

Rockwell: Ethernet Ip Micro 800 PLC family

Driver Documentation

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Document description

This document is dedicated to the programming and functionality of the Rockwell Micro 800 driver included in the Kreo HMI driver portfolio.

Driver Selection

Kreo - Select device	×
Allen Bradley Ethernet/IP (CompactLogix series) Ethernet/IP (ControlLogix series) Ethernet/IP (Micro800 series) Ethernet/IP (MicroLogix series) Beckoff	Î
TwinCAT ADS protocol	
ESA Codesys SoftPLC (for generic PLC) OPC UA client SoftMotion protocol (TCP)	
Fatek FB series	
Modbus Master protocol (TCP) Slave protocol (TCP)	
Omron Ethernet/IP (NJ-NX series) FINS protocol (TCP) FINS protocol (UDP)	
Schneider M series PLC Codesys based Modbus Master protocol (TCP)	
Siemens Industrial ethernet protocol (LOGOLCou 0Δ87)	
	Ok

In the driver portfolio of Kreo HMI select Rockwell – Ethernet Ip (Micro800).



Communication parameters

Double click on the HMI model will display the pop_up window below.

					×	(
Info		ETH 1	EI	Н2		
Etł	nernet par	ameters				
	IP address	192.168.0.1]		
	Subnet mask	255.255.0.0]		
	Ping timeout	500 ms]		
Etł	hernet/IP (Micro800 se	ries)			
	Name		Value		Format	
	🔗 General p	ort parameters				
	Protocol time	out (msec.)	500		[50 - 10000] Step:50	
	No. of retry		0		number: 0 - 3	
	<					
					Ok	

IP address	Ip address of the HMI port connected to the Micro800 PLC
Subnet mask	HMI port subnet mask
Ping timeout	The PING message is used to check the connection stability
Protocol	Ethernet Ip communication time out. The PLC has to reply inside this timing in
timeout	order not to have the communication error.
No. of retry	Number of retries to be sent (with communication error) before rising the HMI
	error status.



Double click on the communication driver will open the pop_up window below.

						×
fo	Parameters					
Device prope	erties					
Soffso	an	🗌 Disa	ble Optimization			
User Addre	ss Field Format	Default]	
Address pref	for a					
Address pre						
Device paran	natars					
Name	_	Value	_	Form	at	
Tcp/IP set	tings					
IP address		0.0.0.0		IP ad	dress: 0.0.0.0 - 255.255.255.255	
IP port		44818		numl	ber: 0 - 65535	
						Ok

Is Offscan	The communication driver is not scheduled.
	In order to enable the communication the user has to force the ST script
	functions below.
	TAG_SETOFFSCANDEV (device, state)
	TAG_SETOFFSCAN (Tag, state)
Disable	The data exchange optimization is disabled.
optimization	Each Tag is required with a separate message.
User address	Tag addressing format.
field format	The default one is defined in the driver database configuration but the user can
	select the preferred one (DECIMAL or HEX).
	In case of symbolic addressing driver this parameter does not have any effect.
Address prefix	Prefix added to the initial part of the Tag path
IP address	PLC Ip address
IP port	PLC communication port.
	The value displayed is the default port.



Offscan

The Offscan option can be selected in case the machine module is part of the application but is not physically connected.



A device wich is NOT CONNECTED but in ONSCAN state will redeuce dramatically the data refresh performance.

The timeout error of the communication driver will delay the Tag requests.

Disable optimization

This option can be used in order to identify wich Tag displayed on a specific page is causing the communication error.

The value of this Tag will not be displayed but some ????? will be displayed in the numeric field.

Tag definition

							^
Тад		Transformations	Thresholds	Database	Events		
Name	Tag1						
Address type	Device	2	~				
Туре	Unsigr	nedInteger	 Array size 	1			
Device E	thernet/	IP (Micro800 series)	 Dynamic 	c			
Data Area V	ariable		✓ Data Type	UINT	~ BCD	Signed	
Name Te	emperat	ure					
Persisten	t 🗌 Re	ead only 📋 Always u	pdate 🔲 Use in script	ts 🗹 Allow subtags [Tag OPC		
Refresh (ms)	0	OffScan mode	e Never ~ Netwo	ork Id 0			
Use defa	ult value						
Unit	[None]	· ~					
							Ok

The Tag addressing is totally symbolic.

The Tag name is the address.

If the Tag is part of a data structure the Tag name is the complete structure path.



Data Area

AREA	TYPE	DIM.	R/W	DESCRIPTION
Variable	Bool Sint Int Dint Real LReal LInt ULInt String	1 8 16 32 32 64 64 64 8	R/W	Read and Write access to the PLC area named Controller TAGs via the predefined format.

- <TagName>:
- <TagName>[X]:
- <TagName>.<ElementName>:

Simple Tag Array element Tag structure element



Communication error codes

CODE	DESCRIPTION
DRIVER ERROR	The message cannot be sent
	HW problem at the port level
PROTOCOL ERROR	Generic error
PROTOCOL TIMEOUT	The HMI did not receive any reply from the PLC inside the time out window
PROTOCOL OFFLINE	The TCP/IP connection cannot be established
SOCKET ERROR	The ethernet socket cannot be created
TRANSMISSION ERROR	The TCP message cannot be created
ERROR	Unknown error



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