

## Siemens – Logo Cpu 0AB8

## Driver documentation

Connect Ideas. Shape solutions.



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## Document description

This document is dedicated to the functionalities and programming of the Siemens driver for Logo CPU 0AB8.

## Driver selection

Kreo - Select device	×
Beckott	
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 (LOGO! Cpu 0AB7)	
Industrial ethernet protocol (LOGO! Cpu 0AB8)	
Industrial ethernet protocol (S7-1200 cpu)	
Industrial ethernet protocol (S7-1200 symbolic)	
Industrial ethernet protocol (S7-200 Smart cpu)	
Industrial ethernet protocol (S7-3/400 cpu)	
	Ok

In the Kreo HMI driver portfolio select Siemens – Industrial ethernet protocol (LOGO Cpu 0AB8).



## Communication parameters

The page below is displayed by double clicking on the HMI model.

Info	ETH 1	E	TH 2		
Ethernet par	ameters				
IP address	192.168.0.1				
Subnet mask	255.255.0.0				
Ping timeout	500 ms				
Industrial ath	ernet proto	col (LOG	O! Cpu 0AB8)		
industrial et	lenner protos		, ,		
Name	pioto.	Value		Format	
Name	ort parameters	Value		Format	
Name O General p Protocol time	ort parameters out (msec.)	Value		Format <i>[50 - 10000] Step:50</i>	
Name General p Protocol time No. of retry	ort parameters out (msec.)	Value 500 0		Format [50 - 10000] Step:50 number: 0 - 3	
Name General p Protocol time No. of retry Siemens s	ort parameters out (msec.) pecific parameter	Value 500 0 s		Format [50 - 10000] Step:50 number: 0 - 3	
Name Constrained Name Protocol time No. of retry Constrained Siemens s Remote TSAP	ort parameters out (msec.) pecific parameter (Client)	Value 500 0 s 03 00		Format [50 - 10000] Step:50 number: 0 - 3 hexadecimal number: 0 - FFFF	
Name O General p Protocol time No. of retry O Siemens s Remote TSAP	ort parameters out (msec.) pecific parameter (Client)	Value 500 0 s 03 00		Format [50 - 10000] Step:50 number: 0 - 3 hexadecimal number: 0 - FFFF	
Name General p Protocol time No. of retry Siemens s Remote TSAP	ort parameters out (msec.) pecific parameter ' (Client)	Value 500 0 s 03 00		Format [50 - 10000] Step:50 number: 0 - 3 hexadecimal number: 0 - FFFF	
Name General p Protocol time No. of retry Siemens s Remote TSAP	ort parameters out (msec.) pecific parameter ' (Client)	Value 500 0 s 03 00		Format [50 - 10000] Step:50 number: 0 - 3 hexadecimal number: 0 - FFFF	,
Name General p Protocol time No. of retry Siemens s Remote TSAP	ort parameters out (msec.) pecific parameter ' (Client)	Value 500 0 5 03 00		Format [50 - 10000] Step:50 number: 0 - 3 hexadecimal number: 0 - FFFF	,

IP address	Ip address of the HMI port
Subnet mask	Subnet mask of the HMI port
Ping timeout	The PING command is sent in order to test the connection stability
Protocol	The PLC has to reply before this time out window will expire in order not to have
Timeout	communication error
No. of retry	Number of retry before having the communication error
Remote	Same value defined in the "Local Properties (client)" of the Logo programming
TSAP (client)	software.



The page below is displayed by double clicking over the Siemens communication driver.

							Х
Info		Parameters					
De	vice proper	ties					
	Soffscar		🗌 Disal	ble Optimization			
	User Address	Field Format	Default				
De	vice parame	eters					
	Name		Value		Form	nat	
	Tcp/IP setting	gs					
	IP address		0.0.0.0		IP ac	ddress: 0.0.0.0 - 255.255.255.255	
	IP port		102		num	ber: 0 - 65535	
	Siemens spe	cific paramete	rs				
	Local TSAP (Serv	ver)	02 00		hexa	decimal number: 0 - FFFF	
							Ok

Is Offscan	The driver is defined in the project but will not be scheduled.
	In order to enable the driver it is mandatory to use the ST script function:
	TAG_SETOFFSCANDEV (device, state)
	TAG_SETOFFSCAN (Tag, state)
Disable the	Disable the data optimization.
optimization	Each tag will be refreshed with a separate communication message.
User address	Tag address format.
field format	The default format is defined in the driver description but the user can select
	the desired format (DECIMAL or HEXADECIMAL)
IP address	Ip address of the PLC port
IP port	Communication port
	The default value is 502
Local TSAP	Local properties server parameter in the Siemens software
(Server)	



#### IsOffscan

Is offscan management can be used in case a specific machine module will be part of the Kreo HMI project but will not be physically connected.



