



AIMCO

UEC-4700 PLC and Devicenet Setup and Usage Manual

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Setup of the UEC Controller consists of setting the following:

Mode 57: 0
Mode 58: 0
Mode 59: 0
Mode 60: 2
Mode 61: 1
Mode 62: 0
Mode 63: 0
Mode 64: 1
Mode 65: 0
Mode 66: 0
Mode 67: 0
Mode 68: 1
Mode 69: 1

Devicenet has been added to the base system through the use of a Devicenet Gateway from SST. It converts devicenet messages to serial data which is then interpreted by the on-board microcontroller.

The Ethernet port is configured through the use of an internet browser. (Instructions will be listed at the end)

The following messaging has been designed to accommodate a PLC interface:

Message from PLC to Socket Tray

Byte0 = 48 (ASCII 0)

Generates a return message

Byte0 = 64 (ASCII #)

Byte1 = 48, 49, 50, or 51 (Ascii 0,1,2,3 where 0 = socket 1, 1 = socket 2, 2 = socket 3, and 3 = socket 4)

Message from PLC to Socket Tray

Byte0 = 49 (ASCII 1)

Byte1 = 49, 50, 51 or 52 (ASCII 1,2,3,4)

Turns on socket light 1, 2, 3, or 4

Message from PLC to Controller

Byte0 = 50 (ASCII 2)

Byte1 = N/A

Byte2 = 1 (Tool Enable)

Byte3 = N/A

Byte4 = 1,2,3, or 4 (Which parameter set to run – referred to as work select in UEC documentation)

Byte5 = Upper byte of station ID

Byte6 = Lower byte of station ID

Byte7 – 10

7 = Upper byte of first word for Engine Serial Number

8 = Lower byte of first word for Engine Serial Number

9 = Upper byte of second word for Engine Serial Number

10 = Lower byte of second word for Engine Serial Number

Example: 4,87,8,174 represents 11112222

Where $4 * 256 = 1024 + 87 = 1111$

Where $8 * 256 = 2048 + 174 = 2222$

After Tool Rundown takes place:

Message to PLC – All in ASCII Characters

Byte0 = 52 or 56 (ASCII 4 or 8)

4 = OK

8 = NOK

Byte1 – 3 = ASCII digits for Station ID

Byte4 – 11 = ASCII digits for Engine Serial Number

Byte12 = “.”

Byte13-31 = Time in the following format YYYY-MM-DD.hh:mm:ss

Message to Ethernet – All in ASCII Characters

Byte0 – 7 = Engine Serial Number

Byte8 = “,”

Byte9 – 11 = Station ID

Byte12 = “,”

Byte13 = Parameter Set Run (1,2,3,4)

Byte14 = “,”

Byte15 – 19 = Torque Results

The following are instructions for programming the Serial to Ethernet/Devicenet Interface:

Introduction

The Serial to Ethernet box has 1 ethernet port and two RS232 Serial ports (Com 1 and Com 2). It uses html to change settings from their default settings.

Setup

Connect a standard RS232 serial cable from the serial port of choice to the serial device. Connect the Ethernet port to an Ethernet hub using a standard Cat 5 RJ45 cable. If you are connecting directly to a computer you can use a crossover cable. Plug the power supply in on the box and wait a minimum of 5 seconds for it to initialize.

The box should now be connected to the network with the default settings. If you need to change the default settings, the computer connected to the box needs to be set to an ip address on the 192.168.1.xxx domain using an ip address other than 192.168.1.2 which is the default ip address for the box. In the browser address bar enter <http://192.168.1.2> and hit ENTER or GO. A configuration screen should appear showing the default settings. You can change any of the settings and hit submit, but remember that you need to enter the current password before any changes will be implemented. The default password is naranja.

Resetting the box

When first powering up the box, if you hold the reset button it will set the box back to the default settings. Let go of the button and disconnect the power. When you re-connect the power the box will re-initialize with the default settings.



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