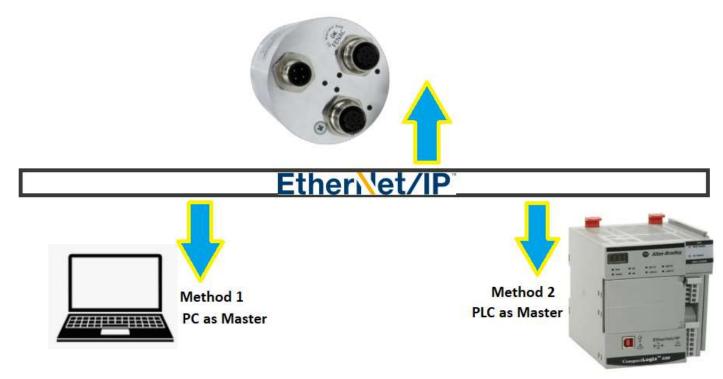


Establishing a Connection with the Fenac Ethernet IP Encoder Device

Power cable and data cable are correctly connected to the device. Details about the connection pinout structure are explained in the section "4.Connector & Pin Assignment". Power cable and data cable are indicated in the figure on the side. It is also specified to which input ports the power cable and data cable will be connected to the Fenac Ethernet IP encoder. The device can be supplied with DC voltage in the range of 10V to 30V. The other end of the data cable must be connected to an Ethernet IP master. Here we will talk about two



methods. Defining a personal computer as an ethernet IP master device and connect the data cable to the ethernet port of a PC is an easy method, as no external hardware is required. You can do your various tests in this way. The other method is to use a PLC device with Ethernet IP Master as traditionally.



Method 2: PLC as Ethernet IP Master

In our example here, we will use Allen Bradley's PLC as the master device. After supplying the Fenac Ethernet Ip Encoder by a voltage in the range of 10-30V from the power supply, connect the data cable to the Ethernet port of your PC. After this process, the status LEDs on the ethernet port of your PLC will light up, indicating that there is a successful connection.

Rockwell's Studio 5000 (in our case version 35.00.00) must be installed in your PC. Open the Studio 5000 interface.

1) Click on File>New> to start a new project. Select your PLC device, in our case it is 5069-L306ERM. Give the project to a name then click Next.

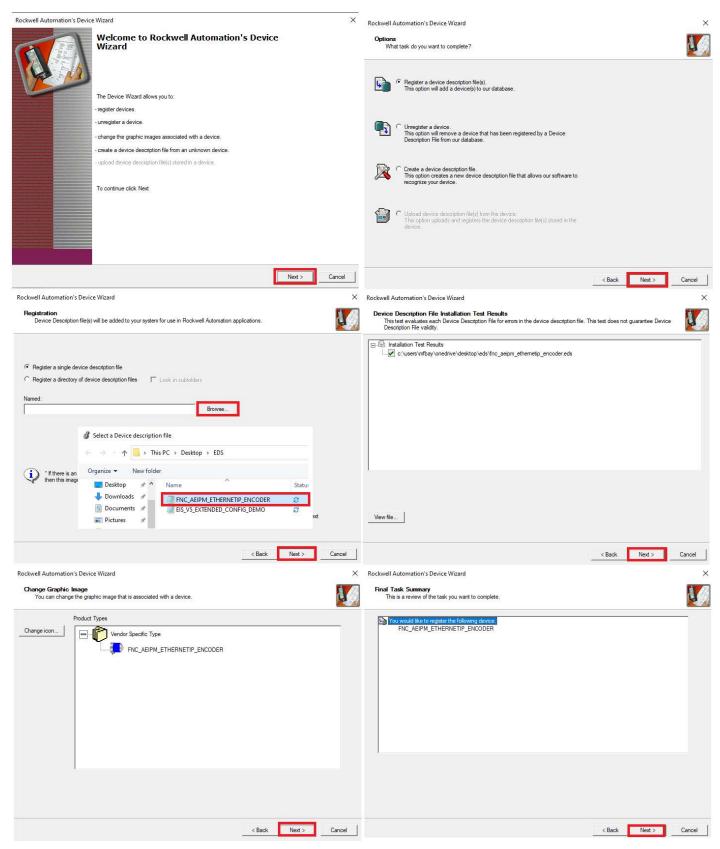
2) Next click Finish button to create project.

🗿 New Project				?	×	💰 New Project			?	×
Project Types			Search		×	5069-L306ERM (Fenac EthernetiP	CompactLogix™ 5380 Controller			
3 Logix	Comp Comp Comp Comp S0 S0	vactLogix™ 5370 vactLogix™ 5370 vactLogix™ 5380 v69-L306ER v69-L306ER v69-L310ER v69-L310ER v69-L310ER	Controller CompactLogix [™] 5380 Controller		Î	Fenac_EthernetiP Revision: Security Authority: Secure With: Description:	35 × No Protection Use only the selected Security Au authorization Logical Name <controller name<="" td=""> Permission Set</controller>			
	Location:		\OneDrive\Documents\Studio : ~	Brows	ie					
		Cancel	Back Next	Finis	sh		Cancel	Back Next	Fin	ish

3) Click on Tool menu and Click EDS Hardware Installation Tool.



4) Click next. Make sure Register a device description files selected then click Next. Browse the eds file(you can downloaded from fenac.com.tr) and click Next till the finish button.



5) Right click on "A1, Ethernet" and chose Properties. On the "General" tab window click on "Change IP Mode" then select A1/A2: Linear/DLR and click OK to save.

		nfiguration		Nonvolatile	Major Faults	pacity Interne Minor Faults	et Protocol Date/Time	Port Configuration Advanced	Security SFC Execution	Alarm Log Project	Change EtherNet/IP Mode		
	0	9 Backplane [0] 5069-L306ERM Fen Fthemet	ac_Ethernet			omation/Allen-Bradle		Auvanceu	SFC Execution	Figed	Current mode:	A1/A2: Dual-IP	
	•	New Module	IP	Type:	5069-L306ER	M CompactLogix"	5380 Controller		Change	Controller	New mode:	A1/A2: Linear/DLR	~
▲ <u>格</u>		Import Module Discover Modules	IP	Revision:	35.011						Move I/O and MSG Paths to port:	A1/A2: Dual-JP A1/A2: Linear/DLR	
	മ	Paste	Ctri+V	Chassis Typ	e: «none>				~				
	C	Properties Alt	Enter	Slot:	0 ‡						ОК С	ancel	Help
		Print	•	EtherNet/IP Mode:	A1/A2: Dual-I	P			Change	IP Mode			

6) Open your PC's Network & Internet Settings. Change adapter options than click properties. Select Internet Protocol Verison 4(TCP/Ipv4) then click on properties. Enter the IP address and Subnetmask below then click OK.

Copen Network & Internet settings	Ethernet0 Properties ×	Internet Protocol Version 4 (TCP/IPv4) Properties
Change adapter options View network adapters and change connection settings.	Networking Connect using:	General You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Ethernet0 Enabled Intel(R) 82574L Ginabit Network C Disable Status Diagnose Bridge Connections Create Shortcut Delete		Obtain an IP address automatically Obtain an IP address: IP address: IP address: IP address: IP address: Default gateway: Obtain DNS server address automatically Use the following DNS server addresses:
Properties	Install Uninstall Properties Description Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks. OK Cancel	Preferred DNS server: Alternate DNS server: Validate settings upon exit Advanced

7) Open RSLinc Classic Application. Connect you PLC's usb cable (or ethernet) Under the USB section right click and select "Module Configuration". Under the "Port Configuration" tab, Set Port for A1 or A2 then set "Manually configure IP settings" and enter the valus below in the image.

RSLinx Classic	USB\16 5069-L306ERM/A Configuration	×
App <	General Port Configuration Advanced Port Configuration Network	
App - 문 Workstation, DESKTOP-0T5T1GJ - 움 Linx Gateways, Ethernet - 움 AB_ETHIP-1, Ethernet - 움 AB_VBP-1, 1789-A17/A Virtual Chassis - 양 USB - 16, 5069-L306ERM LOGIX306ERM, fenac v3 Remove Configure New DDE/OPC Topic Data Monitor	Port: A1/A2 • Manually configure IP settings • Obtain IP settings automatically using BOOTP • Obtain IP settings automatically using DHCP IP Address: IP Address: 192 168 2 135 Network Mask: 255 255 0 Gateway Address: 0 0 0 0 Primary Name 0 0 0 0	
Configure Driver Upload EDS file from device Security Device Properties Module Statistics Module Configuration	Secondary Ivaline 0 0 0 0 Server: Domain Name: Host Name: Status: Network Interface Configured OK Cancel	Apply Help

8) Right click on "A1/A2, Ethernet". Then In the Select Module Type menu search for fenac eds file and double click on it. Then write Name for Encoder in our case we use "fenac" as a name. Click IP Address and enter 192.168.2.101. To chose connection you can click on Change button.

1.000	8	New Mod	Contraction of the second s	Fer	enac		Clear Filt	ters	Show Filters
		Import Mo Discover N	vlodules		Catalog Number	Descriptio	חמ	Category	
	வி	Paste	Ctrl+V		FenacEncoder-Eth/IF		PM_ETHERNETIP_ENCO	- 10 March 1	
		Propertie: Print	s Alt+Enter	1 c	of 824 Module Types Fo	ound			Add to Favorit
					Close on Create				Close
Cor Mo Inte		tion	22	nacEncoder- Ical	r-Eth/IP FNC_AEIPM_ET	THERNETIP_ENG	CODER		
Cor Mo Inte	nnect dule l emet t Con	tion Info Protocol ifiguration	Type: Fe Parent: Lo		-Eth/IP FNC_AEIPM_ET		Ethernet Address	192.168.1.	÷
- Cor Mo Inte	nnect dule l emet t Con	tion Info Protocol ifiguration	Type: Fe Parent: Lo Name: fe	cal	-Eth/IP FNC_AEIPM_ET		Ethernet Address	192.168.1. 192 . 168	- Conservation

9) Click on SINT to change it to DINT for proper parameter showing. Select connection, we chose Exclusive Owner and click OK. Click yes to any warning in this stage.

		Size	
clusive Owner	Input:	4	DINT
clusive Owner	Output:	2	

10) Click on Communications tab on Studio 5000 then select Who Active. Find you PLC under USB tab and click Download button. Click Download to warning again.

Communications Tools Window Help	💣 Who Active (FactoryTalk Linx)					– 🗆 X
器 Who Active Select Recent Path Select Communication Software Go Online	୍ତି 🛱 🕸 🔍 ସ୍ ? 🗸 ♠ DESKTOP-0T5T1GJ	Q ▼ Filter			•	Go Online
Upload Download	▲ Network Strate American American Strate American American Strate American America				₽	Upload Download Update Firmware
Program Mode Run Mode Test Mode	✓ SB ← USB ← ✓ USB ← ✓	14	c c	۶	Ŧ	Close
Lock Controller Clear Faults Go To Faults						

11) Double Click on Controllers Tags to see parameters.

ope: Fenac_Ethemeti ~ Show: All Tags						
Name III	Value 🗧	Force Mat	Style	Data Type	Description	Constant
▲ fenac:C	{}	{}		_0328:FenacEncoder_Eth		
▶ fenac:C.SingleTurn	262144		Decimal	DINT		
fenac:C.TotalRange	1073741824		Decimal	DINT		
fenac:C.Preset_Parameter	0		Decimal	DINT		
fenac:C.preset_changed	0		Decimal	DINT		
fenac:C.Store_Parameters	0		Decimal	DINT		
fenac:C.Restore_Parameters	0		Decimal	DINT		
fenac:C.Operating_Parameter	0		Decimal	INT		
▲ fenac:l	{}	{}		_0328:FenacEncoder_Eth		
fenac:I.ConnectionFaulted	0		Decimal	BOOL		
◢ fenac:I.Data	{}	{ }	Decimal	DINT[4]		
fenac:I.Data[0] FAULT HEADE	R 0		Decimal	DINT		
fenac:I.Data[1] POSITION	9540317		Decimal	DINT		
▶ fenac:I.Data[2] SPEED	-18		Decimal	DINT		
▶ fenac:I.Data[3] FLAGS	0		Decimal	DINT		
▲ fenac:O	{}	{}		_0328:FenacEncoder_Eth		
◢ fenac:0.Data	{}	{}	Decimal	DINT[2]		
fenac:O.Data[0]	0		Decimal	DINT		
▶ fenac:O.Data[1]	0		Decimal	DINT		

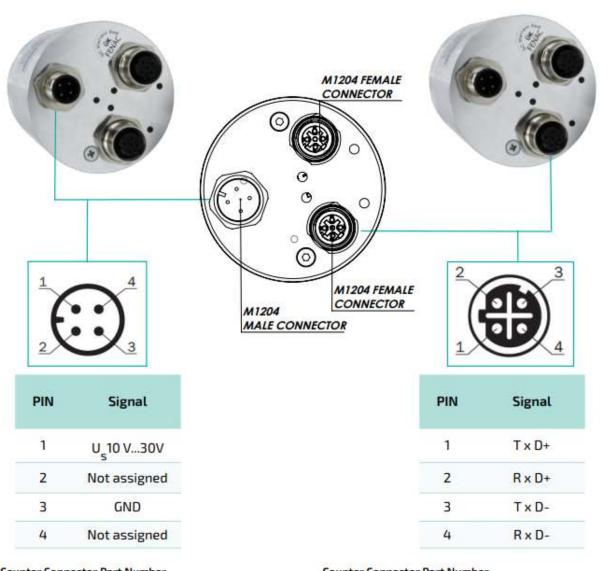
12) We need to change the status and Go Offline to be able to configure the encoder device. Most of the time, single turn value and total turn value are changing in encoders. Lets change the SingleTurn and TotalRange parameters (to do this we also need to enable scaling option with setting Operating_Parameter to 4) We also try to preset device from 50 (to do this we need to enable preset_changed to 1). After that we need to Download this new configuration to out encoder device.

Rem Run	🖳 No Forces 🛛 🔍	Name	== ▲ Valu	e 🔶	Force Mat	Style	Data Type	Offline	🛛 🗸 No Forces 🛛 🔍
	Go Offline	▲ fenac:C		. }	{}		_0328:FenacEncoder_Eth'	· · · · · ·	Go Online
	Upload	▶ fenac:C.SingleTurn		> 100		Decimal	DINT		Upload
	Download	♦ fenac:C.TotalRange		250		Decimal	DINT		Download
	Program Mode	▶ fenac:C.Preset_Parameter		50		Decimal	DINT		Program Mode
	Run Mode	fenac:C.preset_changed				Decimal	DINT		Run Mode
	Test Mode	▶ fenac:C.Store_Parameters		0		Decimal	DINT		Test Mode
	Clear Faults	▶ fenac:C.Restore_Parameters		0		Decimal	DINT		Clear Faults
	Go To Faults	▶ fenac:C.Operating_Parameter				Decimal	INT		Go To Faults
	Controller Properties							1	Controller Properties

FEQAC EtherNet/IP

4. Connector & Pin Assignment

Pin Assignment

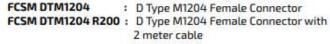


Counter Connector Part Number

FCSF M1204 : M1204 Female Connector

FCSF M1204 R200 : M1204 Female Connector with 2 meter cable

Counter Connector Part Number





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