A NOT CONNECTED and ONSCAN device will reduce dramatically the performance of the page refresh due to the communication timeout.

#### **Disable Optimization:**

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

The value will not be displayed but a series of ????? will let the user identify the faulty tag to be fixed.



# **ESN** Tag definition

							×
Tag		Transformations	Thresholds	Database	Events		
Name	Tag1						
Address type	Devic	e	~				
Туре	Unsig	nedInteger	<ul> <li>Array size</li> </ul>	1			
Device	Industria	l ethernet protocol (LOC	GO! C 🗸 📄 Dynamie				
Data Area	Analogic	input	<ul> <li>Data Type</li> </ul>	Word	~ 🗌 BCD	Signed	
			Al	1		Ø	
					_		
Persiste	nt 🗌 R	ead only 🔄 Always u	pdate 🔄 Use in script	s 🗹 Allow subtags	Tag OPC		
Refresh (ms)	0	OffScan mod	e Never ∽ Netwo	ork Id 0			
	ault valu	e 					
Unit	[None	il ~					
							Ok

The Tag address is based on the PLC memory areas mapping.



## Memory areas

AREA	TIPO	DIM.	R/W	DESCRIZIONE
Variable Block	Bit	1	R/W	Read/Write of registers mapped
	Byte	8		into the Variable block area
	Word	16		
	Dword	32		
Digital Merker	Bit	1	R/W	Read/Write digital merker
Digital Input	Bit	1	R/W	Read/Wrire Digital Input
Digital Output	Bit	1	R/W	Read/Write Digital Output
Analogic Merker	Word	16	R/W	Read/Write Analogic Merker
Analogic Input	Word	16	R/W	Read/Write Analogic Input
Analogic Output	Word	16	R/W	Read/Write Analogic Output

The memory mapping of the Logo devices is different compared with the devices belonging to the S7 family.

In order to access a specific bit the user does not have to specify both the Byte number and the Bit number <Byte.Bit> but the absolute bit number (for example M1, M9 and so on).

The Analog INPUT, Analog OUTPUT, Analog MERKER a values.reas can be also accessed via analog These areas are available inside the same area of VB but with the below offset (byte):

- Analog input: 1032
- Analog output: 1072
- Analog merker: 1118



## Local/Remote TSAP

The TSAP parameters have to be defined in the Logo configurator and the same values have to be used in the Kreo HMI project.

If the PLC is acting as server the device TSAP must be set to the default value 0x200. The source TSAP must be the same of the TSAP (Client) defined in the Logo configurator.

LOGO! Soft Comfort V7 is the Logo configuration software.

🗱 Collegamento 1 (Server)	X
<ul> <li>Collegamento client: richiede il trasferimento dei dati tra il PLC I</li> <li>Collegamento server: risponde alle richieste di collegamento de Proprietà locali (Server)</li> </ul>	locale e un PLC remoto si client remoti Proprietà remote (Client)
TSAP 02.00 Collega con un pannello operatore (OP)	TSAP 03.00
Solo questo collegamento:	



# Error codes

CODICE	DESCRIZIONE
DRIVER ERROR	The driver request cannot be dispatched.
	Hardware problem
PROTOCOL ERROR	Driver generic error
PROTOCOL TIMEOUT	The Logo did not reply in the Timeout window
PROTOCOL OFFLINE	The starting connection procedure is not completed
SOCKET ERROR	The ethernet socket cannot be created
PING FAIL	The PING command is not completed
FORMAT DATA ERR	When writing a value the data format is not compatible with the register format definition
TRANSMISSION ERROR	The TCP message cannot be dispatched
ERROR	Unknown error



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