

ANYTHING BUT COMPLICATED

YASKAWA DRIVE TO PLC INTEGRATION



That's the amount of time you'll need to add a Yaskawa VFD into your Rockwell PLC programming environment

STEP 1

DETERMINE YOUR DATA

If all you'll want to do is start and stop the drive and give it a speed reference, use assemblies 21 and 71. Or refer to the EtherNet/IP™ Technical manual for a list of your options.

You'll need to change b1-01 and b1-02 to 3: Option PCB for control over EtherNet/IP.

Extended Speed Control Output - 21 (0x15)

Output Instance	Word	Byte	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
21	0	0	-	NetRef	NetCtrl	-	-	Fault Reset	Run Rev	Run Fwd
		1	-							
	1	2	Speed Reference (Low Byte)							
		3	Speed Reference (High Byte)							

Extended Speed Control Input - 71 (0x47)

Output Instance	Word	Byte	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
71	0	0	At Speed	Ref from Net	Ctrl from Net	Ready	Running 2 (REV)	Running 1 (FWD)	Warning	Faulted
		1	Drive State							
	1	2	Speed Actual (Low Byte)							
		3	Speed Actual (High Byte)							

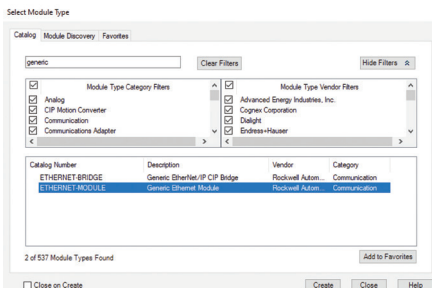
STEP 2

ADD MODULE IN LOGIX

Right click on the EtherNet/IP scanner and choose **"New Module..."**

Select the **Generic Ethernet Module (ETHERNET-MODULE)** and click OK.

Tip: Use the search box and type in "generic" to find the module quicker.



STEP 3

NAME THE DRIVE

Give the drive a logical name (tag) like Pump1 or Conveyor1. This is how the drive will be referenced in the program.

Example: Yaskawa

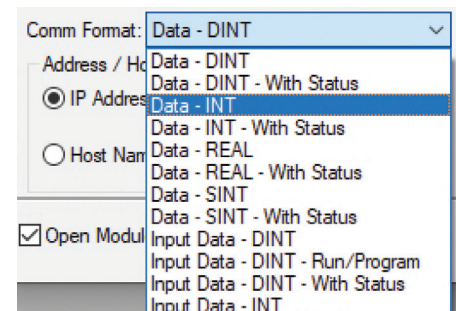
New Module

Type: ETHERNET-MODULE Generic Ethernet Module
Vendor: Rockwell Automation/Allen-Bradley
Parent: Local
Name:
Description:
Connection:
Input:
Output:

STEP 4

CHANGE THE COMM FORMAT

Change the Comm Format to **DATA-INT**.



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STEP 5

IP ADDRESS

Enter the IP address assigned to the drive.

Comm Format: Data - INT

Address / Host Name

☒ IP Address: 192 . 168 . 1 . 20

☐ Host Name:

STEP 6

INPUT ASSEMBLY AND SIZE

Enter the desired input assembly (data to the PLC from the drive) from step 1.

Connection Parameters

	Assembly Instance:	Size:	
Input:	71	2	(16-bit)
Output:	21	2	(16-bit)
Configuration:	1	0	(8-bit)
Status Input:			
Status Output:			

OK Cancel Help

Recommendation for input assembly and size is assembly 71 of size 2 words (4 bytes) for drive status and output frequency.

Recommendation for output assembly and size is assembly 21 of size 2 words (4 bytes) for start, stop, and speed reference.

Configuration assembly is always Instance 1 and Size 0.

STEP 7

OUTPUT ASSEMBLY AND SIZE

Enter the desired output assembly (data from the PLC to the drive) from step 1.

STEP 8

CONFIGURATION ASSEMBLY AND SIZE

Configuration assembly is always **Instance 1** and **Size 0**.

STEP 9

ENTER RPI TIME

Requested Packet Interval (RPI) time is how often data is transmitted back and forth between the PLC and the drive.

Recommendation for RPI time is 100 ms.

Module Properties Report: Local (ETHERNET-MODULE 1.1)

General Connection* Module Info

Requested Packet Interval (RPI): 100.0 ms (1.0 - 3200.0 ms)

☐ Inhibit Module

☐ Major Fault On Controller if Connection Fails While in Run Mode

☒ Use Unicast Connection over Ethernet/IP

Module Fault

Status: Offline

OK Cancel Apply Help

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The number of steps you'll need to get a Yaskawa drive communicating EtherNet/IP to a Logix Controller.



Questions? Learn more at www.yaskawa.com/ethernet-ip