Interface system gateways and digital extension modules

Quick start guide



Application note 105793_en_03

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1 Description

This document describes the startup and parameterization of Interface system (IFS) gateways in connection with other IFS devices, as for example EMM...IFS modules (motor management) or EM-D-...-IFS (digital extension modules) using IFS-CONF software. The requirements are therefore met to permit connection to all common bus systems, such as PROFIBUS DP, PROFINET, Modbus, DeviceNetTM, CANopen®, EtherNet/IPTM, RS-232, and RS-485.

Communication between gateways and up to 32 IFS devices (slaves) is established via TBUS.

The maximum number of IFS devices depends on the number of process data words used (max. 64 words, divided in Access 1 fast cycle and Access 2 slow cycle, each of 32 words).



Make sure you always use the latest documentation. It can be downloaded at phoenixcontact.net/products.





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3 System requirements

3.1 Supported operating systems

- MS Windows 2000 with Service Pack 4
- MS Windows XP
- MS Windows Vista
- MS Windows 7

3.2 Hardware requirements

Hardware requirements

CPU						
	2 GHz (recommended)					
RAM	1 GB (minimum),	Windows				
	2 GB (recommended)	Vista,				
		Windows 7				
	512 MB (minimum),	Windows XP,				
	1 GB (recommended) Windows					
		2000 SP4				
Hard disk space	500 MB free memory space					
CD-ROM drive	Yes					
Interfaces	1 x USB 2.0					
Monitor	SVGA, resolution of 1024 x 76 mum; SXGA, resolution of 1280 x 10 ommended					
Operator panels	Keyboard, mouse					

3.3 Software requirements

Software requirements for CONTACTRON motor management				
.Net Framework	Version 1.1			
.Net Framework	Version 1.1 SP1			
.Net Framework	Version 2.0			
Windows Installer	Version 3.1			
Internet browser	MS Internet Explorer Version 6.0 or later Mozilla Firefox Version 3.5 or later			

Designation	Description
FDT container	IFS-CONF M&M
CONTACTRON-DTM-IFS	DTM devices for integrating the EMM module in the FDT container

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3.4 Programming adapters/cables

Designation	Description	Order No.
IFS-USB- PROG- ADAPTER	Programming adapter for configuring Phoenix Contact INTERFACE modules with 12-pos. S-PORT interface	2811271
IFS-USB- DATACABLE	Data cable for communica- tion between industrial PC and Phoenix Contact devices with the 12-pos. IFS data port	2320500
IFS-TCP- PROG- ADAPTER	RJ45 network cable for com- munication between indus- trial PC and Phoenix Contact devices	-

3.5 Configuration package

Designation	Description	Order No.
MM-CONF-SET	The configuration package contains the following com- ponents: CONTACTRON-DTM-IFS IFS-USB-PROG-ADAPTER	2297992



4 Connecting the programming adapter

Use IFS-USB-PROG-ADAPTER programming adapter (Order No 2811271) or IFS-USB-DATACABLE (Order No. 2320500) for configuring Phoenix Contact INTERFACE modules with 12-pos. S-PORT interface.

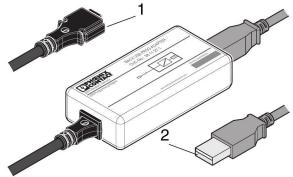


Figure 1 IFS-USB-PROG-ADAPTER

- 1 S-PORT connector
- 2 USB connector

4.1 Connection notes

WAR WAR

WARNING: Risk of injury The programming adapter must not be used in potentially explosive areas.

Do not use the programming adapter if you suspect that it is damaged.

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The adapter may only be used to program supported Phoenix Contact INTERFACE devices. Check the documentation for your device to see whether the programming adapter is compatible. You must install the configuration software re-

quired for your device prior to initial startup. Observe the relevant device documentation for this purpose.

4.2 Connection to the PC

Connect the programming adapter to a free USB connection on your PC using the USB cable provided.

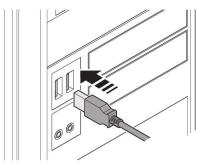


Figure 2 Connection to the PC

4.3 Connection to the device

On the device, connect the programming adapter to the 12-pos. S-PORT interface.

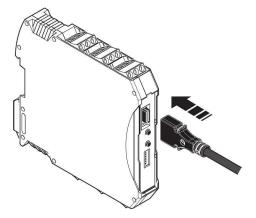


Figure 3

Connection to the device

NOTE: Potential damage to cables

Position the programming adapter so that no strain is placed on the plug-in connection on the device.

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To simultaneously parameterize up to 32 EMM devices, which are connected to a gateway via the TBUS, connect the IFS-USB-PROG-ADAPT-ER (Order No. 2811271) or the data cable IFS-USB-DATACABLE (Order No. 2320500) to the gateway.

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5 Software installation

- 1. Download the "IFS-CONF-SUITE-INTERFACE Setup" software from the URL phoenixcontact.net/products
- 2. Run the installation file by double-clicking it.
- 3. Follow the instructions in the installation program until it comes to selecting the software to be installed.

