UniOP with Mitsubishi A1sCPU

A1sCPU - Programming port

The programming port on the A1sCPU is RS422. Maximum distance between the UniOP and the PLC should be less than 15 meters. Connect cable CA66 from the UniOP to the PLC's programming port.

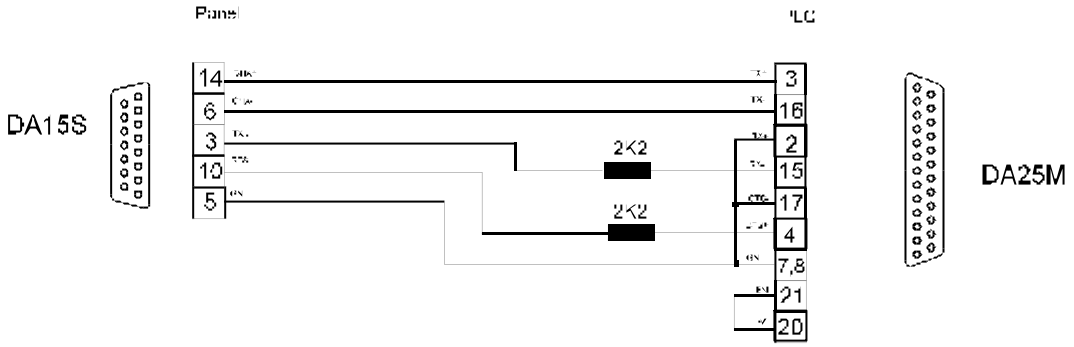

Figure 1. - CA66 Cable

Press the ENTER key on the UniOP until a menu appears, select CONFIG. Connect cable CA2 to the UniOP and your personal computer, and start the DESIGNER software. Select the driver " Mitsubishi A " , in Controller setup " select the PLC model A1S. PLC COMM should be 9600, ODD, 8, 1 (the default). Now go to RDA setup and disable each of the 4 areas and then "OK" it. Double click to invoke the define field dialog. Select a data type (register) and data format (word binary) and a field width of 6 , and "OK " it. Now do a " TRANSFER " - " Download ". After the download you should see the UniOP display a value. Press ENTER on the UniOP until a menu appears, then select SYSTEM, cursor down to the field PLC, it should show COM ON if communications are correct.

A1sCPU - With module A1SJ71C24-R2

Communication module A1SJ71C24-R2 can be used for point to point communications in cases where the total distance of the cable between the UniOP and the module is less than 40 feet. Install the module in the PLC backplane and set the MODE rotary switch to 3. The module has different variations of the protocol, a setting of 3 provides STX and ETX framing. Next, set DIP switches 3 - 12 as shown in Table 1 below.

SW03		OFF
SW04	ON	
SW05	ON	
SW06		OFF
SW07	ON	
SW08	ON	
SW09	ON	
SW10	ON	
SW11		OFF
SW12	ON	

Table 1.

This setting corresponds to write during run enabled, 9600 baud, 8 data bits, parity enabled, even parity, 1 stop bit and sum check enabled.
Now turn the keyswitch on the CPU to RESET then back to RUN, this will cause the settings to take place. Next connect cable CA32 to the UniOP and the module.

Figure 2. - CA32 Cable

Press the ENTER key on the UniOP until a menu appears and then select CONFIG. Connect cable CA2 to the UniOP and your personal computer, and start the DESIGNER software. Select the driver " MELSEC A . In " Controller setup " select the PLC model A1sCPU. The "PLC ID" should be 0, (the default) and PLC COMM should be 9600, even, 8, 1 (the default). Now go to RDA setup and disable each of the 4 areas and then "OK" it. Double click somewhere on a page and the define field dialog will be invoked. Select a data type (register) and data format (word binary) and a field width of 6 , and "OK " it.
Now do a " TRANSFER " - " Download ". After the download you should see the UniOP display a value. On the Mitsubishi module the RUN and CPU led's should be steady on, and the RD and SD should be flashing.
The NEU and ACK led's should also have activity, The led's NAK, C/N, P/S, PRO, and SIO should be off .
Press ENTER on the UniOP until a menu appears, then select SYSTEM, cursor down to the field PLC, it should show COM ON if communcations are correct.

