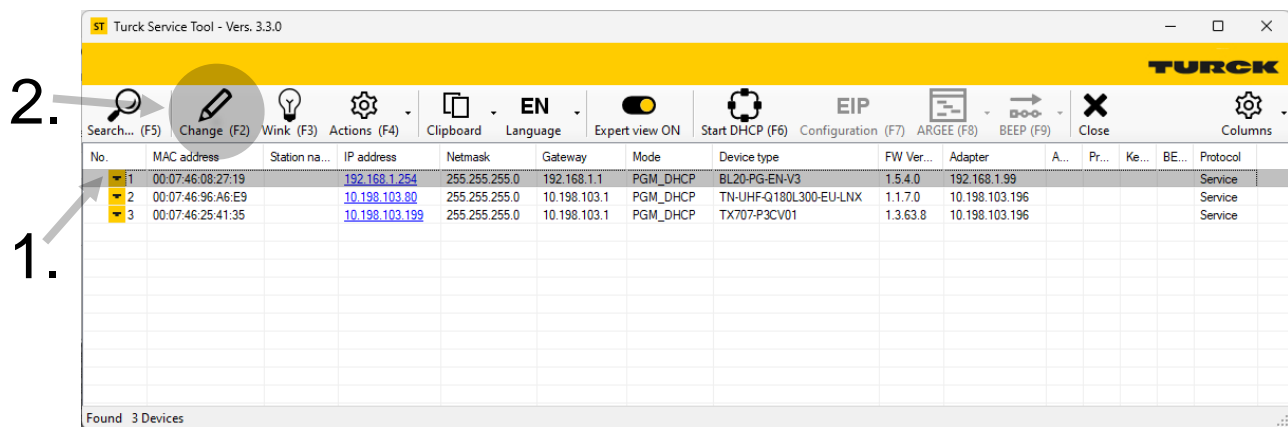1.  Connect the Turck controller to your system via an ethernet cable.
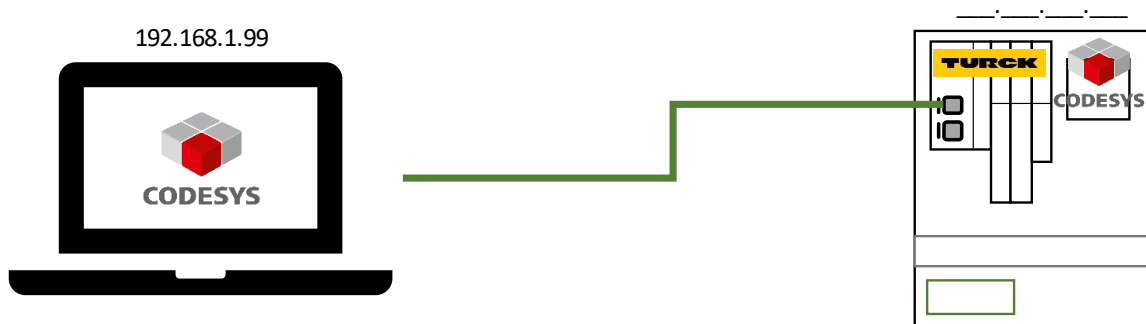