Required components for INT	ERFACE-SYSTEM-DTM	
The choosen components are re	quired to execute the INTERFAC	E-SYSTEM-DTM
INTERFACE-SYSTEM-DTMs		77718 K
FDT-Container Interface Con		0 K
USB-Programmier-Adapter-IFS		0 K
▼ INTERFACE-ANALOG-DTMs		29977 K
Destination Folder		
	e	Deserve
C:\Program Files (x86)\Phoenix	Contact	Browse
Space Required on C:	110420 K	
Space Available on C: allShield	34733608 K	Disk <u>S</u> pace
ano mora		

Figure 4 Installation wizard

All options are installed as standard. The following descriptions stipulate that Phoenix Contact's own FDT frame application (FDT container IFS-CONF) is installed and used.

5.1 Starting the application

Start the application by double-clicking the icon.



Figure 5 Software icon

6 Software configuration

6.1 Initial startup

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When starting the IFS-CONF application for the first time, you must set up an administrator.

Additional users can be set up within the application under "Tools, User management".

ן	Select the "Use Windows login for this user"
	checkbox if you wish to log in as standard with this
	user name each time the application starts. In this
	case, you will not be prompted for your password
	when the application starts, as authentication has
	already taken place through the Windows login.
	This setting is not recommend for an administra-
	tor.

User name: Role assignments:]
Rolename Administrator OEM Service Planning Engineer Maintenance Operator Observer	Description Administrator role OEM Service role Planning Engineer role Maintenance role Operator role Observer role		
Use Windows login f	or this user	ОК	Cancel

Figure 6 Creating a user when starting the software for the first time

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6.2 Transferring CONTACTRON-DTM-IFS to catalog management

After you have created the user, DTM catalog management opens automatically.

Click on "Search for installed DTMs".

Known DTMs:				Current	DTM Catalog				
Name	Vendor	Protocol	Тур	Name	Vendor	Protocol	Туре	Version	Date
	Updating D	TM Catalog							
	Found DT	M: EMMDtm.Dtm (3/12)	%					
			Ab	ort			J		

Figure 7 Searching for known DTMs

Any DTMs found on the system are then displayed in the left-hand table under "Known DTMs". Transfer all desired DTMs to the current DTM catalog.

To do this, proceed as follows:

Select the DTM or several DTMs simultaneously and click on the ">>" button or transfer all the DTMs by clicking on "All >>".

(nown DTMs:			C	urrent	DTM Catalog				
Name	Vendor	Protocol		Name	Vendor	Protocol	Туре	Version	Date
BTT 253 - EO/YO	ABB	IFSM							
BTT 263 - EO/YO	ABB	IFSM							
EEM 3-230AC/500AC-16-IFS	Phoenix Co	IFSM							
EEM 3-230AC/500AC-IFS	Phoenix Co	IFSM	-						
EEM 3-24DC/500AC-16-IFS	Phoenix Co	IFSM							
EEM 3-24DC/500AC-ExM-IFS	Phoenix Co	IFSM							
EEM 3-24DC/500AC-ExM-IFS(JS)	Phoenix Co	IFSM							
EEM 3-24DC/500AC-IFS	Phoenix Co	IFSM	1						
EM-CAN-GATEWAY-IFS	Phoenix Co	IFSM, IFSM	(
EM-DNET-GATEWAY-IFS	Phoenix Co	IFSM, IFSM	(
EM-ETH-GATEWAY-IFS(IFSM)	Phoenix Co	IFSM, IFSM	0						
EM-ETH-GATEWAY-IFS(TCP)	Phoenix Co	IFSM-TCP, I	(
EMM 3-230AC/500AC-16-IFS	Phoenix Co	IFSM	1						
EMM 3-230AC/500AC-16-IFS	Phoenix Co	IFSM	1						
EMM 3-230AC/500AC-IFS	Phoenix Co	IFSM	1						
EMM 3-230AC/500AC-IFS	Phoenix Co	IFSM	1						
FEMM 3-24DC/500AC-16-IFS	Phoenix Co	IFSM	-						
•		,		۰ 📖			11		



All desired DTMs are displayed in the current DTM catalog. If you want to transfer additional DTMs at a later time, follow the same procedure.

Known DTMs: Current DTM Catalog: Name Vendor Protocol Type Name Vendor Protocol Type Vension											
Name	Ve	endor	Protocol	Тур	Name	Vendor	Protocol	Туре	Version	Date	-
					į В	ABB	IFSM	Device D	Firmwar	2009-	
					J B	ABB	IFSM	Device D	Firmwar	2009-	
					Ø E	Phoenix Co	IFSM	Device D	FW: 1.0	2010-	
					# E	Phoenix Co	IFSM	Device D	FW: 1.0	2010-	ſ
					Ø E	Phoenix Co	IFSM	Device D	FW: 1.0	2010-	
					Ø E	Phoenix Co	IFSM	Device D	FW: 2.00	2010-	
					Ø E	Phoenix Co	IFSM	Device D	FW: 2.00	2013-	
					Ø E	Phoenix Co	IFSM	Device D	FW: 1.0	2010-	
					# E	Phoenix Co	IFSM, IFSM	Gateway	FW: 1.00	2012-	
					₿ E	Phoenix Co	IFSM, IFSM	Gateway	FW: 1.00	2012-	
					₿ E	Phoenix Co	IFSM, IFSM	Gateway	FW: 1.00	2012-	
					₿ E	Phoenix Co	IFSM-TCP, I	Gateway	FW: 1.00	2012-	
					Ø E	Phoenix Co	IFSM	Device D	FW: 1.0	2010-	
					₿ E	Phoenix Co	IFSM	Device D	FW: 1.04	2010-	
					# E	Phoenix Co	IFSM	Device D	FW: 1.0	2010-	
						Phoenix Co	IFSM	Device D	FW: 1.04	2010-	
					₿ E	Phoenix Co	IFSM	Device D	FW: 1.0	2010-	-
<	111			P.	٠ -						

Figure 9 DTM catalog management

Click the "Close" button. All DTMs are now prepared for use in the current DTM catalog.

