WebAccess/CNC

SIEMENS

SIEMENS 828D/840D
OPC UA Connection

2022/8/30 Version: V1.5 Neal.Chen

Notice

The OPC UA components can be installed on PCU, NCU and PPU target systems.

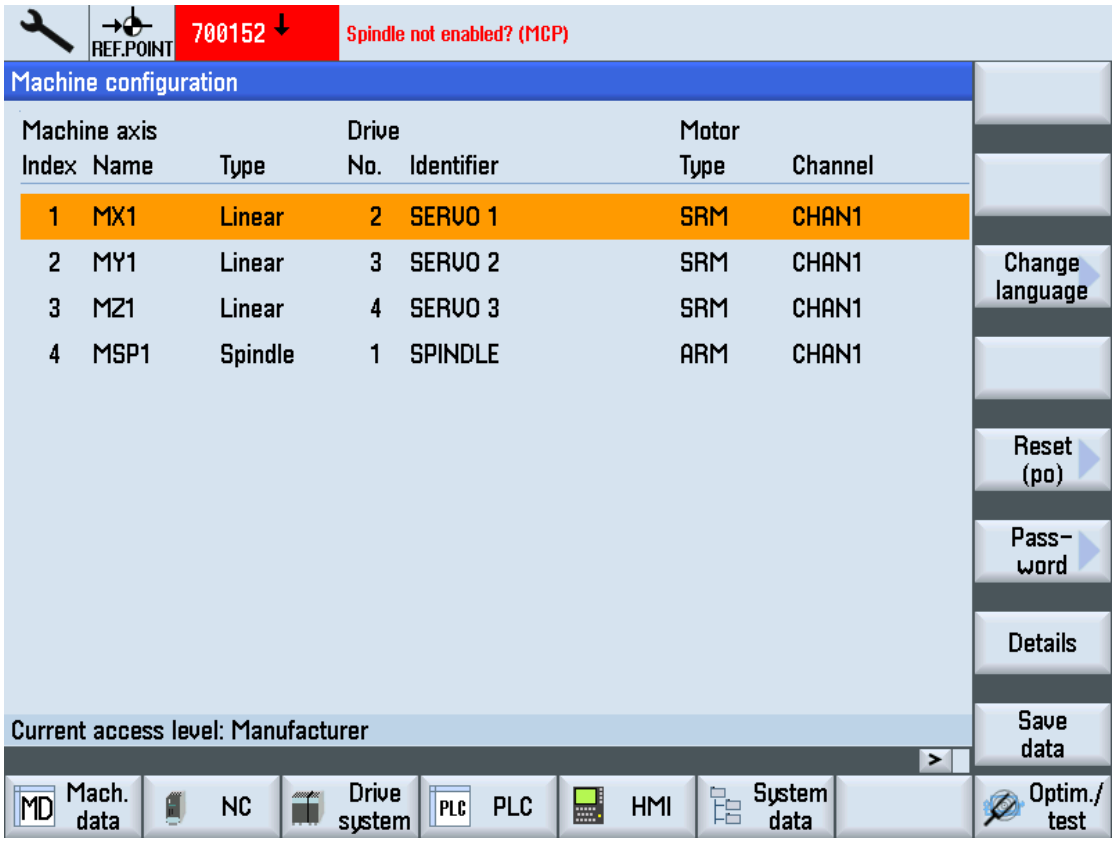
The following steps are necessary to do this:

1. Setting the license
2. Executing the OPC UA configuration dialog
3. Checking the HMI time
4. Performing a restart

- In SIEMENS **V4.05**, there is no user account /password and does not need to select signature & encryption. The access right of OPC UA application program (Client) is rights of local machine operator.
- In SIEMENS **V4.07**, the user needs to use the user account /password and there is no signature & encryption selection in the user interface. The access right of OPC UA application program (Client) is rights of login account.

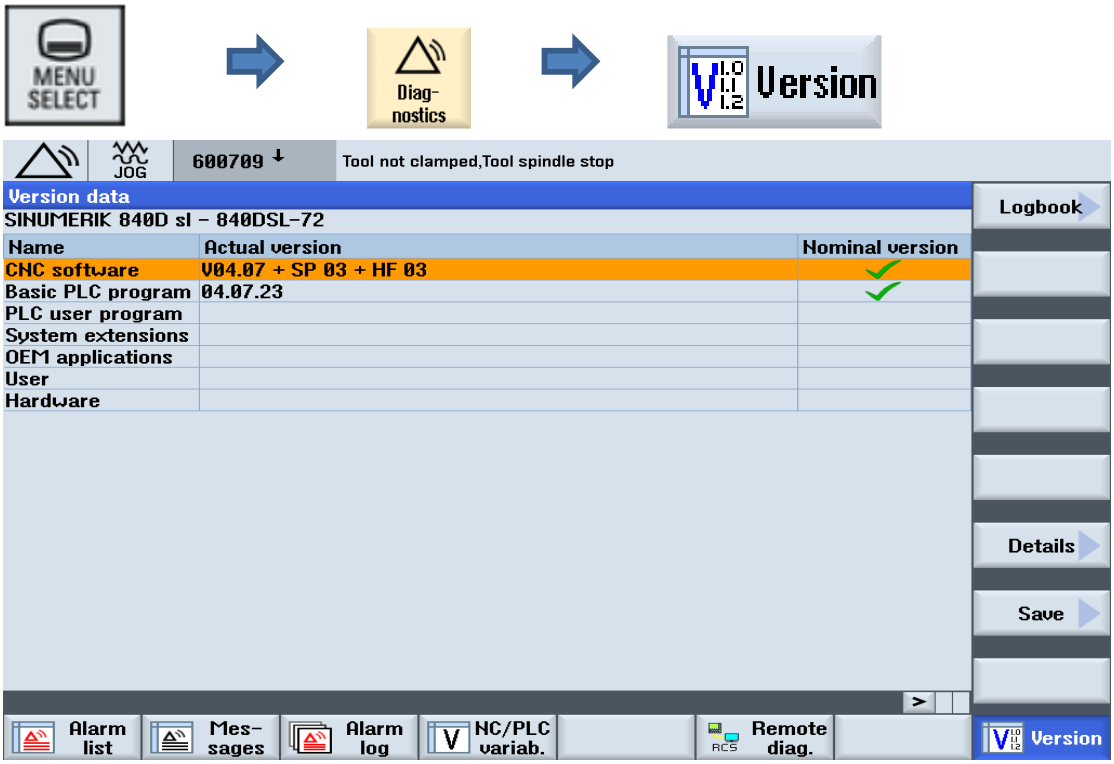
  The user account/password is not allowed to remodify after setting the login user account/password. Users can adopt the 3rd party OPC UA client software program to modify the user account/password again.

