BACnet/IP

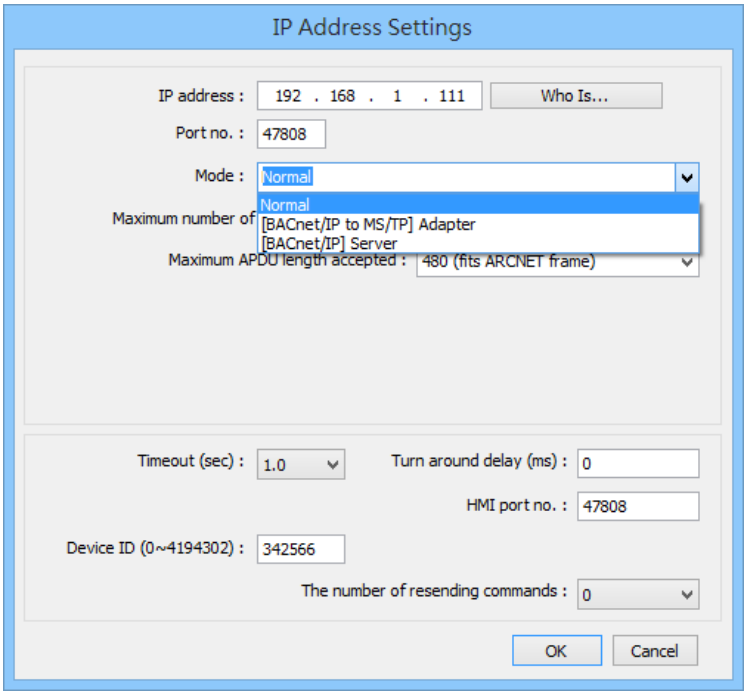
Supported series: BACnet/IP protocol devices

HMI Setting:

Parameters	Recommended	Options	Notes
PLC type	BACnet/IP		
PLC I/F	Ethernet		
Port no.	47808		47808 is the standard communication port of BACnet protocol.
HMI port no.	47808	47808~47823 49152~65535	Different HMI ports are required when connecting multiple
Device ID	342566	0~999999	According to device.
PLC sta. no.	1		

BACnet/IP to MS/TP Adapter Setting:

1. When using BACnet/IP driver, please correctly set “Mode”, “Maxinum number of segments accepted”, and “Maximum APDU length accepted” according to the actual device.



BACnet/IP to MS/TP adapter

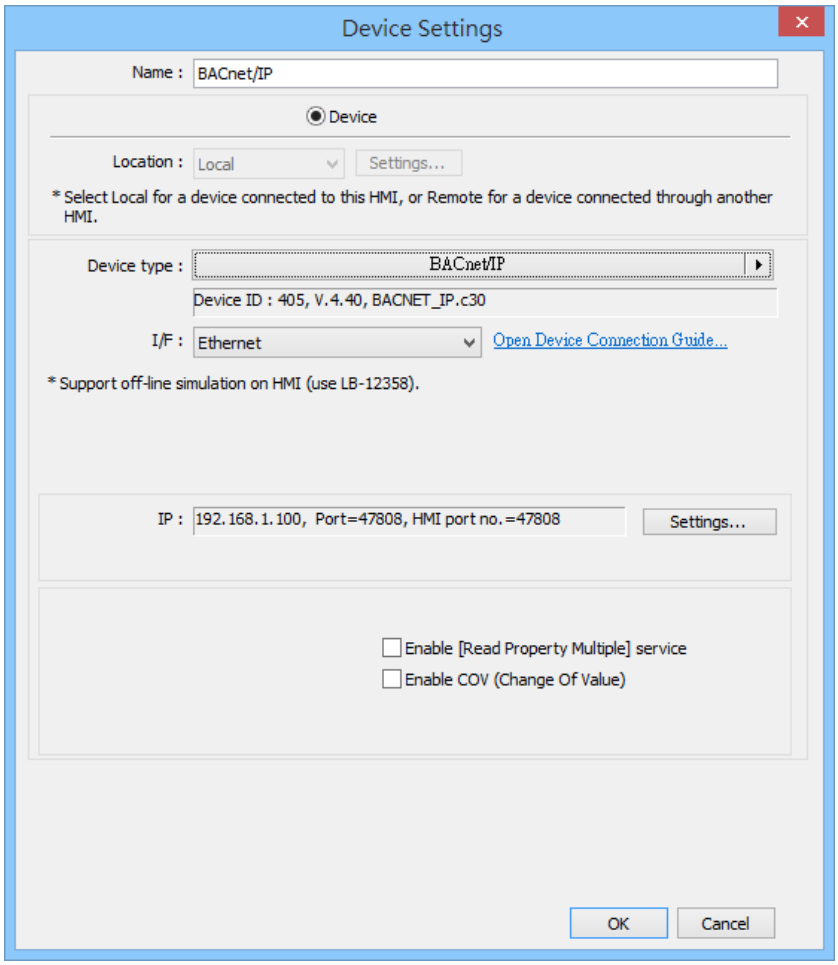
2. As shown above, in BACnet/IP to MS/TP Adapter mode, [Network number] must follow the factory setting, and enter the device station number in [Device ID].