Catalog management is closed.

6.3 Topology scan

Press the "IFSMGwChannel" button to manually start the topology scan wizard and search for connected devices.

OPS-Content Here Project consents Product New Wedge to Prove Wedge to P						
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Project Tree New Project New Project Support Ins-USB-PROG-ADAPTER BUS-ItemConnel DUS-ItemConnel DUS-ItemCo	Add Delete Cut Copy Paste Rename Show/Hide Channels Connect					
	Disconnect	_				
	Offline Compare Online Compare Online Compare All					
	Scan Topology	- 1	IFSMGwChannel			
	Import / Export Info					
	Functions	•				

Figure 10 Topology scan

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Interface system gateways and digital extension modules

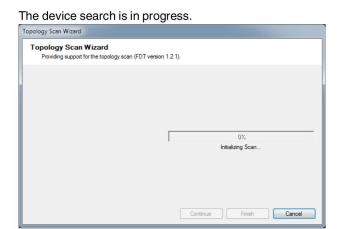


Figure 11 Topology Scan Wizard

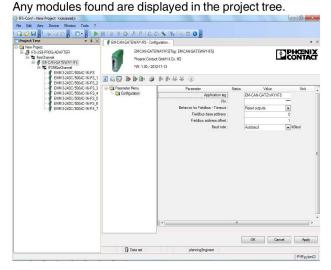


Figure 12 Project tree

6.4 Connecting several devices via an IFS gateway

If several devices, which have not been assigned a unique IFS address, are connected to a gateway via the TBUS, you can cancel the topology scan, as the devices connected to the gateway are not initially displayed in the project tree.

6.5 Functions

Under the "Functions" menu item, you can manage devices connected to the gateway and configure process values.

Device management

In order to identify all the devices on the bus, open the gateway device management by right-clicking the mouse on "Functions, Device management".

IFS-Conf - New Project <uns< th=""><th></th><th></th><th></th><th>- 0</th></uns<>				- 0
Edit Wew Device V				
\$ Ø H ,		130	9 P. P. C. C. 💊 🖗 🔍 🏛 🛛 💂	
Project Tree	• * ×			
B J IFS-USB-PROG-ADAPT	R			
B t fanChannel B-				
IFSMGw(Add	- 1		
	Delete	- 1		
	Cut			
	Сору	- 1		
	Paste	- 1		
	Rename	- 1		
	Show/Hide Channels	- i - i		
	Connect	- 1		
	Connect All	- 1		
	Disconnect	- 1		
	Parameters	· 1		
	Offline Compare	- 1		
	Online Compare	- 1		
	Online Compare All	- 1		
	Configuration	- 1		
	Scan Topology	•		
	Observe	- 1		
	Diagnosis	- 1		
	Import / Export	- 1		
	Info	- 1		
-	Functions		Device management	
	T MILLIONS	-	Process value configuration	
			Process value configuration	

Figure 13 Opening device management

Press the "Connect" button to establish a connection to the gateway.

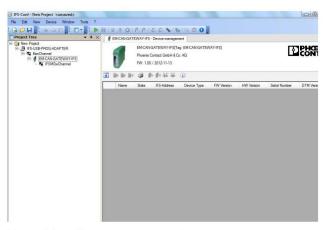


Figure 14 Device management

Following connection, the button in the project tree is highlighted green.

Then click on the "Refresh" button to read the hardware structure.

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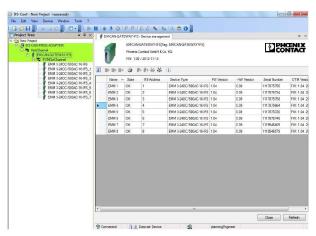


Figure 15 Reading the hardware structure

Assign an IFS address and name to each connected device and then write this information to the devices. To do so, right-click on the gateway in the project tree in the parameter menu on "Download All Parameters".

