

# **Rockwell EtherNet/IP (CompactLogix) – Free Tag Names**

Supported Series: Rockwell CompactLogix, FelxLogix Ethernet Website: <u>http://www.ab.com</u>

# **HMI Settings:**

Parameters	Recommended	Options	Notes
DI C turno	Rockwell EtherNet/IP (Co	ompactLogix) – Free	
РСС туре	Tag Names		
PLC I/F	Ethernet		
Port no.	44818		
PLC sta. no.	1		

#### **PLC Settings:**

#### 1. Set PLC IP address.

Controller Organizer 👻 🕈 🗙	Controller Properties - TEST1 ×
a 📲	
<ul> <li>Controller TEST1</li> <li>Controller Tags</li> <li>Controller Fault Handler</li> <li>Power-Up Handler</li> <li>Tasks</li> <li>MainTask</li> <li>5 MainProgram</li> <li>Unscheduled</li> </ul>	General     Major Faults     Minor Faults     Date/Time     Advanced     SFC Execution     Project       Nonvolatile Memory     Capacity     Internet Protocol*     Port Configuration     Security     Alarm Log       Port     A1     ✓            ⓐ Manually configure IP settings
Motion Groups     Ungrouped Axes     Alarm Manager     Assets     tocical Model	IP Address:       192       168       1       . 100       Subnet Mask:       255       . 255       . 0         Gateway Address:       192       . 168       . 1       . 1
<ul> <li>✓ I/O Configuration</li> <li>▶ ➡ 5069 Backplane</li> <li>▶ ➡ A1, Ethernet</li> </ul>	Domain Name:         Primary DNS Server Address:         192         168         1         1           Host Name:         Secondary DNS Server Address:         0         0         0         0
A2, Ethernet	
🕒 Controller Organizer	OK Cancel Apply Help



# 2. Create new tags (Controller Tags and Program Tags supported).

Controller Organizer 👻 🖣 🗙	Controller Tags - TEST1(controller) ×					•
	Scope: DTEST1 V Show: All Tage	;		✓ Enter Name	e Filter	~
✓ Controller TEST1 ✓ Controller Tags	Name	Base Tag [	Data Type		Description	Extern ^
Controller Fault Handler	Local:1:1	l l	AB:5000_DI16:I:0			Read/' ਰੂ
Power-Up Handler	▶ Local:1:C	A	AB:5000_DI16:C:0			Read/
A C MainTask	▶ P1	F	Pump		Pump01	Read/
A b MainProgram	▶ P2	F	Pump		Pump02	Read/
Parameters and Local Tags B MainRoutine	F1 ♦ ► \ Monitor Tags \ Edit Tags /	F	Eluid <		Fluid01	Read / Y
Unscheduled     Generation Groups	Program Parameters and Local Tags - MainProgram	m ×				•
Ungrouped Axes	Scope: 🔓 MainProgram 🗸 Show: All Tage	;		✓ Enter Name	e Filtet	~
Assets	Name	Usage	e Value 🕈 F	orce Mask 🕈 Style	📰 🗝 Data Type	^ <i>(</i> 2)
h Logical Model	▶ tag	Local	{}	{}	STRING[5]	Prop
▲ ■ I/O Configuration ▶ ■ 5069 Backplane	▶ Pump_site	Local	{}	{}	Pump[5]	ertie
⊳ ಕ್ಷೆ A1, Ethernet	▶ PartName	Local	{}	{}	STRING[100	]
▷ 🚠 A2, Ethernet	▶ ErrMessage2	Local		{}	STRING	
	ErrMessage1	Local		{}	STRING	~
E Controller Organizer	Monitor Tags / Edit Tags /		<			>

There are two ways to get tags, one is by importing .L5X or .CSV files (click Import Tags...), another is by connecting PLC (click Get Tag Info...). After creating a project by one of these ways, please use the same way in future for maintenance to prevent compilation failure.

Recommended for PLC Offline: Import .L5X Recommended for PLC Online: Get Tag Info

Comparison:

	L5X	CSV	Get Tag Info
Can Decription be Imported?	Yes	Yes	No
Need Adding Data Type?	No	Yes	No

\*Description is only supported for atomic tags. (Not supported for structure or array)



# Get Tag Info:

- 1. After adding the driver in EasyBuilder Pro, check whether all communication parameters are correct, and then click [Get Tag Info].
- 2. Select the tag information to be imported and then click [OK].

Tag Manager				×
Select Configuration	Select Tags		Member Data	
	<ul> <li>Device_tags</li> <li>Local:1:C</li> <li>Local:1:I</li> <li>F1</li> <li>F2</li> <li>P1</li> <li>P2</li> <li>Prefefined_Alarm</li> <li>TagBool</li> <li>TagDINT</li> <li>Y Pogram:MainProgram</li> <li>Arr_2D_DNT</li> </ul>		Data Type Array Dimension String Length	DINT [010, 010]
	Image: Select All         Image: Select All         Image: Select All	*		ОК

3. Click [OK] after tag information is imported successfully.



4. View imported information and click the close icon [X] to leave.

Name	Data type	Description	
F1	Fluid		
F2	Fluid		
Local:1:C	AB:5000		
Local:1:I	AB:5000		
P1	Pump		
2	Pump		
Prefefined_Alarm	ALARM		
lagBool	BOOL		
TagDINT	DINT		
_CONTAINER	DINT		
rogram:MainProgram	Program:		



### Import Tag (L5X):

- Export .L5X file from RSLogix 5000 software. The path is: File -> Save as -> Logix Designer XML File (\*.L5X).
- 2. Add the driver in EasyBuilder Pro, click [Import Tags], select [Import Files] (\*.L5X), and then click [OK].

