Alfa Communication Driver

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

Contents

1   Summary Information

Communication Driver Name: Alfa
Current Version: 1.0.0.3
Implementation DLL: T.ProtocolDriver.Alfa.dll
Manufacturer: Alfa Instrumentos.

2   Channel Configuration

2.1   Protocol Options

Not used in this driver.

2.2   Settings

- Serial Channel: Default configuration for AA communication protocol:

    - **Server Mode**: False.
    - **Accept Unsolicited**: False.

  Default configuration for TRC communication protocol:

    - **Server Mode**: True
    - **Accept Unsolicited**: True.

  Set the other fields according to your configuration.

- TCP/IP Channel:

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

3   Node Configuration

3.1   Station Configuration

- Serial Channel:

  Configuration for AA communication protocol:

  Station syntax:

<Address>

Where :

  - <**Address**> = Device address in network (01 - 99).

<center>E.g.: 03</center>

Configuration for TRC communication protocol:

Not used for this protocol. Driver will receive every message from the network.

- TCP/IP Channel:

Station syntax:

<center><IP address> ; <Port number> ; <Address></center>

Where:

  - <**IP address**> = IP address of the scale in Modbus network.
  - <**Port number**> = TCP port where the device is listening.
  - <**Address**> = Device address in network (01 - 99).

<center>E.g.: 192.168.1.101 ; 502 ; 1</center>

3.2   Example Nodes Configuration

Name	Node	PrimaryStation	SecondaryStation	Description
Alfa1	Alfa TCP	192.168.1.101 ; 502 ; 1		Node with TCP Channel
Alfa2	Alfa Serial	1		Node with Serial Channel

4   Point Configuration

4.1   Address

The syntax for the Alfa communication points is: <Type>

Where <Type> indicates the part of the message that will be stored in the configured Point. The valid types are:

- Tare: Returns only Tare value.

- Weight: Returns only Weight value.

- Return: Returns full message.

4.2   Example Points Configuration

TagName	Address	DataType	AccessType	Description
Scale1 Tare	Tare	Native	Read	
Scale1 Weight	Weight	Native	Read	
Scale1 FullMessage	Return	Native	Read	

E.g.: For a typical message 'PB: 00,254kg T: 00,000kg', each Point above will receive the following data:

$$Scale1\_FullMessage = PB : 00,254kg\ T : 00,000kg\ Scale1\_Weight = 00,254kg$$
$$Scale1\_Tare = 00,000kg$$

5   Troubleshoot

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

- Trace window
- Property Watch
- Module Information

Status value of 0 (zero) means communication success. Negative values indicate internal driver error and positive values means protocol errors code.

5.1 Error Codes

Error Code	Description	Possible Solution
0	Success	• None
-100	Error Sending Message	• Turn PLC on • Plug the PLC Ethernet cable • Check configured IP Address field in Device >Node • Ping PLC using prompt command
-101	Error Sending and Waiting Message	
-102 . . . -105	Error creating TCP/IP connection	
-106	Error Receiving Message	
-112	Timeout Start Message	• Turn PLC on • Plug the PLC Ethernet cable • Ping PLC using prompt command • Check configured IP Address field in Device >Node • Increase the driver timeout field in Device >Channel
-113	Timeout between Treated Chars	
-114	Timeout End Message	
-115	Timeout Connect	
-200	Protocol Error	• Check if the PLC model is compatible with driver documentation • Check the configured Address field in Device >Points
-201	Invalid Protocol	• Check if the PLC model is compatible with driver documentation • Contact technical support
-202	Invalid Station	• Check configured IP Address field in Device >Node • Restart the driver
-204	Invalid Message Sequence	• Check if the PLC model is compatible with driver documentation • Check the configured Address field in Device >Points

6 Revision History

Revision	Version	Description	Date
A	1.0.0.0	Initial Revision	Apri 2020 l