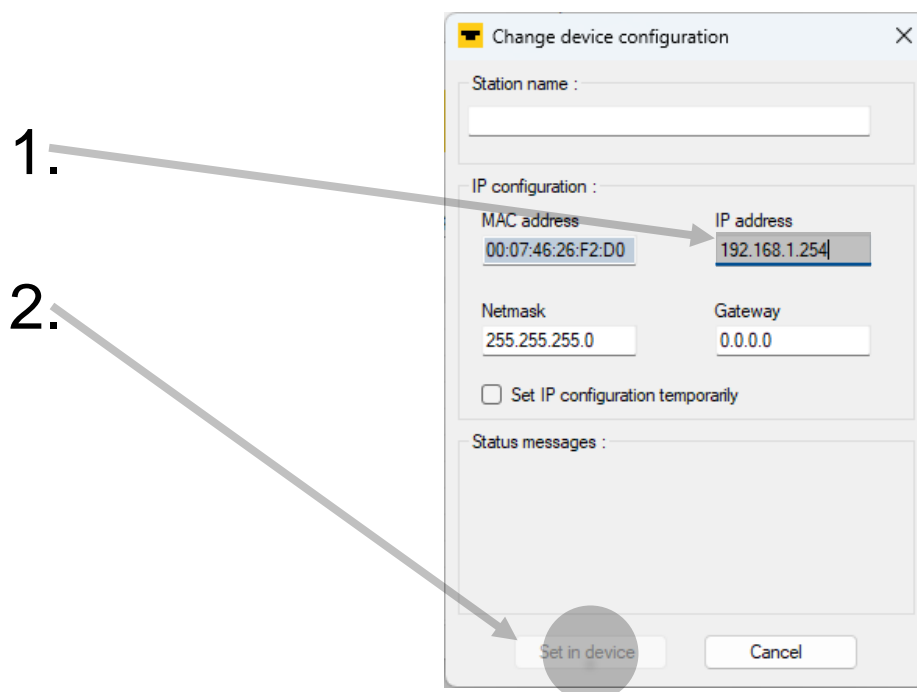
2.  Start the Turck Service Tool, and press 'Search… (F5)'



3.  After the search is done,
    Select the correct device (BL20-PG-EN-V3), and press 'Change (F2)'.

2.

1.

4. In the newly opened menu set an IP-address* (e.g. 192.168.1.10), and press 'Set in device'.

*the IP-address should be in the same range as the network adaper (e.g. 192.168.1.0-255).

1.

2.

## 3.2  Opening the project and loading a program into the Turck BL20

The Turck BL20 device has been setup, a project from the CODESYS IDE can now be loaded into the device.

The latest version of the Turck fischerTechnik CODESYS sample program can be downloaded at:
https://github.com/Bakker-Martijn/fischerTechnik-Turck

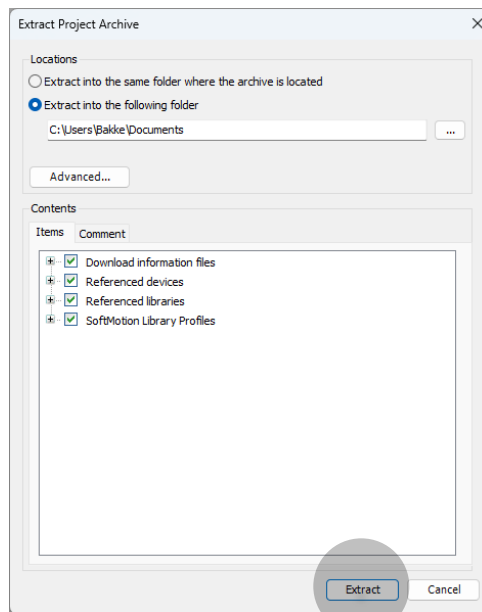1.  Open CODESYS SP18, press 'Open project…'
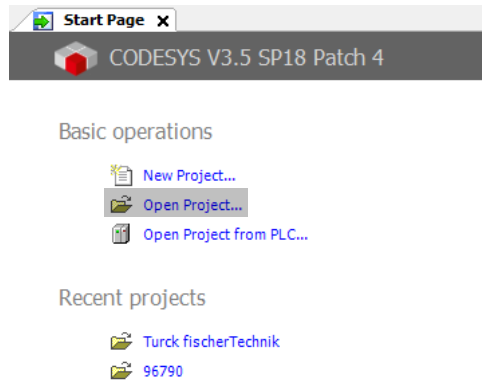


