Motors

Automation

Energy Transmission and Distribution

Coatings

CFW900 - AOI

Configuration



Driving efficiency and sustainability







WEG CFW900 AOI Configuration

Prerequisites

Exclusions

This document does not go into detail of setting up a controller in RSLOGIX/STUDIO 5000.

The connection and configuration of the IP network is beyond the scope of this document.

All non-communication specific parameters on the CFW900 are excluded from the configuration requirements of this document.

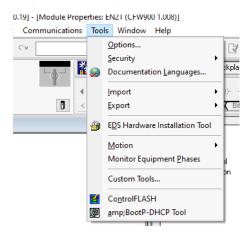
System Components

This document assumes that the following components are available and configured:

- ControlLogix or CompactLogix PLC controller running version 20 (or higher) firmware
- 10/100 or faster ethernet network with IP connectivity and IP addresses for both the PLC and CFW900

EDS Installation

Begin by adding the EDS file for the CFW900 if it is not already in the project.



From inside Logix Designer, go to Tools -> EDS Hardware Installation Tool



Rockwell Automation's Device	Wizard	×
R	Welcome to Rockwell Automation's Device Wizard	
	The Device Wizard allows you to:	
	- register devices.	
	- unregister a device.	
	- change the graphic images associated with a device.	
	- create a device description file from an unknown device.	
	- upload device description file(s) stored in a device.	
	To continue click Next	
	Next > Can	cel

Click Next >

Rockwell Automation's Device Wizard			×
Options What task do you want to complete?			
 Register a device description file(s). This option will add a device(s) to our database. 			
 Unregister a device. This option will remove a device that has been registered by a Device Description File from our database. 			
C Create a device description file. This option creates a new device description file that allows our software to recognize your device.			
Upload device description file(s) from the device. This option uploads and registers the device description file(s) stored in the device.			
	< Back	Next >	Cancel

Click Next >

CFW900 AOI Configuration	www.weg.net
Rockwell Automation's Device Wizard	×
Registration Device Description file(s) will be added to your system for use in Rockwell Automation applications.	
 Register a single device description file Register a directory of device description files Look in subfolders 	
Named: Browse	
• If there is an icon file (.ico) with the same name as the file(s) you are registering then this image will be associated with the device. To perform an installation test on the file(s), click Next	
< Back Next >	Cancel

Click Browse ...

www.weg.net			FW900 AOI Configuration
Select a Device description file			×
← → ✓ ↑ 📙 ≪ EDS files → WEG-CFW900-Ethernet-ip-eds-v108-en	~	5	Search WEG-CFW900-Etherne 🔎
Organize 👻 New folder			■ • ■ ?
Importable PLC CODE WEG-CFW900-E This PC 3D Objects Dosktop Documents Documents Downloads Nusic Pictures Videos Videos			
File name: eip_cfw900_v108xx.eds		~	EDS Files (*.eds) \sim
			Open Cancel

Browse to where the downloaded eds file is located and click Open



www.weg.net

Rockwell Automation's Device Wizard	×
Registration Device Description file(s) will be added to your system for use in Rockwell Automation applications.	
Register a single device description file	
O Register a directory of device description files 🛛 🗌 Look in subfolders	
Named:	
C:\EDS files\WEG-CFW900-Ethemet-ip-eds-v108-en\eip_cfw900_v108x Browse	
* If there is an icon file (.ico) with the same name as the file(s) you are registering then this image will be associated with the device.	
To perform an installation test on the file(s), click Next	
< Back Next > Cancel	

Click Next >

шед

Rockwell Automation's Device Wizard		×
Device Description File Installation Test Results This test evaluates each Device Description File for errors in the device description file. T Description File validity.	This test does not guarantee Device	
Installation Test Results C:\eds files\weg-cfw900-ethemet-ip-eds-v108-en\eip_cfw900_v108xx.eds		
View file	< Back Next >	Cancel

There should be a green checkmark. Click Next >



Rockwell Automation's Device Wizard			×
Change Graphic Image You can change the graphic image that is associated with a device.			
Product Types			
Change icon AC Drive Device CFW900			
	< Back	Next >	Cancel

Click Next >

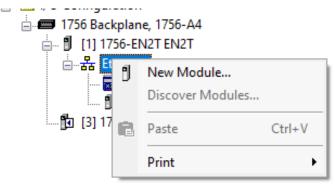


Rockwell Automation's Device Wizard		×
Final Task Summary This is a review of the task you want to complete.		Į,
You would like to register the following device. CFW900		
	< Back Next > C	ancel

Click Next >



Create the Ethernet/IP Device

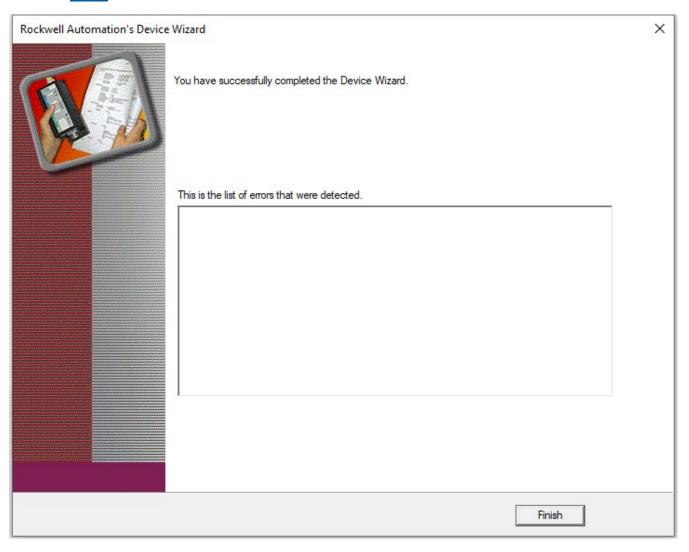


In the device tree, right click on the Ethernet bus that will contain the CFW900 and click New Module....

		Show Filters ≯
Description	Vendor	Category ^
Powermonitor 500	Rockwell Autom	PowerMonitor 50(
48MS-SN1PF1-M2	Rockwell Autom	Rockwell Automa
48MS-SN1PF2-M2	Rockwell Autom	Rockwell Automa
SP600	Rockwell Autom	DPI to EtherNet/I
SP600 ER 400V	Rockwell Autom	DPI to EtherNet/I
SP600 ER 200V	Rockwell Autom	DPI to EtherNet/I
SP600 ER 600V	Rockwell Autom	DPI to EtherNet/I
Liquiflo 2.0	Rockwell Autom	DPI to EtherNet/I
MD60	Rockwell Autom	MDI to EtherNet/
MD65	Rockwell Autom	MDI to EtherNet/
SynapSense Industrial Gateway	Panduit Corporat	Communication
1305 AC Drive via 1203-EN1	Rockwell Autom	Drive
1336 IMPACT Drive via 1203-EN1	Rockwell Autom	Drive
1000 DELLO IL DAVIS VIS 1000 ENT	De alumali Autom	Drive
	Powermonitor 500 48MS-SN1PF1-M2 48MS-SN1PF2-M2 SP600 SP600 ER 400V SP600 ER 200V SP600 ER 200V Liquiflo 2.0 MD60 MD65 Synap Sense Industrial Gateway 1305 AC Drive via 1203-EN1 1336 IMPACT Drive via 1203-EN1	Powermonitor 500Rockwell Autom48MS-SN1PF1-M2Rockwell Autom48MS-SN1PF2-M2Rockwell Autom5P600Rockwell AutomSP600 ER 400VRockwell AutomSP600 ER 200VRockwell AutomSP600 ER 600VRockwell AutomLiquiflo 2.0Rockwell AutomMD60Rockwell AutomMD65Rockwell AutomSynap Sense Industrial GatewayPanduit Corporat1305 AC Drive via 1203-EN1Rockwell Autom1336 IMPACT Drive via 1203-EN1Rockwell Autom

In the Select Module Type dialog box, enter in "CFW900" in the search field





Click Finish

The EDS file is now installed and the CFW900 can be added as an Ethernet/IP device in the device tree.

AOIs

Each AOI is specifically used for a single connection instance type. Select the AOI to be used based on the requirements of the project.

CFW900_2070 (CIP Basic Speed)

This AOI is used when the 20/70 CIP Basic Speed control mode is desired.

Select Module Type				
Catalog Module Discovery Fav	rontes			
cfw900		Clear Filters		Show Filters ≯
Catalog Number CFW900	Description CFW900		Vendor WEG	Category AC Drive Device
<				>
1 of 671 Module Types Found	1			Add to Favorites
Close on Create			Create	Close Help

There should be an entry matching the above screenshot.



www.	weg	.net	

ШEQ

Select	Select Module Type						
Cata	log Module Discovery Favor	ites					
r							
l	cfw900		Clear Filters		Show Filters ≯		
	Catalog Number	Description		Vendor	Category		
	CFW900	CFW900		WEG	AC Drive Device		
	<				>		
L							
1	of 671 Module Types Found				Add to Favorites		
	Close on Create			Create	Close Help		

Highlight the CFW900 and click Create

📧 New Module

New Module			×
General* Connection	General		
- Module Info - Internet Protocol - Port Configuration - Network	Type: Vendor: Parent: Name: Description:	CFW900 CFW900 WEG EN2T VFD1 Private Network: 192.168.1. IP Address: 172 . 30 . 2 . 200 Host Name:	
	Module Defin Revision: Electronic Ke Connections	1.008 eying: Compatible Module	
Status: Creating		OK Cancel Help	



Give the CFW900 a Name and IP address. Before clicking on OK, click on the Change ... button in the module definition.

Module Definition*									
Revision: 1 ~ 008 -									
Electronic Keying: Compa	atible Mod	lule	~	·					
Connections:									
Name		Size		Tag Su	ffix				
20/70 CIP Basic Speed	Input:	4	SINT	1	VFD1:I1				
20/70 CIP Basic Speed	Output:	4	Ť		VFD1:01				
Select a connection 🗸			SINT INT	1					
			DINT	-					
			REAL						
			OK		Connad				
			OK		Cancel Help				

Change the type to INT

Module Definition*	10000					×		
Revision: 1 ~ 008 🜩								
Electronic Keying: Compatible Module ~								
Connections:								
Name		Size		Tag Su	ffix			
20/70 CID Rasis Sacad	Input:	2	INT	4	VFD1:I1			
20/70 CIP Basic Speed	Output:	2	Ň	1	VFD1:01			
Select a connection 🗸								
			OK	(Cancel H	lelp		

The Input and output size should be set to 2 and 2 respectively. Click OK



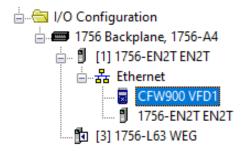


RSLogix 5	5000	\times	
	These changes will cause module data types and properties to change. Data will be set to default values unless it can be recovered from the existing module properties. Verify module properties before Applying changes.		
	Change module definition?		l
	Yes No		

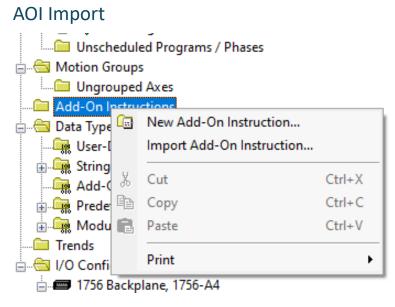
Click Yes

At this point, no other changes are required. However, changing the RPI can be done, if the need arises.

Once satisfied with the settings, Click OK



There should now be an instance of the CFW900 in the device tree



In the device tree, right click on Add-On Instructions and click on Import Add-On Instruction...

www.weg.net

Шеп

🕅 Import Add-On Instruction X							
Look in:	AOIs	~	G 🤌 📂 🛄 -				
Quick access Desktop Libraries This PC	Name	1.L5X 150.L5X 151.L5X 170.L5X	Date modified 5/9/2024 4:32 PM 5/9/2024 4:32 PM 5/9/2024 4:31 PM 5/9/2024 4:31 PM 5/9/2024 4:31 PM 5/9/2024 4:32 PM	Type RSLog RSLog RSLog RSLog RSLog			
Network	< File name: Files of type: Files containing: Into:	RSLogix 5000 XML Files (*.L5X) Add-On Instruction Add-On Instructions		> Import Cancel Help			

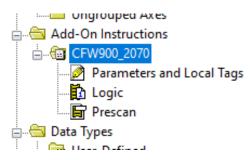
Select the appropriate add-on instruction (CFW900_2070.L5X) and click Import....

www.weg.net

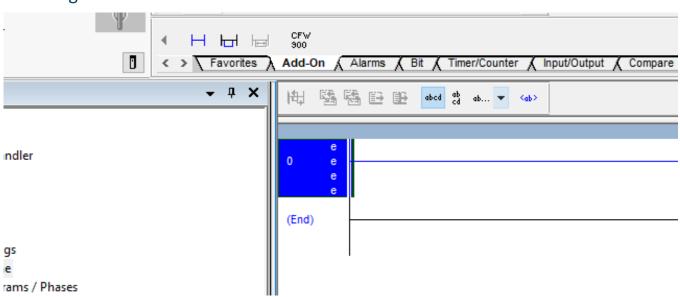


Import Configuration	Import Configuration						
🖉 🖾 Find: Find Within: Final Name, Descrip	v 🎒 🐴	Find/Replace					
Import Content:							
-📇 Add-On Instructions	Configure Add-O	Instruction Properties					
CFW900_2070	Import Name:	CFw900_2070					
Parameters and Local Tage	Operation:	Create 🗸 🗋					
• 🖸 Errors/Warnings	Final Name:	CFw900_2070 V Properties					
	Description:	20/70 CIP Basic Speed					
		×					
	Revision:	v1.0					
	Revision Note:						
	Vendor:						
< >							
			K Cancel Help				
Ready							

Review the proposed changes and click OK



There should now be this add-on instruction in the project.