3. [HMI port no]. default: 47808, can be filled in other effective value.

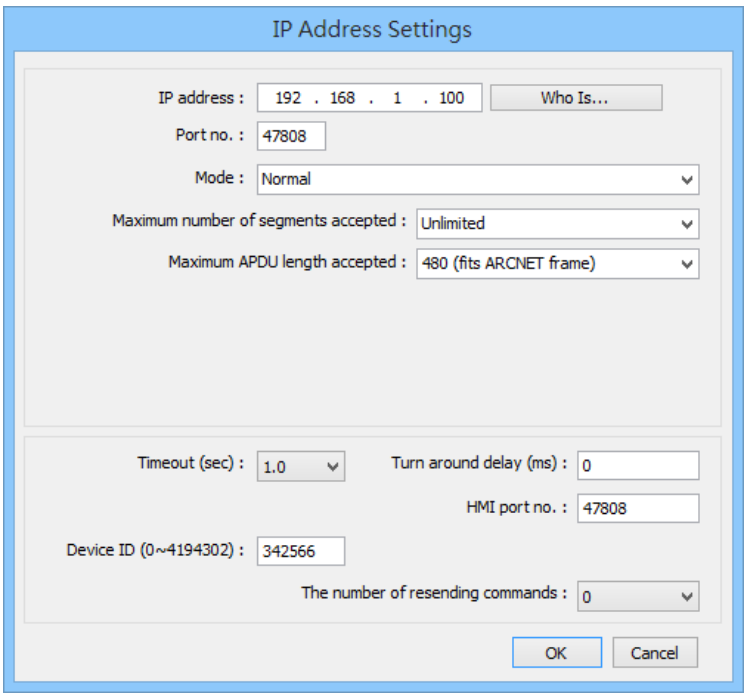
How to Import Tags:

EasyBuilder Pro provides two ways to gain tag addresses. One is to directly get tag information via internet, another is to export the generated CSV file via SCADA, and then import to EasyBuilder Pro. The following introduces how to import tag address information.

