Think & Do Profibus Network Setup with the H0–PSCM

In This Appendix. . .

- Think & Do Profibus Network Setup

NOTE: H0-PSCM has been retired. No replacement available.

Think & Do Profibus Network Setup with H0–PSCM

For those who are using the H0–PSCM as a slave with Think & Do, the following steps will guide you through the setup for your Think & Do Profibus network.

Getting the T & D Network Started Network Started The first thing that will be needed for the Think & Do Profibus network is a Profibus interface card for your PC. We use the SST[™] Interface Card for Profibus, produced by Woodhead Industries, Inc.. More information about the purchase of this card can be obtained from their website, www.mySST.com. The PC used for the setup procedure explained here uses this interface card. Whenever this card has been installed, run the SST Profibus Configuration Tool to configure the Profibus card before beginning the Think & Do setup (refer to Appendix D).

The following setup uses Think & Do Studio; however, if you have Think & Do LIVE installed on your PC, you will use I/O View instead of the Connectivity Center to setup the H0–PSCM DP Slave on the network.

- **T & D Studio setup** for PC control First, be sure that the Node Address has been set to a proper address (3 to 125 for the H0–PSCM). Next, open Think & Do Studio and select <u>File > New</u> in the Project Center window. Use the following procedure to setup the H0–PSCM with Think & Do Studio. The procedure assumes that the Profibus cable is connected from the SST card to your H0–PSCM Profibus Slave Communications Module.
 - 1. Rename the project (the example name is PROFIBUS).
 - 2. Click on the ConnectivityCenter button.



This window will appear with a note to add the I/O driver.

3. Click on **<u>D</u>rivers** > <u>Add</u> in the drop down window which appears.

🔀 Think & Da Studio - ConnectivityCenter - [Configuration]	8 ×
🔀 Configuration Yiew Drivers Devices Iools Window Help	В×
No 1/0 driver available in the open configuration. Please add the 1/0 driver using Drivers> Add command. Board Info Board Status Mapping / Module Info / Module Status Mapping / 1/0 Mapping /	
For Help, press F1	
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The Add I/O Driver window will drop down.

- 4. Click on the down arrow and select the Profibus driver that is installed in your PC.
- 5. Click **OK**.

This installs the SST driver to Think & Do configuration.



The H0–PSCM Slave must be added to the configuration next. 6. Click on **Devices** or the **Add Device** button in this window.

🔀 Think & Do Studio - ConnectivityCenter -	[Configuration]	_ 8 ×
🔀 Configuration View Drivers Devices Tools	: <u>W</u> indow <u>H</u> elp	_ 8 ×
PROFIBUS(SST) Board 1 Total Nodes=0		
B	efresh Grid	
Attributes	Value	
Driver Name	PROFIBUS(S-S Technologies)	
Board Number	1	
Board Configuration	Direct-Link Configuration	
Board Name	1313b-1418-141-0-3	
Roard Info Chard China Marries	te dela late / Madela Status Manaina / 1/0 Manaina /	
Board Status Mapping / N	Todule Inro / Module Status Mapping / I/U Mapping /	
For Help, press F1		UM
🛛 🚟 Start 🛛 🚟 Think & Do Studio - Projec 🛛 🞑 Th	ink & Do Studio - Desia 🛛 🔀 Think & Do Studio - C	11-11 AM

The following window will come into view. You will see a list of companies in the window on the left. Each of these have GSD files that are supported by Think & Do. If AutomationDirect is not in the list, you will need to install the GSD file from the diskette that was supplied with this manual.

7. Click the **Add** button.

<u>S</u> lave List Select vendor name and the slave family in the To add a slave device, choose the Model Nar	list on the left. The ne and press the Ar	a list on the right shows the dd button or double-click it.	supported slave de	evices.
APV Nordic Automation DK auma Werner Riester Grubh & Co KC Automation Direct.com Axiomatic Technologies Corp. BARTEC GmbH BECKHOFF INDUSTRIE ELEKTRD Delta Computer Systems. Inc. EMG, Wenden Escort Memory Systems EUROTHERM Process Automation FESTO AG&Co. FESTO AG&Co.	Model Name	Order No.	Revision	Identifier
GSD Files		PROFIBUS <u>A</u> ddres	s: 0 💌	Add Slave
			Done	<u>H</u> elp

D–6

When this window comes into view, insert the diskette and select the A: drive in the **Look in:** window slot.

7. Click on Auto0779.gsd file to select the File name, then Add.

Add PROFIBUS	GSD File		? ×
Look in:	31/2 Floppy (A:	• E	
Autd0779-ssd			
File name: Au	utd0779.gsd ROFIBUS GSD File (*.gs?)	×	Add Cancel
Vende Device Typ Model Nam Order Numb Revisio	or: AutomationDirect.com le: IO le: HO-PSCM er: n: V1.0		

The window appears like the one shown below.