AOI Usage



On an empty rung of ladder, add an instance of the newly imported add-on instruction by clicking on the Add-On bar and clicking the CFW900 symbol

20/70 CIP Basic Spee CFW900_2070 ConnectionFaulted Inputs Outputs Run Fault_Reset cfg_FailToStartDelay cfg_FailToStopDelay Speed_Reference RealSpeed	ADI ? ?? ?? ?? ?? ?? ?? ?? ?? ??	Connection_Ready)— -(Connection_Faulted)— -(Running)— -(Faulted)—
--	--	--

The Add-On requires a tag to be created. Create this tag by typing a name in the CFW900_2070 field and right-clicking and selecting <u>N</u>ew "Tag"

CFW900_2070 20/70 CIP Basic SpeedAO			
	rive1		Ready)-
ConnectionFaulted		New "Drive1"	Ctrl+W
	ж	Cu <u>t</u> Instruction	Ctrl+X
Inputs	6	Copy Instruction	Ctrl+C
Outputs	B	<u>P</u> aste	Ctrl+V
Run		Delete Instruction	Del
Fault_Reset		Add Ladder Element	Alt+Ins
cfg_FailToStartDelay		Edit Main Operand Description	Ctrl+D
cfg_FailToStopDelay Speed_Reference		Save Instruction Defaults	
opeed_iverence		Clear Instruction Defaults	
RealSpeed		R <u>e</u> move Force	
	_	<u>G</u> о То	Ctrl+G
		Instruction <u>H</u> elp	F1
		Remove Parameter	
	₽	Remove All Unknown Parameters	;
		Open Instruction Logic	
		Open Instruction Definition	
		Properties	Alt+Enter

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New Tag		×
Name:	Drive1	Create 🗸 🔻
Description:	^	Cancel
		Help
	~	
Usage:	<normal> \lor</normal>	
Туре:	Base ~ Connection	
Alias For:	~	
Data Type:	CFW900_2070	
Scope:	🕞 MainProgram 🗸 🗸	
External Access:	Read/Write ~	-
Style:	~	
Constant		
🗌 Open Confi	guration	

Give any appropriate description and scope (the tag can be either program or controller scoped)

e e e	20/70 CIP Basic Speed AOI	
e e e	CFW900_2070 20/70 CIP Basic SpeedAOI CFW900_2070 Drive1 ConnectionFaulted ?	Connection_Ready)
0 0 0 0 0 0 0	?? Inputs ? Outputs ? Run 0+	-(Connection_Faulted)
e e e e	Fault_Reset 0+ cfg_FailToStartDelay 0+ cfg_FailToStopDelay 0+ Speed_Reference ? ??	─(Faulted)──
e e e	RealSpeed 0+]

Next the Connection Faulted, Inputs, Outputs, and Speed_Reference need to be populated as follows:

	20/70 CIP Basic Speed AOI	
CFW900	0_2070	1
20/70 CIP Basic SpeedA		
CFW900 2070	Drive1	(Connection_Ready)-
ConnectionFaulted VFD	1:11.ConnectionFaulted	
	0+	-(Connection_Faulted)
Inputs	VFD1:I1.Data	
Outputs	VFD1:O1.Data	-(Running)-
Run	0+	
Fault Reset	0+	-(Faulted)
cfg_FailToStartDelay	0+	
cfg_FailToStopDelay	0+	
Speed_Reference	SpeedRefTag	
- I	0¢	
RealSpeed	0+	

The SpeedRefTag is an INT that is a tag to be created.

AOI Parameter Description

InOut Parameters

Parameter	Туре	Description
Inputs	INT[2]	Input Assembly from CFW900
Outputs	INT[2]	Output Assembly to CFW900

Input Parameters

Parameter	Туре	Description
Cfg_FailToStartDelay	DINT	Time in seconds before faulting
		on fail to start if VFD does not
		start when commanded
		Set to 0 to disable
Cfg_FailToStopDelay	DINT	Time in seconds before faulting
		on fail to stop if VFD does not
		stop when commanded
		Set to 0 to disable
ConnectionFaulted	BOOL	From CFW900 Ethernet Module.
		1 = Connection is faulted
		0 = Connection is OK
Fault_Reset	BOOL	1 = Send Reset Fault Signal to
		VFD
		0 = No action
Run	BOOL	1 = Run
		0 = Stop





CFW900 AOI Configuration

Speed_Reference	INT	Speed Setpoint (RPM)
		Negative Speed will reverse
		direction of motor
cfg_AutoFaultResetNum	DINT	Maximum number of tries that
		AOI will send fault reset
		command while being
		maintained

Output Parameters

Parameter	Туре	Description
Connection_Faulted	BOOL	Goes high when connections
		interrupted. If "Run" signal is
		set, it must be reset before this
		will clear
		1 = Connection has been faulted
		from VFD to PLC
		0 = Connection OK
Connection_Ready	BOOL	1 = Connection from VFD to PLC
		is established
		0 = Connection not established
Faulted	BOOL	1 = VFD Fault, connection fault,
		or failedToStart/Stop Fault
		0 = No faults
RealSpeed	INT	Current Speed (RPM)
Running	BOOL	1 = VFD running
		0 = VFD Stopped
AutoFaultResetExceed	BOOL	Indicates when the maximum
		number of automatic fault
		clears has been exceeded.
		Set Fault_Reset to 0 to reset and
		allow fault clear to resume.
		1 = Max number of fault clears
		reached. Fault Reset Disabled
		0 = Under threshold for
		automatic fault clears. Fault
		Reset Allowed.

CFW900 Parameter Requirements

The following parameters must be set in the CFW900:

Parameter	Setting
C.9.5.1	20/70
C.4.1.1	Remote 2
C.4.2.2.1	Ethernet
C.4.2.2.2	Ethernet



C.4.2.2.3	Ethernet
C.4.2.2.4	Ethernet
C.4.3.1.2.2	Ethernet

CFW900_120170 (CIP Basic Speed + IO)

This AOI is used when the 120/170 CIP Basic Speed control mode + IO is desired.

This behaves similarly to the 20/70 CIP Basic Speed, but adds the following parameters:

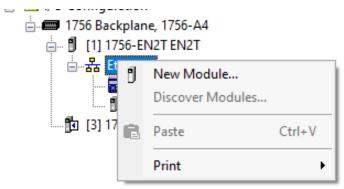
Outputs

- Output Current
- Output Voltage
- Output Frequency
- Last Fault Code

Inputs

- Acceleration Ramp 1
- Deceleration Ramp 1

Create the Ethernet/IP Device



In the device tree, right click on the Ethernet bus that will contain the CFW900 and click New Module....



Enter Search Text for Module	Type Clear Filters		Show Filters 📚
Catalog Number	Description	Vendor	Category ^
1420-V1P-ENT	Powermonitor 500	Rockwell Autom	PowerMonitor 50(
0001_0073_010D	48MS-SN1PF1-M2	Rockwell Autom	Rockwell Automa
0001_0073_010E	48MS-SN1PF2-M2	Rockwell Autom	Rockwell Automa
0005_007B_0030	SP600	Rockwell Autom	DPI to EtherNet/I
0005_007B_0038	SP600 ER 400V	Rockwell Autom	DPI to EtherNet/I
0005_007B_0039	SP600 ER 200V	Rockwell Autom	DPI to EtherNet/I
0005_007B_003A	SP600 ER 600V	Rockwell Autom	DPI to EtherNet/I
0005_007B_0060	Liquiflo 2.0	Rockwell Autom	DPI to EtherNet/I
0005_007F_0027	MD60	Rockwell Autom	MDI to EtherNet/
0005_007F_0028	MD65	Rockwell Autom	MDI to EtherNet/
100-1167-001	SynapSense Industrial Gateway	Panduit Corporat	Communication
1305-ACDrive-EN1	1305 AC Drive via 1203-EN1	Rockwell Autom	Drive
1336E-IMPACTDrive-EN1	1336 IMPACT Drive via 1203-EN1	Rockwell Autom	Drive
1000E DI LICIIDALE ENIT	1000 DELLO IL D202 - 42 1000 EN1	D==!	na

In the Select Module Type dialog box, enter in "CFW900" in the search field

CFW900 AOI Configuration

Select Module Type				
Catalog Module Discovery F	avorites	Clear Filters		Show Filters ≯
Catalog Number CFW900	Description CFW900		Vendor WEG	Category AC Drive Device
< 1 of 671 Module Types Fou	ind			Add to Favorites
Close on Create			Create	Close Help

There should be an entry matching the above screenshot.



Шер

Select Module Type				
Catalog Module Discovery F	avorites			
cfw900		Clear Filters		Show Filters ≯
Catalog Number	Description		Vendor	Category
CFW900	CFW900		WEG	AC Drive Device
<				>
1 of 671 Module Types Fou	nd			Add to Favorites
Close on Create			Create	Close Help

Highlight the CFW900 and click Create

New	Module	

New Module				×	
General* Connection Module Info Internet Protocol Port Configuration Network	General Type: Vendor: Parent: Name: Description: Module Defin Revision: Electronic Ke Connections	ion 1.008 ing: Compatible Module	ate Network: ddress:	192.168.1. ÷ 172 . 30 . 2 . 200	
		Change			
Status: Creating			OK	Cancel Help	



Give the CFW900 a Name and IP address. Before clicking on OK, click on the Change ... button in the module definition.

Module Definition*						×
Revision: 1	~	600				
Electronic Keying: Compa	atible Mod	lule	``	/		
Connections:						
Name		Size		Tag Su	ffix	
120/170 CIP Basic Speed	Input:	4	SINT		VFD1:I1	
+ VO data	Output:	4	~	1	VFD1:01	
Select a connection 🗸		1	SINT INT DINT		-	
			REAL	1		
			ОК		Cancel He	lp

Change the type to INT and the connection name to 120/170 CIP Basic Speed + I/O data

Module Definition*					×	
Revision: 1 ~ 008 ÷						
Electronic Keying: Compatible Module ~						
Connections:						
Name		Size		Tag Su	ffix	
120/170 CIP Basic Speed	Input:	10	INT	4	VFD1:I1	
+ VO data	Output:	10	INT	1	VFD1:01	
Select a connection $$						
			OK	(Cancel H	elp

The Input and output size should be set to 10 and 10 respectively. Click OK

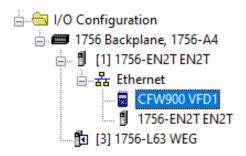


RSLogix 5	5000	\times	
	These changes will cause module data types and properties to change. Data will be set to default values unless it can be recovered from the existing module properties. Verify module properties before Applying changes.		
	Change module definition?		l
	Yes No		

Click Yes

At this point, no other changes are required. However, changing the RPI can be done, if the need arises.

Once satisfied with the settings, Click OK



There should now be an instance of the CFW900 in the device tree

AOI Import			
🔲 🗀 Unschedul	ed Programs / Phases		
🚊 📇 Motion Group	-		
🛄 🛄 Ungrouped			
Add-On Instru			
📄 🔠 Data Type 💷	New Add-On Instruction		
🔤 🛺 User-I	Import Add-On Instruction		
🕁 🙀 String			
Add- 🕺	Cut	Ctrl+X	
🕀 🙀 Prede 🗎	Сору	Ctrl+C	
🖶 🙀 Modu 💼	Paste	Ctrl+V	
Trends			
I/O Confi Print			
🚊 📼 1756 Backplane, 1756-A4			

In the device tree, right click on Add-On Instructions and click on Import Add-On Instruction...



🕅 Import Add-On Instruction X					
Look in:	AOIs	~	G 🦻 📂	 +	
Quick access Desktop Libraries	Name (a) CFW900_207 (a) CFW900_217 (a) CFW900_100 (a) CFW900_101 (a) CFW900_120 (a) CFW900_121	71.L5X 0150.L5X 151.L5X 0170.L5X	Date modifie 5/9/2024 4:32 5/9/2024 4:31 5/9/2024 4:31 5/9/2024 4:31 5/9/2024 4:31 5/9/2024 4:32	2 PM 2 PM 1 PM 1 PM	Type RSLor RSLor RSLor RSLor RSLor
Wetwork	< File name: Files of type: Files containing: Into:	RSLogix 5000 XML Files (*.L5X) Add-On Instruction Add-On Instructions	 	Impo Can Hei	cel



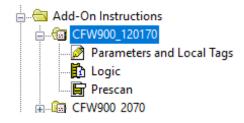
Select the appropriate add-on instruction (CFW900_120170.L5X)

Import Configuration						×
Find: Find Within: Final Name, Descripti	ion	Find/Replace				
Import Content:						
- 🔄 Add-On Instructions	Configure Add-O	n Instruction Properties				
CFW900_120170 Parameters and Local Tags	Import Name:	CFW900_120170				
Routines	Operation:	Create ~				
- 🗵 Errors/Warnings	Final Name:	CFW900_120170 ~	Properties			
	Description:	120/170 CIP Basic Speed ADI plus parameters				
	Revision:	v1.0				
	Revision Note:	C9.5.1 = 120/170				
	Vendor:					
	Vendor:					
< >						
					OK Cancel	IIala
					UN Lancel	Help
Beadu						

0.L5X) and click Import....

Import Conf	figuration				×
문 또 Find: Find	Within: Final Name, Descripti	→ 🐴 🐴	Find/Replace		
Import Content:					
-🔄 Add-On	Instructions	Configure Add-On	Instruction Properties		
	W900_2070 Parameters and Local Tags	Import Name:	CFW900_2070		
	Parameters and Local Tags Routines	Operation:	Create ~		
- 🗵 ErrorsA	Warnings	Final Name:	CFW900_2070 ~	Properties	
		Description:	20/70 CIP Basic Speed		
			AOI		
			×		
		Revision:	v1.0		
		Revision Note:			
		Vendor:			
<	>				
					OK Cancel Help
Ready					

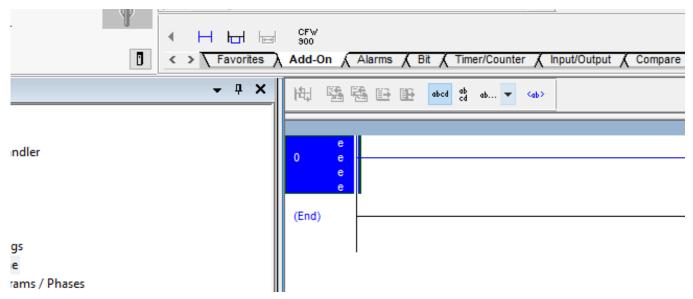
Review the proposed changes and click OK





There should now be this add-on instruction in the project.