STEP 0: Confirm the right as Manufacturer



The operation right is displayed at the bottom left of interface menu.

STEP 1: Check SIEMENS CNC Version

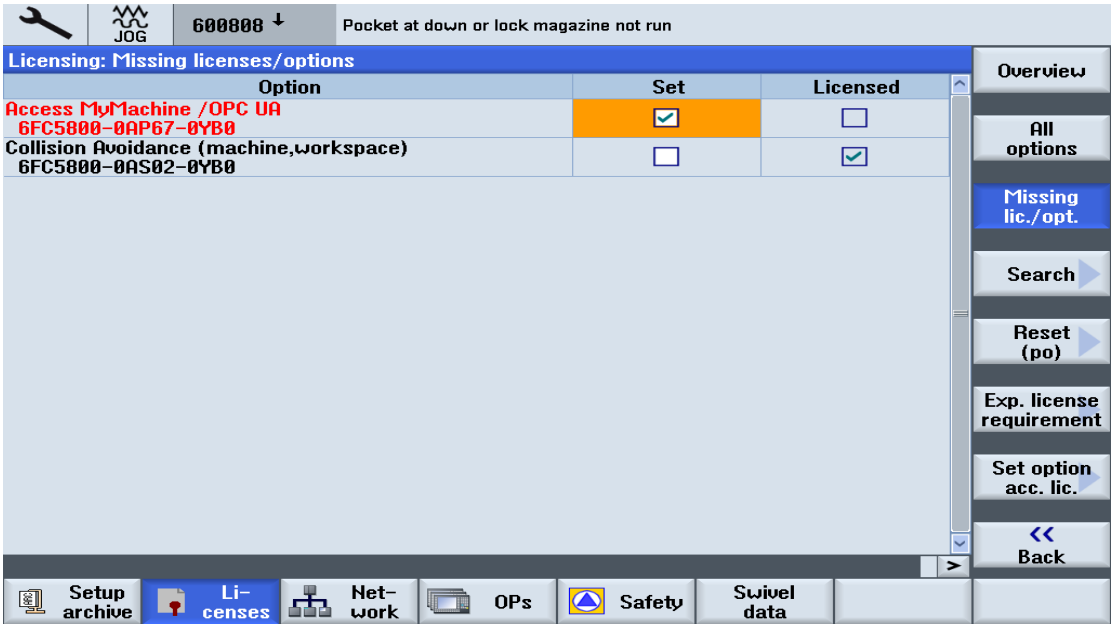


The CNC V4.05 SP03 (or higher) version is needed when using the OPC UA services.

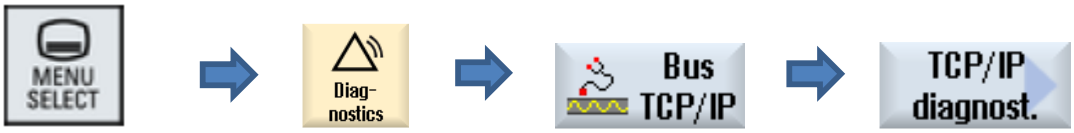
Recommend using V4.07 SP03

STEP 2: Check OPC UA Licenses

Search “OPC UA”, check “6FC5800-0AP67-0YB0” option and select it. If settings are all done, **RESTART** is necessary to activate the new settings.



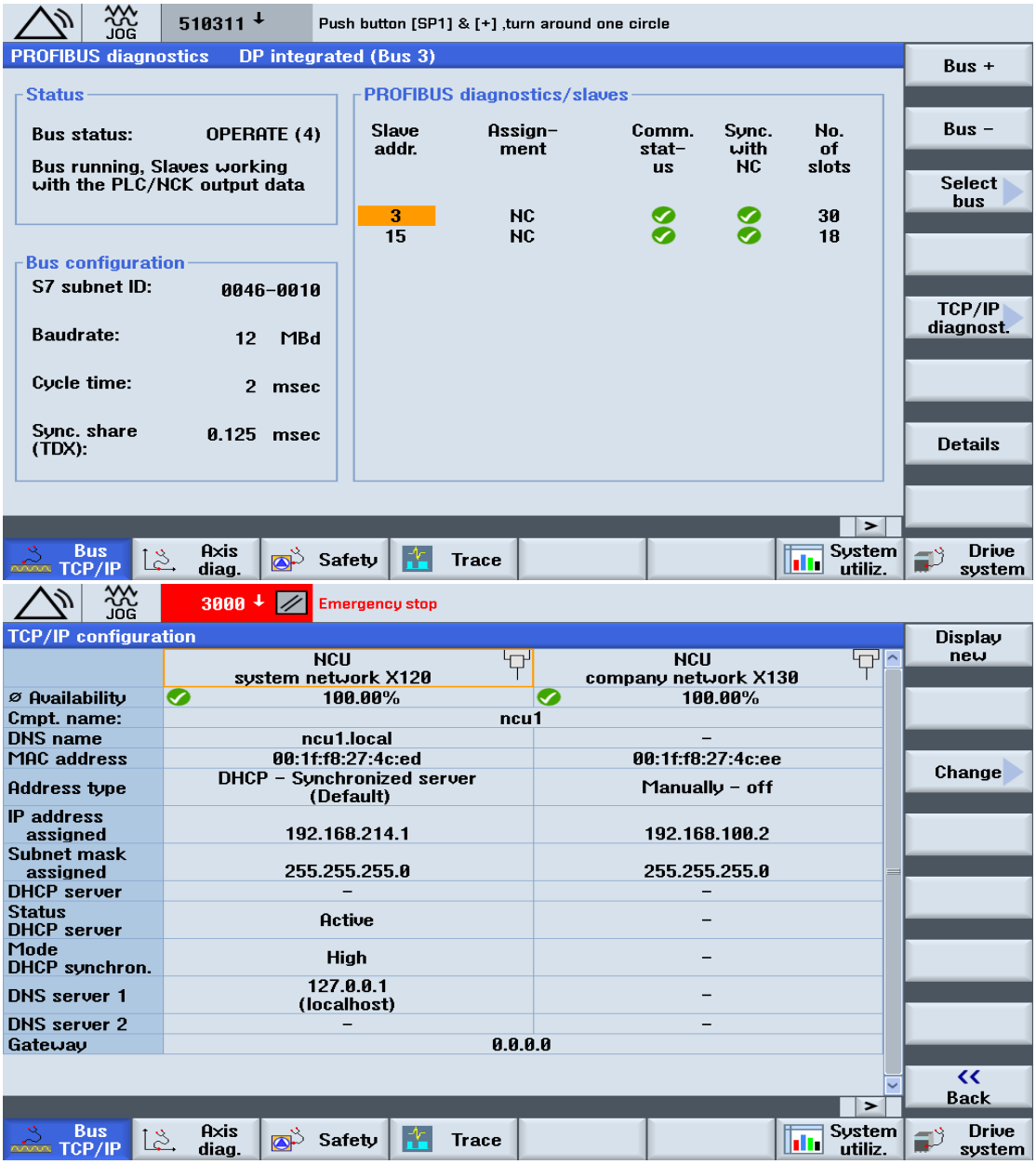
STEP 3: Setting Network & Firewall option

