

Let's connect.

Drop-in connectivity to Logix5000 controllers



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

EtherNet/IP[™] or ControlNet[™]

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.

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	ACS800	ACQ550	ACH550
ACS380	ACS880	AC0800	
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

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.

ix_Base_Setup_V16 [1769-L32E]* - [Controller Tags - Co 🖻 Eile Edit View Search Logic 🤇 Tools Win Add-On - & & & [] 🖉 🖉 🔍 🗠 Instructions RUN OK BAT I/0 Path: Xin om192_168_1\192.168.1.7\Bac Offline No Force ▼ ** 4 ABB DRV No Edits ۲ ٥ χE Scoge: To Compactlogix_Br Shgw... ABB_LUDT_71, ABB_0_UDT_21, STRING, ABBDRV, ALARM, ALARM, ANALOG, ALARM_DIGITAL, AVIS_CONS Alias For Base Tag Data Type Name + ABBDRV er Tags er Fault Handle ABB O UDT 21 ABB ACS800 0 ABB ACS800 O.Run FW/D Task BOOL ABB_ACS800_0.Run_REV ABB_ACS800_0.Fault_Rese BOOL BOOL ABB_ACS800_0.Bit_3_Not_U BOOL ABB_ACS800_0.Bit_4_Not_Used ABB_ACS800_0.Net_CTRL BOOL ABB_ACS800_0.Net_Re BOOL INT INT A68_1U07_71 A68_001_71 B00L + ABB_ACS800_0.Speed_Ref_ **Output User** 87 ABB_ACS800_1 ABB_ACS800_1.Faulted R Defined Data Types ABB, ACS800, I Ruthing, PWD ABB, ACS800, I Running, PWD ABB, ACS800, I Running, REV ABB, ACS800, I Resdy ABB, ACS800, I CRF, From, Net ABB, ACS800, I AT, PEF + ABB, ACS800, I AT, PEF + ABB, ACS800, I AT, PEF User-Defined Input User Defined **Data Types**

Example of AOI 1.0

Example of AOI 2.0

Controller Logic Conversion	Name		Force Maek 6	Shile	Data Type
🖉 Controller Tags	= Pump1 Read		I I	Style	ABB_PE525_L
Controller Fault Handler	L Pump 1 Read Drive Statue	2#0000_000	()	Binany	INT
Power-Up Handler	Pump1 Read Ready	240000_000		Decimal	ROOL
🚊 🛅 Tasks	Pump1_Read Active			Decimal	POOL
🚋 🚭 MainTask	Pump 1_Read Command Dis			Decinal	BOOL
🚊 🚭 MainProgram 🛛 🗖	Pump1_Read.CommandDir			Decinal	BOOL
Parameters and Local Tags	Fump I_Read Actual/			Decimal	BOOL
MainRoutine	Pump I_Head Accelerating	0		Decimal	BOOL
Unscheduled	-Pump1_Head.Decelerating	0		Decimal	BOOL
Motion Groups	Pump1_Read.Faulted	0		Decimal	BOOL
Ungrouped Axes	Pump1_Read.AtReference	0		Decimal	BOOL
🗄 😁 Add-On Instructions	Pump1_Read.CommFreqCnt	. 0		Decimal	BOOL
	-Pump1_Read.CommLogicCnt	0		Decimal	BOOL
AOI_ABB_Scale_O	-Pump1_Read.PamsLocked	0		Decimal	BOOL
🔄 🖂 Data Types	-Pump1_Read.DigIn1Active	0		Decimal	BOOL
🖶 🖏 User-Defined	Pump1_Read.DigIn2Active	0		Decimal	BOOL
🕅 ABB_Link_In	-Pump1_Read.DigIn3Active	0		Decimal	BOOL
ABB_Link_Out	-Pump1_Read.DigIn4Active	0		Decimal	BOOL
🕅 ABB_PF525_1	-Pump1 Read.OutputFreg	0.0		Float	REAL
ABB_PF525_0	-Pump1 Read.OutputFreg Scale	0.0		Float	REAL
🙀 Strings	Pump1 Read.OutputTorque	0.0		Float	REAL
🖶 🙀 Add-On-Defined	Pump1 Read Output Torque Scale	0.0		Float	REAL
🗑 🔤 Predefined	+ Pump1 Bead Custom In 01	[]	(in a local		ABB Link In
🔃 🙀 Module-Defined	+ Pump1 Read Custom In 02	1 1	()		ARR Link In
Trends	H Rump1 Read Custom In 02	[]	()	1	APP Link In
Logical Model	Pump1_Read Custom_in_05	()	()		APP Link In
🗄 🔄 I/O Configuration	Promp 1_nead.Custom_In_04	()	()		ADD_Link_in
e PointlO	+ rump i_neau.custom_in_05	()	()	-	ADD_LINK_IN
😰 [0] 1769-L16ER-BB1B Logic_Conversion	+ Pump I_Read.Custom_In_06	{}	{}		ABB_Link_In
🖨 📾 Embedded I/O	+ Pump I_Read.Custom_In_07	{}	{}		ABB_Link_In
11 Embedded Discrete IO	+ Pump1 Head Custom In 08	{}	[]		ABB Link In

ABB Inc Drives and Controls 16250 W. Glendale Drive New Berlin, WI 53151

We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB AG does not accept any responsibility whatsoever for potential errors or possible lack of information in this document. We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties or utilization of its contents – in whole or in parts – is forbidden without prior written consent of ABB AG. Copyright© 2017 ABB All rights reserved