AOI Usage



On an empty rung of ladder, add an instance of the newly imported add-on instruction by clicking on the Add-On bar and clicking the CFW900 symbol

е	CFW900_12017		1 I
е	— 120/170 CIP Basic Spece	edAOI plus	
е	CFW900_120170	?	-(Connection_Ready)-
е	ConnectionFaulted	?	
е		??	-(Connection Faulted)-
е	Inputs	?	
е	Outputs	?	-(Running)-
e	Run	??	2 · · · · · · · · · · · · · · · · · · ·
e	Fault Reset	22	-(Faulted)-
e	cfg FailToStartDelay	?? ??	S
e	cfg_FailToStopDelay	??	
e	Speed Reference	?	
ē	opcod_noionoio	??	
e	RealSpeed	??	
e	val OutputCurrent	??	
e	val_OutputVoltage	??	
e	val_OutputFreq	??	
e	val_Couput req val FaultCode	??	
e	set_Accel	?	
-	Sel_Accel	??	
е	ant Decel	2	
е	set_Decel	??	
е			
е			
е			

The Add-On requires a tag to be created. Create this tag by typing a name in the CFW900_120170 field and right-clicking and selecting <u>New</u> "Tag"

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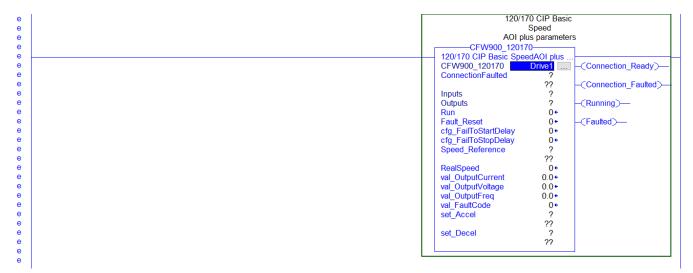
Шед

CFW900_12017	0		
120/170 CIP Basic Spee	edAOI plus		
CFW900_120170	Drive1	. Connection Readv	\geq
ConnectionFaulted	?	<u>N</u> ew "Drive1"	Ctrl+W
	??	Cut Instruction	Ctrl+X
Inputs		Copy Instruction	Ctrl+C
Outputs	· · ·	- 17	Ctrl+V
Run	?? 🗳	<u>P</u> aste	Ctri+v
Fault_Reset	??	Delete Instruction	Del
cfg_FailToStartDelay	00	Add Ladder Element	Alt+Ins
cfg_FailToStopDelay Speed_Reference	27 27 2 27	Edit Main Operand Description	Ctrl+D
	22	Save Instruction Defaults	
RealSpeed	??	Clear Instruction Defaults	
val_OutputCurrent	??		
val_OutputVoltage	??	R <u>e</u> move Force	
val_OutputFreq val FaultCode	?? ??	<u>G</u> o To	Ctrl+G
set Accel	?	Instruction <u>H</u> elp	F1
_	?? 🚌	Remove Parameter	
set_Decel	2	Remove All Unknown Parameters	;
	77 -	Onen Instruction Louis	
		Open Instruction Logic	
		Open Instruction Definition	
		Properties	Alt+Enter

CFW900 AOI Configuration

New Tag		×
Name:	Drive1	Create 🛛 🔻
Description:	^	Cancel
		Help
	~	
Usage:	<normal> ~</normal>	
Туре:	Base ~ Connection	
Alias For:	~	
Data Type:	CFW900_120170	
Scope:	🕞 Main120 🗸 🗸	
External Access:	Read/Write ~	
Style:	~	
Constant		
Open Confi	iguration	

Give any appropriate description and scope (the tag can be either program or controller scoped)



Next the Connection Faulted, Inputs, Outputs, and Speed_Reference need to be populated as follows:





Шер

CFW900 AOI Configuration

120/170 CIP Basic Speed/ CFW900_120170	AOI plus parameters Drive1		
Inputs	0≮ VFD1:I1.Data		
Outputs Run	VFD1:O1.Data 0≁		
cfg_FailToStartDelay	0*	-(Faulted)	
ctg_FailToStopDelay Speed_Reference	Speed_Ref		
RealSpeed	0+		
val_OutputVoltage	0.0*		
val_FaultCode	0		
set_Decel	0.0≮ Decel		
	CFW900_120170 CFW900_120170 ConnectionFaulted VFD1 Inputs Outputs Run Fault_Reset cfg_FailToStorDelay cfg_FailToStorDelay Speed_Reference RealSpeed val_OutputCurrent val_OutputVoltage val_OutputFreq val_FaultCode set_Accel	Speed AOI plus parameters CFW900_120170 120/170 CIP Basic SpeedAOI plus parameters CFW900_120170 Drive1 ConnectionFaulted VFD1:I1.ConnectionFaulted 0+ Inputs VFD1:I1.Data Outputs VFD1:01.Data Run 0+ Fault_Reset 0+ cfg_FailToStartDelay 0+ cfg_FailToStartDelay 0+ cfg_FailToStartDelay 0+ Speed_Reference Speed_Ref RealSpeed 0+ val_Output/Otrage 0.0+ val_Output/otrage 0.0+ val_Output/freq 0.0+ val_Output/freq 0.0+ val_Contput/freq 0.0+ val_Contput/otrage 0.0+ val_Contput/freq 0.0+	Speed AOI plus parameters CFW900_120170 120/170 CIP Basic SpeedAOI plus parameters CFW900_120170 Drive1 ConnectionFaulted VFD1:11.ConnectionFaulted Outputs VFD1:11.Data Outputs VFD1:01.Data Run Cig_FailToStopDelay cig_FailToStopDelay val_OutputForq OutputVoltage 0.0+ val_OutputFreq 0.0+ set_Accel Accel Oc+ Set_Decel

The Speed_Ref is an INT that is a tag to be created.

Accel and Decel are REAL tags that are to be created.

AOI Parameter Description

InOut Parameters

Parameter	Туре	Description
Inputs	INT[10]	Input Assembly from CFW900
Outputs	INT[10]	Output Assembly to CFW900

Input Parameters

Parameter	Туре	Description
Cfg_FailToStartDelay	DINT	Time in seconds before faulting
		on fail to start if VFD does not
		start when commanded
		Set to 0 to disable
Cfg_FailToStopDelay	DINT	Time in seconds before faulting
		on fail to stop if VFD does not
		stop when commanded
		Set to 0 to disable
ConnectionFaulted	BOOL	From CFW900 Ethernet Module.
		1 = Connection is faulted
		0 = Connection is OK
Fault_Reset	BOOL	1 = Send Reset Fault Signal to
		VFD
		0 = No action
Run	BOOL	1 = Run
		0 = Stop
Speed_Reference	INT	Speed Setpoint (RPM)
		Negative Speed will reverse
		direction of motor



Set_Accel	REAL	Acceleration Ramp Setpoint
		(0.1-999.9) in Seconds
Set_Decel	REAL	Deceleration Ramp Setpoint
		(0.1-999.9) in Seconds
cfg_AutoFaultResetNum	DINT	Maximum number of tries that
		AOI will send fault reset
		command while being
		maintained

Output Parameters

Parameter	Туре	Description
Connection_Faulted	BOOL	Goes high when connections
		interrupted. If "Run" signal is
		set, it must be reset before this
		will clear
		1 = Connection has been faulted
		from VFD to PLC
		0 = Connection OK
Connection_Ready	BOOL	1 = Connection from VFD to PLC
		is established
		0 = Connection not established
Faulted	BOOL	1 = VFD Fault, connection fault,
		or failedToStart/Stop Fault
		0 = No faults
RealSpeed	INT	Current Speed (RPM)
Running	BOOL	1 = VFD running
		0 = VFD Stopped
val_FaultCode	DINT	Last fault code reported from
		the VFD
val_OutputCurrent	REAL	Output Current in Amps
		reported from the VFD
val_OutputFreq	REAL	Output Frequency in Hertz
		reported from the VFD
val_OutputVoltage	REAL	Output Voltage in Volts
		reported from the VFD
AutoFaultResetExceed	BOOL	Indicates when the maximum
		number of automatic fault
		clears has been exceeded.
		Set Fault_Reset to 0 to reset and
		allow fault clear to resume.
		1 = Max number of fault clears
		reached. Fault Reset Disabled
		0 = Under threshold for
		automatic fault clears. Fault
		Reset Allowed.



CFW900 Parameter Requirements

The following parameters must be set in the CFW900:

Parameter	Setting
C.9.5.1	120/170
C.9.5.2	1
C.9.5.3	8
C.9.5.4	1
C.9.5.5	8
C.4.1.1	Remote 2
C.4.2.2.1	Ethernet
C.4.2.2.2	Ethernet
C.4.2.2.3	Ethernet
C.4.2.2.4	Ethernet
C.4.3.1.2.2	Ethernet
C.9.2.1.1	3
C.9.2.1.2	7
C.9.2.1.3	5
C.9.2.1.4	60
C.9.2.1.5	USER DEFINED
C.9.2.1.6	USER DEFINED
C.9.2.1.7	USER DEFINED
C.9.2.1.8	USER DEFINED
C.9.2.2.2	100
C.9.2.2.3	101
C.9.2.2.4	USER DEFINED
C.9.2.2.5	USER DEFINED
C.9.2.2.6	USER DEFINED
C.9.2.2.7	USER DEFINED
C.9.2.2.8	USER DEFINED
C.9.2.2.9	USER DEFINED

CFW900_2171

This AOI is used when the 21/71 CIP Extended Speed control mode is desired.



Create the Ethernet/IP Device

🛓 🛲 1756 Backplan		
⊨	New Module Discover Modules Paste Print	Ctrl+V

In the device tree, right click on the Ethernet bus that will contain the CFW900 and click New Module....

Enter Search Text for Module	Type Clear Filters		Show Filters $~$
Catalog Number	Description	Vendor	Category ^
1420-V1P-ENT	Powermonitor 500	Rockwell Autom	PowerMonitor 50(
0001_0073_010D	48MS-SN1PF1-M2	Rockwell Autom	Rockwell Automa
0001_0073_010E	48MS-SN1PF2-M2	Rockwell Autom	Rockwell Automa
0005_007B_0030	SP600	Rockwell Autom	DPI to EtherNet/I
0005_007B_0038	SP600 ER 400V	Rockwell Autom	DPI to EtherNet/I
0005_007B_0039	SP600 ER 200V	Rockwell Autom	DPI to EtherNet/I
0005_007B_003A	SP600 ER 600V	Rockwell Autom	DPI to EtherNet/I
0005_007B_0060	Liquiflo 2.0	Rockwell Autom	DPI to EtherNet/I
0005_007F_0027	MD60	Rockwell Autom	MDI to EtherNet/
0005_007F_0028	MD65	Rockwell Autom	MDI to EtherNet/
100-1167-001	SynapSense Industrial Gateway	Panduit Corporat	Communication
1305-ACDrive-EN1	1305 AC Drive via 1203-EN1	Rockwell Autom	Drive
1336E-IMPACTDrive-EN1	1336 IMPACT Drive via 1203-EN1	Rockwell Autom	Drive
10000 DELICIIDada ENIT	1000 DELLO IL DAVIS 445, 1000 EN1	D	Data 1
			>

In the Select Module Type dialog box, enter in "CFW900" in the search field



Шер

Select	Module Type					
Cata	log Module Discovery Favor	tes				
[cfw900		Clear Filters		Show Filters ≯	
	Catalog Number CFW900	Description CFW900		Vendor WEG	Category AC Drive Device	
1	< of 671 Module Types Found				Add to Favorites	
	Close on Create			Create	Close	lelp :

There should be an entry matching the above screenshot.

CFW900 AOI Configuration

	Module Type	-			
	log Module Discovery Fa	vontes	Clear Filters		Show Filters ≯
ſ	Catalog Number	Description		Vendor	Category
	CFW900	CFW900		WEG	AC Drive Device
	<				>
1	of 671 Module Types Four	ıd		County	Add to Favorites
	Close on Create			Create	Close Help

Highlight the CFW900 and click Create

📧 New Module			×
General*	General		
Connection Module Info Internet Protocol Port Configuration Network	Type: Vendor: Parent: Name: Description: Description: Revision: Electronic Ke Connection:	1.008 eying: Compatible Module	
Status: Creating		OK Cancel Help	





Give the CFW900 a Name and IP address. Before clicking on OK, click on the Change ... button in the module definition.

	Module Definition*						×
Re	vision: 1	~	008 韋				
Ele	ctronic Keying: Compa	atible Mod	lule	~	•		
Co	nnections:						
	Name		Size		Tag Su	ffix	
	24/74 CID Evel Crossed	Input:	4	SINT	4	VFD1:I1	
	21/71 CIP Ext. Speed	Output:	4	~	1	VFD1:01	
	Select a connection 🗸			SINT INT			
				DINT			
				REAL			
				01/		C 1	
				OK		Cancel	Help

Change the type to INT and the Name to 21/71 CIP Ext. Speed

	Module Definitio	n*						×
Rev	ision:	1	~	008 ≑	_			
Elec	tronic Keying:	Compa	atible Mod	ule	~			
Con	nections:							
	Name			Size		Tag Su	ffix	
	24/74 CID Ext. Co.o	e d	Input:	2	INT	4	VFD1:I1	
	21// I CIP EXI. Spe	1/71 CIP Ext. Speed		2	× ×	1	VFD1:01	
	Select a connectio	n ~						
_								
					OK		Cancel	Help

The Input and output size should be set to 2 and 2 respectively. Click OK

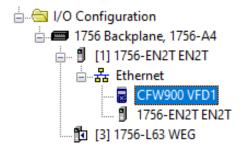


RSLogix 5	5000	×
	These changes will cause module data types and properties to change. Data will be set to default values unless it can be recovered from the existing module properties. Verify module properties before Applying changes.	
	Change module definition?	
	Yes No	

Click Yes

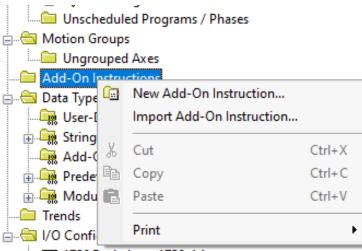
At this point, no other changes are required. However, changing the RPI can be done, if the need arises.

Once satisfied with the settings, Click OK



There should now be an instance of the CFW900 in the device tree

AOI Import



🗄 🛲 1756 Backplane, 1756-A4

In the device tree, right click on Add-On Instructions and click on Import Add-On Instruction...

Шер

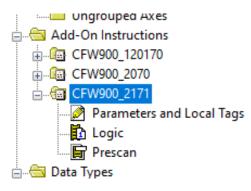
👸 Import Add-	On Instruction			×
Look in:	AOIs	~	G 🤌 📂 🛄 -	
Quick access Desktop Libraries This PC	Name	1.L5X 150.L5X 151.L5X 170.L5X	Date modified 5/9/2024 4:32 PM 5/9/2024 4:32 PM 5/9/2024 4:31 PM 5/9/2024 4:31 PM 5/9/2024 4:31 PM 5/9/2024 4:32 PM	Type RSLog RSLog RSLog RSLog RSLog
Network	≺ File name:	1	~	> Import
	Files of type:	RSLogix 5000 XML Files (*.L5X)	\sim	Cancel
	Files containing:	Add-On Instruction	~	Help
	Into:	Add-On Instructions	~	.:

Select the appropriate add-on instruction (CFW900_2171.L5X) and click Import....