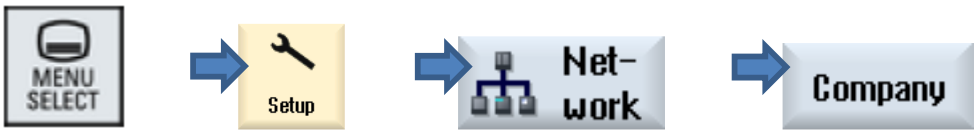


- Setting Address type(Manual-off)

  IP address assigned

  Subnet mask assigned

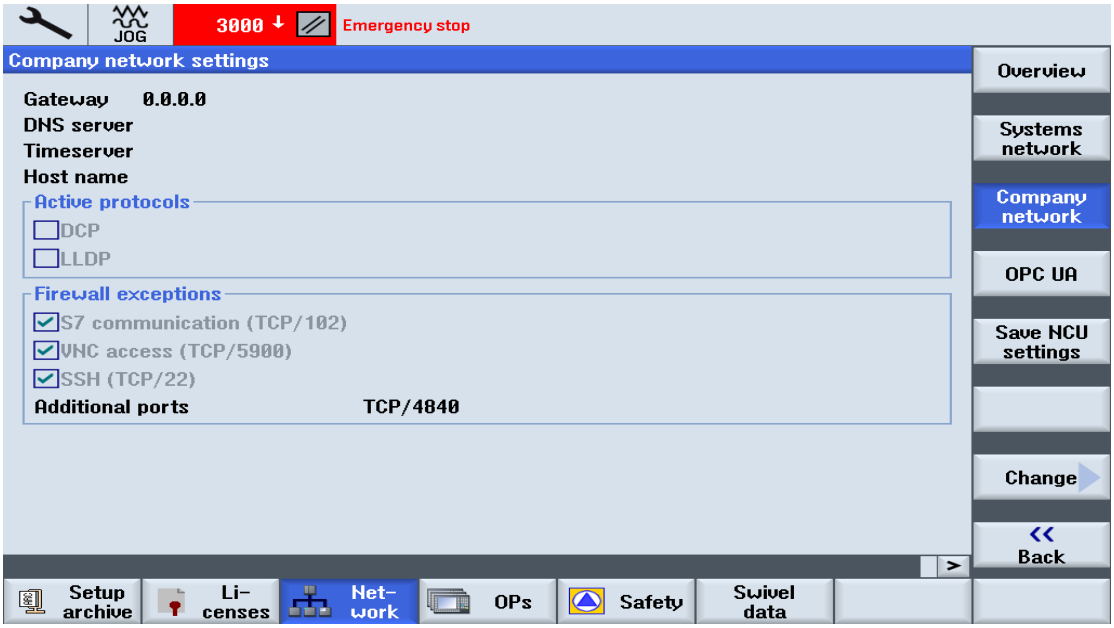




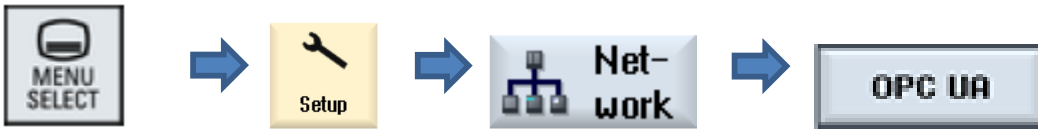
Company network change:

- Select S7 communication(TCP/102)
- Select VNC access(TCP/5900)
- Select SSH(TCP/22)
- Select TCP/4840 (Additional ports)

If settings are all done, **RESTART** is necessary to activate the new settings.

