



CONTROLS & DRIVES LTD

The Industrial Automation Specialists



Technical Tip

GOT2000 Ethernet Multidrop
Using FX and Q series PLCs



Part of the **B P X** Group



GOT2000 Multidrop with FX and Q

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Intro

A setup guide on GOT2000 networked with Multiple PLC through Ethernet.

Equipment used:

FX3G – with FX3U-ENET
FX3G – with FX3U-ENET-ADP
FX3U – with FX3U-ENET
Q02 – with QJ71E71-100
GT2508-VTBA
Standard Ethernet switch





HMI settings on GT25 – GT Designer 3

- 1) Create a new project in GT designer 3 and select correct HMI type.
- 2) In controller settings the following settings were used:

CH1:

Property	Value
GOT Net No.	1
GOT Station	1
GOT Standard Ethernet Setting	192.168.0.9
GOT Communication Port No.	5019
Retry(Times)	3
Startup Time(Sec)	3
Timeout Time(Sec)	3
Delay Time(ms)	0

	Host	Net No.	Station	Unit Type	IP Address	Port No.	Communication
1		1	2	FX	192.168.0.1	5551	TCP
2		1	3	FX	192.168.0.2	5551	TCP
3	*	1	4	FX	192.168.0.3	5556	TCP

It is possible to setup all FX3 PLCs on one channel. You can see above GOT is station 1 and the PLCs are Stations 2, 3, and 4.

The FX3U-ENETs is port 5551, and the FX3U-ENET-ADP is port 5556 (the port number is determined by the type of equipment used and it is not changeable in FX).

Please note: it is not possible to setup Q series PLC and FX3 on the same channel.





Now select CH2:

Check 'use CH2' tick box

These are the settings that were used for Q series. You are able to use a Q series PLC as long as you use a different channel.

Controller Setting X

Use CH2

Manufacturer: MITSUBISHI

Controller Type: MELSEC-Q/QS, Q17nD/M/NC/DR, CRnD-700

To Ethernet Setting

I/F: Standard I/F(Ethernet):Multi(Used in CH1)

Driver: Ethernet(MELSEC), Q17nNC, CRnD-700, Gateway

Detail Setting

GOT Standard Ethernet Setting... IP Filter Setting...

Property	Value
GOT Net No.	1
GOT Station	1
GOT Standard Ethernet Setting	192.168.0.9
GOT Communication Port No.	5001
Retry(Times)	3
Startup Time(Sec)	3
Timeout Time(Sec)	3
Delay Time(ms)	0

Ethernet Setting

	Host	Net No.	Station	Unit Type	IP Address	Port No.	Communication
1	*	2	5	QJ71E71/LJ71E71	192.168.0.4	5001	UDP

On this channel you have to make sure your network number is 2.

Station number 5 was used as an optional number, however the station number needs to be different to the HMI.

Please note: You need will need use a different IP address to the FX PLCs, and also make sure the correct Unit type has been selected.





3) HMI Screen:

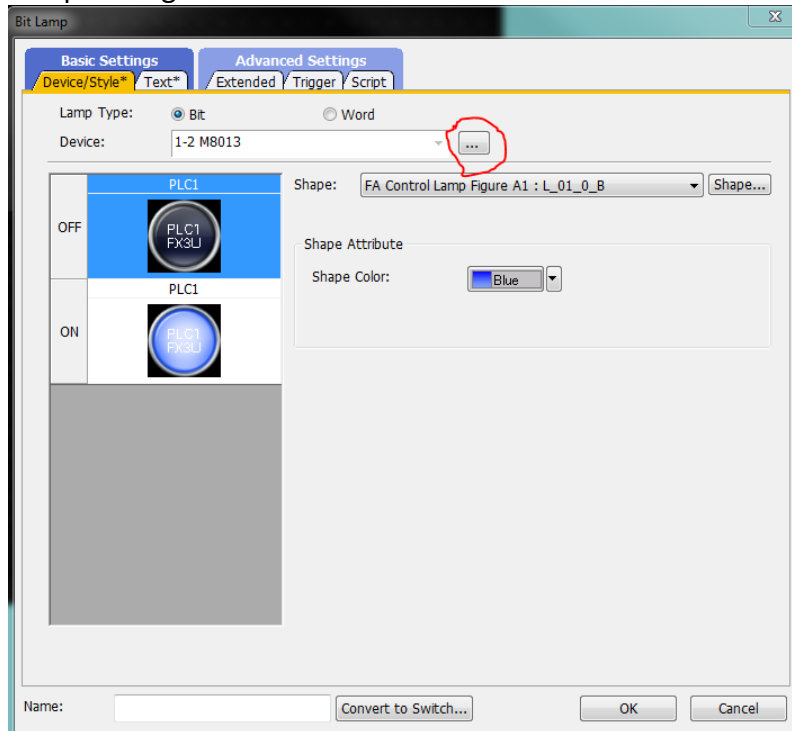


For the screen, 4 lamps were used with a 1 second PLC pulse contact.

FX – M8013

Q – SM412

Lamp settings:

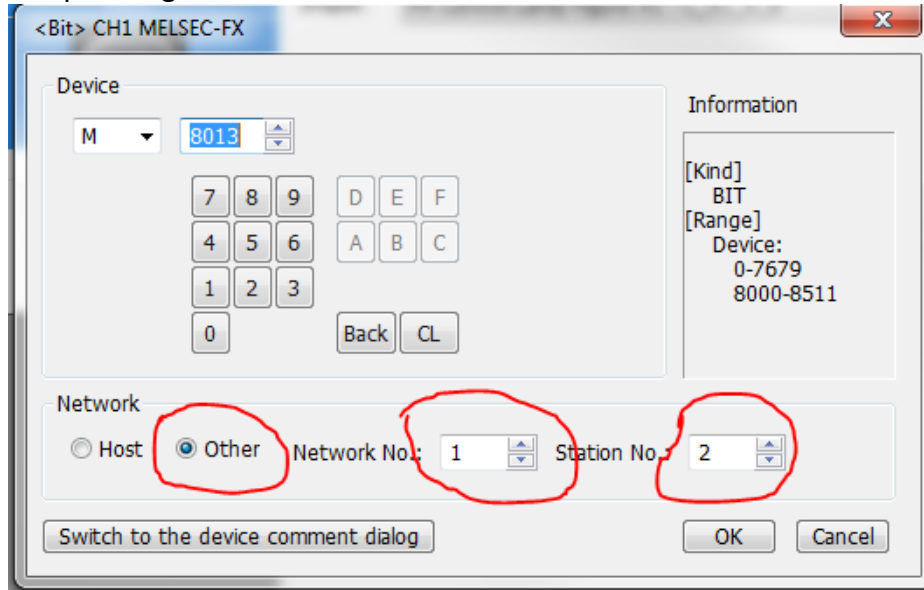


The lamp will require addressing, As above click on the button with '3 dots'.



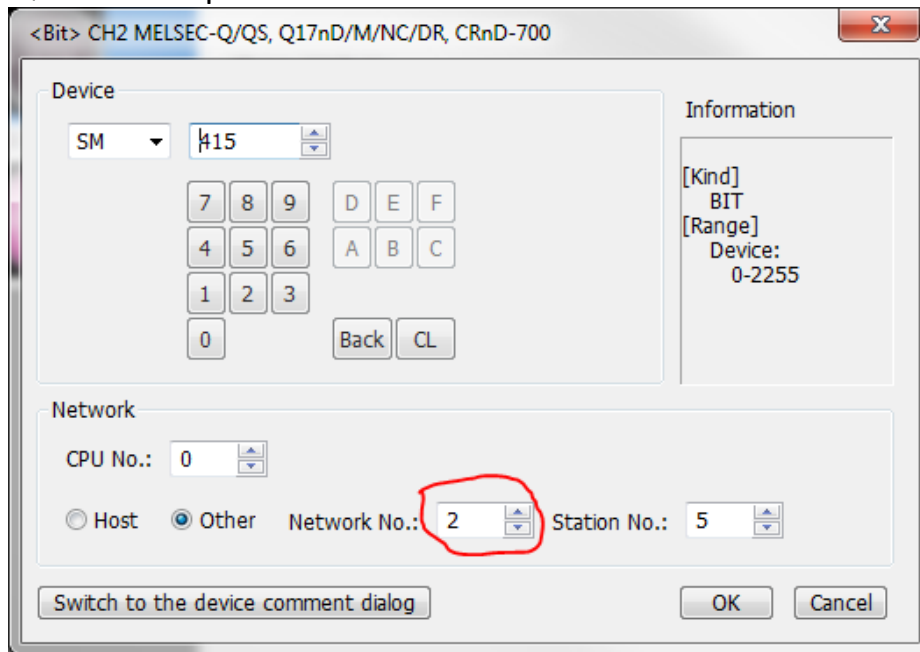


Lamp settings:



The 1st, 2nd and 3rd lamp was FX therefore Network 1 was selected, station number will differ accordingly.

Q series setup:



You can see here Network 2 is selected and Station 5 is selected.

4: The HMI is now ready and can downloaded to GOT screen

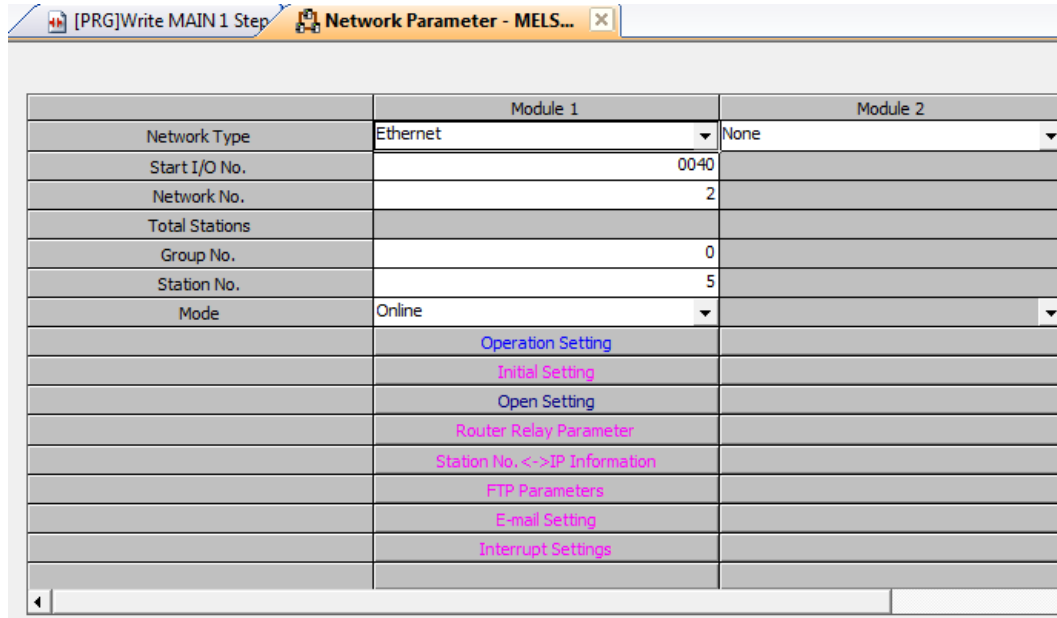




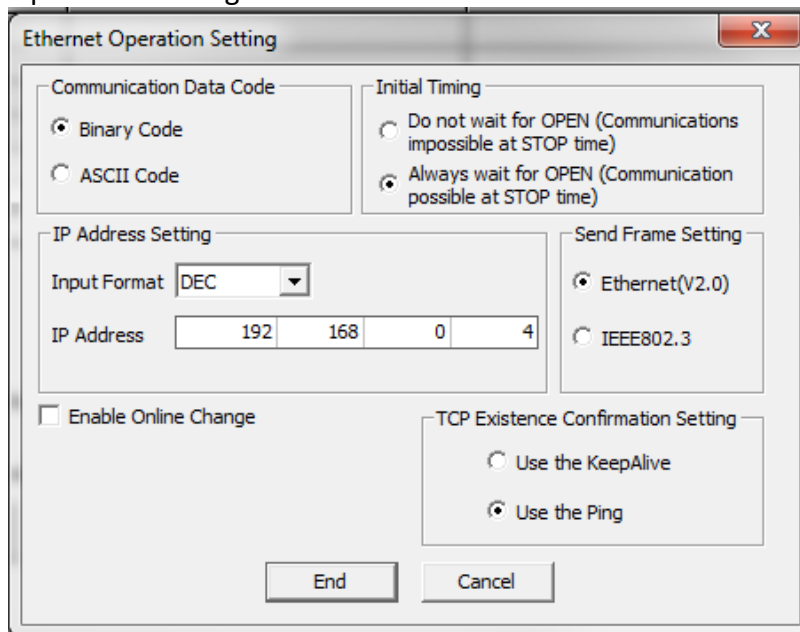
Setting up PLCs

1) Q02 series

Ethernet settings will need to be setup in Network parameters as a QJ71E71-100 was used:



Operation Setting:



Please note: the IP address needs to be the same as the GOT screen for Q series controller in channel 2.



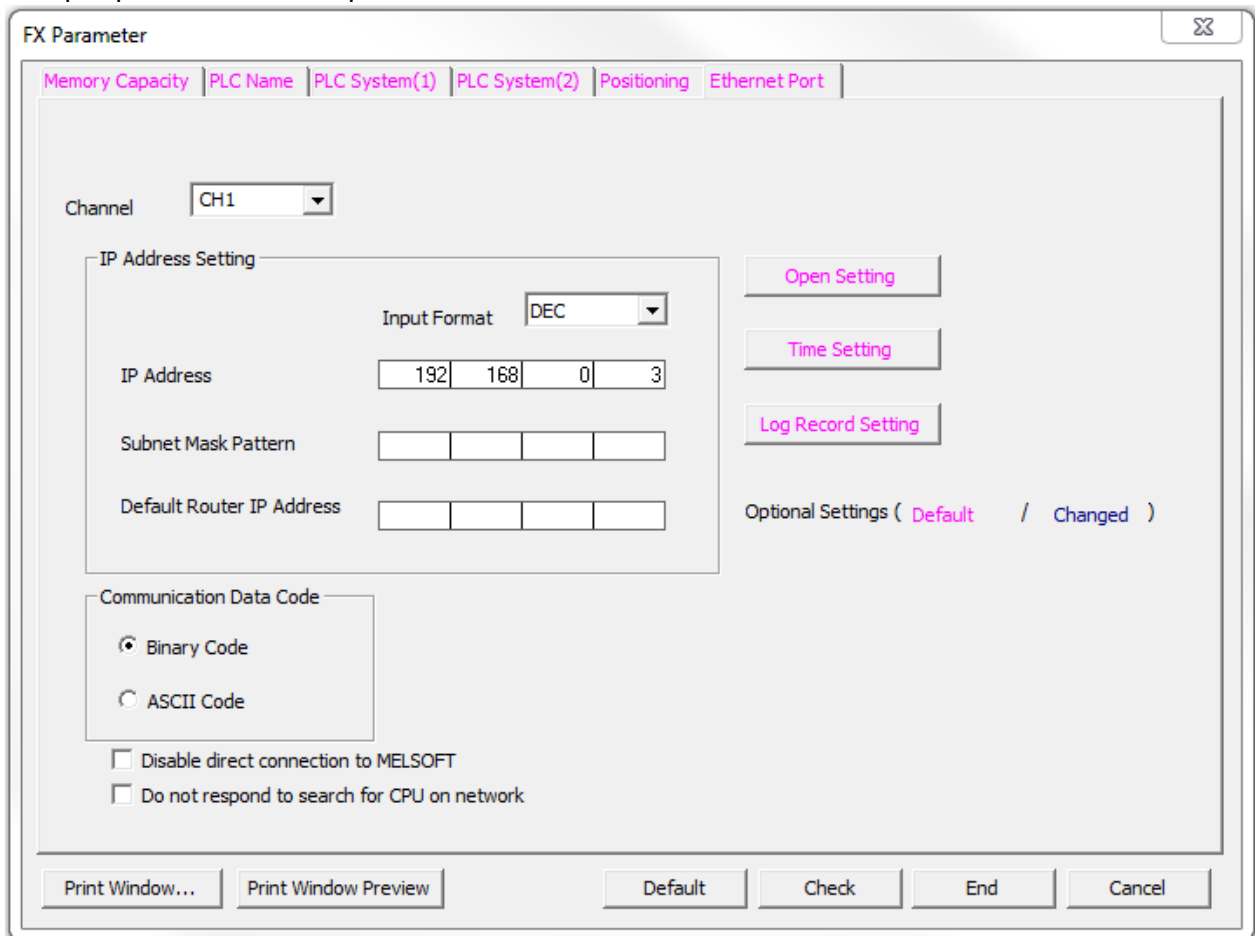
Open settings:

	Protocol	Open System	Fixed Buffer
1	TCP	MELSOFT Connection	
2			
3			
4			
5			
6			
7			

These settings can now be downloaded to The Q series PLC.

2: FX3U-ENET-ADP modules:

Setup is performed in PLC parameters:



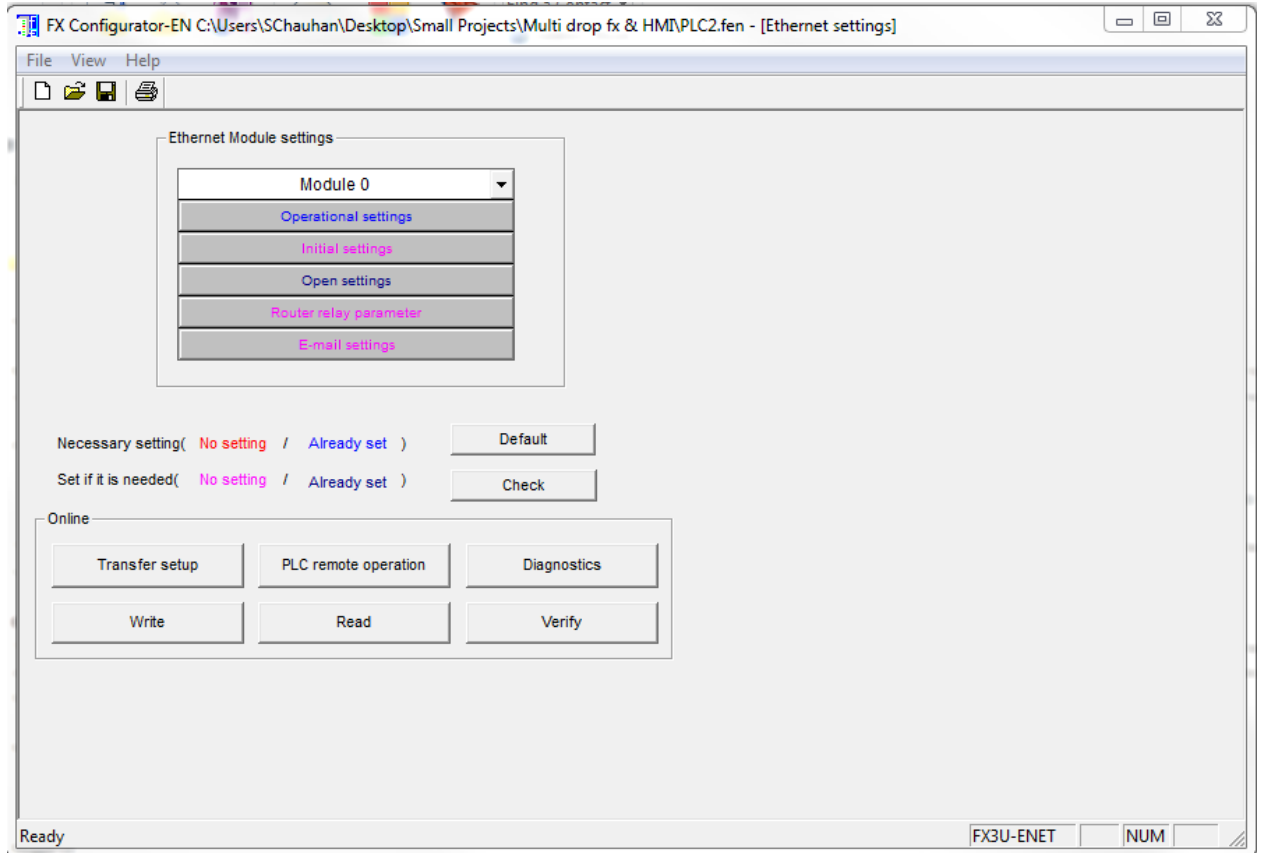
The screenshot shows the 'FX Parameter' dialog box with the 'Ethernet Port' tab selected. The 'Channel' is set to 'CH1'. Under 'IP Address Setting', the 'Input Format' is 'DEC' and the IP address is '192.168.0.3'. There are buttons for 'Open Setting', 'Time Setting', and 'Log Record Setting'. Under 'Communication Data Code', 'Binary Code' is selected. There are also checkboxes for 'Disable direct connection to MELSOFT' and 'Do not respond to search for CPU on network'. At the bottom, there are buttons for 'Print Window...', 'Print Window Preview', 'Default', 'Check', 'End', and 'Cancel'.

These settings can now be downloaded to The FX3 PLC.

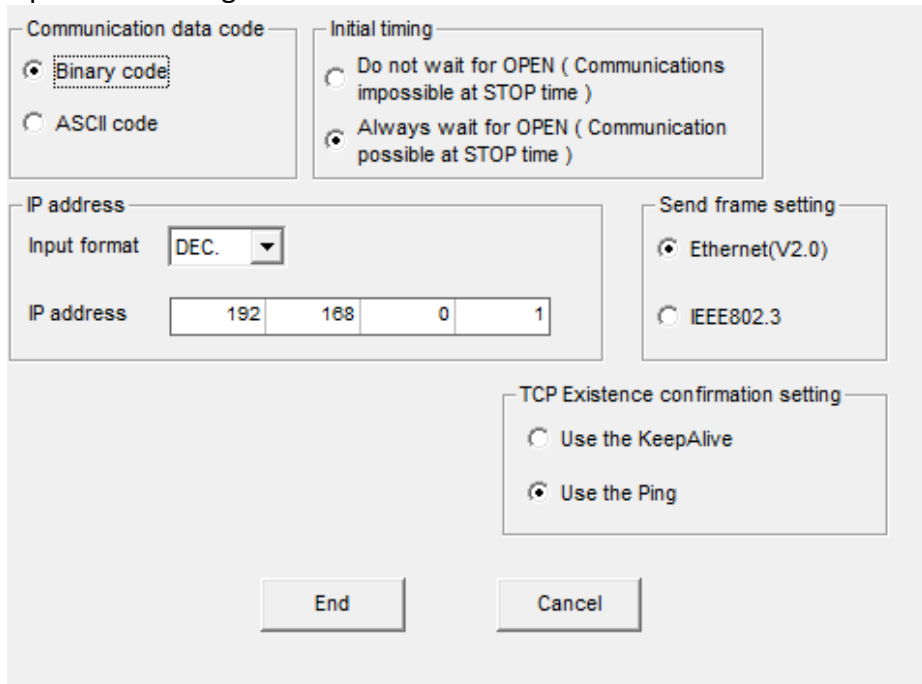


2) FX3U-ENET modules:

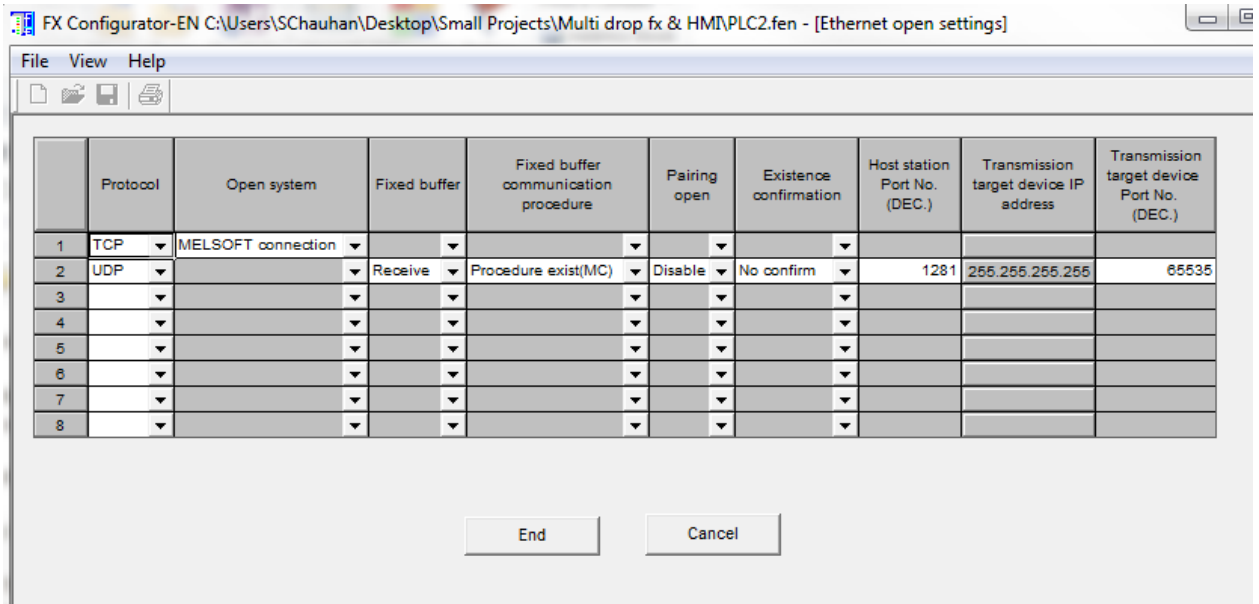
Using FX Configurator-EN tool:



Operation settings:



Open settings:



This can now be downloaded to the PLC.

Please note: These settings were also used for the 2nd FX3U-ENET module.

Troubleshooting Tips:

- 1) Make sure all parameter settings are downloaded to the correct PLCs and Power has been recycled.
- 2) If any of the lamps are not flashing you may have a break in the connection cable, swap cables to retry.