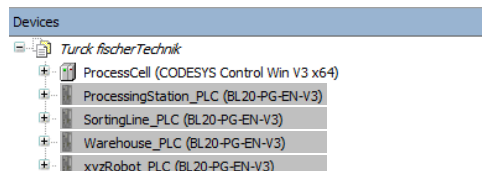2.  Move to the directory containing the .projectarchive, open the project.
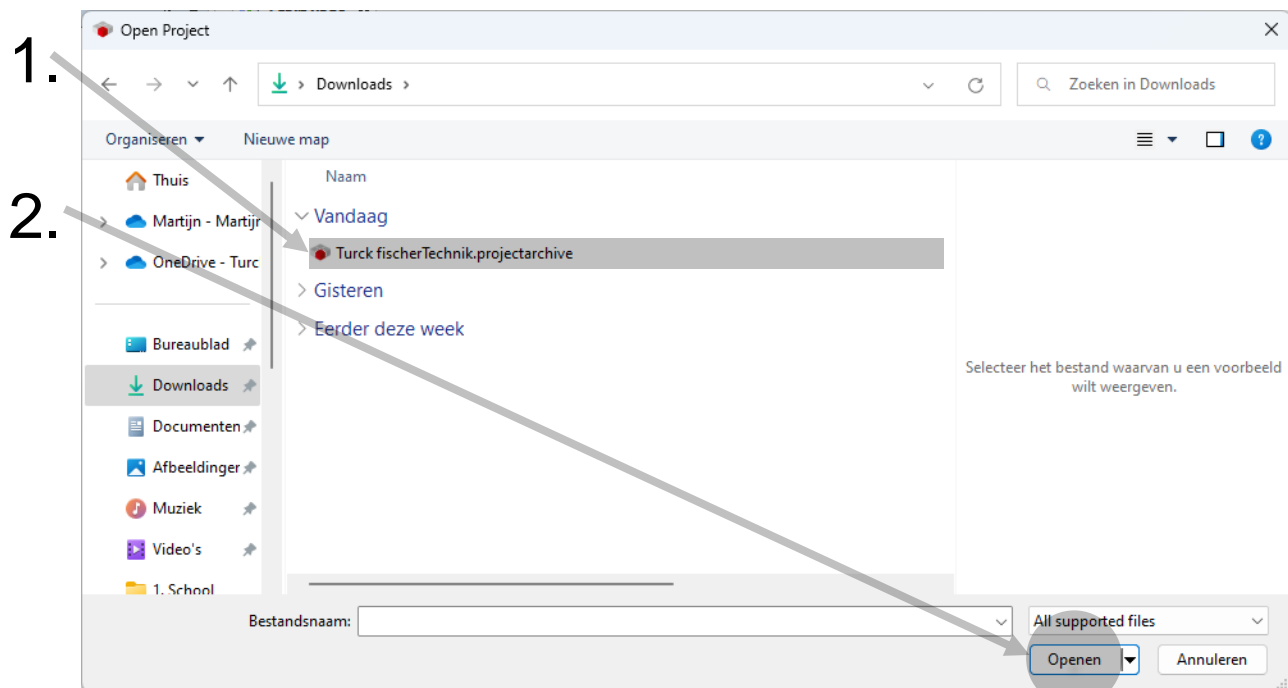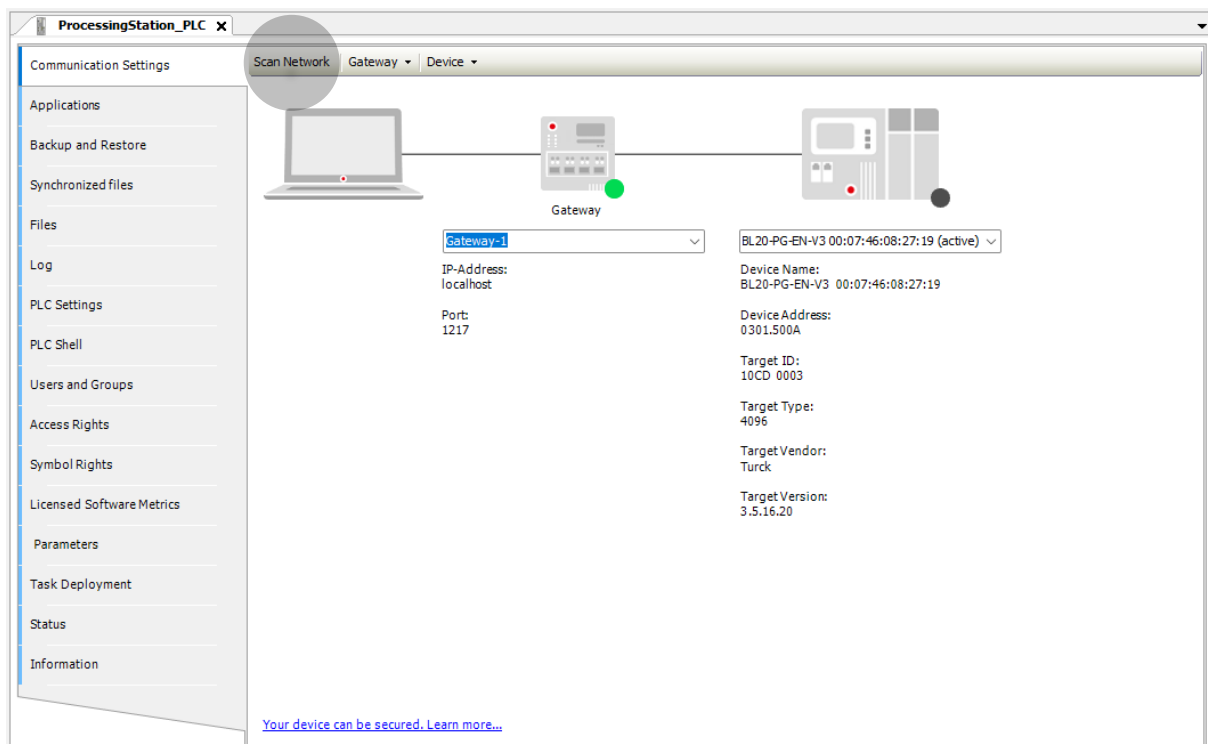


