

Information

As at 01.08.2001 / Subject to change and errors excepted

PROFIBUS-DP GSD files Revision history

Description of contents:

This document provides information about the GSD files that are used for the PROFIBUS-DP components of the **ricos** I/O system from Wieland Electric GmbH.

General information about PROFIBUS-DP:

Two different formats are used for describing devices in this field bus system:

- (1) Type files (file ending .200) are used for older SIEMENS controllers e.g. S5.
- (2) Later generations of DP masters from SIEMENS also understand the GSD format (file ending: GSD, .GSE, .GSG, ...) of these device descriptions. All GSDs have been checked for syntax errors with the validation tool GSD-Checker from the PNO.

For information about using the GSD files, please also refer to the following documentation:
ricos manual (part no. 05.562.1389.0), section "Commissioning notes for field bus systems"

ricos BC DP and relevant GSD files

Overview of modules and GSD files

PROFIBUS DP		
Module	Part number	GSD file
Bus coupler ricos EC DP	83.030.0001.1	Wiel055B
Bus coupler ricos BC DP	83.030.0000.0/.1	Wiel0755
Compact module ricos DP 8 I/O	83.030.1100.0/.1	Wiel0757
Compact module ricos DP 16 I	83.030.1000.0/.1	Wiel0759
Compact module ricos DP 16 O	83.030.1200.0/.1	Wiel075B
Compact module ricos DP 8 I, 8 I/O	83.030.1300.0/.1	Wiel075D

Function of ricos extension modules with the ricos bus coupler firmware versions (e.g. 97.46)

Type	Part number	BC DP 97.46	BC DP 99.30	BC DP 01.27			EC DP 00.50	EC DP 01.24	
ricos 8 I/O	83.035.3100.X	X	X	X			X	X	
ricos 16 I	83.035.3000.X	X	X	X			X	X	
ricos 16 O	83.035.3200.X	X	X	X			X	X	
ricos 8 I, 8 I/O	83.035.3300.X	X	X	X			X	X	
ricos 4AI ± 10 V	83.035.4000.X	X	X	X			X	X	
ricos 4AI 0...10 V	83.035.4001.1		X	X			X	X	
ricos 4AI 0...20 mA	83.035.4010.X	X	X	X			X	X	
ricos 4AI 4...20 mA	83.035.4011.1			X				X	
ricos 4AI/4AO ± 10 V	83.035.4100.X	X	X	X			X	X	
ricos 4AI/4AO 0...10 V	83.035.4101.1			X				X	
ricos 4AI/4AO 0.20 mA	83.035.4110.X	X	X	X			X	X	
ricos COUNTER	83.035.5400.1		X	X			X	X	
ricos POSITION	83.035.5410.0		X	X			X	X	
ricos 4AI / PT100	83.035.4040.1		X	X			X	X	
ricos 4AI / TC	83.035.4050.1			X				X	
ricos RELAY	83.035.5200.1			X				X	
ricos 4 I AC 115 V	83.035.5000.1			X				X	
ricos 4 I AC 230 V	83.035.5005.1			X				X	

ricos BC DP part no. 83.030.0000.1
(previous part no. 83.030.0000.0)

Main directory:

\\PROFIBUS_DP\\GSD-DP-Modular\\

Revision	Subdirectory	File	Valid from	to
1	1-sw9746_(V1_02)	WIEL0755.GSD	97.46	99.30
2/3	2-sw9930_(V2_01)	WIEL0755.GSD	99.30	01.27
5	3-sw0127_(V2_03)	WIEL0755.GSD	01.27	

Comments:

- All **new bus coupler versions** can also be operated with **earlier versions of GSD files**. New functions and new modules cannot however be used.
- All **earlier bus coupler versions cannot** be operated with **new GSD files**.
- **GSD file from revision 2 onwards** contains **standard error text** for extended PROFIBUS diagnostics. A configuration tool can display this diagnostics text in the event of an error. The user is thereby able to detect the reason for the fault without needing to carry out error detection via the PLC.
- **GSD file from revision 2 onwards** makes **extended parameterisation options** available to the user. Preset options such as the default disconnection state of the outputs, byte swap mode, data formats for the analog channels etc. can now be carried out using the menus when configuring the system e.g. with Step7. These so-called user parameters are then transferred by the DP master into the ricos bus coupler before the transition to data exchange mode. It is therefore no longer necessary to program the ricos preset options via the PLC using the parameterisation and diagnostics functions of the bus coupler.
- **GSD file from revision 2 onwards** has **modified identifier bytes** for some modules compared to revision 1:

Module designation	previous	new	Comment
Analog 4 inputs/4 outputs (20 mA and ± 10 V)	37h	73h	8 bytes on 4 words
Analog 4 inputs/4 outputs (20 mA and ± 10 V)	17h	53h	8 bytes on 4 words
Diagnostics interface	33h	71h	4 bytes on 2 words

Consistency is thus guaranteed each time by 1 word when exchanging data between the PLC and DP master

- **GSD file from revision 2 onwards** contains two references to **bitmaps in DIB format** (70*40 pixels, 16 colours) which contain the symbolic representation of the ricos system during normal operation and during diagnosis. Depending on the diagnostics tool used, the bitmaps are either copied into a specific directory before use or the full path including bitmap must be indicated in the GSD file. Refer to the description of the project design/diagnostics tool for the relevant information. The keywords in the GSD file are <Bitmap_Device> and <Bitmap_Diag>.
- **GSD file from revision 3 onwards** contains **new modules**:

Module designation	Identifier	Comment
Counter module: ricos COUNTER, 3 words	72h	3 input + output words
Counter module: ricos COUNTER, 5 words	74h	5 input + output words
Positioning module: ricos POSITION, 3 words	72h	3 input + output words
Positioning module: ricos POSITION, 5 words	74h	5 input + output words
Analog module PT100: ricos PT100	53h	4 input words

- **GSD file from revision 3 onwards** contains **extended parameterisation options for up to 8 modules** as well as additional data formats for the analog modules

- **GSD file from revision 5 onwards** contains **new modules**:

Module designation	Identifier	Comment
Relay module ricos 4 O RELAY	21h	2 output bytes
Input module ricos 4 I AC 115 V	11h	2 input bytes
Input module ricos 4 I AC 230 V	11h	2 input bytes
Analog module ricos 4AI 4-20 mA	53h	4 input words
Analog module ricos 4AI/4AO 4-20 mA	73h	4 input + output words
Analog module ricos TC	53h	4 input words

- **GSD file from revision 5 onwards** contains additional data formats for the analog modules

ricos EC DP part no. 83.030.0001.1

Main directory:

\\PROFIBUS_DP\\GSD-DP-Economy\\

Subdirectory	File	Valid from	to	Rev.
1-sw0050	WIEL055B.GSD	00.50	01.27	1
2-sw0124_(V2_03)	WIEL055B.GSD	01.24		5

- **GSD file from revision 5 onwards** contains **new modules**:

Module designation	Identifier	Comment
Relay module ricos 4 O RELAY	21h	2 output bytes
Input module ricos 4 I AC 115 V	11h	2 input bytes
Input module ricos 4 I AC 230 V	11h	2 input bytes
Analog module ricos 4AI 4-20 mA	53h	4 input words
Analog module ricos 4AI/4AO 4-20 mA	73h	4 input + output words
Analog module ricos TC	53h	4 input words

- **GSD file from revision 5 onwards** contains additional data formats for the analog modules

ricos compact modules

Main directory:

\\PROFIBUS_DP\\GSD-DP-Compact\\

Subdirectory	File	Device	Valid from	to	Rev.
	WIEL0757.GSD	ricos 8 I/O DP	98.08		1
	WIEL0759.GSD	ricos 16 I DP	98.08		1
	WIEL075B.GSD	ricos 16 O DP	98.08		1
	WIEL075D.GSD	ricos 8 I, 8 I/O DP	98.08		1