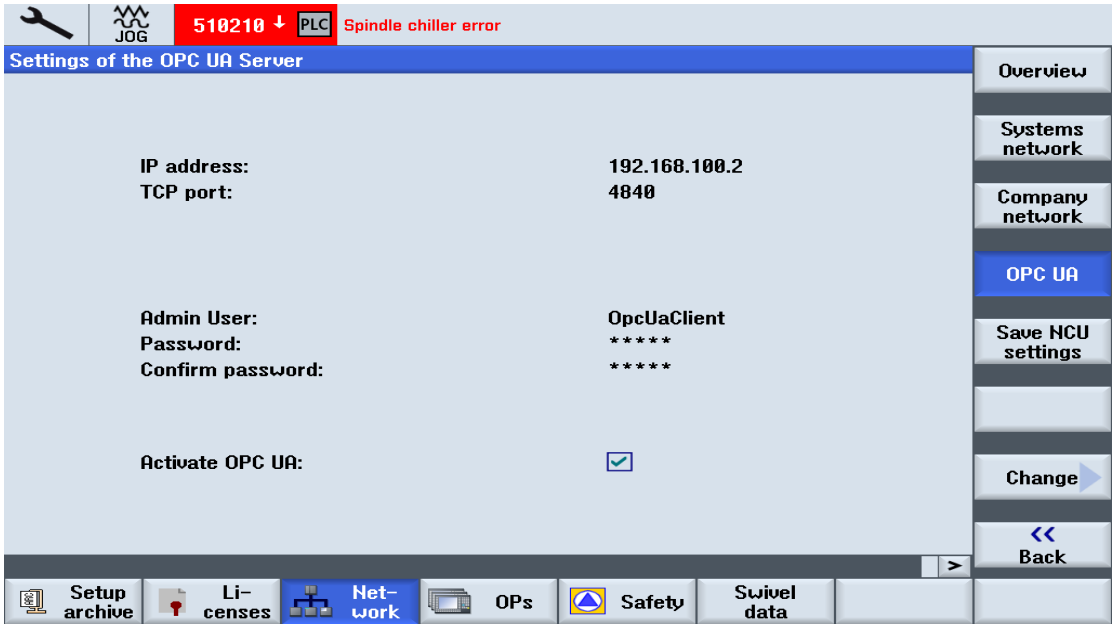


STEP 4: OPC UA Setting



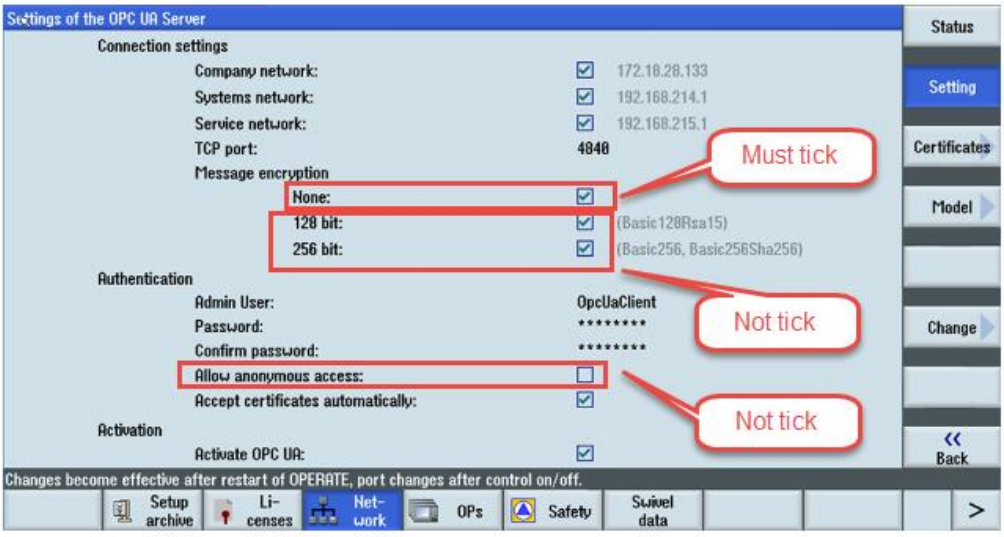
- Setting Port 4840 (binary protocol)
- Setting Admin User, default setting is "OpcUaClient"

  Hint: Admin User can administrate all OPC UA account access right.
- Setting & confirm Password(Setting Password is necessary)
- Select Active OPC UA option.

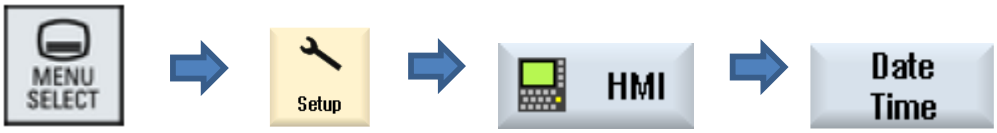


Setting	Description		
IP address	The IPv4 address of the target system. This is determined automatically. Check these:		
		for the NCU and PPU	-X130
		for the PCU 50	Local Area Connection 2
Port	TCP port, communicates via the OPC UA. This is added to the firewall exceptions for NCU and PPU. (The standard for the OPC UA communication is the TCP port 4840)		
Admin User	Name of the administrator; with it you can add or delete other users and assign or delete user authorizations.		
Password	Password of the administrator.		
Activate OPC UA	Place the checkmark to activate OPC UA and remove the checkmark to deactivate it.		

If Siemens CNC OPC UA server is the new version that can support the message encryption function, please click the **None** option and **don't allow anonymous access** option.