3.  In the newly opened menu, press 'Extract'

4. Select one of the four different station programs, an double-click on this device
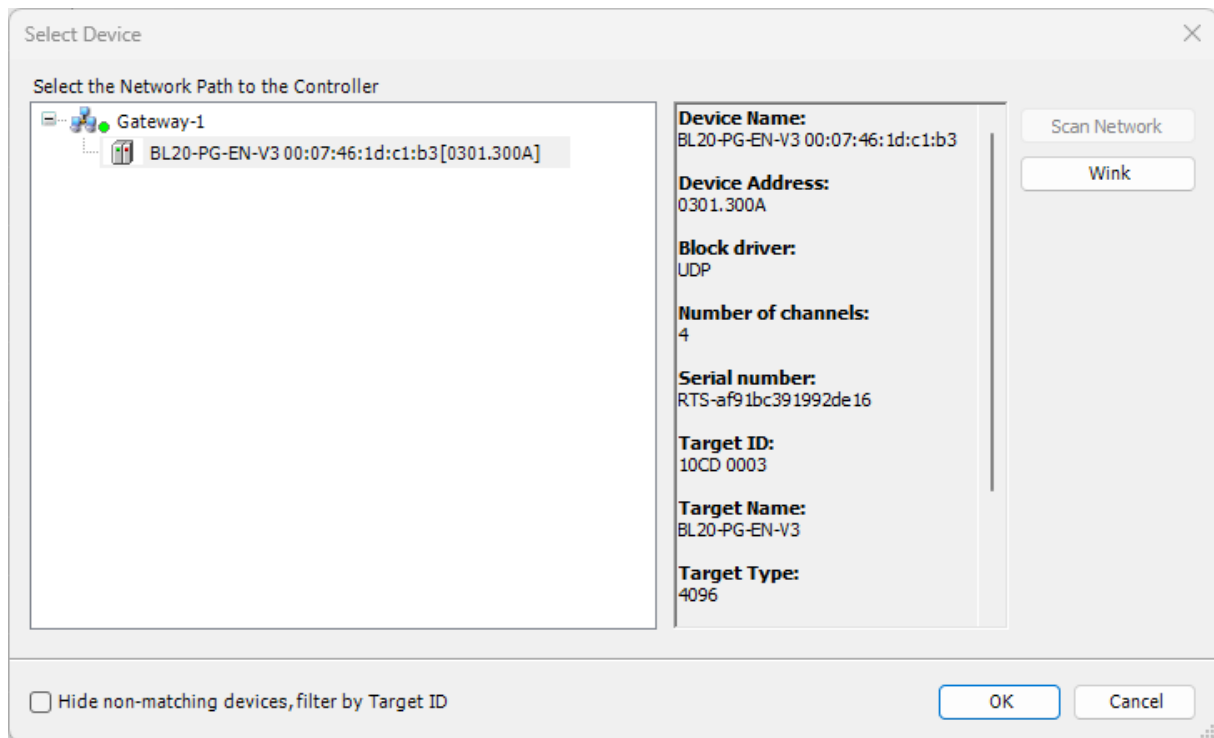


