

MicroLogix Master Communication Driver

This document has the specific information related to the driver configuration. For a generic explanation on Devices, Channels, Nodes and Points configuration, please refer to reference guide.

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Section 1 – Summary Information

Communication Driver Name: MicroLogix

Implementation DLL: T.ProtocolDriver. MicroLogix.dll

Protocol: Proprietary

Interface: TCP/IP

Description: MicroLogix communication driver implements communication with Rockwell MicroLogix PLCs using its proprietary protocol. It operates as a Master on TCP/IP networks. The communication blocks are dynamically created according the pooling cycle defined on the AccessType for each point.

PLC types supported: Rockwell MicroLogix 1100 and 1400 devices

Protocol Options: None

Multi-threading: user configurable, default is five threads to each network node

Max number of nodes: user defined

PC Hardware requirements: Standard PC Ethernet interface board

PC Software requirements

Supported Operands:

Operand	Read	Write	Data Type	Address size
N – Integer	✓	✓	Short	2 bytes
F – Float	✓	✓	Single	4 bytes
B – Binary	✓	✓	Short	2 bytes
O – Output	✓	✓	Short	2 bytes
I – Input	✓	-	Short	2 bytes
S – Status	✓	✓	Short	2 bytes
ST – String	✓	✓	ASCII	Max 82 bytes
DLG-DataLogging	✓	-	ASCII	Max 109

Table 1

Section 2 – Channel Configuration

Protocol Options

- None

Settings

TCP/IP:

- **NodeConnections:** Defines the maximum number of parallel requests that will be sent to each node (asynchronous communication)

Section 3 – Node Configuration

Station Configuration

TCP/IP:

- Station syntax: <IP address> ; <Port number>

Where : <IP address> = IP address of the slave device in the modbus network

< Port number > = TCP port where the slave device is listening (default is 44818)

Ex: 192.168.1.101 ; 44818

Section 4 – Point Configuration

The syntax for the MicroLogix communication points is: <File Type><File Number> : <Address>

Where :

File Type: represents the Operand :

N Integer
 F Float
 B Binary
 O Output
 I Input
 S Status
 ST String
 DLG DataLogging

File Number: Numeric reference of the FileType.

Address: Address number

For DataLogging the syntax is: <File Type><Queue Number> : <Number of Bytes>

Examples:

F8:1 File Type = F, File Number = 8, Address = 1
 F8:2 File Type = F, File Number = 8, Address = 2
 N7:1 File Type = N, File Number = 7, Address = 1
 B3:10 File Type = B, File Number = 3, Address = 10
 ST11:1 File Type = ST, File Number = 11, Address = 1
 DLG0:34 File Type = DLG, Queue Number = 0, Number of Bytes = 34

Please consider the table below to calculate the Number of Bytes for the DataLogging

Data	Formatted String Size
delimiter	1 character
word	6 characters
long word	11 characters
date	10 characters
time	8 characters
string	89 characters
float	13 characters

Section 5 – Troubleshoot

The status of the driver execution can be observed through the diagnostic tools, which are:

- Trace window
- Property Watch
- Module Information

The above tools indicate if the operations have succeeded or have failed where the status 0 (zero) means success. Negative values are internal error codes and positive values are protocol error codes.

Revision History

Revision	Description	Date
A	Initial Revision	August, 2012
B	Revision	September, 2012
C	Added String and DataLogging FileType	November, 2012