Objective
Provide tips for configuring different Profibus PLC tools used with SSD Drives products

Equipment
Master PLC, Profibus Techbox (6053/6055) or Profibus LinkCard (L5353)

Procedure
ALL PLC CONFIGURING TOOLS:

- Delete all internal software input connections to the drive parameter that the PLC writes to. Otherwise, the internal connection will overwrite the Profibus data to the specified tag number.

- Any drive parameter with a TAG number can be written to or read from. However, all I/O points that attach to customer connections must be processed properly (triggered). Any function block output under the SYSTEM::CONFIGURE I/O::BLOCK DIAGRAM that is being read by the PLC must be triggered. The examples below show how to trigger correctly.

Note: The value for Analog Input 1 is read directly at Setpoint Sum 1::Input 0. The Setpoint Sum 1 block is the trigger for Analog Input 1.

Note: The value for Analog Input 2 is read directly at the miniLINK. The miniLINK block is the trigger for Analog Input 2.
The SSD Drives gsd file forces all parameters to be transferred and received as 16-bits.

Please visit [http://ssddrives.com](http://ssddrives.com) Resource Center for Profibus manuals and other gsd files.

Note: Remember that different configuration tools work differently. Some tools use an import command to install new gsd files. Some copy the gsd to a directory, then either restart the tool or use a scan gsd command. Other tools just copy the gsd to a directory.

Note: The euro3245.gsd requires the first 3 bytes of the User_Param_Data to be set to zeroes. Refer to pages 10 and 11 of HA467329U001 Issue 1.

### Using a Siemens S7 PLC to Configure a L5353

The following Organization Blocks, OB82, OB85, OB06, and OB122 are “highly” recommended to complete the setup for the PLC. These Organization Blocks keep the PLC from stopping communications and/or simulating a fatal error to the module.

Also, uncheck the “Turn on Cyclic Distribution of the Bus Parameters” in the DP monitoring setup. When the PLC has power applied, a Global reset command is initiated and can sometimes simulate a communications error.

### Using a GE 90_30 PLC with Versa Pro to Configure a 6055/PROF/00

The GE Profibus configuration software (Versa Pro) does not support user parameter data larger than 25 bytes in length. The SSD Drives GSD file specifies 63 bytes of user parameter data for the 590+. Users must alter the SSD Drives GSD before importing to the GE hardware configuration software. The end result is that the amount of data that can exchanged between the master and drive is limited to 11 words.

GE PLC's do not ground the face of the ProfiBus interface cards or remote I/O, Siemens does.

Note: An example connection is on the following page
If you have questions, please call the Product Support Group at (704) 588-3246.
Objective

To setup communications between a Siemens PLC™ S7-315™ Master to SSD Drives Profibus communication module L5353.

Equipment

- S7 PLC, Simatic™ Manager Step 7 Software, L5300 or L5392, L5311, and L5353.

Procedure

Note: The project wizard in Step 7 will guide you to set up the PLC.

1. Initialize Simatic™ Manager
2. Select the CPU type
   
   Note: The following blocks are recommended to be added to the PLC configuration OB1, OB82, OB85, OB86, and OB 122.
3. Install the Eurotherm Drives GSD file euro5353.gsd.
4. Double click on the hardware icon in “Simatic™ Manager”.
5. Select from the pull down menu: Option::Install new GSE.
   
   Note: After the “wizard” generates a new project, proceed to step 6 to configure the PLC hardware and Profibus Master.

If you have questions, please call the Product Support Group at (704) 588-3246.
6. Select from the “HW Configure” pull-down menu: **Configure Network**.

7. Next, double click on “DP Master”.

8. Next, from “Properties – DP Master”, select “Properties”, then assign an address.

9. Next, right click on the “X2 DP-Master” of the Hardware Configure, Simatic 300” window, then select “Insert DP Master System”.

Note: A Profibus(1): DP Master Line appears:

10. Select from the pull down menu, “Insert::hardware component”.

    Note: A hardware window will appear. You can select the Link product as shown.

