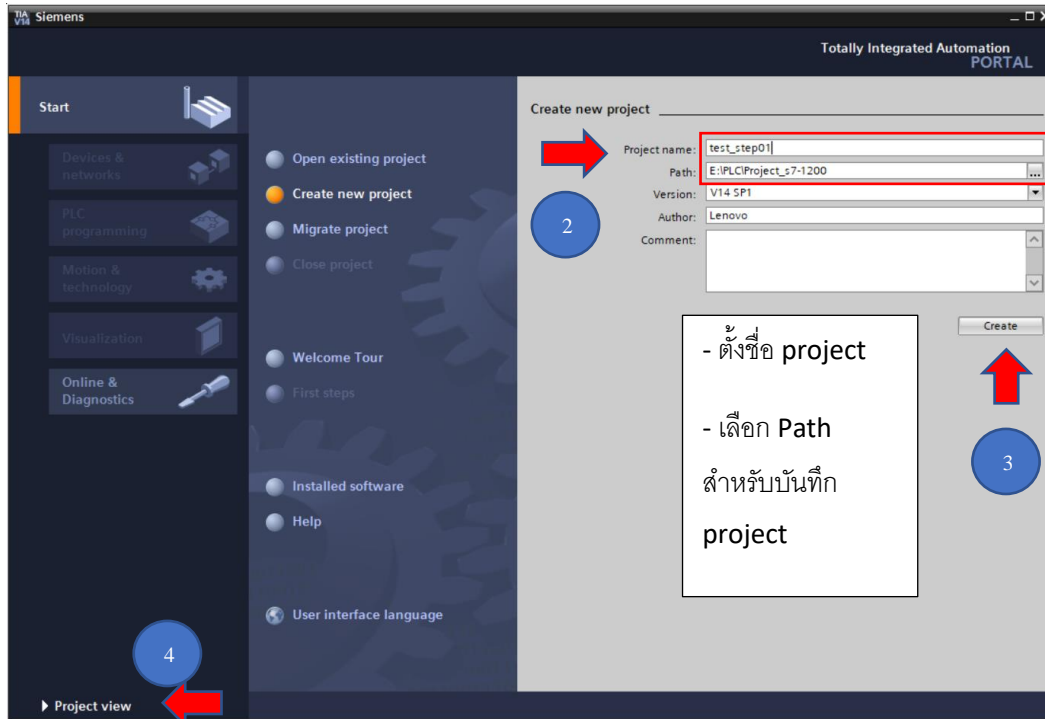
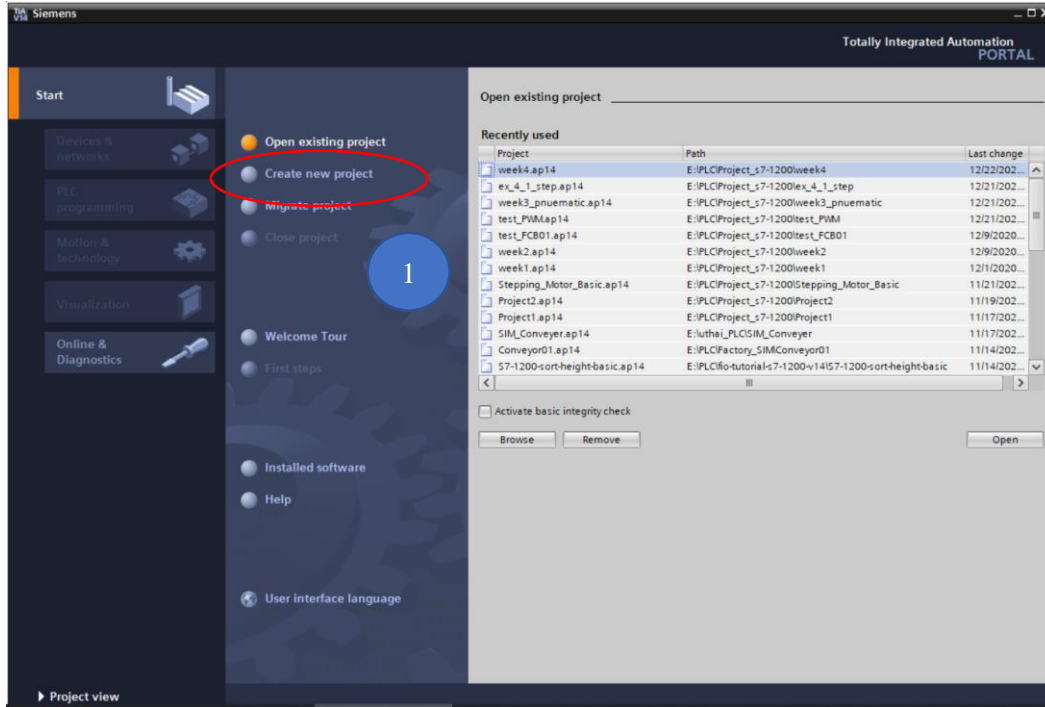


