Step 1: Install the GSDML file of the SFB-PN in the configuration software (TIA / STEP 7)

Options	Tools s	Window	Help
Suppor	t packag	jes	
Manag Start A	e gener utomatio	al station de on License I	escription files (GSD) Manager
Show r	eference	e text	
🛄 Global	libraries		I

Source path:	D:\SFB_GSDMLfile							
Content of in	nported path							
File		Version	Language	Status	Info			
GSDML-V2.	32-Schmersal-SFB-8M	V2.32	English, Ger	Not yet installed	Schmersal			
<			1					
				Delete	- Commit			

Step 2: Add the SFB-PN module to the hardware configuration

Hardware catalog		SFB_Project > Devices & networks	_ 🖬 🖬 🗙
Options		🛃 Topology view 📠 Network view	Device view
		Network	
✓ Catalog			^
	ini, init		
🕑 Filter			
Controllers			
🕨 🫅 HMI			
PC systems		🖲 🗖 Not assig 🖲 👘	
Drives & starters			
Image:			
Detecting & Monitoring			
Distributed I/O			
Field devices			
🛨 🛅 Other field devices			
Drives			
Encoders			
🕨 🧊 Gateway			
🕨 🧊 General			
🗕 🗖 🖉			
👻 🛅 K.A. Schmersal GmbH & Co. KG			
👻 🛅 IO-Parallel			
SFB-PN-IRT-8M12-IOP			
Ident Systems			
Sensors			
PROFIBUS DP			

Step 3: Configuring SFB-PN in the PROFINET network (IP address & PROFINET name)



Step 4: Set the F address (PROFIsafe address) on the field box by using the rotary coding switches and configure it in the configuration software.



Step 5: Set F_WD_Time depending on the call cycle of the safety program of the F-PLC

	HINWEIS
i	The module only starts correctly if the call cycle of the safety program of the F-PLC is selected to be significantly shorter than the F_WD_Time. (e.g. call cycle 20 ms and F_WD_Time > 80 ms)

Safety Field Box SFB-PN

Step 6: Configuring safety parameters for the 8 device ports in the F-CPU (S7 controller)

S data [Module]			Properties	🗓 Info 🗓 📱 Diagnostics	
General IO tags	System constants Texts				
General Catalog information	Module parameters				
PROFIsafe	IO-Port 0				
Inputs					
Module parameters	Cross fault detection:	Off	-		
I/O addresses	Safety inputs :	2 channels			
	Stable time:	1.0s	-		
	Monitoring time:	12s	-		
	Safety outputs :	1 wire (PLd)	-		
	IO-Port 1				
	Cross fault detection:	On	-		
	Safety inputs:	2 channels	•		
	- Stable time:	1.1s	•		
	Monitoring time:	125	•		
	Safety outputs :	1 wire (PLd)	•		

Module parameters			
IO-Port 0			
Cross fault detection:	Off		-
Safety inputs:	2 cha	 Cross fault detection 	-
Stable time:	1.0s	* ON = Contacts *	•
Monitoring time:	12s	dry contacts.	-
Safety outputs:	2 wire	Select Stable time 0.7s and Monitoring time	-
		10s!	
IO-Port 1		* OFF = OSSD Outputs *	
Cross fault detection:	On	tested electronic	
Safety inputs:	2 cha	outputs. Select Sable time 0.1s	-
Stable time:	1.1s	and Monitoring time 2s!	-
Monitoring time:	12s	WARNING!	•
Safety outputs:	1 wire	OFF, please, select 2	
IO-Port 2		input parameter. If cross fault detection is	
		ON, then Safety outputs	
Cross fault detection:	Off	must be i wile.	-
Safety inputs :	2 cha	nnels	-

Step 7: Call the SFB Configuration Tool via the TCI interface of the configuration software



Safety Field Box SFB-PN

Step 8: Check the configured safety parameters with the **SFB Configuration Tool** and calculate the F_iPar_CRC

H	💼 😐 🖏 🗌	?	S SCHMERSR Safe solutions for your indus
Connected CPDtool	Overview configuration		_
	F-Parameters F_SIL: SIL3	Device Port 0	
(And the second	F_Block_ID: 1 F_Par_Version: 1	Cross fault detection Safety Inputs	Off E
Field box	F_Source_Add: 1 F_Dest_Add: 123	Stable time Monitoring time	0.1s 2s
	F_WD_Time: 150 F_Par_CRC: 47327	Safety Outputs	1 wire (PLd)
	F_iPar_CRC: 1756871750	checked and cor	rect
Parameters	Parameters are	Device Port 1	Ø
		Cross fault detection Safety Inputs	Off 2 channel
1	CRC hexadecimal	Stable time	0.1s
	CRC decimal	Safety Outputs	1 wire (PLd)



Step 9: Copy the F_iPar_CRC to the S7 controller

r CRC		FS data [Module]						Rroperties	🗓 Info 追 📱 Diagnostics	
	Calculate	General General	IO tags	Sys	stem constants	Texts				
Parameters are	GRC	Catalog i PROFIsafe	nformation							
correct		Inputs				F_5	IL: SIL3		*	
	- Compared as a	Module para	ameters			F_Block_	ID: 1			
		10 10010350				F_Par_Versio	001 1			
CRC hexadecimal	1000000					F_Source_A	id: 1			
E18E0E3A						F_Dest_A	id: 2			
TIGIOISA					F_Par_CRC_V	/ithoutAddress	85: 0			
CRC decimal	CRO_			•			🛃 Manu	ual assignment of F-	monitoring time	
4032004002						F_WD_Tin	ne: 150	_	ms 📒	
				- 1		F_iPar_CF	C: 888661	47		
						F_Par_CF	(C; 64100			
	CRC						🗌 F-1/O	DB manual number	assignment	
Copy to clipboard w	rith 📑 .					F-I/O DB-numb	er: 8003			
Insert under Proper	ties / PROFIsafe.					F-VO D8-nan	ie: F00002	SFBModuleData_1		

- **Step 10:** Implementing a program for the acknowledgement of module faults and device port faults
- Step 11: Download configuration from the configuration software to the F-PLC