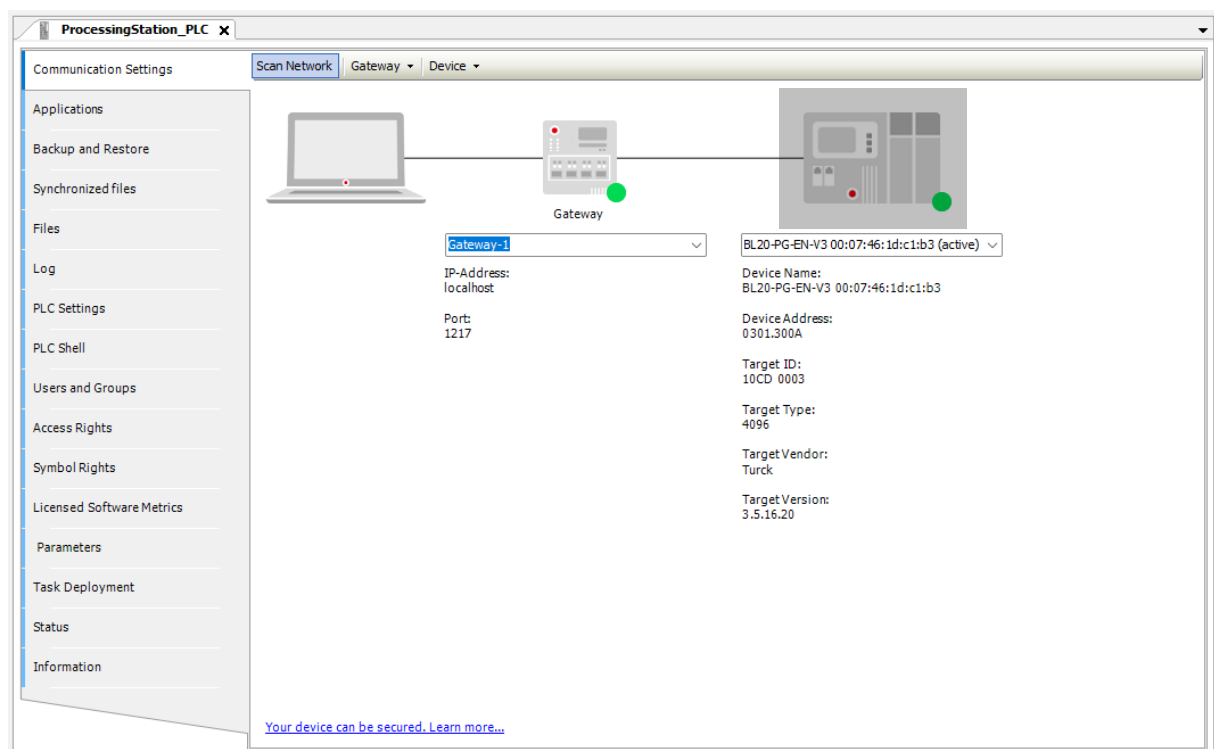5. In the opened menu press 'Scan Network', CODESYS will now search for all connected devices.



6. After the device has been found in the newly opened menu, select it and press 'OK'

**Select Device** ✕

Select the Network Path to the Controller

- Gateway-1
  - BL20-PG-EN-V3 00:07:46:1d:c1:b3[0301.300A]

**Device Name:**
BL20-PG-EN-V3 00:07:46:1d:c1:b3

**Device Address:**
0301.300A

**Block driver:**
UDP

**Number of channels:**
4

**Serial number:**
RTS-af91bc391992de16

**Target ID:**
10CD 0003

**Target Name:**
BL20-PG-EN-V3

**Target Type:**
4096

Scan Network

Wink

☐ Hide non-matching devices, filter by Target ID

OK    Cancel

7.  The CODESYS Gateway (your PC) is now connected to the Device.



**ProcessingStation_PLC** ✕

Communication Settings

Applications

Backup and Restore

Synchronized files

Files

Log

PLC Settings

PLC Shell

Users and Groups

Access Rights

Symbol Rights

Licensed Software Metrics

Parameters

Task Deployment

Status

Information

Scan Network  Gateway ▾  Device ▾

Gateway

Gateway-1

IP-Address:
localhost

Port:
1217

BL20-PG-EN-V3 00:07:46:1d:c1:b3 (active)