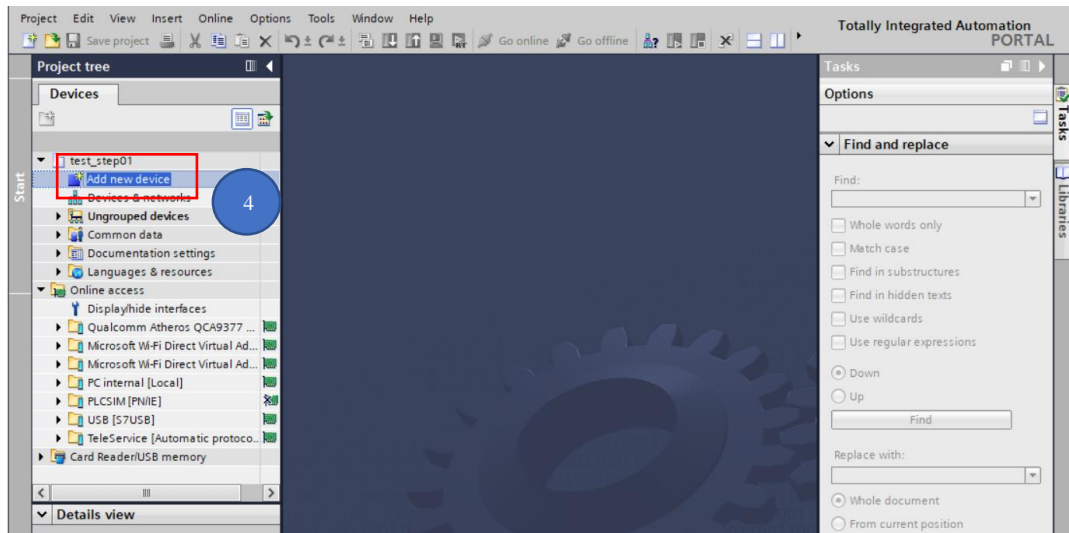
# TIA V14 For PLC S7-1200

## 1. Create new project

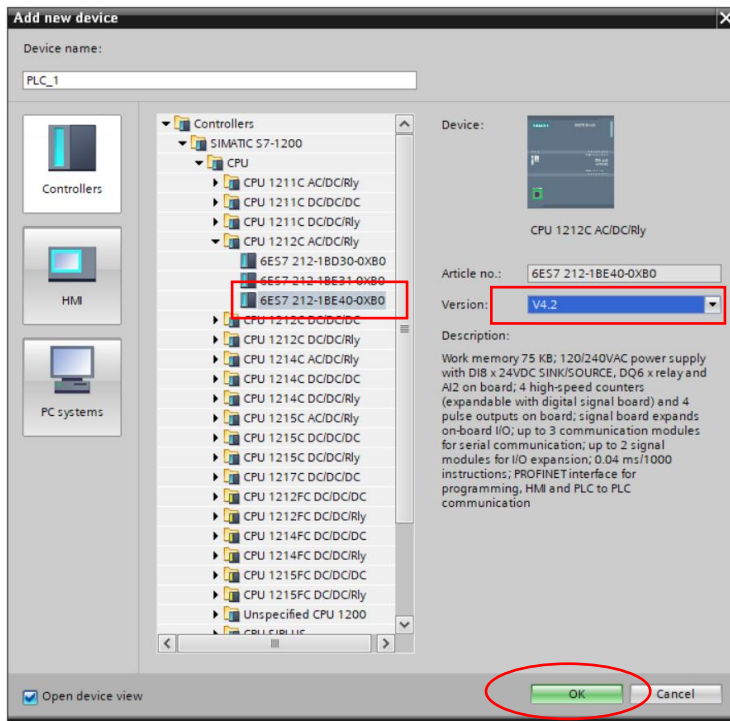


## 2. Add new device

- Double click : Add new device



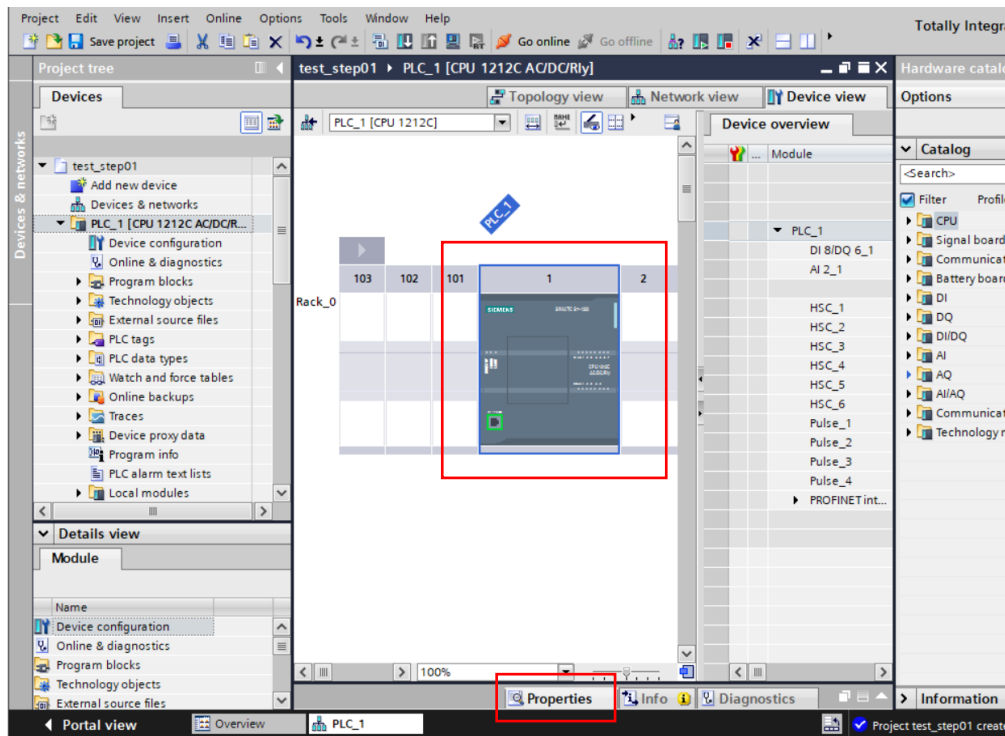
- Controllers > SIMATIC S7-1200 > CPU > CPU 1212C AC/DC/Rly > 6ES7 212-1BE40-0XB0