Project Tree				- Device manager					
Wew Project Wew Project Sussement Figure 1:: Sussement Figure 1:: Sussement Figure 1:: Sussement Sussement Sussement Sussement Sussement Sussement Sussement	Add		EM-CAN Phoenix		g: EM-CAN-GATEWAY-IFS]			1269	Q
- 6 EMM 3- EMM 3- EMM 3-	Delete	1	(🎯	1-1-1-1-1-1	0				
- 🖉 EMM 3-	Copy	15	- State	IFS-Address	Device Type	FW Version	HW Version	Serial Number	-
- EMM 3-	Paste		OK	1	EMM 3-24DC/500AC-16-IF	5 1.04	0.09	1117875755	
- 0 EMM 3-	Rename		OK	2	EMM 3-24DC/500AC-16-IF	5 1.04	0.09	1117875734	
	Show/Hide Channels		OK	3	EMM 3-24DC/500AC-16-IF	5 1.04	0.09	1117875758	
		1	OK	4	EMM 3-24DC/500AC-16-IF	5 1.04	0.09	1117875664	
	Connect		OK	5	EMM 3-24DC/500AC-16-IF	5 1.04	0.09	1117875720	
	Connect All Disconnect		OK	6	EMM 3-24DC/500AC-16-IF	5 1.04	0.09	1117875745	
			OK	7	EMM 3-24DC/500AC-16-IF	5 1.04	0.09	1119546409	
	Parameters		Upload	Parameter	DC/500AC-16-IF	5 1.04	0.09	1119546579	
	Offline Compare Online Compare			ad Parameter All Parameters					
	Online Compare All		Download All Parameters						
	Configuration		Online	Parameter					
	Scan Topology		Offline	Parameter	_				
	Observe Diagnosis								
	Import / Export Info								
	Functions				ш.				2

Figure 16 Downloading parameters

The devices are then highlighted green. If addresses have already been assigned to IFS devices, you merely need to change the device names.

6.6 Options

The simplest way to assign each device is to select an individual name for every device under "Tools, Options".

Concentration Concentratio Concentration Concentration Concentration Concentr	KCE N
Instructure Instruct	łCE N
Implementation Implem	KCE N
Contact Gibb H Co. KG Min 3420/50(4)	N
EMM 3-240C/500AC-16-IFS_2	
EMM 3-24DC/500AC-16-IFS_3 Name - State IFS-Address Device Type FW Version HW Version Setal Number	_
EMM 3/240C/500AC/16/FS_4 EMM 3/240C/500AC/16/FS_5 EMM 1 OK 1 EMM 3/240C/500AC/16/FS 1.04 0.09 1117875755	-
EMM 3/40C/5004C16/F5 5 EMM 2 OK 2 EMM 3/40C/5004C16/F5 1.04 0.09 1117875734	1
EMM 3:24DC/500AC-16IFS_7 EMM 3: OK 3: EMM 3:24DC/500AC-16IFS 1.04 0.09 1117875758	1
EMM 4 OK 4 EMM 3-24DC/500AC-16HS 1.04 0.09 1117875664	
EMM 5 OK 5 EMM 3-24DC/500AC-164FS 1.04 0.09 1117875720	1
EMM 6 OK 6 EMM 3-24DC/500AC-16IFS 1.04 0.09 1117875745	1
EMM 7 OK 7 EMM 3-24DC/500AC-16HS 1.04 0.09 1119546409	1
EMM 8 OK 8 EMM 3-24DC/500AC-164FS 1.04 0.09 1119546579	1

Figure 17 Selecting "Options"

Selecting "Individual Name (Fdt: Tag)".

international Settings Startup Keyboard ♥ Staplay	Pattem Individual Name (Fdt:Tag) Show Bus Address Friforce unique Individual Names Show Channels

Figure 18 "Individual Name" options

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7 Process data configuration

The process data configuration determines which data should be exchanged between the gateway and the control level. In addition to control signals and status messages as inputs, this data can also be measured values of connected devices. Process data can be selected by means of drag and drop.

To do so, open the process data configuration by right-clicking on the gateway in the project tree under "Functions, Process value configuration".

IFS-Conf-New Project <unsaved> e Edit View Device Window</unsaved>		le le
		P. P. C. C. 💊 🖏 🔍 🏛 😝 💂
Project Tree	- + ×	
New Project		
E J IFS-USB-PROG-ADAPTER		
E S EMCANGATEWAYJE	a	
IFSMGwChanne	Add	
	Delete	
- EMM 3/24D	Cut	
E DIFS-USB-PROG-ADAPTER Mar FamChannel Company Control Contr	Сору	
	Paste	
- 🖉 EMM 3-24D	Rename	
- 0 EMM 3-24D - 0 EMM 3-24D - 0 EMM 3-24D	Show/Hide Channels	
	Connect	
	Connect All	
	Disconnect	
	Parameters >	
	Offline Compare	
	Online Compare	
	Online Compare All	
	Configuration	
	Scan Topology	
	Observe	
	Diagnosis	
	Import / Export	
	Info	
	Functions +	Device management
		Process value configuration

Figure 19 Process data configuration

7.1 Definition of process data

Here you can view and define the process data that can be assigned to each device.

Select the device.

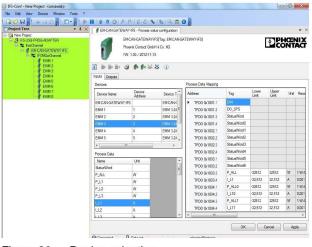


Figure 20 Device selection

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Select either "Inputs" or "Outputs".

Select the process data required by "double-clicking" it. Click the "Apply" button to apply the process data to the project.

7.2 Downloading process data

To write project data to the modules, right-click with the mouse on the gateway in the project tree and select "Parameters, Download All Parameters".