Step 1. Add BACnet/IP driver in System Parameters Settings

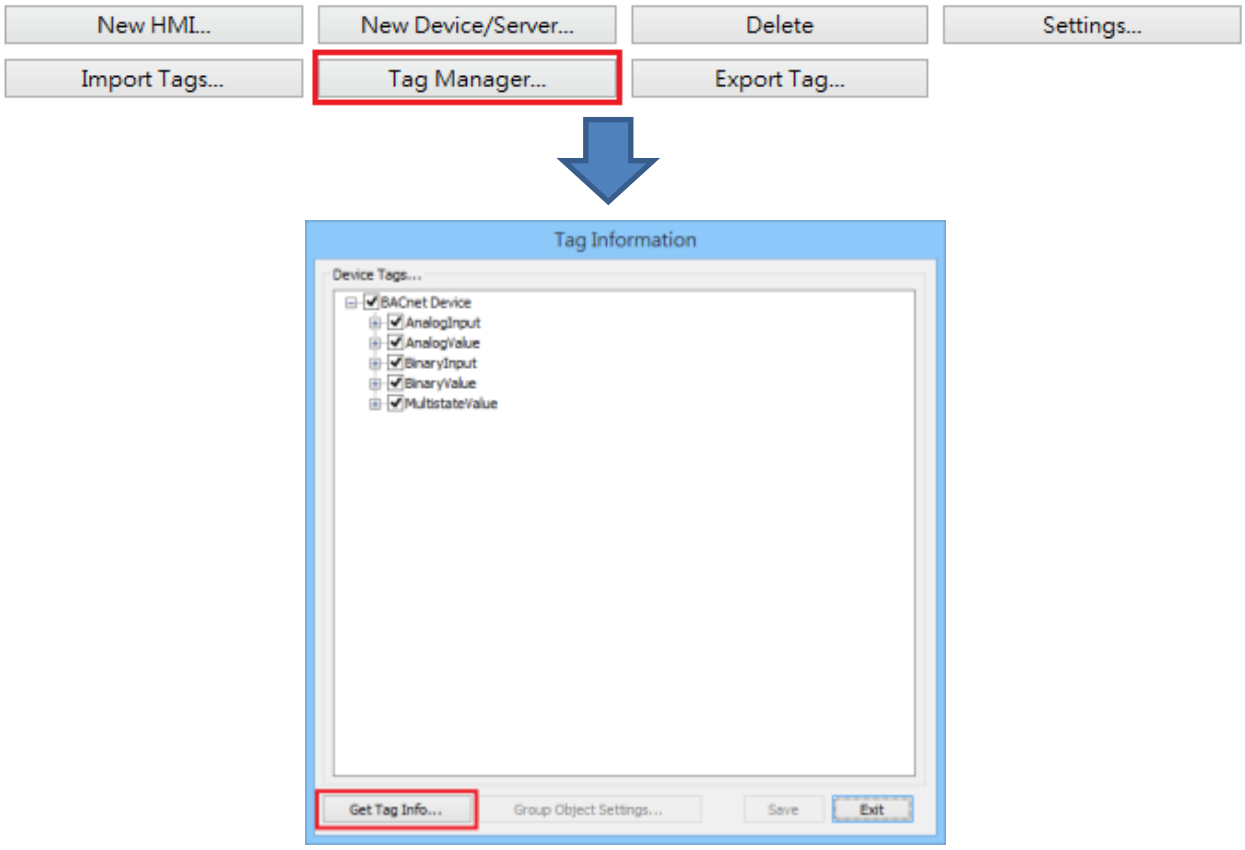


Step 2. Correctly set the relevant parameters.