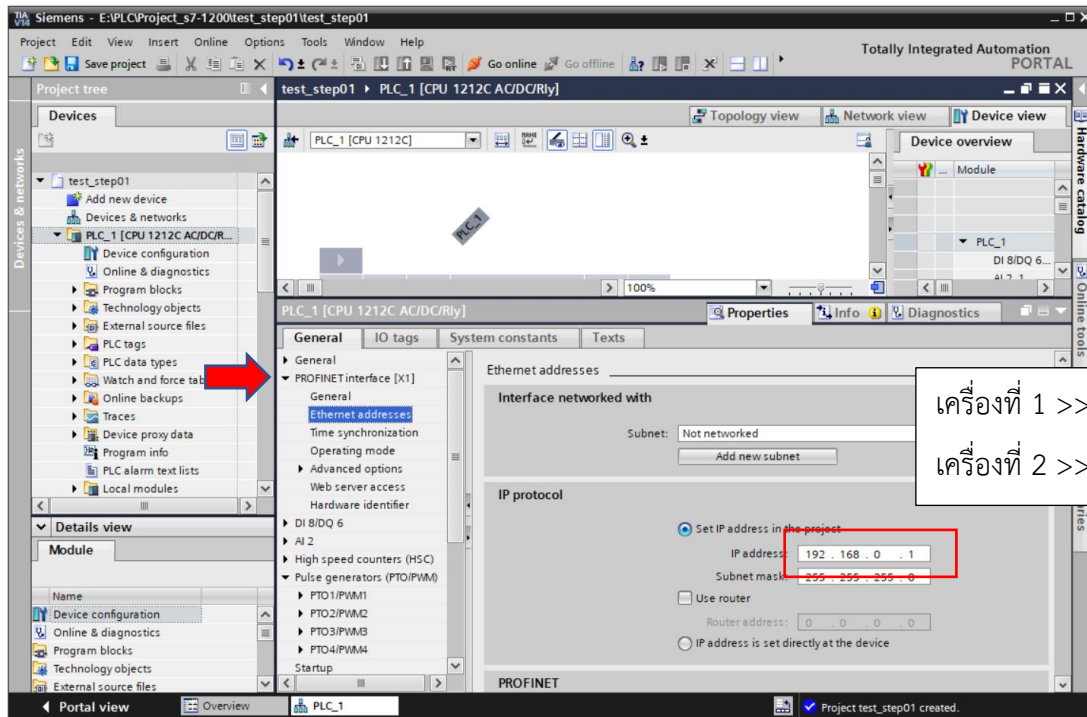
- เลือก Version  
V4.2

### 3. PLC Configuration

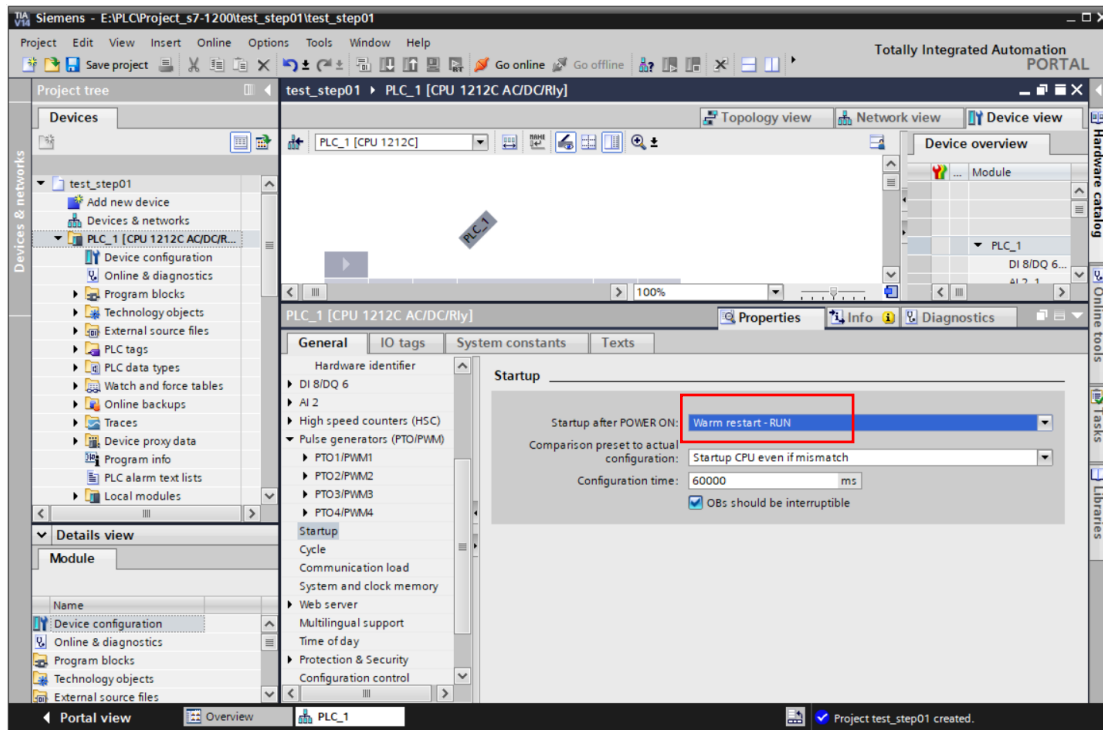
- คลิกที่ PLC\_1 => เลือก Properties (หรือ ดับเบิลคลิกที่ PLC\_1)