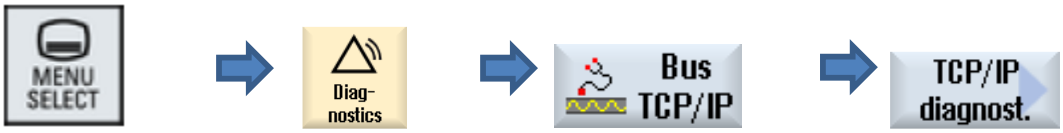


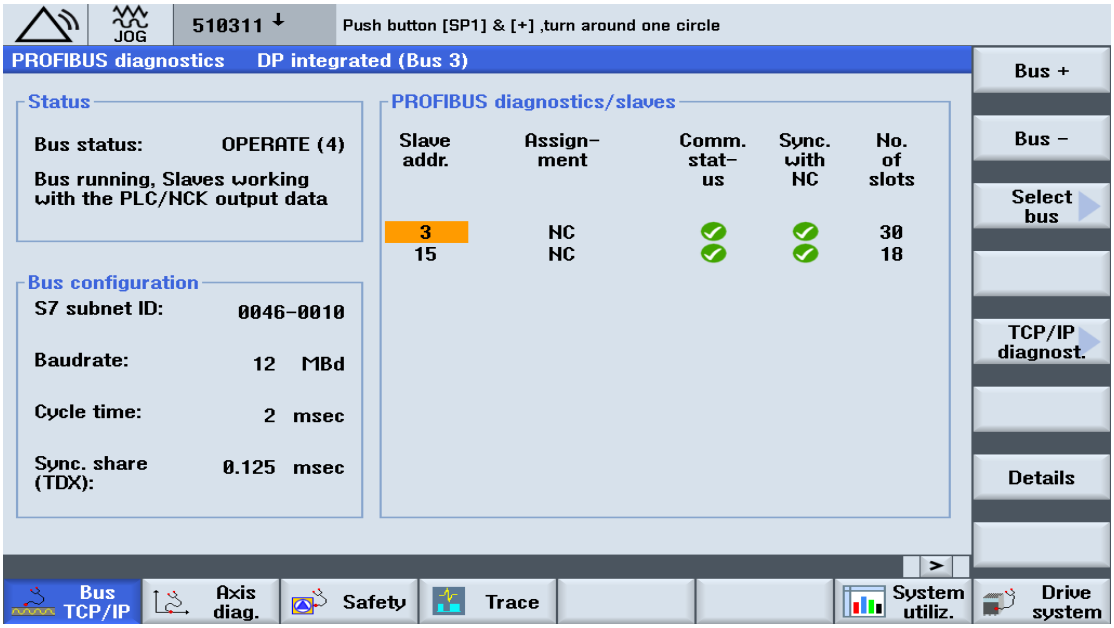
STEP 5: Check HMI Date & Time

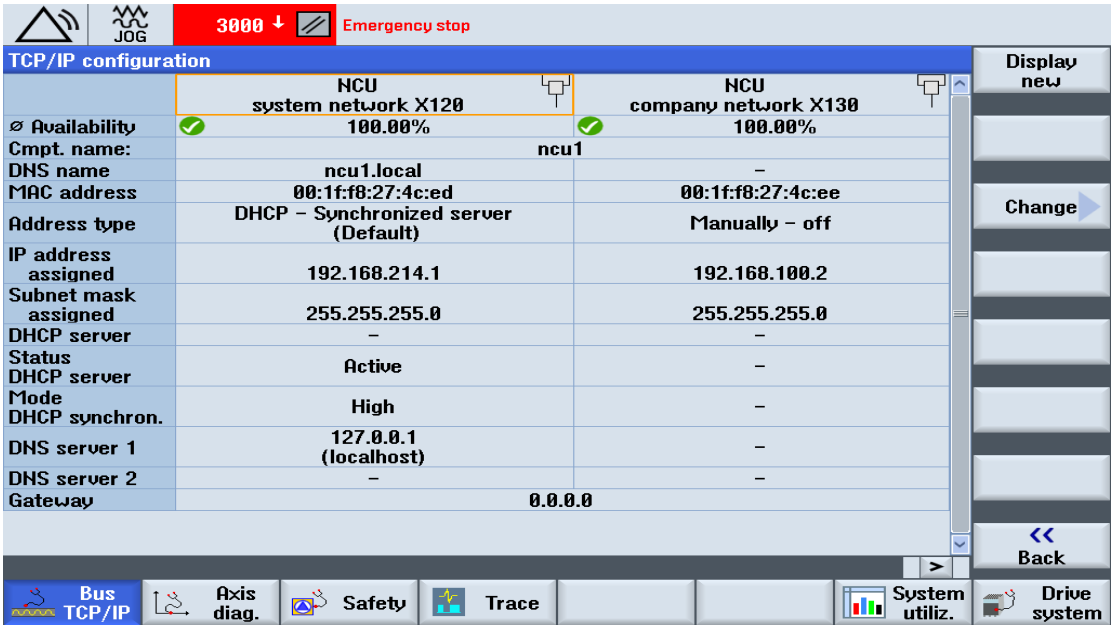


- The date & time of OPC UA must calibration as current date & time
- If settings are all done, RESTART is necessary to activate the new settings.

STEP 6: Confirm Network setting







- Must using X130 Ethernet port as connecting with OPC UA

STEP 7: OPC UA Connection Testing

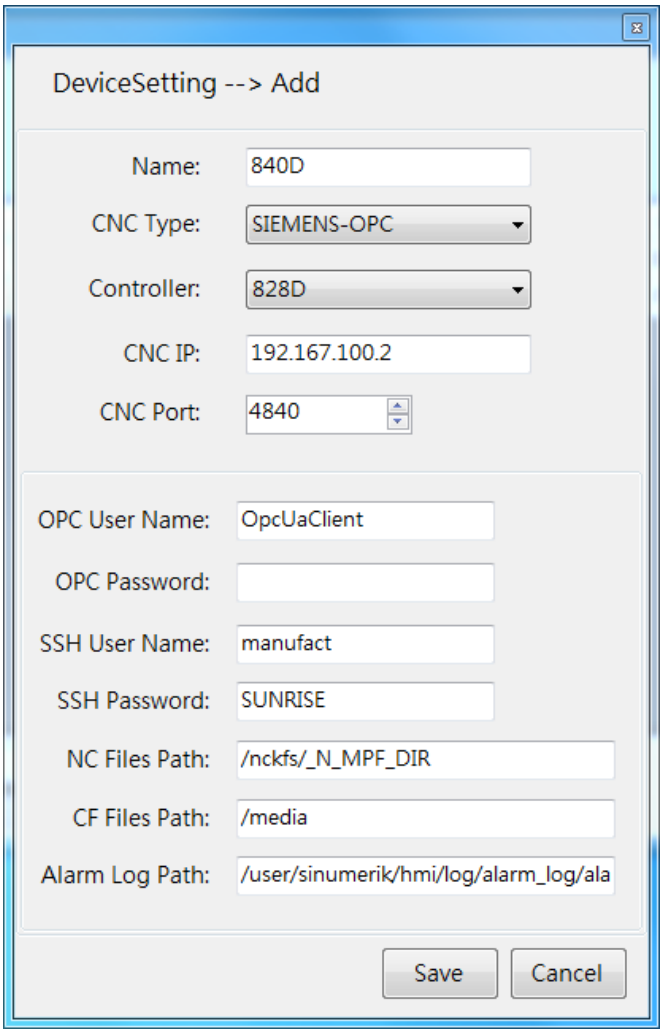
- Verify OPC UA port work or not by using telnet tool.

  telnet *IP address* port number

  EX: telnet 192.167.100.2 4840

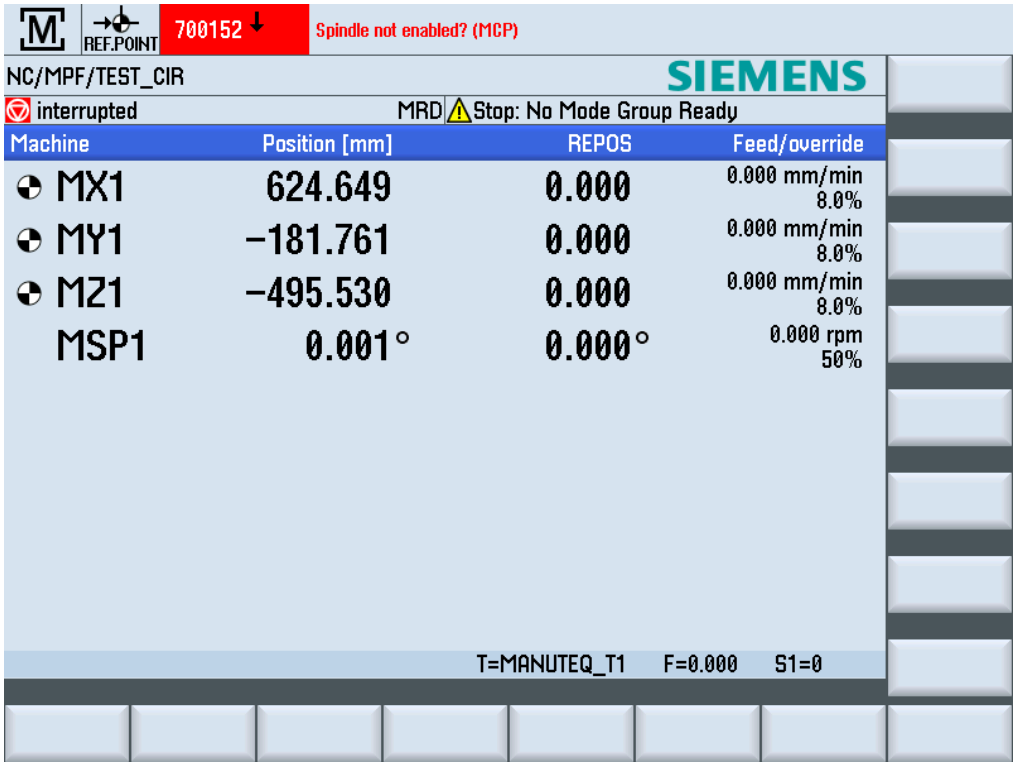
- Using 3rd party OPC UA software program connect with SIEMENS CNC controller. (Ex. UaExpert software)

- WebAccess/CNC connection test.

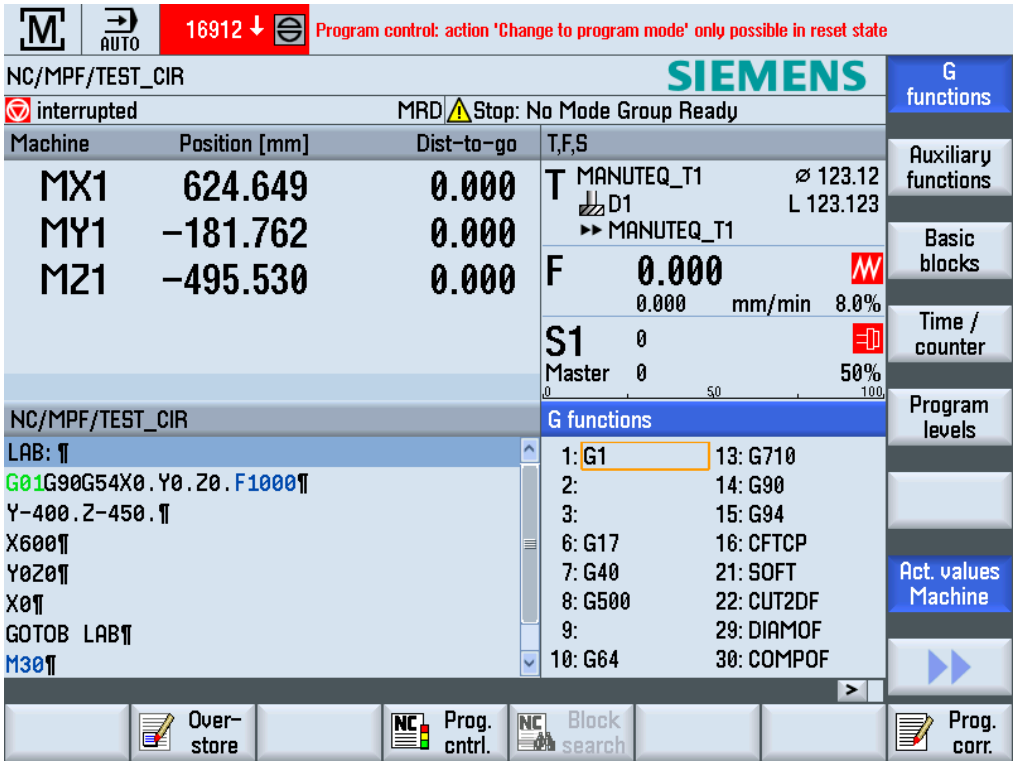


STEP 8: SIEMENS CNC Function Pages

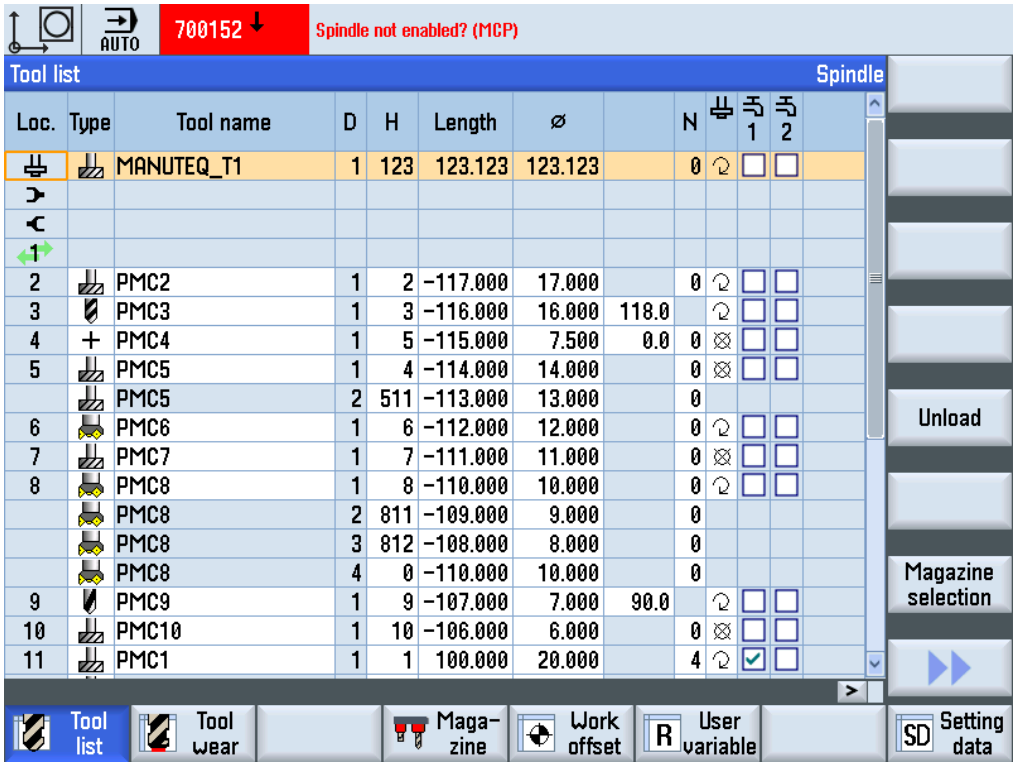
Position Information



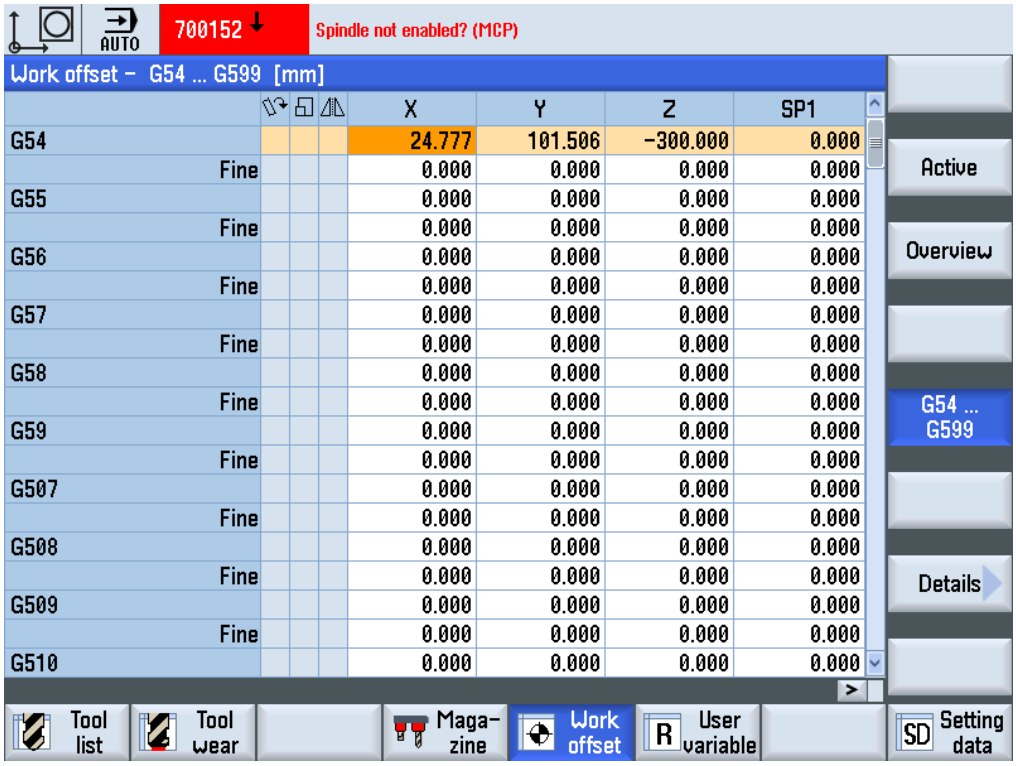
Status Display