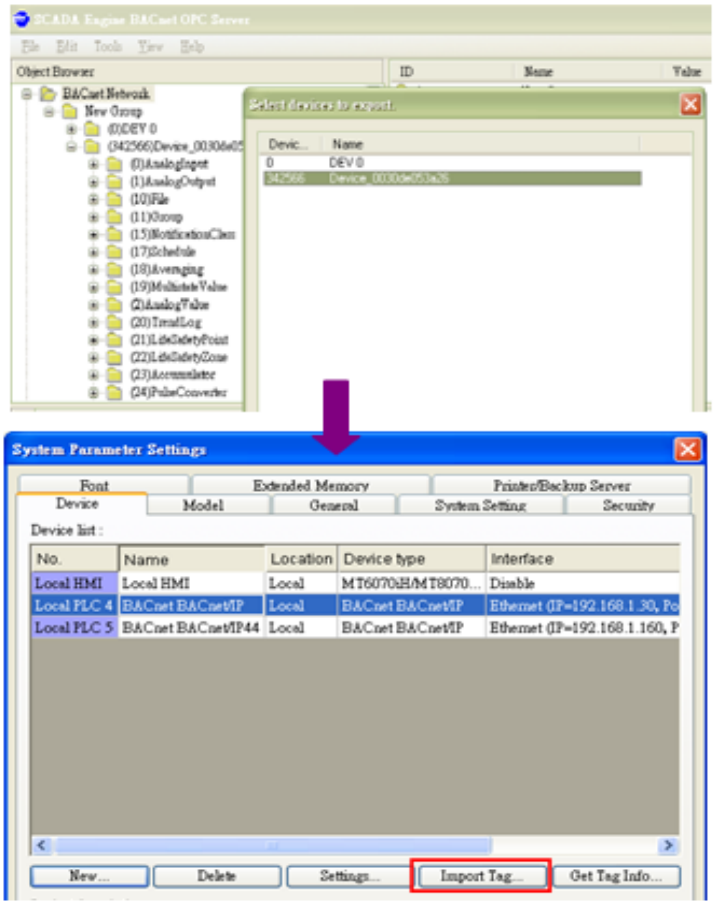
Step 3. Get tag address information

Way 1: Click **Tag Manager -> Get Tag Info**



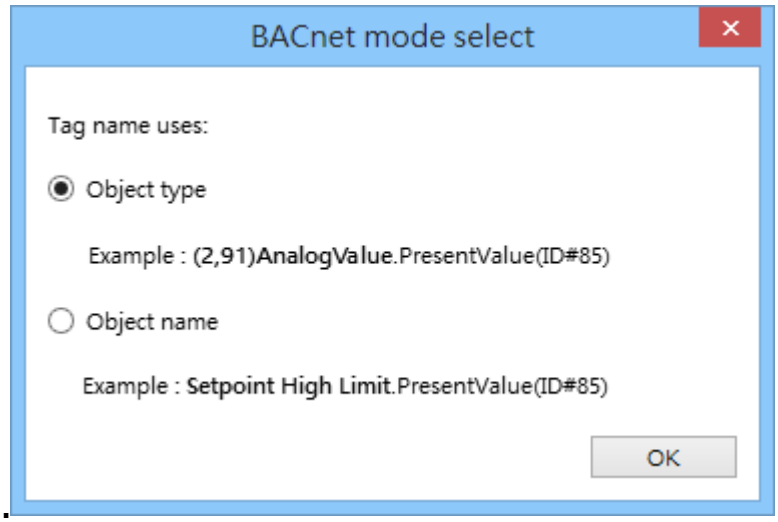
Way 2: Import the CSV file generated by SCADA software.

*Support files exported by BACShark software



BACnet mode select: Object type or Object name

When using Get tag or import SCANDA Sofeware to create a csv file, you can select BACnet mode. (EasyBuilder Pro V6.04.02 and later versions support this function)



CSV file content is shown below; users can build the file and import:

a. Object format

b. OBJECT NAME (user defined tag name, EasyBuilder will start reading data from the 6th row of CSV file.), DEVICE ID, OBJECT TYPE(object ID) and INSTANCE(object address)

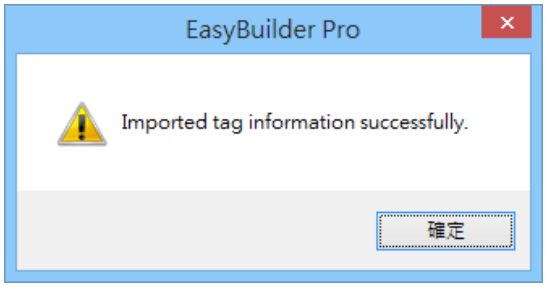
A1 GROUP_ID

	A	B	C	D
1	GROUP_ID	GROUP_NAME		
2	1	New Group		
3	DEVICE_ID	GROUP_ID	DEVICE_NAME	
4	342566	1	Device_0030de053a26	
5	DEVICE_ID	OBJECT_TYPE	INSTANCE	OBJECT_NAME
6	342566	0	0	ANALOG_INPUT_0
7	342566	0	1	ANALOG_INPUT_1
8	342566	0	2	ANALOG_INPUT_2
9	342566	1	0	ANALOG_OUTPUT_0
10	342566	1	1	ANALOG_OUTPUT_1
11	342566	1	2	ANALOG_OUTPUT_2
12	342566	2	0	ANALOG_VALUE_0
13	342566	2	1	ANALOG_VALUE_1
14	342566	2	2	ANALOG_VALUE_2
15	342566	2	3	ANALOG_VALUE_3
16	342566	3	0	BINARY_INPUT_0
17	342566	3	1	BINARY_INPUT_1
18	342566	3	2	BINARY_INPUT_2
19	342566	3	3	BINARY_INPUT_3
20	342566	3	4	BINARY_INPUT_4
21	342566	3	5	BINARY_INPUT_5

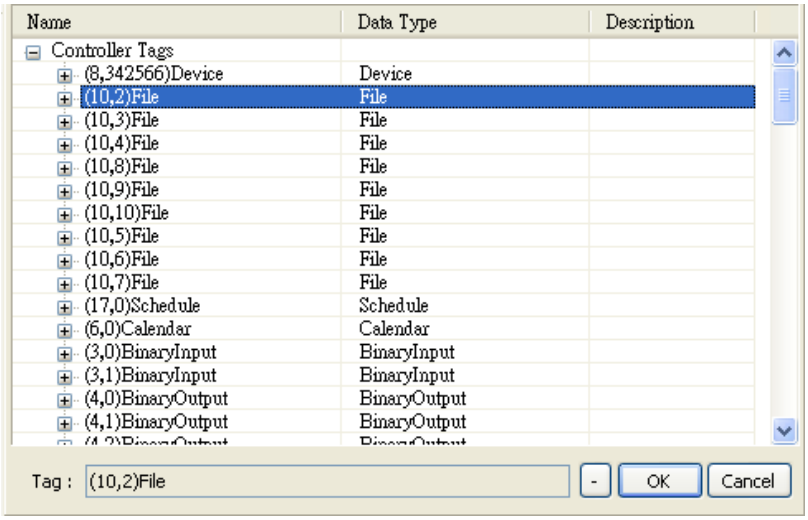
a

b

Step 4. File imported successfully.