Figure 21 Writing project data to the modules



8 Monitoring dialog box

You can display the cyclically updated process data values of the connected IFS devices, which were assigned in the process data configuration.

The data is displayed in a hexadecimal, binary, and decimal format. The units of the measured values are also displayed.

8.1 Gateways

Right-click on the gateway and then on "Observe".

oject Tree	• * ×	0 0 11 - 1 - 1 0 - 0		
New Project				
EMCANGATEWAY	Add			
- EMM 1	Delete			
- 🕴 EMM 3	Cut			
- EMM 4	Сору			
- EMM 6	Paste			
EMM 7 EMM 8	Rename			
	Show/Hide Channels			
	Connect			
	Connect All			
	Disconnect			
	Parameters	•		
	Offline Compare			
	Online Compare			
	Online Compare All			
	Configuration	_		
	Scan Topology	•		
	Observe			
	Diagnosis			
	Import / Export			
	Info			
	Functions			

Figure 22 Monitoring

The defined process data is displayed with the corresponding measured values.

Project Tree 🔹 🔹 🕹		NGATEWAY-IFS - Ob	C- 💊 🗤 🔍 🏗 🛛 💂				
Kew Project SUS8-PROG-40APTER SUS8-PROG-40APTER GET EnrChannel GET ENCANGATEMANIES GET ENGWChannel GET ENGWChannel	1		TEWAYIFS[Tag: EM-CAN-GATEWAYI act GmbH & Co. NG 012-11-13	FSI	[CON	ENI
 EMM 3-24DC/500AC-16-FS_1 EMM 3-24DC/500AC-16-FS_2 	•		144 萃 (1)				
EMM 3/24DC/500AC-16-IFS_3 EMM 3/24DC/500AC-16-IFS_4	Access 1	Access 2			Update time	500	*
- EMM 3-24DC/500AC-16-IFS_5 - EMM 3-24DC/500AC-16-IFS_6	PDC	Name	Device	Hex	Binary	Value	Ur 1
EMM 3-24DC/500AC-16-IFS_7	1	DO_SPS	[128] EM-CAN-GATEWAY-IFS	0000	0000 0000 0000 0000	0.000	
	2	StatusWord	[1] EMN 1	0002	0000 0000 0000 0010	2,000	
	3	StatusWord0	[2] EMN 2	0002	0000 0000 0000 0010	2,000	
	4	StatusWord 1	[3] EMN 3	0002	0000 0000 0000 0010	2,000	
	5	StatusWord2	[4] EMN 4	0002	0000 0000 0000 0010	2,000	
	6	StatusWord3	(5) EMN 5	0002	0000 0000 0000 0010	2,000	
	7	StatusWord4	[6] EMN 6	0002	0000 0000 0000 0010	2,000	
	8	StatusWord5	[7] EMN 7	0002	0000 0000 0000 0010	2,000	
	9	StatusWord6	[8] EMN 8	0002	0000 0000 0000 0010	2,000	
	19	P_ALL	[1] EMN 1	0000	0000 0000 0000 0000	0,00	W
	11	UH.	[1] EMN 1	0000	0000 0000 0000 0000	0,00	A
	12	P_ALLO	[2] EMN 2	0000	0000 0000 0000 0000	0,00	W
	13	L_L10	[2] EMN 2	0000	0000 0000 0000 0000	0,00	A
	14	P_ALL1	[3] EMN 3	0000	0000 0000 0000 0000	0.00	W
	15	I L11	[3] EMN 3	0000	0000 0000 0000 0000	0.00	A ·
							Close

Figure 23 Displaying process values in the monitoring window

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8.2 Digital extension modules

Right-click on the gateway and then on "Observe".

The "Overview" page is displayed.

t Tree • + X	# EM-D-8/4/24DC-FS - Observe			
nplate IFSUSSPROG-ADAPTER Ifs famOrannel If Innel Ifs IFSND-ADamel Ifs IFSND-ADamel IfsND-Adapted	8H-0-6/4/34DC-IF5(Thg: Phoenix Contact GridH & PW: 1.00 / 2015-10-27	Co. 103		
8	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	i (()		
	Monitoring, Diagnose	Overview		
	Overview		State	
	Trend		Device :	PRR DAT ERR
		Alt	Message :	No mescages, errors
		ATTA .	1/9	
			Inputs:	1 2 3 4 5 6 7 8
			Outputs:	1 2 3 4
			Information	
			Seriel number :	D197886528581986
			Firmward- Version I	1.00
			Hardware-Version :	0.001

The "Trend" page shows the states of the digital inputs and outputs.

ect Tree • + ×	EM D 8/424DC IFS - Online Parameter	IND-8/4/24DC-IFS - Observe			
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Figure 25 State indication of the digital inputs and outputs

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Click the "Apply" button to apply the data to the project.

9 Settings

To set the IFS device properties, such as fieldbus address and baud rate, right-click on the gateway and then left-click on "Settings".

Set the required properties, such as baud rate and fieldbus address. For optimum performance, we recommend defining a fixed baud rate and not selecting Autobaud.

9.1 CAN gateway EM-CAN-GATEWAY-IFS

Project Tree	EM-CAN-GATE	EWAY-IFS[Tag: EM-CAN-GATEWAY-IFS] ct GmbH & Co. KG		ß	28	HŒN ONTA	
- EMM 3240C/5004-16FS2 - EMM 340C - EMM	Configuration	Parameter Application tag Pin: Behavior for Fieldbus. Timeout : Fieldbus base address : Fieldbus address offset : Baud rate :	Status	Value EM-CAN-GATENIAY-IFS Reset outputs Autobaud	• • 0 1	Unit	•
			(OK Cano	el	Apply	y

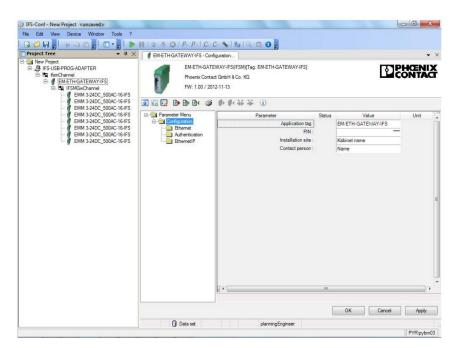
Figure 26 CAN gateway settings

Parameter	Selection	Interval	Program side
Application tag	– Max. 32 characters	-	EM-CAN-GATEWAY-IFS
Pin	– Min: 0 – Max: 9999	-	0000
Behavior for fieldbus timeout	Reset outputsMaintain last state	-	Reset outputs
Fieldbus base address	– Min: 0 – Max: 255	1	0
Fieldbus address offset	– Min: 0 – Max: 255	1	10
Baud rate	 Autobaud 10 20 50 	-	Autobaud

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9.2 Ethernet gateway EM-ETH-GATEWAY-IFS

Figure 27 ETH gateway - configuration settings

Parameter	Selection	Interval	Program side
Application tag	 Max. 32 characters 	-	EM-ETH-GATEWAY-IFS
PIN	– Min: 0 – Max: 9999	-	0000
Installation site	 Max. 32 characters 	-	Kabinet name
Contact person	 Max. 32 characters 	-	Name

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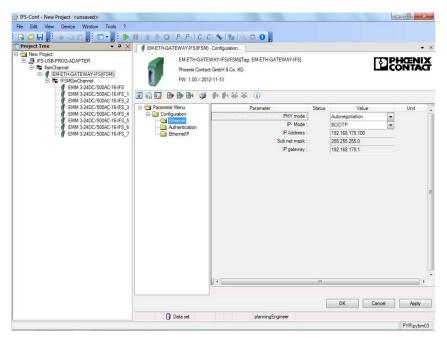


Figure 28 ETH gateway - Ethernet settings

Parameter	Selection	Interval	Program side
PHY mode	 Autonegotiation 		
	 10 Mbit, full duplex 	_	Autonegotiation
	 100 Mbit, half duplex 	_	Autonegotiation
	 100 Mbit, full duplex 		
IP Mode	– BOOTP		
	 Static IP address 	-	BOOTP
	– DHCP		
IP Address	-	-	192.168.178.100
Sub net mask	-	-	255.255.255.000
IP gateway	-	-	192.168.178.001

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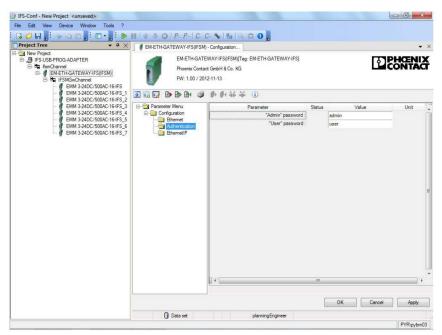


Figure 29 ETH gateway - authentication settings

Parameter	Selection	Interval	Program side
Admin password	 Max. 32 characters 	-	admin
User password	 Max. 32 characters 	-	user

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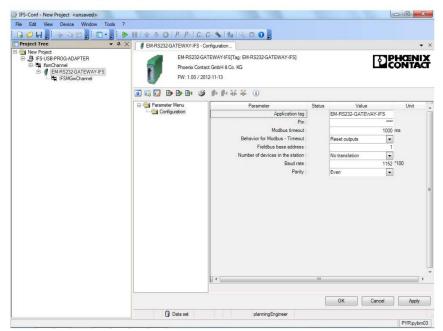
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) « [ок	incel	Apply

Figure 30 ETH gateway - Modbus/TCP settings

Parameter	Selection	Interval	Program side
Behavior at connection timeout	Reset outputsHold last outputs	_	Reset outputs

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9.3 RS-232 gateway EM-RS232-GATEWAY-IFS

Figure 31 RS-232 gateway settings

Parameter	Selection	Interval	Program side
Application tag	– Max. 32 characters	-	EM-RS232-GATEWAY- IFS
Pin	– Min: 0 – Max: 9999	-	0000
Modbus timeout	– Min: 0 – Max: 60000	1	1000
Behavior for Modbus-Timeout	Reset outputsMaintain last state	-	Reset outputs
Fieldbus base address	– Min: 0 – Max: 255	1	1
Number of devices in the station	 No translation 1 3 7 15 31 	-	No translation
Baud rate	Min: 96Max: 30000	1	1152
Parity	– None – Even – Odd	-	Even