If you have questions, please call the Product Support Group at (704) 588-3246.
11. Make sure to install a power supply and any other hardware I/O’s being used.
   
   Note: Double click on the “Profibus(1): DP Master” line then select “Properties”, “Network setting”, “Parameters”, then uncheck the “Turn On Cycle Distribution of Bus Parameters”.

13. Add a “L5353 Profibus Link Card” folder from the “Hardware Catalog”.
   
   Note: Scroll across and under the “Profibus(1): DP Master” line until the cursor changes into a “+ sign”.

14. Now you can assign a node address to L5353.
15. Now add the needed “8 Input word” or “8 Output word” as needed for program.

   Note: Click on the “(2) L5353 DP-Norm” before you drag and drop.

If you have questions, please call the Product Support Group at (704) 588-3246.
16. Verify the list of I/O words against the Link Configuration.

17. Next, from the pull down menu select “Station::Save and Compile”
18. Close this window and from the “Simatic™ Manager” highlight the Hardware icon and install.

   Note: After installing the Link and plc program both LED’s on the L5353 should be green.

<table>
<thead>
<tr>
<th>C_PBW.1</th>
<th>C_PBR.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>L5353</td>
<td>L5353</td>
</tr>
<tr>
<td>INPUT 1</td>
<td>OUTPUT 1</td>
</tr>
<tr>
<td>INPUT 2</td>
<td>OUTPUT 2</td>
</tr>
<tr>
<td>INPUT 3</td>
<td>OUTPUT 3</td>
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<tr>
<td>INPUT 4</td>
<td>OUTPUT 4</td>
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<td>INPUT 5</td>
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<td>INPUT 6</td>
<td>OUTPUT 6</td>
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<tr>
<td>INPUT 7</td>
<td>OUTPUT 7</td>
</tr>
<tr>
<td>INPUT 8</td>
<td>OUTPUT 8</td>
</tr>
</tbody>
</table>

   Note: The following is the data communication monitoring in Link and PLC:

   ![Image of Link and PLC monitoring]

If you have questions, please call the Product Support Group at (704) 588-3246.
Objective
Provide tips for different PLC tools to be used with SSD Drives products

Equipment
Master PLC, Communication TechBox (6053/6055) or Communication LinkCard (L53xx)

Procedure
FOR ALL DRIVE CONFIGURATIONS REGARDLESS OF PLC TYPE:

- Delete internal software connections to the drive parameter that will be written to by the PLC. Otherwise, the internal drive connection will overwrite the data to the specific tag number.
- The SSD Drives datasheet file formats all parameters to be transmitted and received as 16-bit words.
- Any drive parameter with a tag number can be read or write via the PLC. I/O points that attach to customer connections must be properly triggered in the 590+ drive. Any function block output under the SYSTEM::CONFIGURE I/O::BLOCK DIAGRAM that is being read by the PLC must be triggered. The examples below show how to trigger correctly. The 690+ drive does not require the function block output to be connected to a system block to be triggered.

Note: The value for Analog Input 1 is read directly at Setpoint Sum 1::Input 0. The Setpoint Sum 1 block is the trigger for Analog Input 1.

Note: The value for Analog Input 2 is read directly at the miniLink. The miniLink block is the trigger for Analog Input 2.