Take **(10，2)File** as an example, **10** represents object ID, **2** represents object address, **File** represents user defined name or default name.



Default Object Model:

Object ID	Object Name	Object Structure
0	Analog Input	ObjectName ObjectIdentifier ObjectType PresentValue PresentValue Array EventState OutOfService Units SubscribeCovTime HighLimit LowLimit DeadBand NotificationClass LimitEnable EventEnable NotifyType TimeDelay
1	Analog Output	ObjectName ObjectIdentifier ObjectType PresentValue PresentValueArray EventState OutOfService Units Priority PriorityReset PriorityArray RelinquishDefault SubscribeCovTime HighLimit LowLimit DeadBand NotificationClass LimitEnable EventEnable

Object ID	Object Name	Object Structure
		NotifyType TimeDelay
2	Analog Value	ObjectName ObjectIdentifier ObjectType PresentValue PresentValueArray EventState OutOfService Units Priority PriorityReset PriorityArray RelinquishDefault SubscribeCovTime HighLimit LowLimit Dead Band NotificationClass LimitEnable EventEnable NotifyType TimeDelay
3	Binary Input	ObjectName ObjectIdentifier ObjectType PresentValue PresentValueArray EventState OutOfService Polarity SubscribeCovTime AlarmValue NotificationClass EventEnable NotifyType TimeDelay
4	Binary Output	ObjectName

Object ID	Object Name	Object Structure
		ObjectIdentifier ObjectType PresentValue PresentValueArray EventState OutOfService Priority PriorityReset PriorityArray Polarity SubscribeCovTIme AlarmValue NofificationClass EventEnable NotifyType TimeDelay
5	Binary Value	ObjectName ObjectIdentifier ObjectType PresentValue PresentValueArray EventState Priority PriorityReset PriorityArray OutOfService SubscribeCovTime AlarmValue NotificationClass EventEnable NotifyType TimeDelay
6	Calendar	ObjectName ObjectIdentifier ObjectType PresentValue DateList Date DateList DateRange

Object ID	Object Name	Object Structure
		DateList WeekDay DateListControl DateListStatus
7	Command	ObjectName ObjectIdentifier ObjectType PresentValue PresentValueArray InProcess AllWritesSuccessful
8	Device	ObjectName ObjectIdentifier ObjectType SystemStatus VendorName VendorIdentifier ModelName FirmwareRevision ApplicationSoftwareVersion ProtocolVersion ProtocolRevision MaxAPDUlengthAccepted SegmentationSupported ApduTimeout NumberOfAPDUretries DataBaseRevision MaxSegmentsAccepted UtcOffset DaylightSavingsStatus ApduSegmentTimeout BackupFailureTimeout
10	File	ObjectName ObjectIdentifier ObjectType FileType FileSize Archive ReadOnly

Object ID	Object Name	Object Structure
11	Group	ObjectName ObjectIdentifier ObjectType SettingGroup
13	Multi State Input	ObjectName ObjectIdentifier ObjectType PresentValue EventState OutOfService NumberOfStates SubscribeCovTime
14	Multi State Output	ObjectName ObjectIdentifier ObjectType PresentValue EventState OutOfService NumberOfStates Priority SubscribeCovTime PriorityReset PriorityArray
15	Notification Class	ObjectName ObjectIdentifier ObjectType NotificationClass RecipientList ControlWord (1:Read / 2:Write)
16	Program	ObjectName ObjectIdentifier ObjectType
17	Schedule	ObjectName ObjectIdentifier ObjectType PresentValue PriorityForWriting Reliability