A1sCPU - With module A1SJ71C24-R4

Communication module A1SJ71C24-R4 is the RS422 version, the cable distance can be up to 1200 meters. Use this module for PLC networks. Install the module in the PLC backplane and set the MODE rotary switch to 7. The module has different variations of the protocol, a setting of 7 provides STX and ETX framing. Next, set DIP switches 1 - 12 as shown in Table 2 below.

SW01	ON	
SW02	ON	
SW03	ON	
SW04	ON	
SW03		OFF
SW04	ON	
SW05	ON	
SW06		OFF
SW07	ON	
SW08	ON	
SW09	ON	
SW10	ON	
SW11		OFF
SW12	ON	

Table 2.

This setting corresponds to computer link, write during run enabled, 9600 baud, 8 data bits, parity enabled, even parity, 1 stop bit and sum check enabled.
Unlike the A1SJ71C24-R2 , the R4 type has two rotary switches to set the station number.
Set X10 to zero and X1 to one. This will give the module it's identity.
Now turn the keyswitch on the CPU to RESET then back to RUN, this will cause the settings to take place.
Next connect cable CA88 to the UniOP and the module.

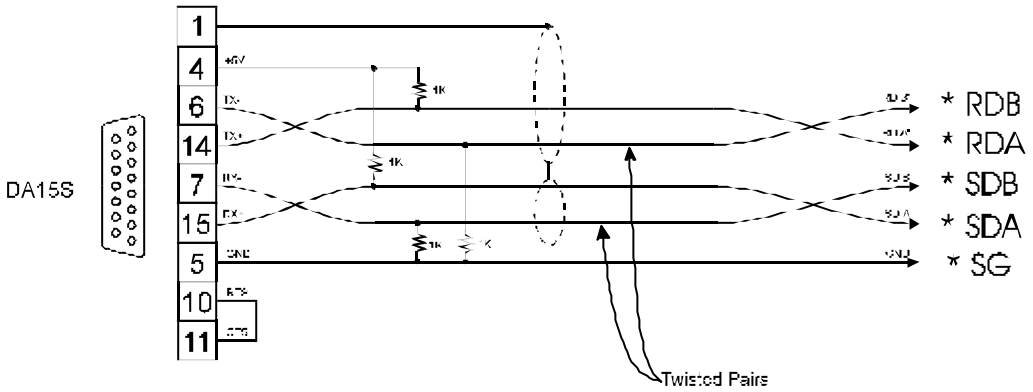

Figure 3. - CA88 Cable

Press the ENTER key on the UniOP until a menu appears and then select CONFIG. Connect cable CA2 to the UniOP and your personal computer, and start the DESIGNER software. Select the driver " MELSEC A . In " Controller setup " select the PLC model A1sCPU. The "PLC ID" should be 1, (NOT THE DEFAULT) in order to match the station setting switch on the module. PLC COMM should be 9600, even, 8, 1 (the default). Now go to RDA setup and disable each of the 4 areas and then "OK" it. Double click somewhere on a page and the define field dialog will be invoked. Select a data type (register) and data format (word binary) and a field width of 6 , and "OK " it.
Now do a " TRANSFER " - " Download ".
After the download you should see the UniOP display a value. On the Mitsubishi module the RUN and CPU led's should be steady on, and the RD and SD should be flashing.
The NEU and ACK led's should also have activity, The led's NAK, C/N, P/S, PRO, and SIO should be off . The COM led should be on.
Press ENTER on the UniOP until a menu appears, then select SYSTEM, cursor down to the field PLC, it should show COM ON if communcations are correct.