CFW900 AOI Configuration

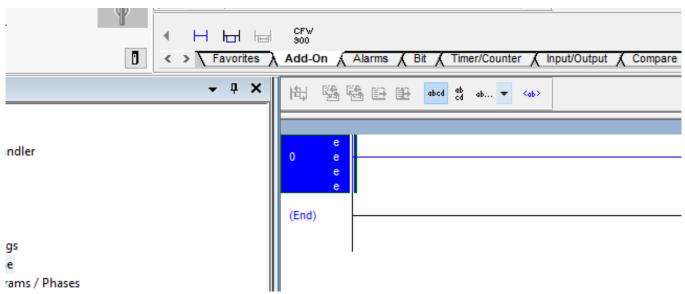
💽 Impo	ort Configuration				×
22	Find: Find Within: Final Name, Descripti	ion	Find/Replace		
Import Co					
	Add-On Instructions	Configure Add-On	Instruction Properties		
	CFW900_2171 Parameters and Local Tags	Import Name:	CFW900_2171		
	- 🔁 Routines	Operation:	Create ~	ם	
	Errors/Warnings	Final Name:	CFW900_2171 ~	Properties	
		Description:	21/71 CIP Extended Speed		
		Revision:	v1.0		
		Revision Note:			
		Vendor:			
<	>				
					OK Cancel Help
Ready			Outerst		ii.

Review the proposed changes and click OK



There should now be this add-on instruction in the project.

AOI Usage





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On an empty rung of ladder, add an instance of the newly imported add-on instruction by clicking on the Add-On bar and clicking the CFW900 symbol

CFW900 2171	
21/71 CIP Extended SpeedAOI	
	Dente
CFW900_2171 ?(Connection	
ConnectionFaulted ? Connection	
?? –(sts_Drv_nr	dy)—
Inputs ? - Faulted -	
Outputs ? (Running1)	
Community of Community of Community	
Run_Rev ?? –(Warning)–	
Fault_Reset ?? -(Ready)-	
NetCtrl ?? -(Ctrl_from_r	iet)—
NetRef ?? - Ref_from_r	
Speed_Reference ? (At_reference	
?? -(FailedToSt	
RealSpeed ?? -(FailedToSt	op)—
cfg_FailToStartDelay ??	
cfg_FailToStopDelay ??	
Drive Status ??	
Dirite_caute	

The Add-On requires a tag to be created. Create this tag by typing a name in the CFW900_2171 field and right-clicking and selecting <u>N</u>ew "Tag"

CFW900_2171-			
 — 21/71 CIP Extended Spee CFW900_2171 	Drive1	Connection Rea	adv)—
ConnectionFaulted	1	<u>N</u> ew "Drive1"	Ctrl+W
	?1 🐰	Cut Instruction	Ctrl+X
Inputs	E	Copy Instruction	Ctrl+C
Outputs	le	Paste	Ctrl+V
Run_Fwd	?1		
Run_Rev	?1	Delete Instruction	Del
Fault_Reset	?1	Add Ladder Element	Alt+Ins
NetCtrl	?1	Edit Main Operand Description	Ctrl+D
NetRef	?]	Save Instruction Defaults	
Speed_Reference	21	Clear Instruction Defaults	
RealSpeed	?1	R <u>e</u> move Force	
cfg_FailToStartDelay	?1	<u>G</u> о То	Ctrl+G
cfg_FailToStopDelay Drive_Status	?1 ?1	Instruction <u>H</u> elp	F1
Drive_Status		Remove Parameter	
	Ð	Remove All Unknown Parameters	5
		Open Instruction Logic	
		Open Instruction Definition	
		Properties	Alt+Enter



New Tag			×
Name:	Drive1		Create 🛛 🔻
Description:		^	Cancel
			Help
		\sim	
Usage:	<normal></normal>	\sim	
Туре:	Base ~ Connection	n	
Alias For:		\sim	
Data Type:	CFW900_2171		
Scope:	🕞 Main21	~	
External Access:	Read/Write	\sim	
Style:		\sim	
Constant			
🗌 Open Confi	guration		

Give any appropriate description and scope (the tag can be either program or controller scoped)

e	AOI -CFW900_2171 21/71 CIP Extended SpeedAOI CFW900_2171 Drive1 Connection_Ready ConnectionFaulted ? Sts_Drv_nrdy) (nputs ? Nun_Fwd 0+ Run_Rev 0+ Running2) Run_Rev 0+ Running2) Run_Rest 0+ NetCtrl 1+ NetRef 1+ Speed_Reference ? (Connection_Ready) Connection_Ready Connection_Re	
-	NetRef 1 ← Ref_from_net →	
e	?? -(FailedToStart)	
e e	RealSpeed 0 ← (FailedToStop)— cfg_FailToStartDelay 0 ←	
e	cfg_FailToStopDelay 0 ←	
e e	Drive_Status 0+	
e		

Next the Connection Faulted, Inputs, Outputs, and Speed_Reference need to be populated as follows:



	21//1 CIP Extended Speed AOI	
CF 21/71 CIP Extended CFW900 2171	W900_2171 SpeedAOI Drive1	Connection Ready)
_	VFD1:I1.ConnectionFaulted	-(Connection_Ready)- -(Connection_Faulted)- -(sts_Drv_nrdy)
Inputs Outputs	VFD1:I1.Data VFD1:O1.Data	-(Faulted) (Running1)
Run_Fwd Run Rev	0+ 0+	–(Running2)–– –(Warning)––
Fault_Reset NetCtrl	0 <i>←</i> 1 <i>←</i>	-(Ready) -(Ctrl from net)
NetRef Speed Reference	1 ← SpeedRefTag	-(Ref_from_net) -(At_reference)
RealSpeed	0+ 0+	– (FailedToStart)— – (FailedToStop)—
cfg_FailToStartDela cfg_FailToStopDela		
Drive_Status	0 ←	

The SpeedRefTag is an INT that is a tag to be created.

AOI Parameter Description

InOut Parameters

Parameter	Туре	Description
Inputs	INT[2]	Input Assembly from CFW900
Outputs	INT[2]	Output Assembly to CFW900

Input Parameters

Parameter	Туре	Description
Cfg_FailToStartDelay	DINT	Time in seconds before faulting
		on fail to start if VFD does not
		start when commanded
		Set to 0 to disable
Cfg_FailToStopDelay	DINT	Time in seconds before faulting
		on fail to stop if VFD does not
		stop when commanded
		Set to 0 to disable
ConnectionFaulted	BOOL	From CFW900 Ethernet Module.
		1 = Connection is faulted
		0 = Connection is OK



Fault_Reset	BOOL	1 = Send Reset Fault Signal to
		VFD
		0 = No action
Run_Fwd	BOOL	1 = Run Forward
		0 = Stop
Run_Rev	BOOL	1 = Run Reverse
		0 = Stop
Speed_Reference	INT	Speed Setpoint (RPM)
		Negative Speed will reverse
		direction of motor
NetCtrl	BOOL	1 = R2 Control (Ethernet)
		0 = R1 Control (other)
NetRef	BOOL	1 = R2 Reference (Ethernet)
		0 = R1 Reference (other)
cfg_AutoFaultResetNum	DINT	Maximum number of tries that
		AOI will send fault reset
		command while being
		maintained

Output Parameters

Parameter	Туре	Description
Connection_Faulted	BOOL	Goes high when connections
		interrupted. If "Run" signal is
		set, it must be reset before this
		will clear
		1 = Connection has been faulted
		from VFD to PLC
		0 = Connection OK
Connection_Ready	BOOL	1 = Connection from VFD to PLC
		is established
		0 = Connection not established
Faulted	BOOL	1 = VFD Fault, connection fault,
		or failedToStart/Stop Fault
		0 = No faults
RealSpeed	INT	Current Speed (RPM)
Running_Fwd	BOOL	1 = VFD running forward
		0 = VFD not running forward
Running_Rev	BOOL	1 = VFD running in reverse
		0 = VFD not running in reverse
At_reference	BOOL	1 = VFD has reached
		programmed speed
Ctrl_from_net	BOOL	1 = VFD Controlled remotely
		(PLC)
		0 = VFD Controlled Locally
Drive_Status	INT	0 = Non-existent
		1 = Startup

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		2 = Not Ready
		3 = Ready
		4 = Enabled
		5 = Stopping
		6 = Fault Stop
		7 = Faulted
FailedToStart	BOOL	1 = VFD failed to start in time
		allotted
		0 = Normal
FailedToStop	BOOL	1 = VFD failed to stop in time
		allotted
		0 = Normal
Ref_from_net	BOOL	1 = using speed reference from
		remote source
		0 = using speed reference from
		local source
Sts_Drv_nrdy	BOOL	1 = indicates AOI detected a not
		ready state and
		run_fwd/run_rev must be set to
		0 to clear
		0 = Normal
Warning	BOOL	1 = VFD is in alarm condition
		0 = VFD is not in alarm condition
AutoFaultResetExceed	BOOL	Indicates when the maximum
		number of automatic fault
		clears has been exceeded.
		Set Fault_Reset to 0 to reset and
		allow fault clear to resume.
		1 = Max number of fault clears
		reached. Fault Reset Disabled
		0 = Under threshold for
		automatic fault clears. Fault
		Reset Allowed.

CFW900 Parameter Requirements

The following parameters must be set in the CFW900:

Parameter	Setting
C.9.5.1	21/71
C.4.1.1	Ethernet
C.4.2.2.1	Ethernet
C.4.2.2.2	Ethernet
C.4.2.2.3	Ethernet
C.4.2.2.4	Ethernet
C.4.3.1.2.2	Ethernet



CFW900_121171

This AOI is used when the 121/171 CIP Extended Speed control mode + IO is desired.

This behaves similarly to the 21/71 CIP Extended Speed, but adds the following parameters:

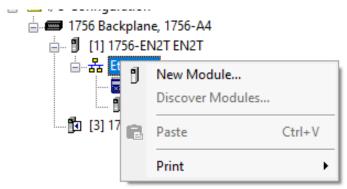
Outputs

- Output Current
- Output Voltage
- Output Frequency
- Last Fault Code

Inputs

- Acceleration Ramp 1
- Deceleration Ramp 1

Create the Ethernet/IP Device



In the device tree, right click on the Ethernet bus that will contain the CFW900 and click New Module....

Шео

Enter Search Text for Module T	Clear Filters		Show Filters 🗧
Catalog Number	Description	Vendor	Category ^
1420-V1P-ENT	Powermonitor 500	Rockwell Autom	PowerMonitor 500
0001_0073_010D	48MS-SN1PF1-M2	Rockwell Autom	Rockwell Automa
0001_0073_010E	48MS-SN1PF2-M2	Rockwell Autom	Rockwell Automa
0005_007B_0030	SP600	Rockwell Autom	DPI to EtherNet/I
0005_007B_0038	SP600 ER 400V	Rockwell Autom	DPI to EtherNet/I
0005_007B_0039	SP600 ER 200V	Rockwell Autom	DPI to EtherNet/I
0005_007B_003A	SP600 ER 600V	Rockwell Autom	DPI to EtherNet/I
0005_007B_0060	Liquiflo 2.0	Rockwell Autom	DPI to EtherNet/I
0005_007F_0027	MD60	Rockwell Autom	MDI to EtherNet/
0005_007F_0028	MD65	Rockwell Autom	MDI to EtherNet/
100-1167-001	SynapSense Industrial Gateway	Panduit Corporat	Communication
1305-ACDrive-EN1	1305 AC Drive via 1203-EN1	Rockwell Autom	Drive
1336E-IMPACTDrive-EN1	1336 IMPACT Drive via 1203-EN1	Rockwell Autom	Drive
1000E DI LICIIDALE ENIT	1000 DELLO IL D202, 222, 1000 EN1	D	Data Y
c			>

In the Select Module Type dialog box, enter in "CFW900" in the search field

CFW900 AOI Configuration

	Clear Filte	ers	Show Filters ≯
Catalog Number	Description	Vendor	Category
CFW900	CFW900	WEG	AC Drive Device
			>
C			*

There should be an entry matching the above screenshot.



Select Module Type			
Catalog Module Discovery Fav	rorites		
cfw900	Clear Filters		Show Filters 🗧
Catalog Number	Description	Vendor	Category
CFW900	CFW900	WEG	AC Drive Device
<			>
1 of 671 Module Types Found			Add to Favorites
r or of it module it ypes i ound			
Close on Create		Create	Close Help

Highlight the CFW900 and click Create

📧 New Module			<
General*	General		
Connection Module Info Internet Protocol Port Configuration Network	Type: Vendor: Parent: Name: Description: Description: Module Defini Revision: Electronic Ke Connections	1.008 zying: Compatible Module	
' Status: Creating		OK Cancel Help	

All data subject to change without notice



Give the CFW900 a Name and IP address. Before clicking on OK, click on the Change ... button in the module definition.

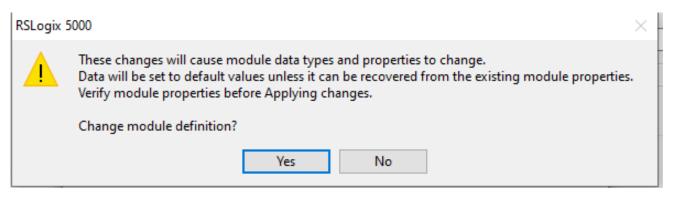
■ Module Definition* × Revision: 1 × 008 +
Revision 1 V 008 🔶
Electronic Keying: Compatible Module ~
Connections:
Name Size Tag Suffix
121/171 CIP Ext. Speed + Input: 4 SINT VFD1:I1
VO data Output: 4 VFD1:01
Select a connection
REAL
OK Cancel Help

Change the type to INT and the Name to 121/171 CIP Ext. Speed + I/O data

Module Definition*						×
Revision: 1	~	008 ≑				
Electronic Keying: Compa	atible Mod	ule	~	*		
Connections:						
Name		Size		Tag Su	ffix	
121/171 CIP Ext. Speed +	Input:	10	INT	1	VFD1:I1	
VO data	Output:	10			VFD1:01	
Select a connection 🗸			-			
			ОК	(Cancel	Help

The Input and output size should be set to 10 and 10 respectively. Click OK

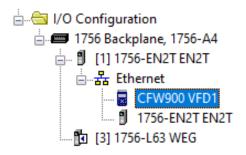




Click Yes

At this point, no other changes are required. However, changing the RPI can be done, if the need arises.