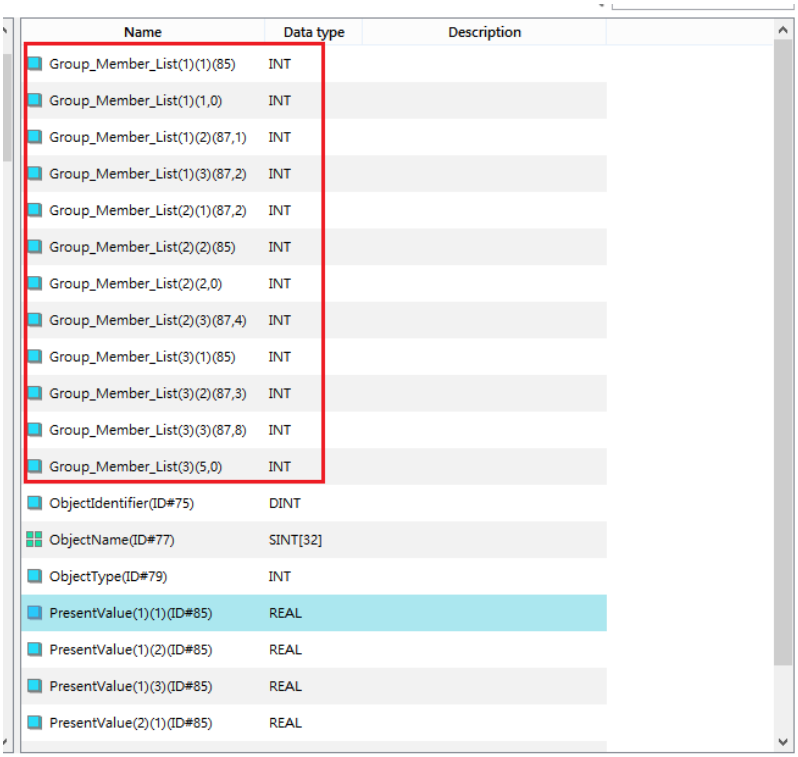
Object ID	Object Name	Object Structure
		OutOfService WeeklyScheduleControl WeeklyScheduleStatus ExceptionScheduleControl ExcpetionScheduleStatus ScheduleDefault WeeklySchedule_Monday WeeklySchedule_Tuesday WeeklySchedule_Wednesday WeeklySchedule_Thursday WeeklySchedule_Friay WeeklySchedule_Saturday WeeklySchedule_Sunday BACnetExceptionSchedule_Date BACnetExceptionSchedule_DateRange BACnetExceptionSchedule_WeekDay BACnetExceptionSchedule_Calender
18	Averaging	ObjectName ObjectIdentifier ObjectType MinimumValue AverageValue MaximumValue AttemptedSamples ValidSamples Window nterval WindowSamples
19	Multi State Value	ObjectName ObjectIdentifier ObjectType PresentValue EventState OutOfService NumberOfStates Priority PriorityReset PriorityArray SubscribeCovTime

Object ID	Object Name	Object Structure
20	Trend Log	ObjectName ObjectIdentifier ObjectType Enable StopWhenFull BufferSize RecordCount TotalRecordCount
21	Life Safety Point	ObjectName ObjectIdentifier ObjectType PresentValue TrackingValue EventState Reliability OutOfService Mode Silenced
22	Life Safety Zone	ObjectName ObjectIdentifier ObjectType PresentValue TrackingValue EventState Reliability OutofService Mode Silenced
23	Accumulator	ObjectName ObjectIdentifier ObjectType PresentValue PresentValueArray EventState OutOfService Scale Units
24	Pulse	ObjectName

Object ID	Object Name	Object Structure
	Converter	ObjectIdentifier ObjectType PresentValue EventState OutOfService Units ScaleFactor AdjustValue Count

Note 1. Object name can not include “#”.

Note 2 Group objects can only communicate when the Group_Member_List addresses are placed in the project editing screen.



Name	Data type	Description
Group_Member_List(1)(1)(85)	INT	
Group_Member_List(1)(1,0)	INT	
Group_Member_List(1)(2)(87,1)	INT	
Group_Member_List(1)(3)(87,2)	INT	
Group_Member_List(2)(1)(87,2)	INT	
Group_Member_List(2)(2)(85)	INT	
Group_Member_List(2)(2,0)	INT	
Group_Member_List(2)(3)(87,4)	INT	
Group_Member_List(3)(1)(85)	INT	
Group_Member_List(3)(2)(87,3)	INT	
Group_Member_List(3)(3)(87,8)	INT	
Group_Member_List(3)(5,0)	INT	
ObjectIdentifier(ID#75)	DINT	
ObjectName(ID#77)	SINT[32]	
ObjectType(ID#79)	INT	
PresentValue(1)(1)(ID#85)	REAL	
PresentValue(1)(2)(ID#85)	REAL	
PresentValue(1)(3)(ID#85)	REAL	
PresentValue(2)(1)(ID#85)	REAL	

Wiring Diagram:

Diagram 1

Ethernet cable: