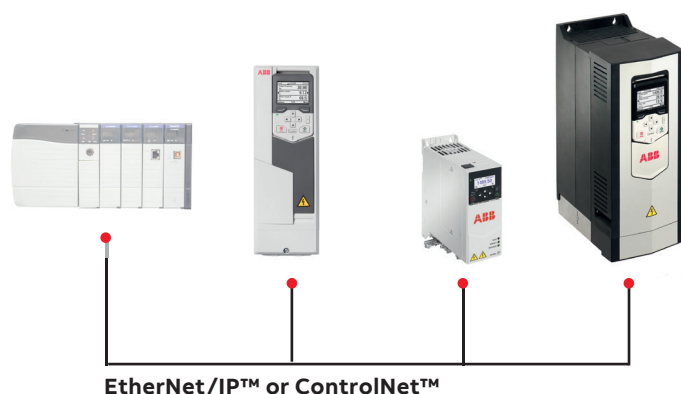


Let's connect.

Drop-in connectivity to Logix5000 controllers



Universal Connectivity – Simplifying ABB drive commissioning and connectivity to EtherNet/IP™ and ControlNet™ networks

AOI 1.0 for New VFD Applications

This Add-on Instruction is designed to be used in new VFD applications. The User Defined Data Type (UDT) defines the tag descriptions, such as control word, status word, references and actual speed & torque. UDTs provide users with an interface that enables them to add specific tag descriptions into the dynamic datasets supported by ABB low voltage AC and DC drives. It will map the EtherNet/IP or ControlNet module to the User Defined Data Type providing a seamless and simplified connection to the network.

Supported Drives

Industrial		Water	HVAC
ACS355	ACS800	ACQ550	ACH550
ACS380	ACS880	ACQ800	
ACS550	DCS800		
ACS580	DCS880		

Supported Profile Types

- ABB Drives
- ODVA
- Transparent (16-bit and 32-bit)

Benefits

- Reduce development time and simplify diagnostics with pre-defined tag descriptions and data types
- Minimize commissioning cost
- Create consistent PLC code regardless of programmer
- Easily rename tag description to an installation-specific name
- Leverage modular programming to easily copy and paste Add-On Instruction for additional drives
- Save time and money by re-using the same User Defined Data Type for duplicate drives
- Enjoy the flexibility and versatility of ABB drives connected to EtherNet/IP and ControlNet networks

AOI 2.0 Drive Control Emulation

This Add-on Instruction (AOI) is designed to be used in places where the user doesn't want to have to modify the existing control code for Rockwell Drives. The AOIs and UDTs are already setup to mimic the existing control and status tags, so just find and replace the existing tags with the newly created ABB tags and the existing RSLogix 5000 code will control the ABB drive seamlessly. Built in scaling for customized data is available.

Supported Drives

Industrial	Water	HVAC
ACS355	ACQ580	ACH580
ACS380		
ACS580		
ACS880		

Supported Profile Types

- PF520 series
 - PF750 series
- More to come in future development

Benefits

- Benefit from pre-defined tag descriptions that mimic tag descriptions in existing Rockwell drives
- Minimize commissioning cost
- Quickly replace existing drive with ABB without having to rewrite PLC code
- Leverage modular programming to easily copy and paste Add-On Instruction for additional drives
- Enjoy the flexibility and versatility of ABB drives connected to EtherNet/IP and ControlNet networks

The Programming Environment

It's easy to import UDTs and AOIs into the Logix5000 programming environment. AOIs appear in the language element toolbar under the Add On tab. You can insert the ABB AOIs into the PLC program in the same manner as the built-in instructions already in the Logix5000 controllers.

UDTs appear as a new data type similar to an INT or BOOL that is built-in to the Logix5000 programming environment. You can assign the imported UDTs to a controller tag providing BOOL definitions of the ABB control and status words. You can also define integer or double integer definitions of speed/torque references, actual speed/torque and any required additional datasets.

Example of AOI 1.0

The screenshot shows the Logix5000 software interface. The 'Add-On Instructions' tab is active, displaying a list of user-defined data types (UDTs) and input/output tags. The list includes:

Name	Alias For	Base Tag	Data Type
ABBDRV			ABBDRV
ABB_ACS800_0			ABB_ODT_21
ABB_ACS800_0 Run_Fwd			BOOL
ABB_ACS800_0 Run_Rev			BOOL
ABB_ACS800_0 Fault_Reset			BOOL
ABB_ACS800_0 Br_3_Not_Used			BOOL
ABB_ACS800_0 Br_4_Not_Used			BOOL
ABB_ACS800_0 Net_CTRL			BOOL
ABB_ACS800_0 Net_Ref			BOOL
ABB_ACS800_0 Speed_Ref_1			INT
ABB_ACS800_1			ABB_ODT_71
ABB_ACS800_1 Faulted			BOOL
ABB_ACS800_1 Warning			BOOL
ABB_ACS800_1 Running_Fwd			BOOL
ABB_ACS800_1 Running_Rev			BOOL
ABB_ACS800_1 Ready			BOOL
ABB_ACS800_1 CTRL_From_Net			BOOL
ABB_ACS800_1 REF_From_Net			BOOL
ABB_ACS800_1 AT_REF			BOOL
ABB_ACS800_1 Actual_Speed_1			INT
ABB_ACS800_0			AB ETHERNET_MODULE_INT_4bYes:0.0
ABB_ACS800_1			AB ETHERNET_MODULE_INT_4bYes:1.0
ABB_ACS800.C			AB ETHERNET_MODULE.C:0
Local:31			AB:1769_SDN_496BYes:1.0
Local:30			AB:1769_SDN_364BYes:0.0
Local:20			AB:1769_IQ6xIW4:0.0
Local:21			AB:1769_IQ6xIW4:1.0
Local:2C			AB:1769_IQ6xIW4:C.0
Local:10			AB:1769_IF4QF2:0.0
Local:11			AB:1769_IF4QF2:1.0
Local:1C			AB:1769_IF4QF2:C.0

Callouts in the image identify 'Add-On Instructions' (pointing to the toolbar), 'Output User Defined Data Types' (pointing to the ABB_ACS800_0 and ABB_ACS800_1 entries), and 'Input User Defined Data Types' (pointing to the Local:31 through Local:1C entries).

Example of AOI 2.0

The screenshot shows the Logix5000 software interface. The 'Add-On Instructions' tab is active, displaying a list of user-defined data types (UDTs) and input/output tags. The list includes:

Name	Value	Force Mask	Style	Data Type
Pump1_Read	[...]	[...]		ABB_PF525_1
Pump1_Read DriveStatus	2#0000_000...		Binary	INT
Pump1_Read Ready	0		Decimal	BOOL
Pump1_Read Active	0		Decimal	BOOL
Pump1_Read CommandDir	0		Decimal	BOOL
Pump1_Read ActualDir	0		Decimal	BOOL
Pump1_Read Accelerating	0		Decimal	BOOL
Pump1_Read Decelerating	0		Decimal	BOOL
Pump1_Read Faulted	0		Decimal	BOOL
Pump1_Read Reference	0		Decimal	BOOL
Pump1_Read CommFreqCrt	0		Decimal	BOOL
Pump1_Read CommLogicCrt	0		Decimal	BOOL
Pump1_Read PamsLocked	0		Decimal	BOOL
Pump1_Read Digh1Active	0		Decimal	BOOL
Pump1_Read Digh2Active	0		Decimal	BOOL
Pump1_Read Digh3Active	0		Decimal	BOOL
Pump1_Read Digh4Active	0		Decimal	BOOL
Pump1_Read OutputFreq	0.0		Float	REAL
Pump1_Read OutputFreq_Scale	0.0		Float	REAL
Pump1_Read OutputTorque	0.0		Float	REAL
Pump1_Read OutputTorque_Scale	0.0		Float	REAL
Pump1_Read Custom_In_01	[...]	[...]		ABB_Link_In
Pump1_Read Custom_In_02	[...]	[...]		ABB_Link_In
Pump1_Read Custom_In_03	[...]	[...]		ABB_Link_In
Pump1_Read Custom_In_04	[...]	[...]		ABB_Link_In
Pump1_Read Custom_In_05	[...]	[...]		ABB_Link_In
Pump1_Read Custom_In_06	[...]	[...]		ABB_Link_In
Pump1_Read Custom_In_07	[...]	[...]		ABB_Link_In
Pump1_Read Custom_In_08	[...]	[...]		ABB_Link_In