- 8. Click on **AutomationDirect.com**, then **IO**. This puts the available GSD file names in the window on the right.
- 9. Select H0–PSCM and enter the **PROFIBUS** <u>A</u>ddress set on the rotary switches.
- 10. Click on **<u>A</u>dd Slave**, then **<u>D</u>one**.

Add PROFIBUS Slave				3
Slave List Select vendor name and the slave family in th To add a slave device, choose the Model Na	e list on the left. The me and press the Ac	list on the right show d button or double-o	ws the supported slave de click it.	evices.
APV Nordic Automation DK auma Werner Riester GmbH & Co KU AutomationDirect.com Axiomatic Technologies Corp. BARTEC GmbH BECKHOFF INDUSTRIE ELEKTRO Delta Computer Systems, Inc. EMG, Wenden Escort Memory Systems EUROTHERM Process Automation FESTO AG&Co.	Model Name T1H-PBC H2-PBC H0-PSCM	Order No.	Revision V1.0 V1.0 V1.0	Identifier 0x0607 0x0608 0x0779
GSD Files		PROFIBUS &	Address : 3	Add Slave
			Done	<u>H</u> elp

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Note: Once the GSD file has been added, simply click the Connect button after installing the Profibus I/O driver the next time that a slave is configured. Think & Do Studio will search the network for all connected slaves and the modules for each slave. You will need to select the name for each module found.

The window now displays the **H0–PSCM** as a block with the name and address.

Now that the H0–PSCM Slave has been added to the configuration, add the read and write information.

11. Either click on **Devices** or on the **Add Device** button.

Think & Do Studio - ConnectivityCenter - P	ROFIBUS.tio - [Configuration]	
		그미스
PROFIBUS(SST) Board 1 Total Nodes=1	Add Device button	
<u>R</u> e	fresh Grid	
Attributes PROFIBUS Address Model Name Order Number Description	Value Value Value Value Value Value Value V V V V V V V V V V V V V V V V V V V	
Board Into / Board Status Mapping / Mo For Help, press F1	dule Info Module Status Mapping // I/U Mapping /	

D–8

The **Add I/O Module to Modular Slave** window will drop down. Select the module for Slot 1 by clicking on the down arrow next to the **I/O Module**. 12. Select **2 WORD READ FROM PLC**. Click the **OK** button.

Think & Do Studio - ConnectivityCenter	
PROFIBUS(SST) Add I/O Module to Modular Slave Board 1 Total Nodes=1 Slave Station Address : 3 Slot Number :	
I/O Module :	
	_
Driver Name PROFIBUS(S-S Technologies)	
Board Number 1	
Board Configuration Direct-Link Configuration	
Board Name 5136-PFB-PCI-0-9	
Board Info Board Status Mapping Module Info Module Status Mapping / 1/0 Mapping	
For Help, press F1	NUM
😭 Start 📓 Think & Do Studio - Projec 🛄 Think & Do Studio - Desig 🔀 Think & Do Studio - C	🤶 2:30 PM

Repeat these steps for each slot with an input module installed.

The configuration window now shows the H0–PSCM Slave Communications Module with the added input module. The next step is to configure the module.

13.	Click	on	Configure	I/O	Lay	yout.
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🔀 Entivity Studio - ConnectivityCenter - [Con	iguration]	
X Configuration View Drivers Devices Tools	Window Help	<u>_8×</u>
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PROFIN Decal Total 1		
	fresh Grid	
Attributes	Value	
Slot Number	1	
Module Name	2 WORD READ FROM PLC	
Description	Station003_S01	
Configure I/0 Layout		
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) L
Board Info Board Status Mapping	dule Info / Module Status Mapping / 1/0 N	lapping /
Board Info Board Status Mapping Mc	dule Info 🖉 Module Status Mapping 🖉 1/0 N	tapping /

The **Configure I/O Layout** window will appear.

14. Deselect Swap Bytes, then click on <u>Apply</u> and OK.

Cor	figure	I/O Layou	ŧ							×
Ir	nput	Output								
	Input s	ize : 4 Bytes					\frown	<u>A</u> dd <u>I</u> nsert	Delete	
		Data Type		Length In Bytes	Map Data To		Swap Bytes	1/O Description(15	Chars)	
	0	Word	-	2	Value	•		i_E00		
	1	Word	•	2	Value	-	\ _/	i_E01		
							\bigcirc			
										<u> </u>
	New Ir	iput size : 4 B	ytes							
	Note									
	Whe	n transferring	wor	ds, PROFIB	US-DP transf	ers t	he high b	yte first, followed by the l	ow byte.	
	Forc	efault PRUFI	803	-DP behavi	or, keep Swa	рBJ	ites box o	hecked.		
_			_	Γ	OK	7	Cano	el Applu	Help	
				L	70	┛.	Caric		neip	

Click on **Parameterize** in the Configuration window. The Parameterize window will appear with a default value of 1024.

15. Change 1024 to **16640** (40400 octal). Click on <u>Apply</u> then **OK**.

Pai	Parameterize : 2 WORD READ FROM PLC (Slot : 1)									
E	Extended Extended (Hex)									
Offset Name Value										
	0	V Mem Read Addr (decimal fmt)	16640							
		ОК	Cancel <u>Apply</u>	Help						

Add the output module(s) in the **Configuration** window next. 16. Click on **Devices** > **Add**.

	figuration]	
🔀 Configuration View Drivers Devices Tools	Window Help	
Add Denort Inset Replace Load Confyr Upddet Conf No-PSOFIBI Replace Load Confyr Addr: 3	xation	
B	efresh Grid	
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Attributes Slot Number Module Name	fresh Grid Value 1 2 WORD READ FROM PLC	A
Attributes Slot Number Module Name Description	irresh Grid Value 1 2 wORD READ FROM PLC Station003_S01	
Attributes Slot Number Module Name Description Parameterize Configure 1/0 Layout	fresh Grid Value 1 2 WORD READ FROM PLC Station003_S01 Click Here	
Attributes Slot Number Module Name Description Parameterize Configure 1/0 Layout	fresh Grid Value 1 2 WORD READ FROM PLC Station003_S01 Click Here Click Here	
Attributes Stot Number Module Name Description Parameterize Configure I/D Layout Board Info Board Status Mapping M Add a new I/O device to active configuration.	steeh Grid Value Value Value Value Vor PROM PLC Station003_S01 Click Here Click Here Value Info Module Status Mapping / 1/0	



17. Select **1 WORD WRITE TO PLC** in the window that appears, then click **OK**.

Add I/O Module to Modular Slave
Slave Station Address : 3 <u>N</u> ew Slave
Slot Number :
I/O <u>M</u> odule :
1 WORD WRITE TO PLC
OK Cancel <u>H</u> elp

18. Now click on **Configure I/O Layout** and deselect **Swap Bytes**. Click <u>Apply</u> then **OK**.

Configu	re I/O Layout							×
Input	Output							
Outp	ut size :2 Bytes				Add	Insert	Delete]
	Data Type	Length In Bytes	Map Data To	Swap Bytes	I/O Desc	ription(15	Chars)	
0	Word	• 2	Value		o_E00			
New No Wł Foi	Output size : 2 B te nen transferring w r default PROFIBI	ytes vords, PROFIB US-DP behavi	US-DP transfr or, keep Swa	ers the high b p Bytes box o	yte first, follo hecked.	wed by the	low byte.	
		[OK	Cano	el j	Apply	Help	

19. Click on Parameterize in the Configuration window.

The Parameterize window will appear with a default value of 1024. 20. Change 1024 to **16704** (40500 octal). Click on **Apply** then **OK**.

Pa	rameteriz	ze : 1 WORD WRITE TO PLC (Slot : 2)		x
ſ	Extended	Extended (Hex)		
	Offset	Name	Value	
	0	V Mem Write Addr (decimal fmt)	16704	
		· · · · ·	· · ·	
		ОК	Cancel <u>A</u> pply Help	

The H0–PSCM Slave Communications Module can now be put on line.

- 21. Either click on <u>Configuration > Connect</u> or on the Connect button.
- 22. After it is connected, either click on <u>Configuration</u> > Scan or on the Scan button.

The system should now be running.

Entivity Studio - ConnectivityCenter	- [Configuration]		×
Configuration View Drivers Devices	Tools Window Help		_ 8 ×
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Attributes Slot Number Module Name	Befresh Grid Value 2 1 WORD WRITE TO PLC		1
Attributes Stot Number Module Name Description	Befresh Grid Value 2 1 WORD WRITE TO PLC Station003_S02		
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Attributes Stot Number Module Name Description Parameterize Configure I/O Layout	Befreeh Grid Value 2 Value 2 Station003_S02 Click Here Click Here		×
Attributes Slot Number Module Name Description Parameterize Configure 1/0 Layout	Befresh Grid 2 1 Value 2 1 WORD WRITE TO PLC Station003_S02 Click Here Click Here		•
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Attributes Slot Number Module Name Description Parameterize Configure I/D Layout Board Info Board Status Mapping nnext to I/O Network	Befresh Grid Value 2 1 WORD WRITE TO PLC Station003_S02 Click Here Click Here Module Info Module Status Mapping ///D	Mapping /	