EXOR

Tech-note

Connecting UniOP to Fatek Controllers with Facon Protocol

This Technical Note contains the information required to connect UniOP to Facon PLC controllers via a serial communication line. The Facon PLC communication driver is delivered with the Designer file D32UPLC209.DLL.

Contents

1 Introduction

To create a Designer project for communication with controller based on Facon PLC, select the driver "Facon PLC" from the list of available communication drivers in the Configure Controller dialog box.

Note: In case the Facon PLC is not shown in the list, make sure that the file D32UPLC209.DLL is present in the Designer installation folder and then press the Refresh button in the Controller Setup dialog box.

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2 Controller Setup

The Figure 1 below shows the "Controller Setup..." dialog box for the Facon PLC driver.
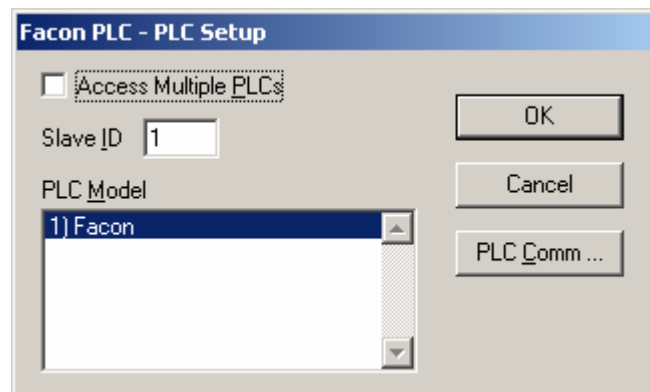

Figure 1 – Controller Setup Dialog Box

Slave ID specifies the node address assigned to the controller.
The option **Access Multiple PLC** allows defining the network configuration when one HMI panel is connected to more than one PLC.

3 The Data Field Properties Dialog Box

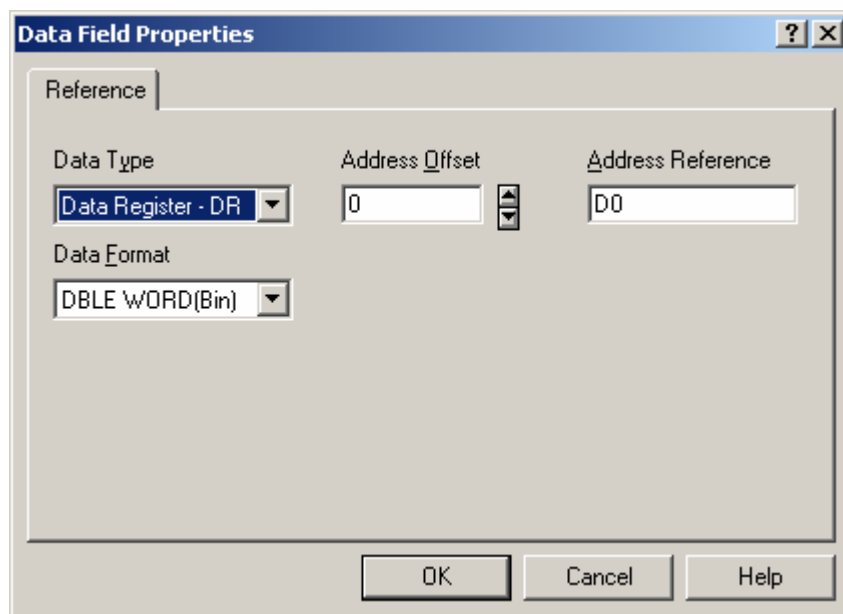The Facon PLC Data Field Properties dialog box is shown in the figure below.

Figure 2 – The Data Field Properties dialog box

The **Data Type** combo box is used to select the memory area to be referenced.
The following memory areas can be selected:

Name	Offset range
Input Discrete	0 - 9999
Output Relay	0 - 9999
Internal Relay	0 - 9999
Step Relay	0 - 9999
Timer Discrete	0 - 9999
Counter Discrete	0 - 9999
Timer Register	0 - 9999
Counter Register	0 - 9999
Data Register - HR	0 - 65535
Data Register - DR	0 - 65535

Two additional Data Types are available when the "Command" macro is used:

Name	Command
RUN PLC	RUN command for PLC
STOP PLC	STOP command for PLC

4 RDA, Alarms, Mailbox and Data Transfer

All data types can be used as reference for RDA, Alarms, Mailbox and Data Transfer.

5 Communication Parameter Setting

Default communication parameters are: 9600,N,8,1. Communication speed up to 38400 is supported.

	Default value
Speed	9600 baud
Start bits	1
Data	8
Parity	None
Stop bits	1

Connection to the PLC can be point-to-point (one operator panel connected to one PLC - RS-232) or PLC network (operator panel connected to PLC network – RS-485).

Appendix A. Communication Error Codes

Current communication status is displayed on the system page of the UniOP. Beside the string, describing current state of the communication (OFF, ON, ERR), there is an additional error code representing the last (which may be not the current one) error encountered. The codes are:

Code	Description	Notes
00	No error	There are no communication errors and there have been no errors since start-up.
04	Negative ACK	NAK returned by the controller while UniOP is waiting for ACK, or invalid data in frame (wrong format, station number or command code).
05	Time out (receiving)	No response received form the controller within the timeout period.
07	General communication error	General un-known communication error.
10	NAK from PLC	Wrong response telegram structure.
11	Line error	Wrong bad baud rate, parity, etc.
12	Checksum error	Wrong checksum received from the controller.