Once satisfied with the settings, Click OK

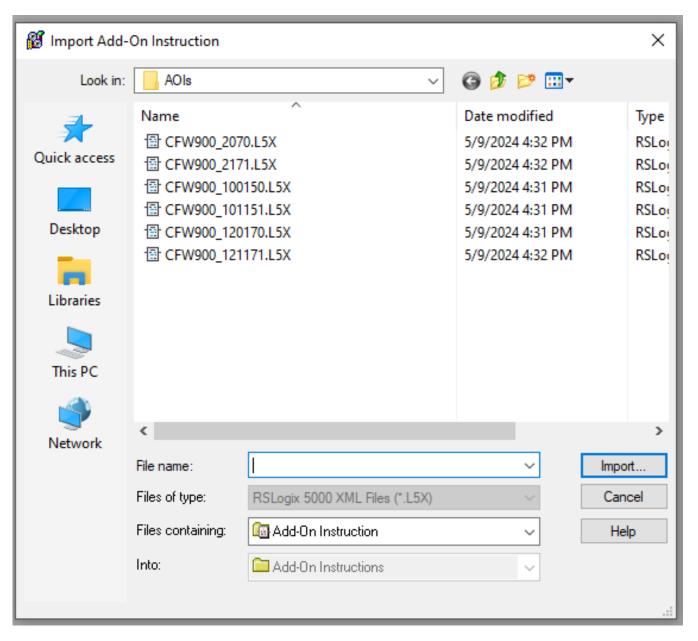


There should now be an instance of the CFW900 in the device tree

AOI Import

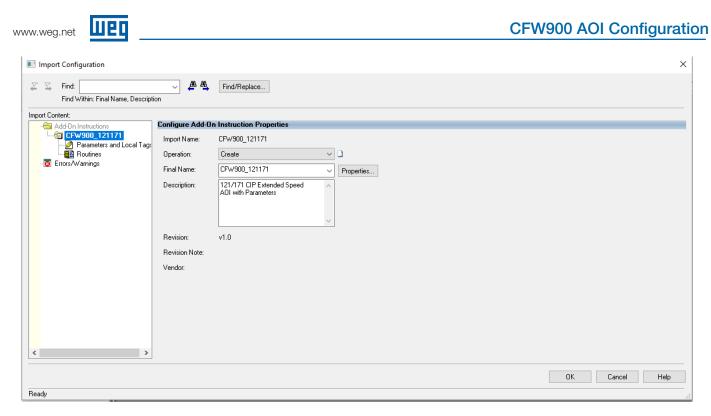
Unschedul	ed Programs / Phases s	
Ungrouped		
Add-On Instru 	New Add-On Instruction	
🔤 🗔 User-I	Import Add-On Instruction	
🕁 🗐 🙀 String	Cut	Ctrl+X
🕀 🙀 Prede 🗎	Сору	Ctrl+C
🕀 🚂 Modu 💼	Paste	Ctrl+V
Trends		
🗄 📇 I/O Confi	Print	•
🚊 📼 1756 Backp	lane, 1756-A4	

In the device tree, right click on Add-On Instructions and click on Import Add-On Instruction...

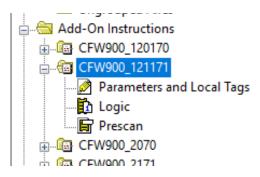


Select the appropriate add-on instruction (CFW900_121171.L5X) and click Import....

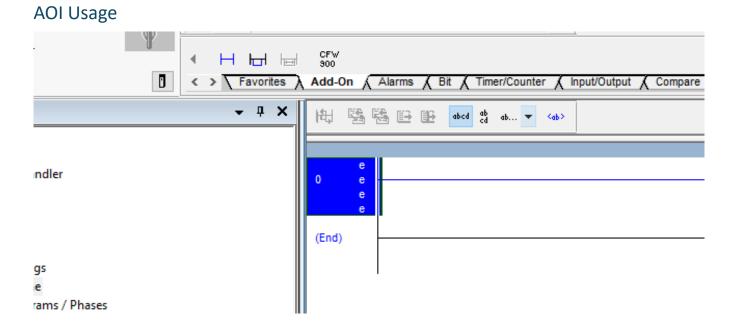




Review the proposed changes and click OK



There should now be this add-on instruction in the project.





On an empty rung of ladder, add an instance of the newly imported add-on instruction by clicking on the Add-On bar and clicking the CFW900 symbol

е	CFW900_121	171	1
е	121/171 CIP Extended	SpeedAOI	
е	CFW900_121171	?	-(Connection_Ready)-
e	ConnectionFaulted	?	-Connection_Faulted
e		??	-(sts_Drv_nrdy)
e	Inputs	?	-(Faulted)-
e	Outputs	2	-(Running1)-
	Run Fwd	??	-(Running2)-
e	Run Rev	??	
е		??	-(Warning)
е	Fault_Reset	77	
е	NetCtrl	??	-(Ctrl_from_net)
е	NetRef	??	-(Ref_from_net)
е	Speed_Reference	?	(At_reference)
е		??	(FailedToStart)
е	RealSpeed	??	(FailedToStop)
е	cfg_FailToStartDelay	??	
е	cfg_FailToStopDelay	??	
е	Drive Status	??	
е	val OutputVoltage	??	
е	val_OutputCurrent	??	
е	valOutputFreq	??	
e	val FaultCode	??	
e	set Accel	2	
e		22	
e	set Decel	2	
e	361_06061	22	
e		~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	
e			
е			

The Add-On requires a tag to be created. Create this tag by typing a name in the CFW900_121171 field and right-clicking and selecting <u>N</u>ew "Tag"

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Шед

CFW900_12117 121/171 CIP Extended S			
CFW900 121171	Drive1	Connection Ready	~
ConnectionFaulted	1	<u>N</u> ew "Drive1"	Ctrl+W
	21 8	Cut Instruction	Ctrl+X
Inputs		Copy Instruction	Ctrl+C
Outputs	1		
Run_Fwd	?1 🗳	<u>P</u> aste	Ctrl+V
Run_Rev	21 21	Delete Instruction	Del
Fault_Reset	?1	Add Ladder Element	Alt+Ins
NetCtrl	?1 ?1	Edit Main Operand Description	Ctrl+D
VetRef	?1	Eur Main operand Description	Curro
Speed_Reference	1	Save Instruction Defaults	
	?1	Clear Instruction Defaults	
RealSpeed	?1		
cfg_FailToStartDelay	?1	R <u>e</u> move Force	
cfg_FailToStopDelay	?1 ?1 ?1	Go To	Ctrl+G
Drive_Status	?1	Instruction <u>H</u> elp	F1
/al_OutputVoltage	?1	Instruction <u>ri</u> ep	
val_OutputCurrent	?1 ?1	Remove Parameter	
val_OutputFreq	?1	Remove All Unknown Parameters	;
/al_FaultCode	?]		
set_Accel	1	Open Instruction Logic	
	?1	Open Instruction Definition	
set_Decel	1	Properties	Alt+Ent
	??		_

CFW900 AOI Configuration

New Tag			×
Name:	Drive1		Create 🛛 🔻
Description:		^	Cancel
			Help
		~	
Usage:	<normal></normal>	\sim	
Туре:	Base 🗸 Conn	ection	
Alias For:		\sim	
Data Type:	CFW900_121171		
Scope:	🕞 Main121	~	
External Access:	Read/Write	~	
Style:		\sim	
Constant			
🗌 Open Confi	iguration		

Give any appropriate description and scope (the tag can be either program or controller scoped)

e e	121/171 CIP Extended Speed
е	AOI with Parameters
е	CFW900_121171
е	121/171 CIP Extended SpeedAOI
е	CFW900_121171 Drive1(Connection_Ready)-
е	ConnectionFaulted ? (Connection Faulted)
е	?? – Cst_Drv_nrdy)—
е	Inputs ? (Faulted)
е	Outputs ? (Running1)—
е	Run Fwd 0+ (Running2)—
е	Run Rev 0+ – Warning –
е	Fault Reset 0 + (Ready)
е	NetCtrl 1+ -(Ctrl from_net)-
е	NetRef 1+ – (Ref_from_net) →
е	Speed_Reference ? —(At_reference)—
е	?? – FailedToStart)—
е	RealSpeed 0← (FailedToStop)—
е	cfg_FailToStartDelay 0 ←
е	cfg_FailToStopDelay 0 ←
е	Drive_Status 0 +
е	val_OutputVoltage 0.0 ←
е	val OutputCurrent 0.0←
е	val_OutputFreq 0.0 ←
е	val FaultCode 0+
е	set Accel ?
е	- ??
е	set_Decel ?
е	- ??
е	
е	

Next the Connection Faulted, Inputs, Outputs, Speed_Reference, set_Accel, and set_Decel need to be populated as follows:

ED www.weg.net



	121/171 CIP Extended	
	Speed	
	AOI with Parameters	
	W900_121171	
	ed SpeedAOI with Parameters	
CFW900_121171	Drive1	-(Connection_Ready)
ConnectionFaulted	VFD1:I1.ConnectionFaulted	-(Connection_Faulted)-
	0+	-(sts_Drv_nrdy)
Inputs	VFD1:I1.Data	-(Faulted)-
Outputs	VFD1:01.Data	-(Running1)-
Run_Fwd	0.	-(Running2)
Run_Rev	0≮ 0≮	-(Warning)
Fault_Reset NetCtrl	0€ 1€	-(Ready)
NetRef	1+	(Ctrl_from_net) (Ref_from_net)
Speed Reference	SpeedRefTag	-(At_reference)
Speed_Reference	O¢	-(FailedToStart)
RealSpeed	0+	-(FailedToStop)-
cfg FailToStartDela	-	(Tuned toolop)
cfg FailToStopDela	,	
Drive Status	, 0€	
val OutputVoltage	0.0€	
val_OutputCurrent	0.0	
val_OutputFreq	0.0 •	
val_FaultCode	0€	
set_Accel	Accel	
	0.0	
set_Decel	Decel	
	0.0*	
		1

The SpeedRefTag is an INT that is a tag to be created.

set_Accel and set_Decel are REAL tags to be created.

AOI Parameter Description

InOut Parameters

Parameter	Туре	Description
Inputs	INT[10]	Input Assembly from CFW900
Outputs	INT[10]	Output Assembly to CFW900

Input Parameters

Parameter Type Description



Cfg_FailToStartDelay	DINT	Time in seconds before faulting on fail to start if VFD does not start when commanded Set to 0 to disable
Cfg_FailToStopDelay	DINT	Time in seconds before faulting on fail to stop if VFD does not stop when commanded Set to 0 to disable
ConnectionFaulted	BOOL	From CFW900 Ethernet Module. 1 = Connection is faulted 0 = Connection is OK
Fault_Reset	BOOL	1 = Send Reset Fault Signal to VFD 0 = No action
Run_Fwd	BOOL	1 = Run Forward 0 = Stop
Run_Rev	BOOL	1 = Run Reverse 0 = Stop
Speed_Reference	INT	Speed Setpoint (RPM) Negative Speed will reverse direction of motor
NetCtrl	BOOL	1 = R2 Control (Ethernet) 0 = R1 Control (other)
NetRef	BOOL	1 = R2 Reference (Ethernet) 0 = R1 Reference (other)
Set_Accel	REAL	Acceleration Ramp Setpoint (0.1-999.9) in Seconds
Set_Decel	REAL	Deceleration Ramp Setpoint (0.1-999.9) in Seconds
cfg_AutoFaultResetNum	DINT	Maximum number of tries that AOI will send fault reset command while being maintained

Output Parameters

Parameter	Туре	Description
connection_Faulted	BOOL	Goes high when connections
		interrupted. If "Run" signal is
		set, it must be reset before this
		will clear
		1 = Connection has been faulted
		from VFD to PLC
		0 = Connection OK
connection_Ready	BOOL	1 = Connection from VFD to PLC
		is established
		0 = Connection not established



faulted	BOOL	1 = VFD Fault, connection fault,
laallea	5002	or failedToStart/Stop Fault
		0 = No faults
realSpeed	INT	Current Speed (RPM)
running_Fwd	BOOL	1 = VFD running forward
		0 = VFD not running forward
running_Rev	BOOL	1 = VFD running in reverse
running_nev	5002	0 = VFD not running in reverse
at reference	BOOL	1 = VFD has reached
		programmed speed
ctrl_from_net	BOOL	1 = VFD Controlled remotely
etti_nom_net	BOOL	(PLC)
		0 = VFD Controlled Locally
drive Status	INT	0 = Non-existent
unve_status		1 = Startup
		2 = Not Ready
		3 = Ready
		4 = Enabled
		5 = Stopping
		6 = Fault Stop
		7 = Faulted
failedToStart	BOOL	1 = VFD failed to start in time
	5002	allotted
		0 = Normal
failedToStop	BOOL	1 = VFD failed to stop in time
lancalostop	5002	allotted
		0 = Normal
ref from net	BOOL	1 = using speed reference from
iei_iieii		remote source
		0 = using speed reference from
		local source
sts Drv nrdy	BOOL	1 = indicates AOI detected a not
		ready state and
		run_fwd/run_rev must be set to
		0 to clear
		0 = Normal
warning	BOOL	1 = VFD is in alarm condition
0		0 = VFD is not in alarm condition
val FaultCode	DINT	Fault code from VFD
val_OutputCurrent	REAL	Output current in Amps from
		VFD
val OutputFreq	REAL	Output frequency in Hertz from
		VFD
val_OutputVoltage	REAL	Output voltage in Volts from
0		VFD



AutoFaultResetExceed	BOOL	Indicates when the maximum
		number of automatic fault
		clears has been exceeded.
		Set Fault_Reset to 0 to reset and
		allow fault clear to resume.
		1 = Max number of fault clears
		reached. Fault Reset Disabled
		0 = Under threshold for
		automatic fault clears. Fault
		Reset Allowed.

CFW900 Parameter Requirements

The following parameters must be set in the CFW900:

Parameter	Setting
C.9.5.1	121/171
C.9.5.2	1
C.9.5.3	8
C.9.5.4	1
C.9.5.5	8
C.4.1.1	Ethernet
C.4.2.2.1	Ethernet
C.4.2.2.2	Ethernet
C.4.2.2.3	Ethernet
C.4.2.2.4	Ethernet
C.4.3.1.2.2	Ethernet
C.9.2.1.1	3
C.9.2.1.2	7
C.9.2.1.3	5
C.9.2.1.4	60
C.9.2.1.5	USER DEFINED
C.9.2.1.6	USER DEFINED
C.9.2.1.7	USER DEFINED
C.9.2.1.8	USER DEFINED
C.9.2.2.2	100
C.9.2.2.3	101
C.9.2.2.4	USER DEFINED
C.9.2.2.5	USER DEFINED
C.9.2.2.6	USER DEFINED
C.9.2.2.7	USER DEFINED
C.9.2.2.8	USER DEFINED
C.9.2.2.9	USER DEFINED



CFW900_100150

This AOI is used when the 100/150 Manufacture Speed + IO is desired.

This uses the WEG status word and is controlled slightly differently from the CIP style controls.

Additionally, the AOI handles the following additional parameters:

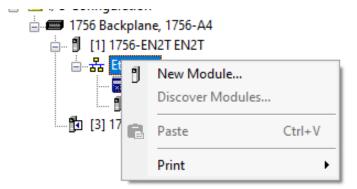
Outputs

- Output Current
- Output Voltage
- Output Frequency
- Last Fault Code

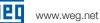
Inputs

- Acceleration Ramp 1
- Deceleration Ramp 1

Create the Ethernet/IP Device



In the device tree, right click on the Ethernet bus that will contain the CFW900 and click New Module....



Inter Search Text for Module	Type Clear Filters		Show Filters ≯
Catalog Number	Description	Vendor	Category ^
1420-V1P-ENT	Powermonitor 500	Rockwell Autom	PowerMonitor 50(
0001_0073_010D	48MS-SN1PF1-M2	Rockwell Autom	Rockwell Automa
0001_0073_010E	48MS-SN1PF2-M2	Rockwell Autom	Rockwell Automa
0005_007B_0030	SP600	Rockwell Autom	DPI to EtherNet/I
0005_007B_0038	SP600 ER 400V	Rockwell Autom	DPI to EtherNet/I
0005_007B_0039	SP600 ER 200V	Rockwell Autom	DPI to EtherNet/I
0005_007B_003A	SP600 ER 600V	Rockwell Autom	DPI to EtherNet/I
0005_007B_0060	Liquiflo 2.0	Rockwell Autom	DPI to EtherNet/I
0005_007F_0027	MD60	Rockwell Autom	MDI to EtherNet/
0005_007F_0028	MD65	Rockwell Autom	MDI to EtherNet/
100-1167-001	SynapSense Industrial Gateway	Panduit Corporat	Communication
1305-ACDrive-EN1	1305 AC Drive via 1203-EN1	Rockwell Autom	Drive
1336E-IMPACTDrive-EN1	1336 IMPACT Drive via 1203-EN1	Rockwell Autom	Drive
10000 DELICIIDANA ENIT	1000 DELLO IL D2	D	D

In the Select Module Type dialog box, enter in "CFW900" in the search field



шед

Select Module Type Catalog Module Discovery Favo			
cfw900 Catalog Number CFW900	Clear Filters Description CFW900	Vendor WEG	Show Filters Category AC Drive Device
< 1 of 671 Module Types Found			Add to Favorites
Close on Create		Create	Close Help

There should be an entry matching the above screenshot.

CFW900 AOI Configuration

Select	Select Module Type							
Cat	alog Module Discovery	avorites						
	cfw900	Clear Filters		Show Filters ≯				
	Catalog Number	Description	Vendor	Category				
	CFW900	CFW900	WEG	AC Drive Device				
	٢			>				
	1 of 671 Module Types Fo	und		Add to Favorites				
[Close on Create		Create	Close Help				

Highlight the CFW900 and click Create

📧 New Module		×	
General*	General		d
Connection Module Info Internet Protocol Port Configuration Network	Type: Vendor: Parent: Name: Description: Description: Module Defin Revision: Electronic Ke Connections	1.008 eying: Compatible Module	
Status: Creating		OK Cancel Help	





Give the CFW900 a Name and IP address. Before clicking on OK, click on the Change ... button in the module definition.

	Module Definition*						×
Re	vision: 1	~	008 🗘				
Ele	ctronic Keying: Compa	atible Mod	lule	~	•		
Cor	nnections:						
	Name		Size		Tag Su	ffix	
	100/150 Manufacturer	Input:	4	SINT	1	VFD1:I1	
	Speed + VO data	Output:	4	Ň	'	VFD1:01	
	Select a connection			SINT			
				INT DINT			
				REAL			
							_
				ОК	(Cancel Help	

Change the type to INT and the Name to 100/150 Manufacturer Speed + I/O data

■ Module Definition* ×							×
Revision: 1 ~ 008 🖨							
Electronic Keying: Compatible Module \checkmark							
Cor	nnections:						
	Name		Size		Tag Su	ffix	
	100/150 Manufacturer	Input:	10	INT	1	VFD1:I1	
	Speed + VO data	Output:	10	Ť	<u> </u>	VFD1:01	
	Select a connection 🗸			·,			
_							
				OK	(Cancel H	lelp

The Input and output size should be set to 10 and 10 respectively. Click OK

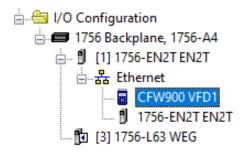


RSLogix	5000	×	
	These changes will cause module data types and properties to change. Data will be set to default values unless it can be recovered from the existing module properties. Verify module properties before Applying changes.		
	Change module definition?		
	Yes No		

Click Yes

At this point, no other changes are required. However, changing the RPI can be done, if the need arises.

Once satisfied with the settings, Click OK



There should now be an instance of the CFW900 in the device tree

AOI Import

Unscheduled Programs / Phases					
🖃 🚔 Motion Groups					
Ungrouped Axes					
Add-On Instru	ctions				
👝 🔄 Data Type 💷	New Add-On Instruction				
🛺 User-I	Import Add-On Instruction				
🖶 🙀 String 💡	Cut	Ctrl+X			
	Cut	Ctri+X			
🕀 🙀 Prede 🗎	Сору	Ctrl+C			
🗄 🚂 Modu 💼	Paste	Ctrl+V			
- Trends					
🗄 🗠 📇 I/O Confi	Print	•			
🖃 📼 1756 Backplane, 1756-A4					

In the device tree, right click on Add-On Instructions and click on Import Add-On Instruction...

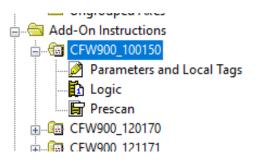
🕅 Import Add-On Instruction X					
Look in:	AOIs	~	G 🦻 🖻 🗄	•	
Quick access Desktop Libraries	Name		Date modified 5/9/2024 4:32 PM 5/9/2024 4:32 PM 5/9/2024 4:31 PM 5/9/2024 4:31 PM 5/9/2024 4:31 PM 5/9/2024 4:32 PM		/pe SLoi SLoi SLoi SLoi SLoi
Network	≺ File name:	1	~	Import	>
	Files of type: RSLogix 5000 XML Files (*.L5X)			Cancel	
	Files containing:	Add-On Instruction		Help	
	Into:	Add-On Instructions	~		
					:

Select the appropriate add-on instruction (CFW900_100150.L5X) and click Import....

CFW900 AOI Configuration

Import Configuration X						
之 当 Find: Find Within: Final Name, Description	→ 🀴 🐴	Find/Replace				
Import Content:	o c					
E CEW900 100150		Instruction Properties CFW900_100150				
Parameters and Local Tags	Operation:	Create ~] 🗅			
• 🔯 Errors/Warnings	Final Name:	CFW900_100150 ~	Properties			
	Description:	100/150 WEG Advanced Speed				
	Revision:	v1.0				
	Revision Note:					
	Vendor:					
< >						
				0K Cancel Help		
Ready						

Review the proposed changes and click OK



There should now be this add-on instruction in the project.

CFW 900 4 1 Favorites A Add-On 🖌 Alarms 🔏 Bit 🔏 Timer/Counter 🔏 Input/Output 🔏 Compare 🗕 🕂 🗙 闺 S., **R**. 臣臣 ab cd abcd ab... 💌 <ab> e ndler 0 е е (End) gs e rams / Phases



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On an empty rung of ladder, add an instance of the newly imported add-on instruction by clicking on the Add-On bar and clicking the CFW900 symbol

~ ~	non, o oro, a oca, i stoj i orc, o orc, i nono, i ion, a oroj i sto
e	CFW900_100150
e	100/150 WEG Advanced SpeedAOI
e	CFW900_100150 ? (sts_Connection_Faulted)-
е	ConnectionFaulted ? - (sts_Faulted)-
e	?? –(sts_Local)—
e	Inputs ?
e	Outputs ? —(sts_ConfigMode)—
e	cmd_DriveEnable ?? (sts_Ready)
e	cmd_NetCtrl ?? –(sts_STO)—
e	cfg_RampSelect ?? –(sts_NoQuickStop)—
e	cmd_Fault_Reset ?? -(sts_Ctrl_from_net)-
e	cmd_QuickStop ?? -(sts_Ramp2_Selected)
e	cmd_RunForward ?? - <sts_runcommand)< th=""></sts_runcommand)<>
e	cmd_RunReverse ?? -(sts_RunningForward)
e	cmd_JogForward ?? -(sts_RunningReverse)
e	cmd_JogReverse ?? -(sts_Warning)
e	set_Speed_Reference ? —(sts_FailedToStart)—
e	?? – (sts_FailedToStop)
e	cfg_FailToStartDelay ?? –(sts_STO_Fault)–
e	cfg_FailToStopDelay ??
e	val_RealSpeed ??
e	val_FaultCode ??
e	val_OutputCurrent ??
e	val_OutputFreq ??
e	val_OutputVoltage ??
e	set_Accel ?
e	- ??
e	set_Decel ?
e	??
e	
e	

The Add-On requires a tag to be created. Create this tag by typing a name in the CFW900_100150 field and right-clicking and selecting <u>New</u> "Tag"

CFW900_100150 - 100/150 WEG Advanced S	peedAOI	Cata Danas Kan Fau	
CFW900_100150	Drive1	. ⊢{sts Connection Fau	
ConnectionFaulted	0	<u>N</u> ew "Drive1"	Ctrl+W
Inputs	6 %	Cu <u>t</u> Instruction	Ctrl+X
Outputs	2 🗈	Copy Instruction	Ctrl+C
cmd DriveEnable	?? 🖻	<u>P</u> aste	Ctrl+V
cmd_NetCtrl	??		
cfg_RampSelect	??	Delete Instruction	Del
cmd_Fault_Reset	??	Add Ladder Element	Alt+Ins
cmd_QuickStop	??	Edit Main Operand Description	Ctrl+D
cmd_RunForward	??		
cmd_RunReverse	??	Save Instruction Defaults	
cmd_JogForward	??	Clear Instruction Defaults	
cmd_JogReverse	??		
set_Speed_Reference	2	R <u>e</u> move Force	
of a FailTa Start Dalay	??	<u>G</u> o To	Ctrl+G
cfg_FailToStartDelay	??	Instruction Help	F1
cfg_FailToStopDelay val RealSpeed	??		
val FaultCode	?? ?? 🕀	Remove Parameter	
val_OutputCurrent	?? ≞	Remove All Unknown Parameters	
val OutputFreq	??	Open Instruction Logic	
val_OutputVoltage	??	Open Instruction Definition	
set_Accel	?	•	
	??	Properties	Alt+Ente
set_Decel	?		
	??		

шец

New Tag		×
Name:	Drive1	Create 🗸 🔻
Description:	^	Cancel
		Help
	~	
Usage:	<normal> ~</normal>	
Туре:	Base 🗸 Connection	
Alias For:	~	
Data Type:	CFW900_100150	
Scope:	🕞 Main100 🗸 🗸	
External Access:	Read/Write ~	
Style:	~	
Constant		
🗌 Open Confi	guration	

Give any appropriate description and scope (the tag can be either program or controller scoped)

е	100/150	NEG Advar	nced
е		Speed	
е		ÂOI	
е	CFW900 100150-		
е	100/150 WEG Advanced Sp	peedAOI	
е		Drive1	-(sts Connection Faulted)-
е	ConnectionFaulted	?	-(sts Faulted)-
е		22	-(sts Local)-
е	Inputs	?	- <sts connection="" ready=""></sts>
е	Outputs	?	-(sts ConfigMode)
е	cmd DriveEnable	0 ←	-(sts Ready)-
е	cmd NetCtrl	1 ←	-Čsts STO)
е	cfg RampSelect	• 0	-Csts NoQuickStop)-
е	cmd Fault Reset	0 ←	- <sts_ctrl_from_net></sts_ctrl_from_net>
е	cmd QuickStop	1 ←	-(sts Ramp2 Selected)-
е	cmd RunForward	• 0	-(sts RunCommand)-
е	cmd_RunReverse	• 0	- <sts_runningforward></sts_runningforward>
е	cmd_JogForward	• 0	-(sts RunningReverse)
е	cmd_JogReverse	• 0	-(sts_Warning)-
е	set Speed Reference	?	-(sts FailedToStart)
е		??	-(sts_FailedToStop)
е	cfg_FailToStartDelay	• 0	-(sts_STO_Fault)-
е	cfg_FailToStopDelay	• 0	
е	val_RealSpeed	0.0 ←	
е	val_FaultCode	• 0	
е	val_OutputCurrent	0.0 ←	
е	val_OutputFreq	0.0 ←	
е	val_OutputVoltage	• 0	
е	set_Accel	?	
е		??	
е	set_Decel	?	
е		??	
е			
е			

Next the Connection Faulted, Inputs, Outputs, Speed_Reference, set_Accel, and set_Decel need to be populated as follows:

	100/150 WEG Advanced Speed			
		AOI		
Г	CFW900_			
	100/150 WEG Advanced S			
	CFW900_100150	Drive1	<pre>-<sts_connection_faulted></sts_connection_faulted></pre>	
	ConnectionFaulted VFD1	:I1.ConnectionFaulted	(sts_Faulted)	
		• 0	-(sts_Local)	
	Inputs	VFD1:I1.Data	<pre>-<sts_connection_ready></sts_connection_ready></pre>	
	Outputs	VFD1:01.Data	- <sts_configmode></sts_configmode>	
	cmd_DriveEnable	• 0	- <sts_ready></sts_ready>	
	cmd_NetCtrl	1€	(sts_ST0)	
	cfg_RampSelect	• 0	<pre>-<sts_noquickstop></sts_noquickstop></pre>	
	cmd_Fault_Reset	• 0	<pre>-<sts_ctrl_from_net></sts_ctrl_from_net></pre>	
	cmd_QuickStop	1€	- <sts_ramp2_selected></sts_ramp2_selected>	
	cmd_RunForward	0 ←	-(sts_RunCommand)	
	cmd_RunReverse	0 ←	<pre>-<sts_runningforward></sts_runningforward></pre>	
	cmd_JogForward	0 ←	- <sts_runningreverse></sts_runningreverse>	
	cmd_JogReverse	0 ←	- <sts_warning></sts_warning>	
	set_Speed_Reference	SpeedRef	- <sts_failedtostart)< td=""></sts_failedtostart)<>	
		0.0 +	<pre>-<sts_failedtostop></sts_failedtostop></pre>	
	cfg_FailToStartDelay	•0	- <sts_sto_fault)< td=""></sts_sto_fault)<>	
	cfg_FailToStopDelay	• 0		
	val_RealSpeed	0.0 +		
	val_FaultCode	0 ←		
	val_OutputCurrent	0.0 +		
	val_OutputFreq	0.0 +		
	val_OutputVoltage	0 ←		
	set_Accel	Accel		
	_	0.0 +		
	set_Decel	Decel		
		0.0 ←		
L				

SpeedRef, Accel, and Decel are REAL tags to be created.