- เลือก PROFINET interface => Ethernet addresses => IP address

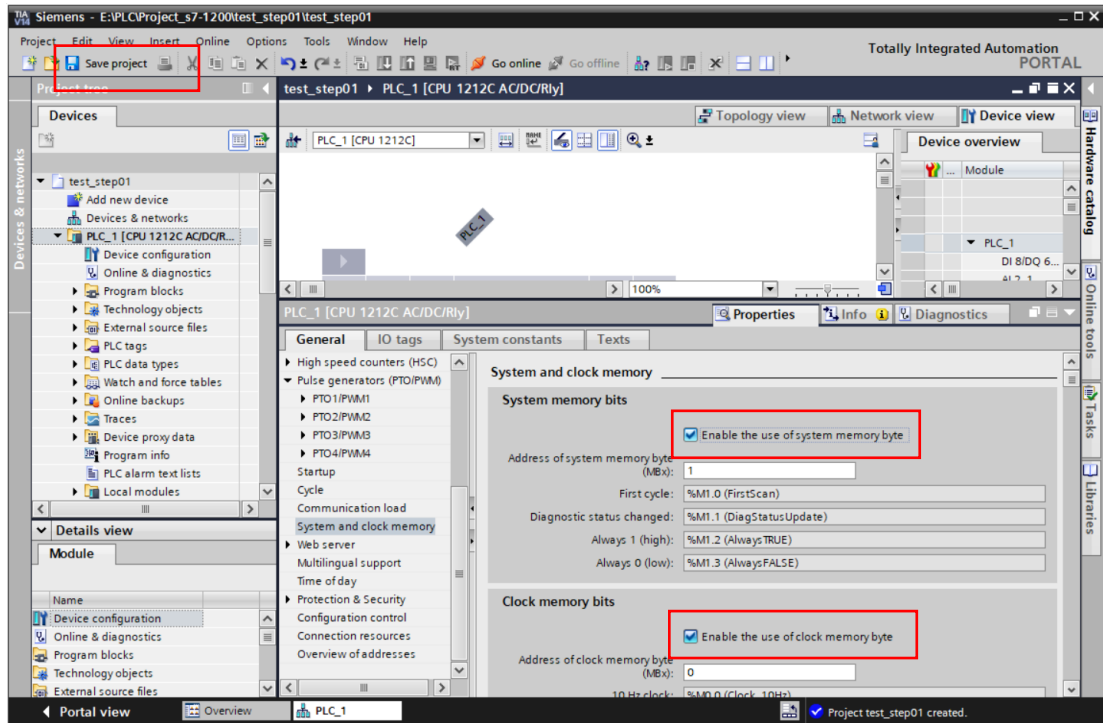


- เลือก Startup => Startup after POWER ON: Warm restart - RUN

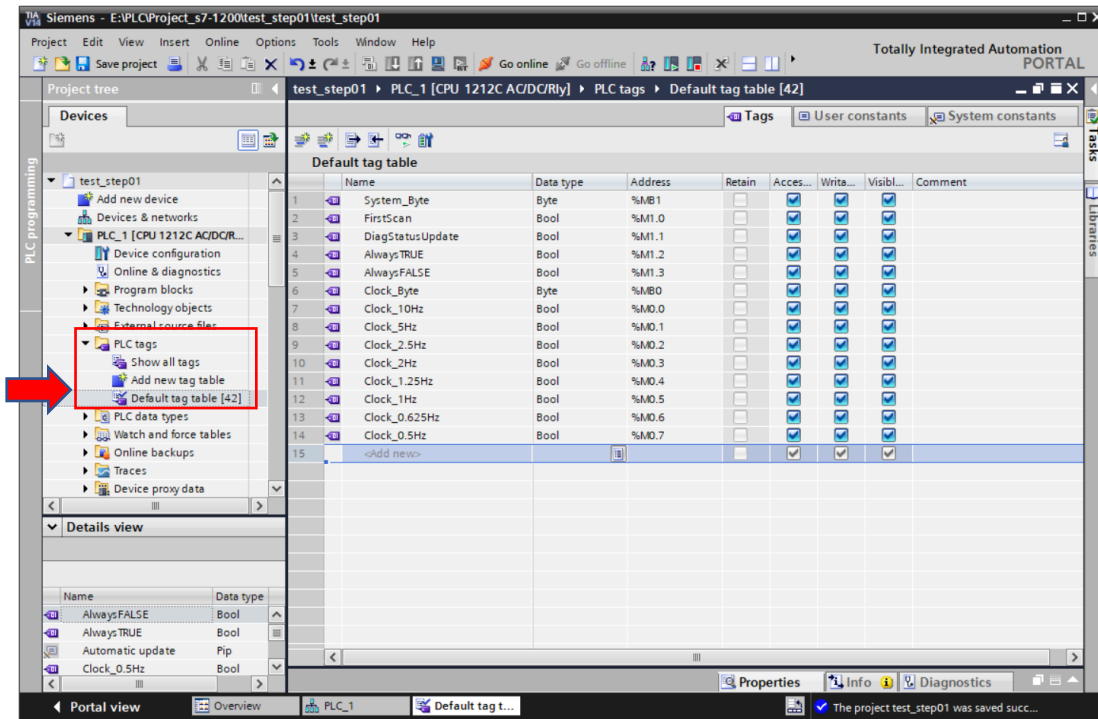


- เลือก System and clock memory =>

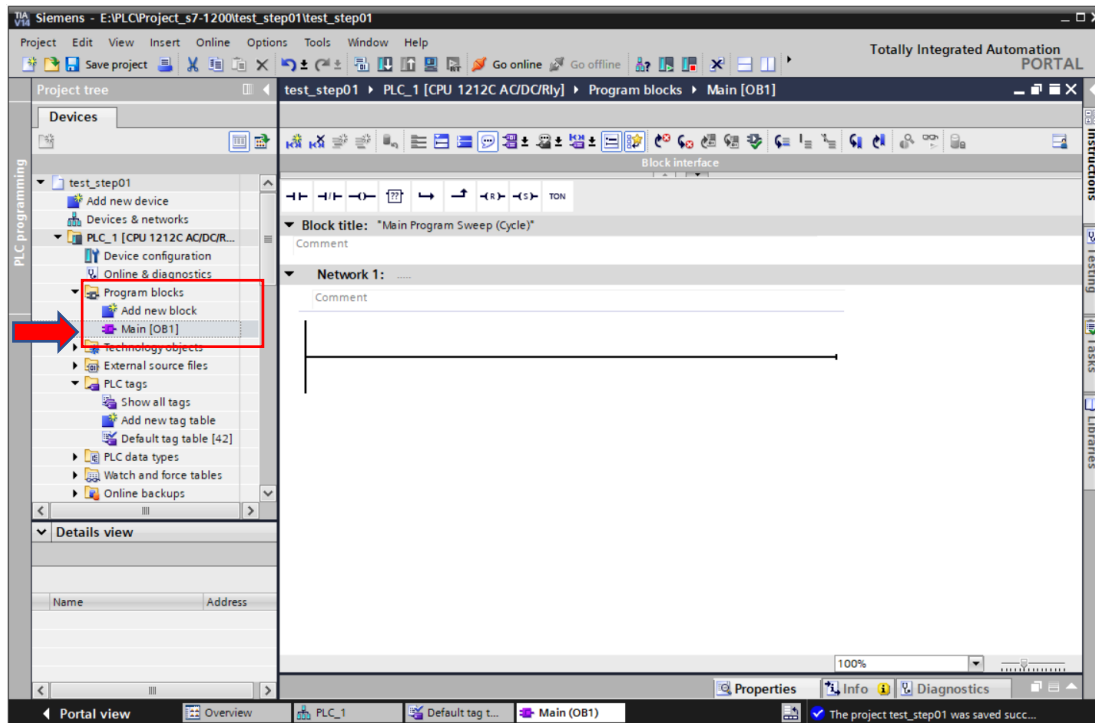
- Save project