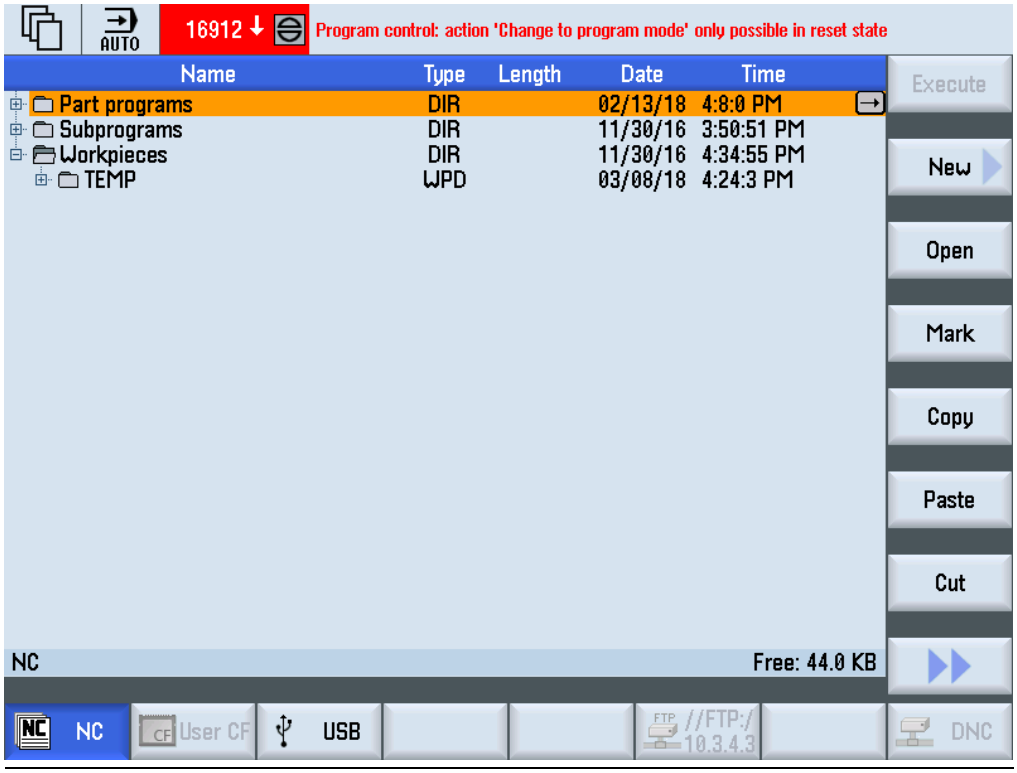
Tool List



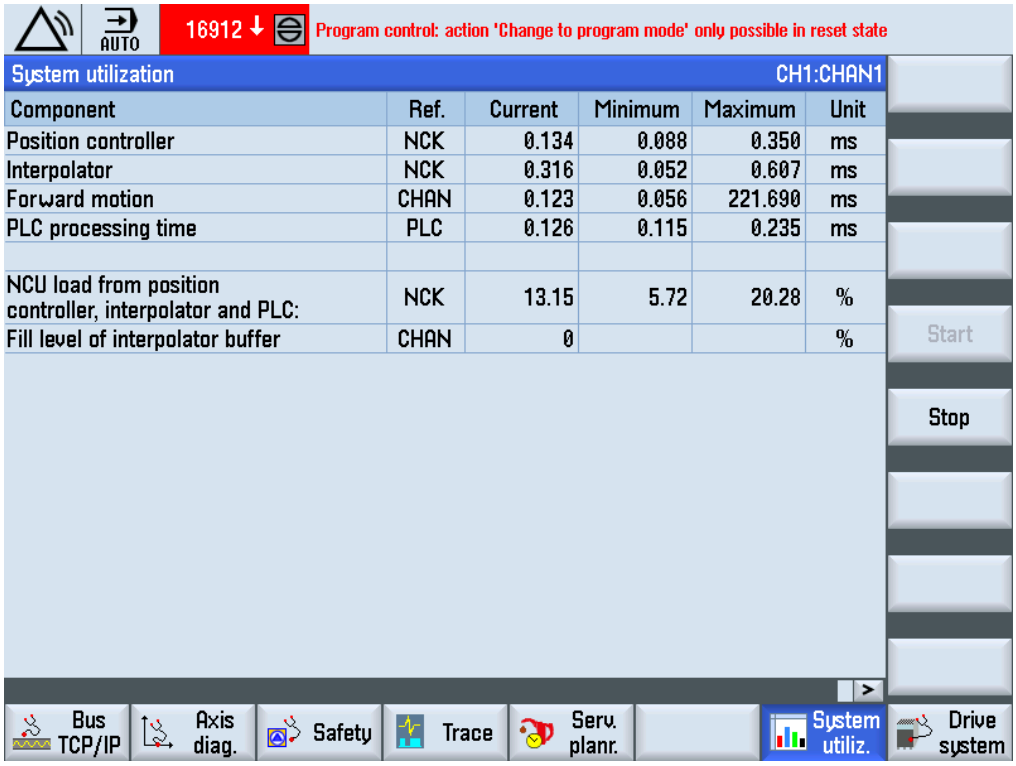
Work Offset



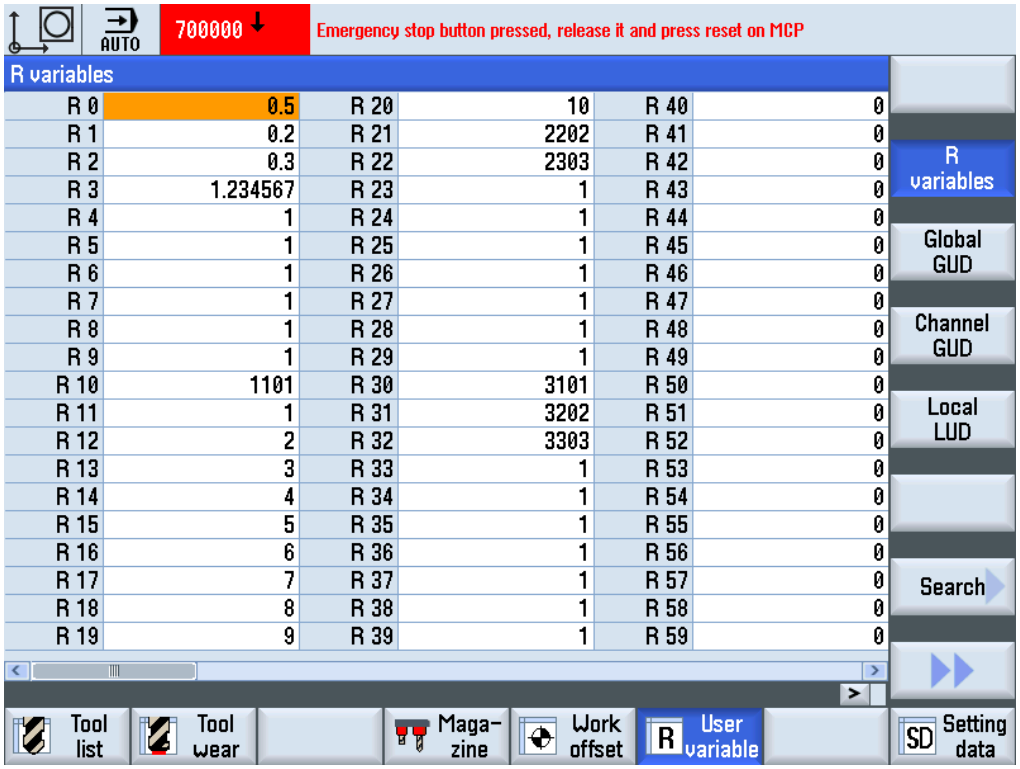
NC program List



System Utilization



R Variables



Alarm Log