AOI Parameter Description

InOut Parameters

Parameter	Туре	Description
Inputs	INT[10]	Input Assembly from CFW900
Outputs	INT[10]	Output Assembly to CFW900

Input Parameters

Parameter	Туре	Description
Cfg_FailToStartDelay	DINT	Time in seconds before faulting
		on fail to start if VFD does not
		start when commanded







		Set to 0 to disable
Cfg_FailToStopDelay	DINT	Time in seconds before faulting
		on fail to stop if VFD does not
		stop when commanded
		Set to 0 to disable
ConnectionFaulted	BOOL	From CFW900 Ethernet Module.
		1 = Connection is faulted
		0 = Connection is OK
cfg_RampSelect	BOOL	1 = Ramp 2 (C.6.1.4/C.6.1.5)
		0 = Ramp 1 (C.6.1.1/C.6.1.2)
cmd_DriveEnable	BOOL	1 = Enable operation of VFD
		0 = Disable operation of VFD
cmd_Fault_Reset	BOOL	1 = Send Reset Fault Signal to
		VFD
		0 = No action
cmd_JogForward	BOOL	1 = Jog Forward
		0 = No Action / Stop
cmd_JogReverse	BOOL	1 = Jog Reverse
		0 = No Action / Stop
cmd_NetCtrl	BOOL	1 = R2 (Ethernet) control
		0 = R1 (Other) control
cmd_QuickStop	BOOL	1 = No Quick stop (must be 1 to
		run)
		0 = Quick Stop
cmd_RunForward	BOOL	1 = Run Forward
		0 = Stop
cmd_RunReverse	BOOL	1 = Run Reverse
		0 = Stop
set_Speed_Reference	REAL	Speed Setpoint (0-100%)
set_Accel	REAL	Acceleration Ramp Setpoint
		(0.1-999.9) in Seconds
set_Decel	REAL	Deceleration Ramp Setpoint
		(0.1-999.9) in Seconds
cfg_AutoFaultResetNum	DINT	Maximum number of tries that
		AOI will send fault reset
		command while being
		maintained

Output Parameters

Parameter	Туре	Description
sts_ConfigMode	BOOL	1 = VFD in Config Mode
		0 = VFD in Operation Mode
sts_Connection_Faulted	BOOL	Goes high when connections
		interrupted. If "Run" signal is
		set, it must be reset before this
		will clear

All data subject to change without notice

CFW900 - AOI Configuration | 77



		1 = Connection has been faulted
		from VFD to PLC
		0 = Connection OK
sts_Connection_Ready	BOOL	1 = Connection from VFD to PLC
		is established
		0 = Connection not established
sts_Ctrl_from_net	BOOL	1 = VFD controlled remotely
		(PLC)
		0 = VFD controlled locally
sts_Faulted	BOOL	1 = VFD Fault, connection fault,
		or failedToStart/Stop Fault
		0 = No faults
sts_FailedToStart	BOOL	1 = VFD failed to start in time
		allotted
		0 = Normal
sts_FailedToStop	BOOL	1 = VFD failed to stop in time
		allotted
		0 = Normal
sts_Local	BOOL	1 = Local
		0 = Remote
sts_NoQuickStop	BOOL	1 = No quick stop commanded
		0 = Quick stop commanded
sts_Ramp2_Selected	BOOL	1 = Ramp 2 rates selected
		0 = Ramp 1 rates selected
sts Ready	BOOL	1 = VFD is ready to operate
_ ,		(states Ready, Enabled, or
		Stopping)
		0 = VFD is not ready to operate
sts_RunCommand	BOOL	1 = Commanded to run
_		0 = Not commanded to run
sts RunningForward	BOOL	1 = Running forward
<u> </u>		0 = Not running forward
sts RunningReverse	BOOL	1 = Running reverse
		0 = Not running reverse
sts STO	BOOL	1 = Safe Torque Off is active
565_510	2001	0 = Safe Torque Off is not active
sts STO Fault	BOOL	1 = AOI is preventing running
313_310_1auit	BOOL	due to STO trip until
		cmd RunForward/Reverse
		shows a rising edge
		0 = Normal Operation
val FaultCode	DINT	Fault code 1 from VFD
val_OutputCurrent	REAL	Output current in Amps from VFD
val OutputFreq	REAL	Output frequency in Hertz from
		VFD



val_OutputVoltage	REAL	Output voltage in Volts from VFD
AutoFaultResetExceed	BOOL	Indicates when the maximum number of automatic fault clears has been exceeded. Set cmd_Fault_Reset to 0 to reset and allow fault clear to resume. 1 = Max number of fault clears reached. Fault Reset Disabled 0 = Under threshold for automatic fault clears. Fault Reset Allowed.

CFW900 Parameter Requirements

The following parameters must be set in the CFW900:

Parameter	Setting
C.9.5.1	100/150
C.9.5.2	1
C.9.5.3	8
C.9.5.4	1
C.9.5.5	8
C.4.1.1	Ethernet
C.4.2.2.1	Ethernet
C.4.2.2.2	Ethernet
C.4.2.2.3	Ethernet
C.4.2.2.4	Ethernet
C.4.3.1.2.2	Ethernet
C.9.2.1.1	3
C.9.2.1.2	7
C.9.2.1.3	5
C.9.2.1.4	60
C.9.2.1.5	USER DEFINED
C.9.2.1.6	USER DEFINED
C.9.2.1.7	USER DEFINED
C.9.2.1.8	USER DEFINED
C.9.2.2.2	100
C.9.2.2.3	101
C.9.2.2.4	USER DEFINED
C.9.2.2.5	USER DEFINED
C.9.2.2.6	USER DEFINED
C.9.2.2.7	USER DEFINED
C.9.2.2.8	USER DEFINED
C.9.2.2.9	USER DEFINED



CFW900_101151

This AOI is used when the 101/151 Manufacture Speed + IO is desired.

This uses the WEG status word and is controlled slightly differently from the CIP style controls.

This mode is suited for torque control

Additionally, the AOI handles the following additional parameters:

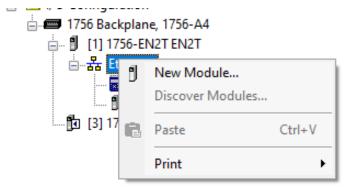
Outputs

- Torque Reference
- Output Current
- Output Voltage
- Output Frequency
- Last Fault Code

Inputs

- Acceleration Ramp 1
- Deceleration Ramp 1
- Torque IncRamp
- Torque DecRamp

Create the Ethernet/IP Device



In the device tree, right click on the Ethernet bus that will contain the CFW900 and click New Module....

Шео

inter Search Text for Module i	Type Clear Filters		Show Filters ≯
Catalog Number	Description	Vendor	Category ^
1420-V1P-ENT	Powermonitor 500	Rockwell Autom	PowerMonitor 50(
0001_0073_010D	48MS-SN1PF1-M2	Rockwell Autom	Rockwell Automa
0001_0073_010E	48MS-SN1PF2-M2	Rockwell Autom	Rockwell Automa
0005_007B_0030	SP600	Rockwell Autom	DPI to EtherNet/I
0005_007B_0038	SP600 ER 400V	Rockwell Autom	DPI to EtherNet/I
0005_007B_0039	SP600 ER 200V	Rockwell Autom	DPI to EtherNet/I
0005_007B_003A	SP600 ER 600V	Rockwell Autom	DPI to EtherNet/I
0005_007B_0060	Liquiflo 2.0	Rockwell Autom	DPI to EtherNet/I
0005_007F_0027	MD60	Rockwell Autom	MDI to EtherNet/
0005_007F_0028	MD65	Rockwell Autom	MDI to EtherNet/
100-1167-001	SynapSense Industrial Gateway	Panduit Corporat	Communication
1305-ACDrive-EN1	1305 AC Drive via 1203-EN1	Rockwell Autom	Drive
1336E-IMPACTDrive-EN1	1336 IMPACT Drive via 1203-EN1	Rockwell Autom	Drive
10000 DELICIIDADE ENH	1000 DELLO IL D.2	De al····all A· Aana	Y

In the Select Module Type dialog box, enter in "CFW900" in the search field

CFW900 AOI Configuration

alog Module Discovery	Favorites		
cfw900	Clear Filters		Show Filters ≯
Catalog Number CFW900	Description CFW900	Vendor WEG	Category AC Drive Device
<			>
	bund		Add to Favorites
1 of 671 Module Types Fo			

There should be an entry matching the above screenshot.



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Select	elect Module Type				
Catal	og Module Discovery Favor	ites			
c	2 fw900		Clear Filters		Show Filters ≯
ſ	Catalog Number	Description		Vendor	Category
	CFW900	CFW900		WEG	AC Drive Device
	<				
1	of 671 Module Types Found				Add to Favorites
	Close on Create			Create	Close Help

Highlight the CFW900 and click Create

New Module			×
General*	General		
Connection Module Info Internet Protocol Port Configuration Network	Type: Vendor: Parent: Name: Description: Module Defini Revision: Electronic Ke Connections	1.008 ying: Compatible Module	
Status: Creating		OK Cancel Help	



Give the CFW900 a Name and IP address. Before clicking on OK, click on the Change ... button in the module definition.

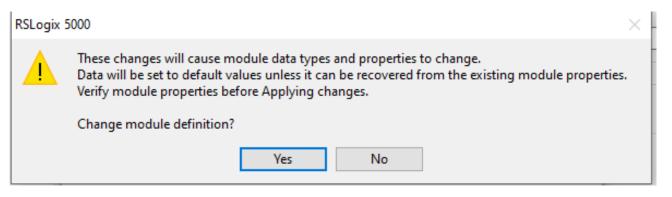
1						
■ Module Definition* ×						
Revision: 1 ~ 008 ÷ Electronic Keying: Compatible Module ~						
Connections:						
Name		Size		Tag Su	ffix	
101/151 Manufacturer	Input:	4			VFD1:I1	
Speed and Torque + VO data	Output:	4		1	VFD1:01	
Select a connection ~			SINT INT DINT REAL		·	
			ОК		Cancel Help	

Change the type to INT and the Name to 101/151 Manufacturer Speed and Torque + I/O data

■ Module Definition* ×						
Revision: 1 ~ 008 🜩						
Electronic Keying: Compatible Module ~						
Connections:						
Name		Size		Tag S	Suffix	
101/151 Manufacturer	Input:	10	INT \	1	VFD1:I1	
Speed and Torque + VO data	Output:	10		1	VFD1:01	
Select a connection 🗸						
<u> </u>						
			ОК		Cancel He	elp

The Input and output size should be set to 10 and 10 respectively. Click OK

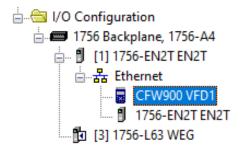




Click Yes

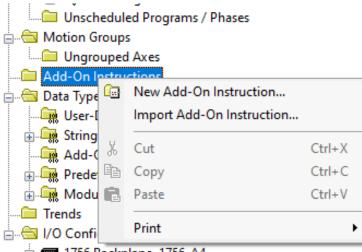
At this point, no other changes are required. However, changing the RPI can be done, if the need arises.

Once satisfied with the settings, Click OK



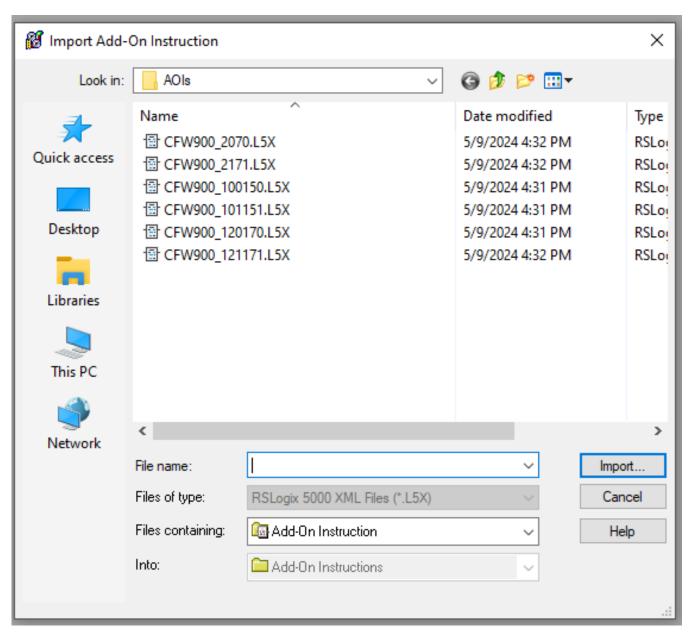
There should now be an instance of the CFW900 in the device tree

AOI Import



🗄 🛲 1756 Backplane, 1756-A4

In the device tree, right click on Add-On Instructions and click on Import Add-On Instruction...



Select the appropriate add-on instruction (CFW900_101151.L5X) and click Import....

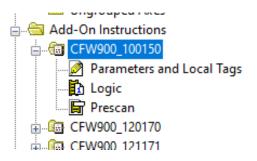


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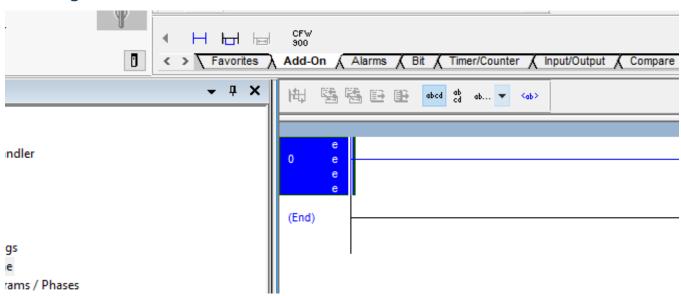


Import Configuration			×
😤 🖺 Find: Find Within: Final Name, Descript	→ AA AA tion	Find/Replace	
Import Content:	Configure Add-O	n Instruction Properties	
CFW900_101151 Parameters and Local Tags Market Routines	Import Name:	CFW900_101151	
	Final Name:	CFW900_101151 V Properties	
	Description:	101/151 WEG Advanced Torque	
	Revision:	v1.0	
	Revision Note:		
	Vendor:		
< >>			
	1		
		OK Cancel Help	
Ready			

Review the proposed changes and click OK



There should now be this add-on instruction in the project.