If you have questions, please call the Product Support Group at (704) 588-3246.
<table>
<thead>
<tr>
<th>Communication Option</th>
<th>Protocol</th>
<th>Master</th>
<th>Maximum Nodes</th>
<th>Maximum Words per Card</th>
<th>Communication Speed</th>
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</thead>
<tbody>
<tr>
<td>L5351</td>
<td>Device Net (CAN Bus)</td>
<td>Allen-Bradley PLCs</td>
<td>64</td>
<td>127 per node</td>
<td>125, 250, 500 Kbaud</td>
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<tr>
<td>L5352</td>
<td>Modbus TCP/IP, Ethernet IP</td>
<td>Modbus TCP/IP PC's and PLCs Modbus TCP/IP Allen Bradley ControlLogix</td>
<td>256</td>
<td>256</td>
<td>10 or 100 Mbaud</td>
</tr>
<tr>
<td>L5353</td>
<td>Profibus</td>
<td>Siemens/TI PLCs</td>
<td>32</td>
<td>112</td>
<td>9.6, 19.2, 93.75, 187.5, 500 Kbaud, 1.5, 12 Mbaud</td>
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<tr>
<td>L5354</td>
<td>ControlNet</td>
<td>Allen-Bradley PLCs</td>
<td>99</td>
<td>240</td>
<td>5 Mbaud</td>
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<tr>
<td>L5355</td>
<td>Modbus TCP, Modbus Plus</td>
<td>Modicon PLCs</td>
<td>256</td>
<td>256</td>
<td>1 Mbaud</td>
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<tr>
<td>6055/DNET/00</td>
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<td>Allen-Bradley PLCs</td>
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<td>Limited by Polled Assy. Number</td>
<td>125, 250, 500 Kbaud</td>
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<tr>
<td>6053/DNET/00</td>
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<td>Allen-Bradley PLCs</td>
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<td>Limited by Polled Assy. Number</td>
<td>125, 250, 500 Kbaud</td>
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<tr>
<td>6055/MBP/00</td>
<td>Modbus TCP, Modbus Plus</td>
<td>Modicon PLCs</td>
<td>256</td>
<td>Limited by I/O Point to Point selection</td>
<td>1 Mbaud</td>
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<tr>
<td>6055/CNET/00</td>
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<td>Allen-Bradley PLCs</td>
<td>99</td>
<td>Limited by I/O Point to Point selection</td>
<td>5 Mbaud</td>
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<tr>
<td>6055/ENET/00</td>
<td>Modbus TCP/IP, Ethernet IP</td>
<td>Modbus TCP/IP PC's and PLCs Modbus TCP/IP Allen Bradley ControlLogix</td>
<td>256</td>
<td>590+ 20 Read, 20 Write words 690+ 36 Read, 36 Write words</td>
<td>10 or 100 Mbaud</td>
</tr>
<tr>
<td>6055/PROF/00</td>
<td>Profibus</td>
<td>Siemens/TI PLCs</td>
<td>32</td>
<td>16 Read, 16 Write words</td>
<td>9.6, 19.2, 93.75, 187.5, 500 Kbaud, 1.5, 12 Mbaud</td>
</tr>
<tr>
<td>6055/EI00/00</td>
<td>EI Bisynch ASCII/Binary, Modbus RTU</td>
<td>Any PC or PLC with EI Bisynch or Modbus RTU comms.</td>
<td>256</td>
<td>32 Read, 32 Write words</td>
<td>1200 to 57600 Kbaud</td>
</tr>
</tbody>
</table>

If you have questions, please call the Product Support Group at (704) 588-3246.
Objective
To facilitate the use of CELite, CELite+, DSD and ConfigEd, on computers not fitted with serial ports.

Introduction
These software packages were originally intended to be used with a serial port but several new computers only have USB ports. This document is a recommendation for using the existing cable with a computer that has only a USB port.

Note: This does not apply to operating systems older than Windows XP, due to the lack of drivers supported by these adaptors.

Equipment
The Product Support Group has performed test on several different USB to Serial adaptors. See the picture below. The recommended brands have connected reliably between the PC and unit to be programmed, without errors in the SSD Drives software.

Recommended Brands
ATEN (model UC232A) http://aten-usa.com/?product&cat=595&Item=UC232A
SEWELL (model SW-1301) http://sewelldirect.com/usbtoserial.asp

Note: The Belkin brand of USB to Serial adaptor is not recommended. It performed poorly in our tests with our equipment.

If you have questions, please call the Product Support Group at (704) 588-3246.