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		●●●#辛 ①			
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	Congulation	Application tag Pin :		EM-RS485-GATEWAY-IFS	
		Modbus timeout :		1000	ms
		Behavior for Modbus - Timeout :		Reset outputs	
		Fieldbus base address : Fieldbus address offset : Number of devices in the station :	Fieldbus base address :		0
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		•	III		
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9.4 RS-485 gateway EM-RS485-GATEWAY-IFS

Figure 32 RS-485 gateway settings

Parameter	Selection	Interval	Program side
Application tag	– Max. 32 characters	-	EM-RS485-GATEWAY- IFS
Pin	– Min: 0 – Max: 9999	-	0000
Modbus timeout	– Min: 0 – Max: 60000	1	1000
Behavior for Modbus-Timeout	Reset outputsMaintain last state	-	Reset outputs
Fieldbus base address	– Min: 0 – Max: 255	1	0
Fieldbus address offset	– Min: 0 – Max: 255	1	1
Number of devices in the station	 No translation 1 3 7 15 31 	_	No translation
Baud rate	– Min: 96 – Max: 30000	1	1152

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Parameter	Selection	Interval	Program side
Parity	– None		
	– Even	-	Even
	– Odd		

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9.5 PROFIBUS gateway EM-PB-GATEWAY-IFS

Figure 33 Settings EM-PB-GATEWAY-IFS

Parameter	Selection	Interval	Program side
Application tag	 Max. 32 characters 	-	EM-PB-GATEWAY-IFS
Pin	– Min: 0 – Max: 9999	-	0000
Profibus base address	– Min: 0 – Max: 96	1	0
Profibus address offset	– Min: 0 – Max: 31	1	10
Behavior for Profibus error	Reset outputsMaintain last state	-	Reset outputs

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Charles Contraction EMPNETGATEWAY/ESUFSMIC Configuration EMPNETGATEWAY/ESUFSMIC Configuration EMPNETGATEWAY/ESUFSMIC Configuration	b			
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ji ji	< [m		OK Cancel Apply

9.6 PROFINET gateway EM-PNET-GATEWAY-IFS

Figure 34 PROFINET gateway - configuration settings

Parameter	Selection	Interval	Program side
Application tag	– Max. 32 characters	-	EM-PNET-GATEWAY- IFS
PIN	– Min: 0 – Max: 9999	-	0000
Installation site	 Max. 32 characters 	-	Kabinet name
Contact person	 Max. 32 characters 	_	Name

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Authentication		Sub net mask :	255.255.255.0		
		IP gateway :	192.168.178.1		
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				OK Cancel	Apply
Unconnected Data set planningEngineer					
O Unconnected Data set planningEngineer					EMM
					CMP

Figure 35 PROFINET gateway - Ethernet settings

Parameter	Selection	Interval	Program side
IP Address	—	-	192.168.178.100
Sub net mask	_	-	255.255.255.0
IP gateway	-	-	192.168.178.1

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G owner paringly						EMM

Figure 36 PROFINET gateway - authentication settings

Parameter	Selection	Interval	Program side
Admin password	 Max. 32 characters 	-	admin
User password	 Max. 32 characters 	-	user

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9.7 Modbus gateway EM-MBUS-GATEWAY-IFS

Figure 37 Modbus gateway - configuration settings

Parameter	Selection	Interval	Program side
Application tag	 Max. 32 characters 	-	EM-MBUS-GATEWAY- IFS
PIN	– Min: 0 – Max: 9999	-	0000
Installation site	 Max. 32 characters 	-	Kabinet name
Contact person	 Max. 32 characters 	-	Name

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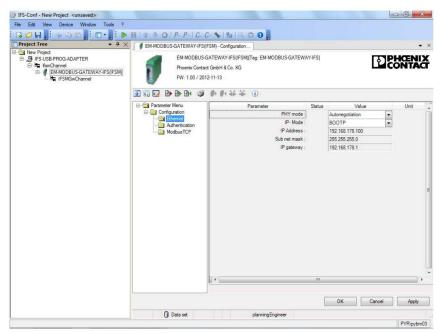


Figure 38 Modbus gateway - Ethernet settings

Parameter	Selection	Interval	Program side
PHY mode	 Autonegotiation 10 Mbit, full duplex 100 Mbit, half duplex 100 Mbit, full duplex 	_	Autonegotiation
IP-Mode	 BOOTP Static IP address DHCP DHCP or AutolP 	_	BOOTP
IP Address	-	-	192.168.178.100
Sub net mask	-	-	255.255.255.000
IP gateway	-	_	192.168.178.001

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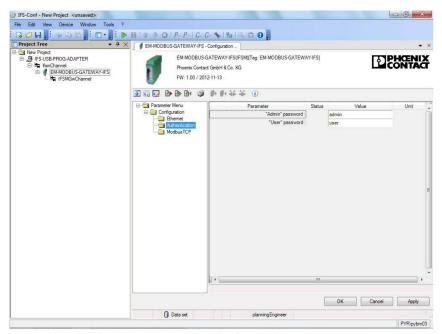


Figure 39 Modbus gateway - authentication settings

Parameter	Selection	Interval	Program side
Admin password	 Max. 32 characters 	-	admin
User password	 Max. 32 characters 	-	user

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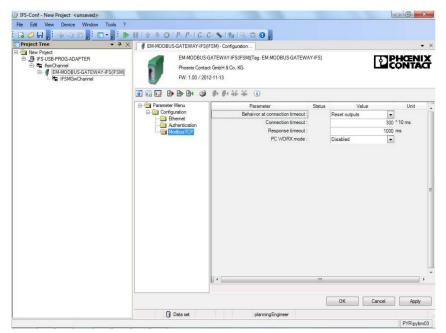


Figure 40 Modbus gateway - Modbus/TCP settings

Parameter	Selection	Interval	Program side
Behavior at connection timeout	 Reset outputs Maintain last state 	-	Reset outputs
Connection timeout	– Min: 100 – Max: 6000	_	3000 ms
Response timeout	– Min: 50 – Max: 60000	-	1000 ms
PC WORX mode	– Disabled – Enabled	-	Disabled

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9.8 DeviceNet gateway EM-DNET-GATEWAY-IFS

Figure 41 DeviceNet gateway settings

Parameter	Selection	Interval	Program side
Application tag	– Max. 32 characters	-	EM-DNET-GATEWAY- IFS
Pin	– Min: 0 – Max: 9999	-	0000
Behavior for Fieldbus-Timeout	 Reset outputs Maintain last state 	-	Reset outputs
Fieldbus base address	– Min: 0 – Max: 255	1	0
Fieldbus address offset	– Min: 0 – Max: 255	1	10
Baud rate	 Autobaud 125 250 500 	_	Autobaud

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9.9 Digital extension module EM-D-8/4-24DC-IFS

			OK	Cancel	Apply
Sconnected	Q Device	planningEngineer			
					EMM

Figure 42 Digital extension module settings

Parameter	Selection	Interval	Program side	
Application tag	 Max. 32 characters 	-	EM-D-8/4-24DC-IFS	
Behavior in case of IFS bus errors	StopOn hold	_	Stop	

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10 Diagnostics dialog box

You can continually check the current states of the gateway via the diagnostics dialog box. In addition, IFS communication errors can be displayed for the individual devices.

To open the dialog box, right-click on the gateway and then on "Diagnostics".

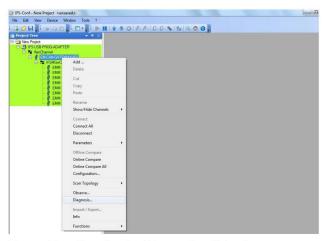


Figure 43 Opening the Diagnostics dialog box

10.1 Overview

The "Overview" dialog box displays all the operating data and status messages that provide initial information. This dialog box enables a quicker and more comprehensive overview of the gateway state.

Project Tree 🔹 🕈 🗙	EM-CAN-GATEWAY-IFS - Diagnosi	E.		
New Project		× 0		
E - 🔄 TanChannel	EM-CAN-GATEWAY-IFS Diagnosis			
EM-CAN-GATEWAY-IFS IFSMGwChannel	Directive Control Linghosis			
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	Connection state			

Figure 44 Tab 1 of the gateway Diagnostics dialog box

10.2 Diagnostics

The Diagnostics dialog box displays all status messages of the devices connected to the IFS bus. This provides a quick overview of the IFS communication state.

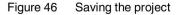
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E III IFSMGwChannel	Slave Diag		Gateway
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EMM 3-24DC/500AC-16-IFS_3 EMM 3-24DC/500AC-16-IFS_4	□ 3	□ 19	Failure rate 0,00 %
EMM 3-24DC/500AC-16-IFS_5	□ 4	□ 20	
EMM 3-24DC/500AC-16-IFS_6 EMM 3-24DC/500AC-16-IFS_7	□ 5	<u>[</u> 21	
	F 6	□ 22	
	F 7	F 23	
	F 8	2 4	
	F 9	T 25	
	F 10	F 26	
	E 11	F 27	Color legend
	F 12	L 28	Slave Message
	F 13	F 29	Slave Error
	F 14	F 30	
	F 15	F 31	
	F 16	F 32	
	1 10	1 32	

Figure 45 Tab 2 of the gateway Diagnostics dialog box

11 Saving the project

You can save the project for further use of the project data, e.g., for comparable stations. To do so, go to "File, Save as..." and enter a name.

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		5	StatusWord2	[4] EMM 4	0002	0000 0000 0000 0010	2,000
		6	StatusWord3	(5) EMM 5	0002	0000 0000 0000 0010	2,000
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		8	StatusWord5	[7] EMM 7	0002	0000 0000 0000 0010	2,000
		9	StatusWord6	[8] EMM 8	0002	0000 0000 0000 0010	2,000
		10	P_ALL	[1] EMM 1	0000	0000 0000 0000 0000	0,00
		11	UI1	[1] EMM 1	0000	0000 0000 0000 0000	0,00
		12	P_ALLO	[2] EMM 2	0000	0000 0000 0000 0000	0,00
		13	UL10	[2] EMM 2	0000	0000 0000 0000 0000	0.00
		14	P_ALL1	[3] EMM 3	0000	0000 0000 0000 0000	0,00
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