#### 4. PLC Tags

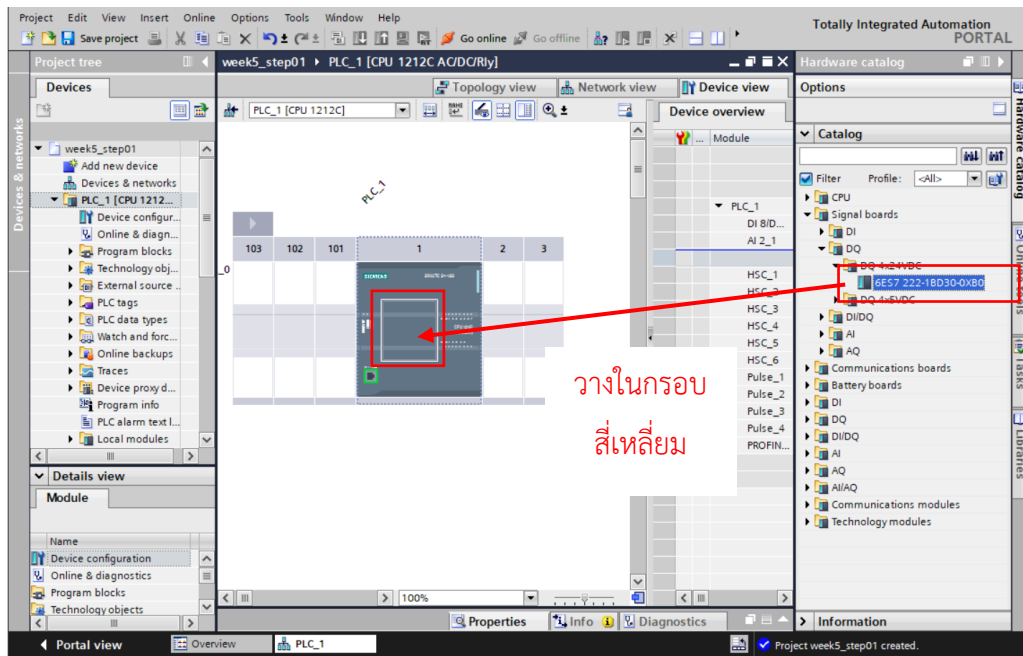


#### 5. Program block



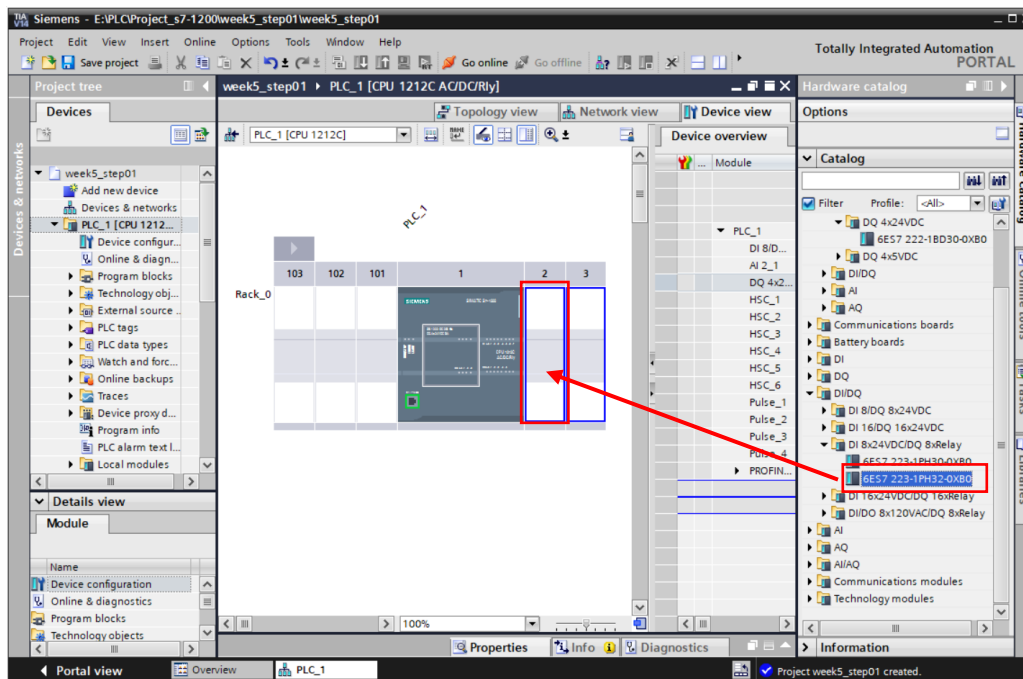
## 6. การเพิ่ม Module Signal Board DQ 4x24 VDC

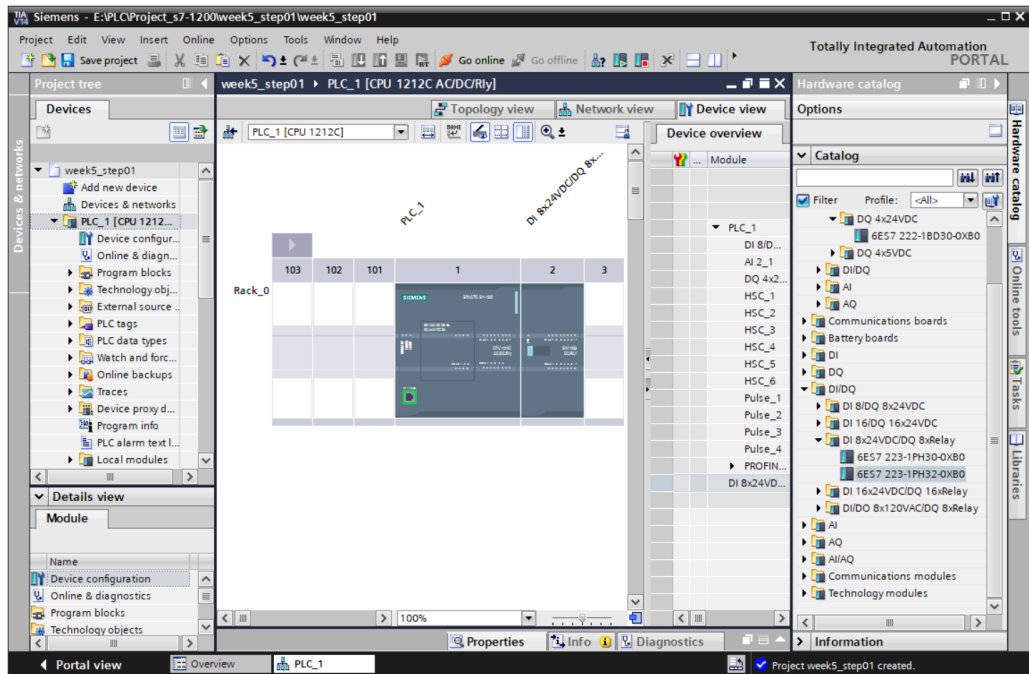
- Hardware Catalog => Signal board => DQ => DQ 4x24VDC => 6ES7 222-1BD30-0XB0



## 7. การเพิ่ม Module DI/DQ

- Hardware Catalog => DI/DQ => DI 8x24VDC/ DQ 8xRelay => 6ES7 223-1PH32-0XB0



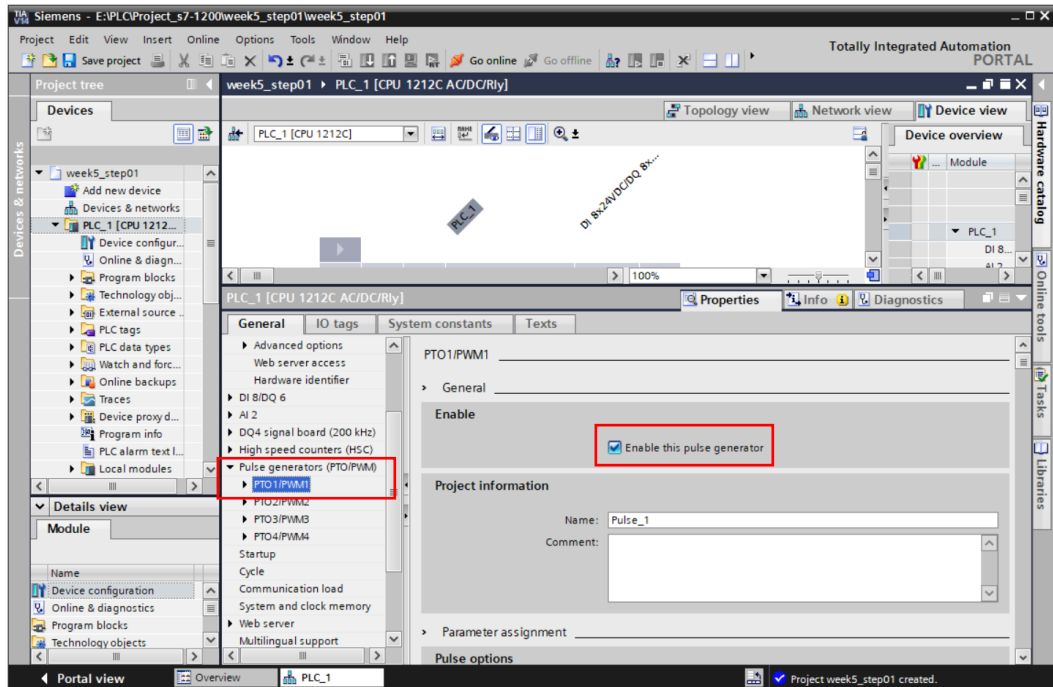


## 8. การใช้งาน Stepping motor

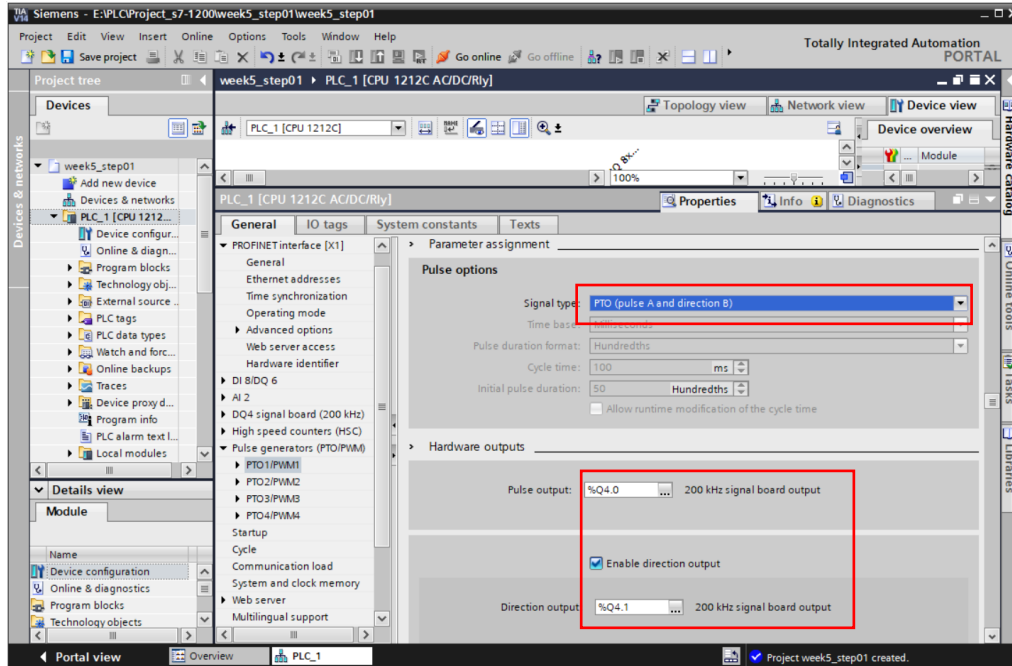
8.1 - คลิกที่ PLC\_1 => เลือก Properties (หรือดับเบิลคลิกที่ PLC\_1)

- Pulse generators (PTO/PWM) => PTO1/PWM1

- เลือก Enable this pulse generator

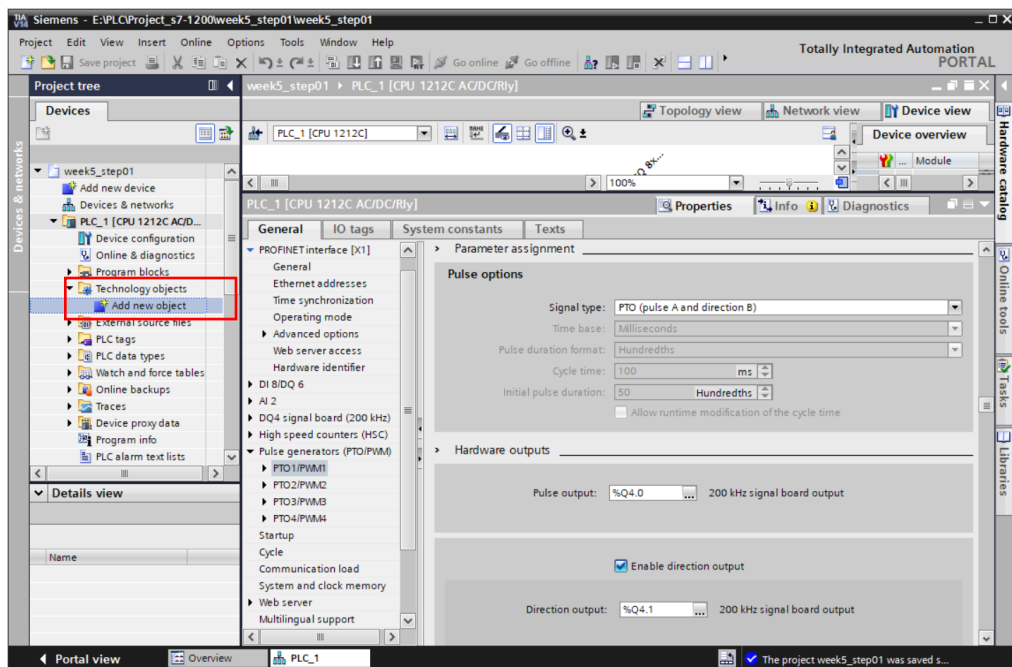


- เลื่อนลงด้านล่าง
- เลือก PTO (pulse A and direction B)
- เลือก Enable direction output



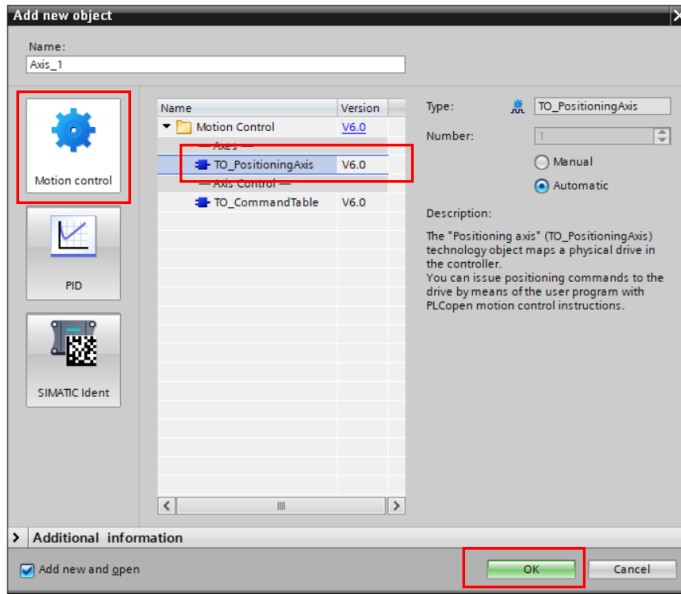
## 8.2 Axis-Config

- Technology objects => Add new object

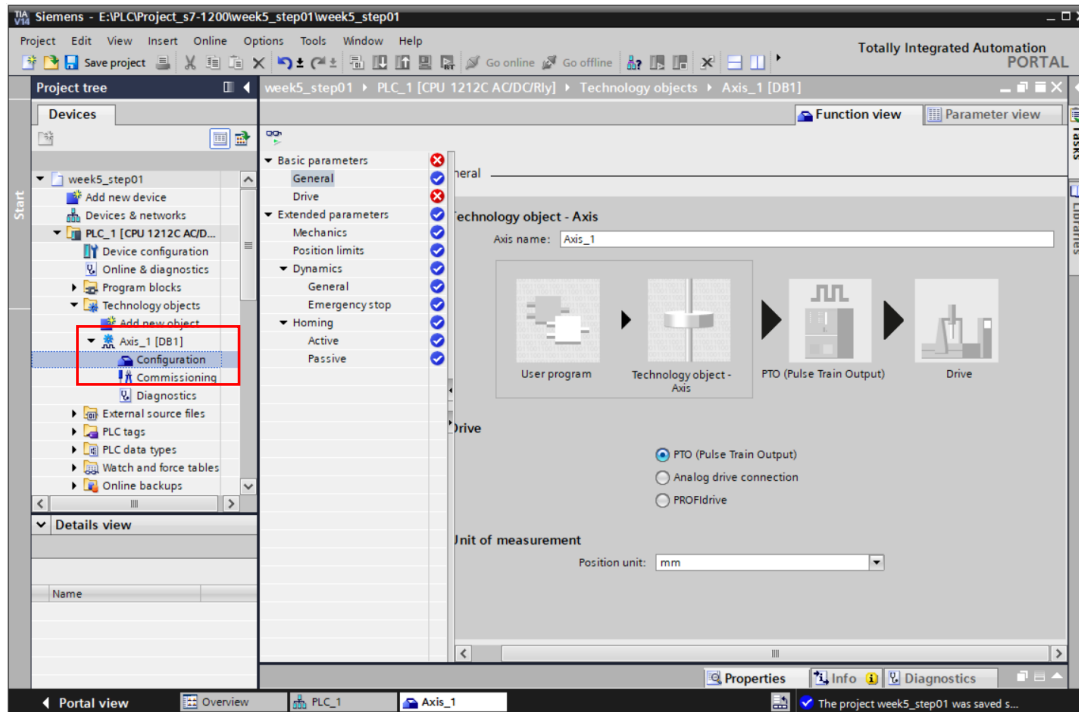




- เลือก Motion control => TO\_PositioningAxis => OK



- เลือก Axis\_1[DB1] => Configuration



- Basic parameters => Drive

The screenshot shows the Siemens TIA Portal interface for configuring a drive. The left sidebar displays the project tree with 'Axis\_1 [DB1]' selected. The main window is divided into a parameter list on the left and a configuration area on the right. The 'Basic parameters' section is expanded to 'Drive'. The 'Hardware interface' section is highlighted with a red box, showing the following settings:

- Pulse generator: Pulse\_1
- Signal type: PTD (pulse A and direction B)
- Pulse output: Axis\_1\_Pulse (%Q4.0) 200 kHz signal board
- Activate direction output
- Direction output: Axis\_1\_Direction (%Q4.1) 200 kHz signal board

The right side of the window shows a diagram of the drive system with a PLC, a drive unit, and a motor. The drive unit is labeled 'Drive' and the motor is labeled 'Motor'. The PLC is labeled 'PLC'. The drive unit has 'PTD signal' and 'Enable' inputs, and a 'Ready' output. The motor has 'Power' input.

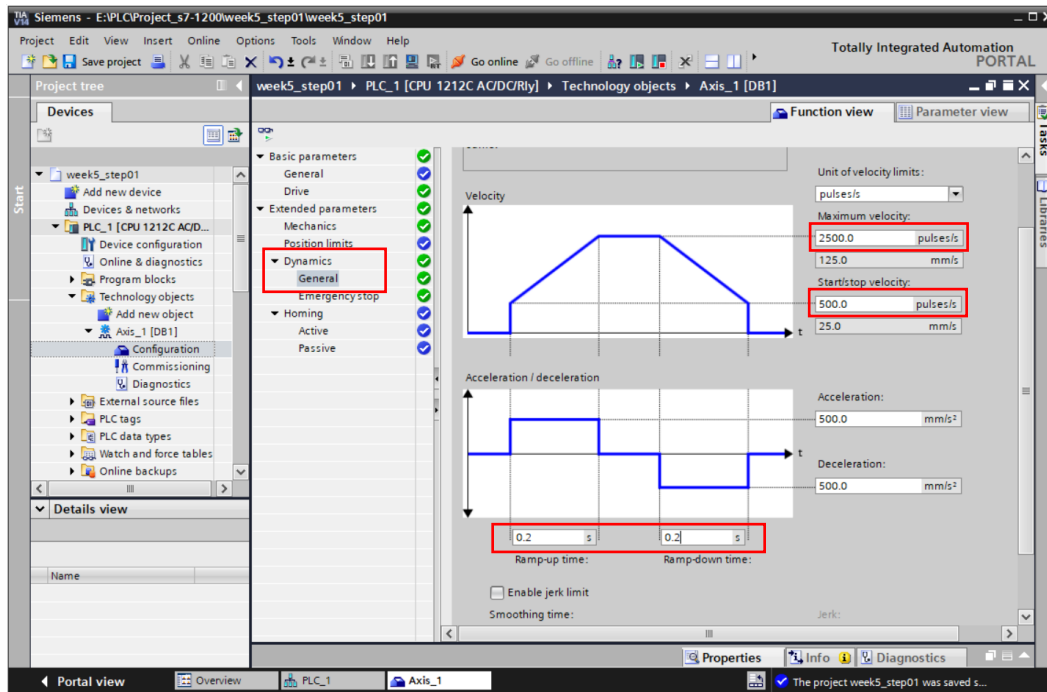
- Mechanics

The screenshot shows the Siemens TIA Portal interface for configuring the mechanical parameters of the drive. The left sidebar displays the project tree with 'Axis\_1 [DB1]' selected. The main window is divided into a parameter list on the left and a configuration area on the right. The 'Extended parameters' section is expanded to 'Mechanics'. The 'Mechanics' section is highlighted with a red box, showing the following settings:

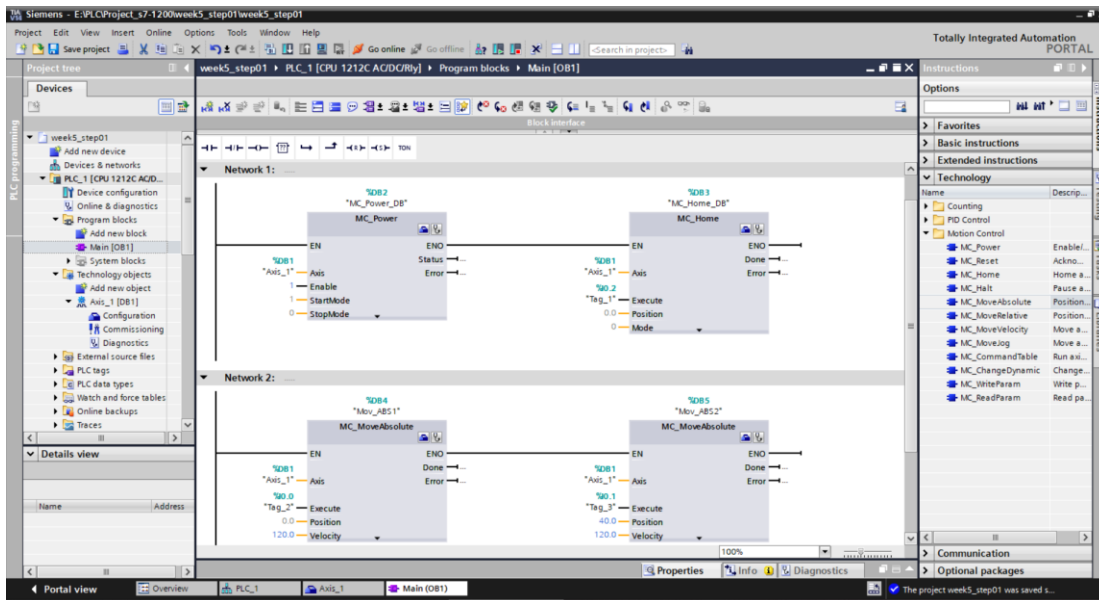
- Pulses per motor revolution: 800
- Load movement per motor revolution: 40 mm
- Permitted direction of rotation: Both directions
- Invert direction signal

The right side of the window shows a diagram of the drive system with a motor. The motor is labeled 'Motor'. The motor has 'Pulses per motor revolution' and 'Load movement per motor revolution' inputs. The motor is labeled 'Motor'.

- Dynamics => General



ตัวอย่าง



- Instructions => Technology => Motion Control

- MC\_power
- MC\_Home
- MC\_MoveAbsolute