Device Name:
BL20-PG-EN-V3 00:07:46:1d:c1:b3

Device Address:
0301.300A

Target ID:
10CD 0003

Target Type:
4096

Target Vendor:
Turck

Target Version:
3.5.16.20

Your device can be secured. Learn more...

8. The selected station program can now be downloaded to the device\*. Press '⚙' to compile, and download the program to the device.

   \*_make sure the active application is the same as the selected program!_
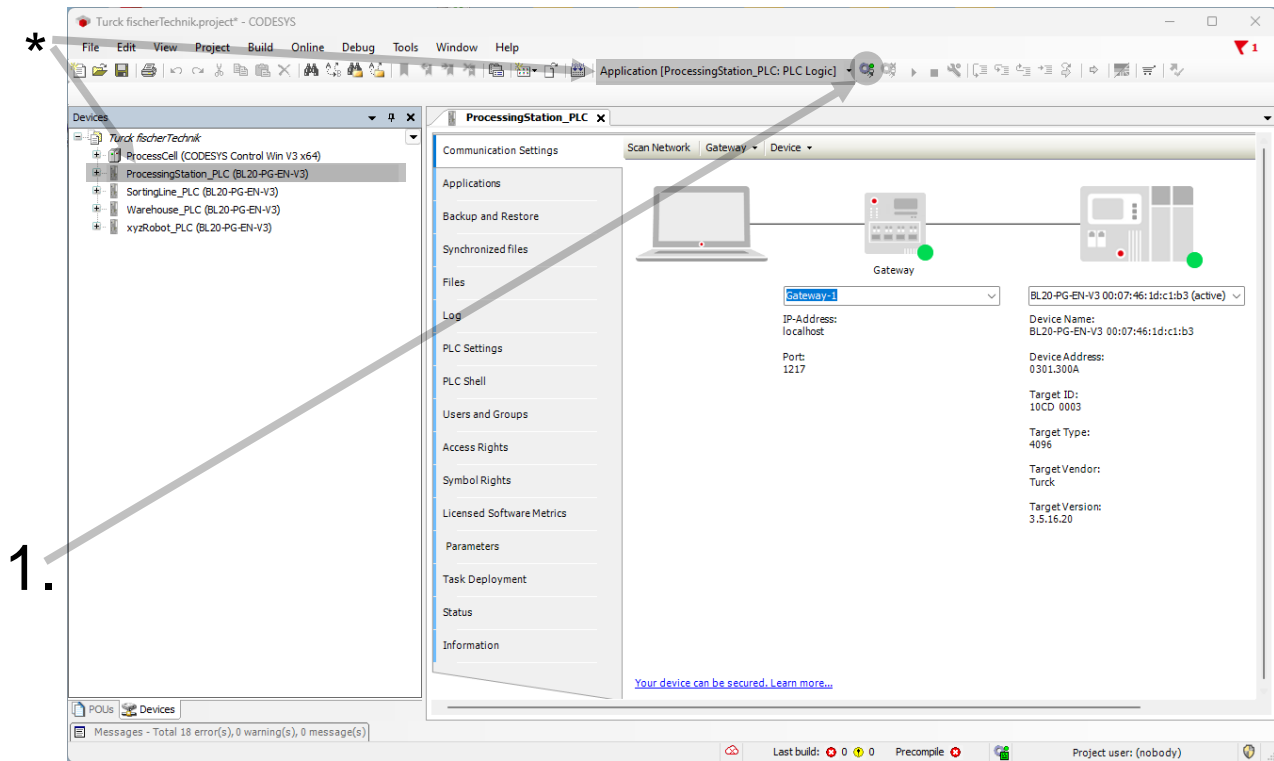


9. The program has now been loaded into the PLC,
   Start the PLC by pressing '▶', controlling the PLC can be done through the tags.