Connecting UniOP to Baldor Flex+

This Technical Note contains all the information required to connect the UniOP panels to the Baldor Flex+Drive servo controls.

Note: *this Technical Note applies to the Baldor communication driver identified by the name 'Baldor Flex' and included in the Designer file UPLC148.DLL.*

Contents

1. Introduction

This communication driver provides full access to the parameters in the servo control using the ASCII command set.

2. Configuring UniOP for Connection to Flex+

To configure a UniOP HMI panel for use with the Flex+ with the Designersoftware, follow the procedure described in this chapter.

1) Select the option 'Project/Change Controller Driver…' and choose 'Baldor Flex'

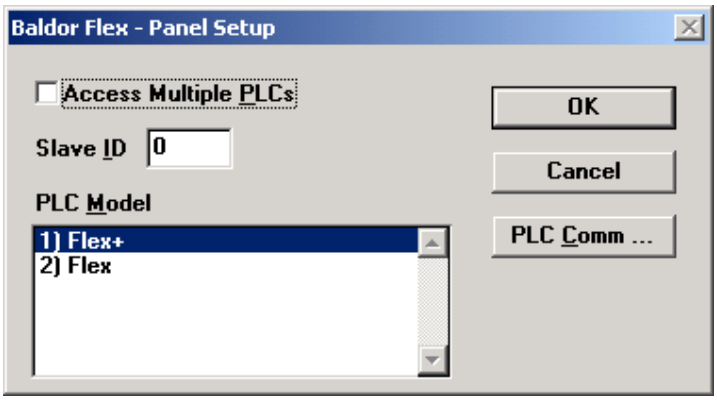

Figure 1 - Controller Setup

2) A UniOP panel can access multiple Flex+ controllers in a RS-485 multidrop connection. To every controller in the network must be assigned its own unique address. You can specify controller addresses using the 'Slave ID' edit box in the Controller Setup dialog box. See figure above.

3) The Real Time Clock information in the Reserved Data Area (RDA) is coded in BCD. The RDA information should be placed in the UniOP Internal Buffer memory since no suitable memory areas are available in the Flex+ drive.

4) Access to the drive parameters can be obtained simple selecting the parameter name in the Define Field Dialog Box. See figure below. Parameter names have been defined according to the specification in the manual 'Flex+ Drive Servo Controls, Installation & Operating Manual' MN1276, Appendix B.

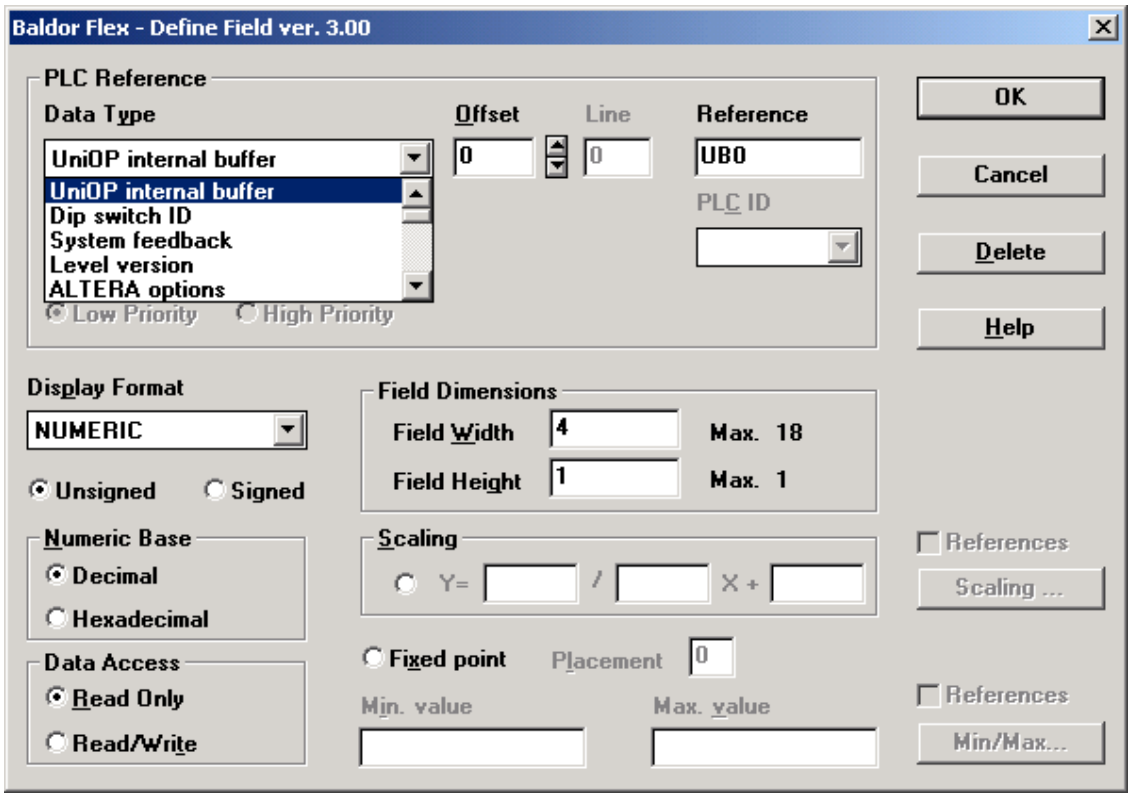

Figure 2 – Define Field Dialog Box for SmartMove

The UniOP Internal Buffer is a 256 bytes memory area that can be used for functions of the operator panel such as the RDA and the mailbox as there are no suitable memory areas in the controllers for these applications.

3. Communication Error Codes

Current communication status is displayed in the System Menu of the UniOP. The error status is described by a message and a numeric error code. The number shows the code of the current communication error and, if the communication is correct, the code of the last error encountered. When the error code 0 is shown, it means there have been no communication errors since this system start-up.

Code	Description	Notes
00	No error	There are no communication errors and there have been no errors since start up.
04	NAK response	The controller didn't accept the request, it returned a NAK
05	Timeout	The controller didn't respond to the request within 2 seconds
06	Response error	Buffer overrun. The controller sent more than 250 bytes in the response
08	No application response data	Some application response data was expected but the response contained no data
09	Unespected response data	There were unexpected characters in the application response data
11	Line error	Bad Baud rate, parity etc
12	Bad application response data	There were invalid characters in the application response data

Table 1 – Communication Error Codes

4. Technical Data and Connection Information

UniOP communicates via the X6 serial port on the controller. The part number of the cable for the RS-232 communication is CA55. Note that Flex+ drives are available with RS-232 or RS-485 interface. Different controller part numbers will have to be selected for the two types of interface.
The default baud rate is 9600 bauds. Values can be changed to match those configured in the controller. In the case of multidrop connection of multiple Flex drives, the address of the individual controllers will have to be set with dip-switch AS1. The factory setting (address 0) is suitable for point-to-point connections.