On an empty rung of ladder, add an instance of the newly imported add-on instruction by clicking on the Add-On bar and clicking the CFW900 symbol

е	CFW900_101151	
е	101/151 WEG Advanced TorqueAOI	
е	CFW900_101151?	<pre></pre>
е	ConnectionFaulted ?	
ē	27	- <sts_faulted></sts_faulted>
e	Inputs ?	8000_00000
e	Outputs ?	- <sts_local></sts_local>
ē	cmd DriveEnable ??	(old_cood.)
ē	cmd_NetCtrl ??	- <sts connection="" ready=""></sts>
e	cfg RampSelect ??	Cora_connection_rectury
ě	cmd Fault Reset ??	<sts configmode=""></sts>
e	cmd QuickStop ??	Cata_Oornigmode)
e	cmd_RunForward ??	- <sts ready=""></sts>
e	cind_namowerse ??	CSIS_Ready
e	cmd_JogForward ??	(sts_STO)
e	cmd_JogReverse ??	
	set Speed Reference ?	(sts_NoQuickStop)
e	set_speed_reference //	
e		- <sts_ctrl_from_net></sts_ctrl_from_net>
e	set_Torque_Reference ?	
e	val RealSpeed	- <sts_ramp2_selected></sts_ramp2_selected>
e e	val_realDeeu 77	Sis_Kampz_Selected
	val_realitCode ??	-(sts RunCommand)
e e	vai OutputCurrent ??	
_		(ata DunningForward)
е		-(sts_RunningForward)-
е		(etc. Burging Baugers)
е	set_Accel ?	- <sts_runningreverse></sts_runningreverse>
е		Coto Manzie - N
е	set_Decel ?	- <sts_warning></sts_warning>
е	??	
е	set_IncRamp ?	- <sts_sto_fault></sts_sto_fault>
е	??	
е	set_DecRamp ?	
е	??	
е		_
е		

The Add-On requires a tag to be created. Create this tag by typing a name in the CFW900_101151 field and right-clicking and selecting <u>N</u>ew "Tag"

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Шер

CFW900_101151 101/151 WEG Advanced To			
CFW900_101151	Drive1	Csts Connection Fau	Ited >
ConnectionFaulted	?	New "Drive1"	Ctrl+W
Inputs	?? *	Cu <u>t</u> Instruction	Ctrl+X
Outputs	2 🖻	Copy Instruction	Ctrl+C
cmd DriveEnable	?? 🖪	Paste	Ctrl+V
cmd_NetCtrl	??		
cfg RampSelect	??	Delete Instruction	Del
cmd Fault Reset	??	Add Ladder Element	Alt+Ins
cmd_QuickStop	??	Edit Main Operand Description	Ctrl+D
cmd_RunForward	??		
cmd_RunReverse	??	Save Instruction Defaults	
cmd_JogForward	??	Clear Instruction Defaults	
cmd_JogReverse	??	R <u>e</u> move Force	
set_Speed_Reference	?	<u>Nemove Porce</u>	
	??	<u>G</u> о То	Ctrl+G
set_Torque_Reference	??	Instruction <u>H</u> elp	F1
val_RealSpeed	?? ?? ?? ₽	Remove Parameter	
val_RealTorque	?? 🔤		
val_FaultCode	?? 🕮	Kemove All Onknown Parameters	
val_OutputCurrent	??	Open Instruction Logic	
val_OutputFreq	??	Open Instruction Definition	
val_OutputVoltage	??	Properties	Alt+Ente
set_Accel	??		
set_Decel	?	- <sts_warning></sts_warning>	
	??	2 <u>-</u>	
set IncRamp	?	-(sts STO Fault)-	
	??		
set_DecRamp	?		
	??		

CFW900 AOI Configuration

New Tag		×
Name:	Drive1	Create 🗸 🔻
Description:	^	Cancel
		Help
	~	
Usage:	<normal> ~</normal>	
Туре:	Base ~ Connection	
Alias For:	~	
Data Type:	CFW900_101151	
Scope:	🕞 Main101 🗸 🗸]
External Access:	Read/Write ~]
Style:	~	
Constant		
Open Conl	figuration	

Give any appropriate description and scope (the tag can be either program or controller scoped)

		, 4 010, 7 740		
е		101/151 WE	EG Advan	ced
е		To	rque	
ĕ			NOI	
е		CFW900_101151		1
е		101/151 WEG Advanced Torqu		
е			ive1	- <sts_connection_faulted></sts_connection_faulted>
е		ConnectionFaulted	?	
е			??	-(sts Faulted)-
е		Inputs	?? ?	S
е		Outputs	?	-(sts_Local)
е		cmd DriveEnable	0 •	(010_0000.)
e		cmd_NetCtrl	1∙	-(sts_Connection_Ready)
ē		cfg RampSelect	0 +	Cara_connection_rectuyy
ĕ		cmd Fault Reset	0.	(sts_ConfigMode)
ĕ		cmd_QuickStop	1.	(SIS_CONINGWIDDE)
e		cmd RunForward	0.	- <sts ready=""></sts>
e		cmd RunReverse	0+	
				(-t- CTO)
е		cmd_JogForward	• 0	(sts_STO)
е		cmd_JogReverse	0+	
е		set_Speed_Reference	?	- <sts_noquickstop></sts_noquickstop>
е			??	
е		set_Torque_Reference	?	- <sts_ctrl_from_net></sts_ctrl_from_net>
е			??	
е		val RealSpeed	0.0 +	-(sts_Ramp2_Selected)
е		val RealTorque	0.0 ←	
е		val FaultCode	0 +	-(sts RunCommand)-
е		val OutputCurrent	0.0	· - · · ·
е		valOutputFreq	0.0	-(sts RunningForward)-
е		val OutputVoltage	0.0	(oto_rtaining) officialdy
e		set Accel	?	- <sts runningreverse=""></sts>
ē		Set_Accel	??	Cata_rtunningrteverae
ĕ		set Decel	2	- <sts warning=""></sts>
e		Ser_Decer	??	Coro_vvanning
e		set IncDomp	2	(ato STO Foult)
		set_IncRamp	??	- <sts_sto_fault></sts_sto_fault>
e				
е		set_DecRamp	?	
е			??	
е				
е				

Next the Connection Faulted, Inputs, Outputs, set_Speed_Reference, set_Torque_Reference, set_Accel, set_Decel, set_IncRamp, set_DecRamp need to be populated as follows:





	101/151 WEG Advanced Torque AOI	
CEW/900	101151	
- 101/151 WEG Advanced	_	
CFW900_101151	Drive1	- <sts_connection_faulted></sts_connection_faulted>
ConnectionFaulted VFD		
	→ 0	- <sts faulted=""></sts>
Inputs	VFD1:I1.Data	
Outputs	VFD1:01.Data	- <sts_local)< td=""></sts_local)<>
cmd_DriveEnable	0 ←	
cmd_NetCtrl	1+	<pre>-<sts_connection_ready></sts_connection_ready></pre>
cfg_RampSelect	•0	
cmd_Fault_Reset	•0	<sts_configmode></sts_configmode>
cmd_QuickStop	1€	
cmd_RunForward	0 *	- <sts_ready)< td=""></sts_ready)<>
cmd_RunReverse	0+	
cmd_JogForward	0+	(sts_STO)
cmd_JogReverse	•0	
set_Speed_Reference	SpeedRef	- <sts_noquickstop></sts_noquickstop>
ant Torque Deference	0.0 ← TorqueDef	(ata Otal from not)
set_Torque_Reference	TorqueRef 0.0 ←	- <sts_ctrl_from_net></sts_ctrl_from_net>
val_RealSpeed	0.0+	Cete Damp2 Solocted
val_RealTorque	0.0+	-(sts_Ramp2_Selected)
val FaultCode	0.0 *	-(sts_RunCommand)
val_OutputCurrent	0.0	Colo_ranooninanay
val_OutputFreq	0.0 +	- <sts_runningforward></sts_runningforward>
val_OutputVoltage	÷.0	
set Accel	Accel	- <sts_runningreverse></sts_runningreverse>
_	0.0 +	
set_Decel	Decel	- <sts_warning)< td=""></sts_warning)<>
_	0.0	
set_IncRamp	IncRamp	- <sts_sto_fault></sts_sto_fault>
	0.0 +	
set_DecRamp	DecRamp	
	0.0 ←	

SpeedRef, TorqueRef, Accel, Decel, IncRamp, and DecRamp are REAL tags to be created.

AOI Parameter Description

InOut Parameters

Parameter	Туре	Description
Inputs	INT[10]	Input Assembly from CFW900
Outputs	INT[10]	Output Assembly to CFW900



Input Parameters

Parameter	Туре	Description
Cfg_FailToStartDelay	DINT	Time in seconds before faulting
		on fail to start if VFD does not
		start when commanded
		Set to 0 to disable
Cfg_FailToStopDelay	DINT	Time in seconds before faulting
		on fail to stop if VFD does not
		stop when commanded
		Set to 0 to disable
ConnectionFaulted	BOOL	From CFW900 Ethernet Module.
		1 = Connection is faulted
		0 = Connection is OK
cfg_RampSelect	BOOL	1 = Ramp 2 (C.6.1.4/C.6.1.5)
		0 = Ramp 1 (C.6.1.1/C.6.1.2)
cmd_DriveEnable	BOOL	1 = Enable operation of VFD
		0 = Disable operation of VFD
cmd Fault Reset	BOOL	1 = Send Reset Fault Signal to
		VFD
		0 = No action
cmd JogForward	BOOL	1 = Jog Forward
_ 0		0 = No Action / Stop
cmd_JogReverse	BOOL	1 = Jog Reverse
_ 0		0 = No Action / Stop
cmd NetCtrl	BOOL	1 = R2 (Ethernet) control
_		0 = R1 (Other) control
cmd QuickStop	BOOL	1 = No Quick stop (must be 1 to
_ ·		run)
		0 = Quick Stop
cmd_RunForward	BOOL	1 = Run Forward
_		0 = Stop
cmd RunReverse	BOOL	1 = Run Reverse
_		0 = Stop
set Speed Reference	REAL	Speed Setpoint (0-100%)
set_Torque_Reference	REAL	Torque Setpoint (in %)
set Accel	REAL	Acceleration Ramp Setpoint
		(0.1-999.9) in Seconds
set Decel	REAL	Deceleration Ramp Setpoint
		(0.1-999.9) in Seconds
set DecRamp	REAL	Decreasing Torque control ramp
		(0.1-999.9) in seconds
set_IncRamp	REAL	Increasing Torque control ramp
		(0.1-999.9) in seconds
cfg_AutoFaultResetNum	DINT	Maximum number of tries that
cig_Autorauitkesethum		AOI will send fault reset
		command while being
		maintained
		maintaineu

Output Parameters

Parameter	Туре	Description
sts_ConfigMode	BOOL	1 = VFD in Config Mode
		0 = VFD in Operation Mode
sts_Connection_Faulted	BOOL	Goes high when connections
		interrupted. If "Run" signal is
		set, it must be reset before this
		will clear
		1 = Connection has been faulted
		from VFD to PLC
		0 = Connection OK
sts_Connection_Ready	BOOL	1 = Connection from VFD to PLC
		is established
		0 = Connection not established
sts_Ctrl_from_net	BOOL	1 = VFD controlled remotely
		(PLC)
		0 = VFD controlled locally
sts_Faulted	BOOL	1 = VFD Fault, connection fault,
		or failedToStart/Stop Fault
		0 = No faults
sts_FailedToStart	BOOL	1 = VFD failed to start in time
		allotted
		0 = Normal
sts_FailedToStop	BOOL	1 = VFD failed to stop in time
		allotted
		0 = Normal
sts_Local	BOOL	1 = Local
		0 = Remote
sts_NoQuickStop	BOOL	1 = No quick stop commanded
		0 = Quick stop commanded
sts_Ramp2_Selected	BOOL	1 = Ramp 2 rates selected
		0 = Ramp 1 rates selected
sts_Ready	BOOL	1 = VFD is ready to operate
		(states Ready, Enabled, or
		Stopping)
		0 = VFD is not ready to operate
sts_RunCommand	BOOL	1 = Commanded to run
		0 = Not commanded to run
sts_RunningForward	BOOL	1 = Running forward
		0 = Not running forward
sts_RunningReverse	BOOL	1 = Running reverse
		0 = Not running reverse
sts_STO	BOOL	1 = Safe Torque Off is active
		0 = Safe Torque Off is not active



sts_STO_Fault	BOOL	1 = AOI is preventing running due to STO trip until cmd_RunForward/Reverse shows a rising edge 0 = Normal Operation
val_FaultCode	DINT	Fault code 1 from VFD
val_OutputCurrent	REAL	Output current in Amps from VFD
val_OutputFreq	REAL	Output frequency in Hertz from VFD
val_OutputVoltage	REAL	Output voltage in Volts from VFD
AutoFaultResetExceed	BOOL	Indicates when the maximum number of automatic fault clears has been exceeded. Set cmd_Fault_Reset to 0 to reset and allow fault clear to resume. 1 = Max number of fault clears reached. Fault Reset Disabled 0 = Under threshold for automatic fault clears. Fault Reset Allowed.

CFW900 Parameter Requirements

The following parameters must be set in the CFW900:

Parameter	Setting
C.9.5.1	101/151
C.9.5.2	1
C.9.5.3	7
C.9.5.4	1
C.9.5.5	7
C.4.1.1	Ethernet
C.4.2.2.1	Ethernet
C.4.2.2.2	Ethernet
C.4.2.2.3	Ethernet
C.4.2.2.4	Ethernet
C.4.3.1.2.2	Ethernet
C.9.2.1.1	3
C.9.2.1.2	7
C.9.2.1.3	5
C.9.2.1.4	60
C.9.2.1.5	USER DEFINED
C.9.2.1.6	USER DEFINED
C.9.2.1.7	USER DEFINED

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C.9.2.1.8	USER DEFINED
C.9.2.2.2	100
C.9.2.2.3	101
C.9.2.2.4	4001
C.9.2.2.5	4002
C.9.2.2.6	USER DEFINED
C.9.2.2.7	USER DEFINED
C.9.2.2.8	USER DEFINED
C.9.2.2.9	USER DEFINED

 WEG's scope of solutions is not limited to the products and solutions presented in this brochure.
 Contact WEG for information on additional products and solutions.

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