Import Tags	×
Importer type	Туре
Import Files (*.CSV)	Linear
Import Files (*.L5X)	Hierarchical
Import Files (*.CSV)	EBProTag
<	>
Multiple tag importers are available for this protocol.Please appears.	e select the importer type
	OK Cancel

3. View imported information and click the close icon [X] to leave.

Select Configuration	Select Tags	Member Data	
🚅 Tag Info	▼       ✓       Device_tags         ✓       Local:1:C         ✓       ⇒       Local:1:I         ✓       ⇒       F1         ✓       ⇒       F2         ✓       ⇒       Prefefined_Alarm         ✓       ⇒       Prefefined_Alarm         ✓       ⇒       Prefefined_Alarm         ✓       ⇒       Pregram:MainProgram         ✓       ➡       Program:MainProgram         ✓       ➡       Arr_2D_DNT         ✓       ➡       Arr_2D_INT         ✓       ➡       Arr_BOOL         ✓       ➡       Arr_DINT	Data Type Array Dimens String Length	DINT (010, 010)

4. Click [OK] after tag information is imported successfully.





### Import Tag (CSV):

The tags edited using RSLogix5000 can be exported as a CSV file, and then imported in EasyBuilder Pro.

Note: For Tags that use Data Types such as User-Defined, Strings, Predefined, and Module-Defined, please click [Data Type...] to add necessary data types before importing the CSV file.

1. Export tag data to CSV file. ( [Tools] » [Export] » [Tags and Logic Comments] )



Note: The separator character in CSV file must be a comma ","; otherwise the file is invalid.

The directory for changing system settings: [Control Panel] » [Date, Time, Language, and Regional Options] » [Change the format of numbers, dates, and times] » [Customize] » [List separator]. Please select "," and export CSV file after setting.

2. In [System Parameters], click [Import Tags], select [Import Files] (\*.CSV), .and then click [OK].

Import Tags	×
Importer type	Туре
Import Files (*.CSV)	Linear
Import Files (*.L5X)	Hierarchical
Import Files (*.CSV)	EBProTag
<	>
Multiple tag importers are available for this protocol.Please select th appears.	e importer type
OK	Cancel



3. Decide whether to keep the current data type (User-Defined, Strings, Predefined, Module-Defined) or replace with default data type.



4. A Warning window appears when unsupported tags are used. Please check whether these tags use data types, and add the necessary ones.

Warning		×
Unable to use the following tags		
Tag Name	Error Status	
Local: 1:C	Unknown data type : AB:5000_DI16:C:0	
Local: 1:I	Unknown data type : AB:5000_DI16:I:0	
F1	Unknown data type : Fluid	
F2	Unknown data type : Fluid	
P1	Unknown data type : Pump	
P2	Unknown data type : Pump	
Program:MainProgram.Pum	Unknown data type : Pump[5]	
To fix the error(s) :		
* Define structures or data typ structures or data types.	es for your tags first. Use [Data Type] to add nece	ssary
* If you still get "Unknown stru does not support these tags.	cture" or "Unknown data type", it means EasyBuilder F Do not use these tags.	'no
Export	Exit	

The following message pops up when the tags are successfully imported.





### **Device Address:**

PLC Data Type Name	Bit/Word	EasyBuilder Data Format	Memo
BOOL	Boolean	Bit object	
BitArray			
SINT			-128 ~ 127
USINT			0 ~ 255
INT	Integer	16-bit signed, ASCII	-32768 ~ 32767
UINT			0 ~ 65535
DINT	Double Integer	32-bit signed	-2 <sup>31</sup> ~ (2 <sup>31</sup> -1)
UDINT			0 ~ 4294967295
REAL	Single Precision Float	32-bit float	IEEE 754
LINT	Long Integer	64-bit signed	*Note1
ULINT	Long Integer	64-bit unsigned	*Note1
LREAL	Double Precision Float	64-bit double	*Note1
STRING			*Note4

#### Note:

- 1. EBPro V6.03.02 or later supports 64 bits data type (cMT Series only), but please note that the address limit range is 48 bits in maximum.
- 2. Please avoid using "." in the Tag name because this may influence macro execution.
- 3. Shorter tag names are recommended for enhancing communication efficiency.
- 4. When importing, there are two modes of one/two char per word to choose from. When importing one char per word, choose Unicode data format for ASCII objects, and choose UTF-8 (Default) data format for two char per word.

e XML import	ed contains I	EC-61131 STR	ING type. In E	asyBuilderPro, IE	C-61131 STRING ty	oe is handle	d in one of the	following wa	ys.
ease select yo	ur preference	2.							
One char	per word				Two char p	er word			
Each single WORD's hi	-byte charact gh byte is zer	er is mapped o-padded.	to a WORD ir	n memory. The	Every two cha the first chara high byte.	racters are n Icter takes th	napped to a W ne low byte, an	ORD in memo Id the second	ry. In this case one takes the
E.g. The 4-c	haracter strir	ng "ABCD" is n	napped to 4 w	vords.	E.g. The 4-cha	racter string	"ABCD" is maj	pped to 2 wor	ds.
Byte Index	0	1	2	3	Byte Index	0	1	2	з
Value	0x41	0x42	0x43	0x44	Value	0x41	0x42	0x43	0x44
Character	"A"	"B"	"C"	"D"	Character	"A"	"В"	"C"	"D"
	Ŷ	Ŷ	$\hat{\nabla}$	¢			1		1
Word Index	0	1	2	3	Word Index		0	:	1
Malua	0x0041	0x0042	0x0043	0x0044	Value	0x4	241	0x4	443

5. Data format supported for Binary Access: INT, DINT, and SINT.



## Wiring Diagram:

#### Ethernet cable:

