



VACUUM-AUTOMATION

Function Block-Dokumentation

„FB_PARA_RW_ETH“ – Beckhoff – TwinCAT 3

Version 01 | 01.2020

Note

This document were originally written in German and have been translated into English.
Store in a safe place for future reference.

Subject to technical changes without notice. No responsibility is taken for printing or other types of errors.

Published by

© J. Schmalz GmbH, 01.2020

This document is protected by copyright. J. Schmalz GmbH retains the rights established thereby. Reproduction of the contents, in full or in part, is only permitted within the limits of the legal provisions of copyright law. Any modifications to or abridgments of the document are prohibited without explicit written agreement from J. Schmalz GmbH.

Contact

J. Schmalz GmbH
Johannes-Schmalz-Str. 1
72293 Glatten, Germany

Tel. +49 (0) 7443 2403-0
Fax +49 (0) 7443 2403-259
schmalz@schmalz.de
www.schmalz.com

Contact information for Schmalz companies and trade partners worldwide can be found at

 www.schmalz.com/salesnetwork

Table of contents

1	Function block “FB_PARA_RW_ETH”	4
1.1	Brief description	4
1.2	Image of function block.....	4
1.3	Parameter - Input.....	5
1.4	Parameter - Output.....	5
1.5	Additional information	6
1.5.1	EtherCat.....	6
1.5.2	Profinet.....	6
2	Appendix	7
2.1	List of abbreviations	7
2.2	Note	7

1 Function block "FB_PARA_RW_ETH"

1.1 Brief description

This function block is used to access parameter data of the respective products via various systems.

Systems:

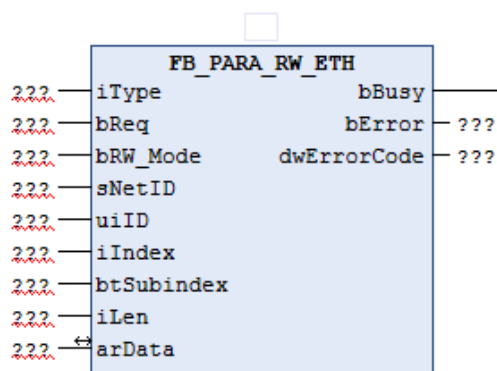
- Beckhoff TwinCAT 3 – EtherCat
- Beckhoff TwinCAT 3 – Profinet

The functions Read parameter and Write parameter are available.

Please refer to the respective parameter lists for the documents of the corresponding products.

1.2 Image of function block

Example of function block:



1.3 Parameter - Input

name	data type	description
iType	INT	Select the system: 0 = EtherCat 1 = Profinet
bReq	BOOL	Execute the read or write process
bRW_Mode	BOOL	Select the mode: 0 = Read 1 = Write
sNetId	STRING	Specification of the network identifier
uiID	UINT	Address of the desired ID
iIndex	INT	Index of the object to be used
btSubindex	BYTE	Subindex of the object to be used (can only be used with EtherCat)
iLen	INT	Number of data to be used in bytes
arData	ARRAY [0..231] OF BYTE	Address (pointer) to the data buffer: Read -> read data available Write -> enter data to be written

1.4 Parameter - Output

name	data type	description
bBusy	BOOL	Is active during the processing of the process until a feedback occurs
bError	BOOL	Will be activated if an error has occurred
dwErrorCode	DWORD	Returns the ADS error code of last executed command in case of an error

1.5 Additional information

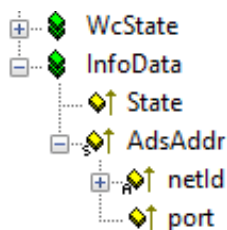
In order to perform the required functions, library blocks were used. For the block described here to work, the PLC library "TcEtherCAT.Lib" must be integrated into the project.

So that data can be read from the object directory of an EtherCAT slave, the slave must have a mailbox and support the "CANopen over EtherCAT" (CoE) protocol.

1.5.1 EtherCat

The necessary network identifier can be found in the System Manager. Select the desired device and enter the values under "netId" in sNetID and "port" in uiID.

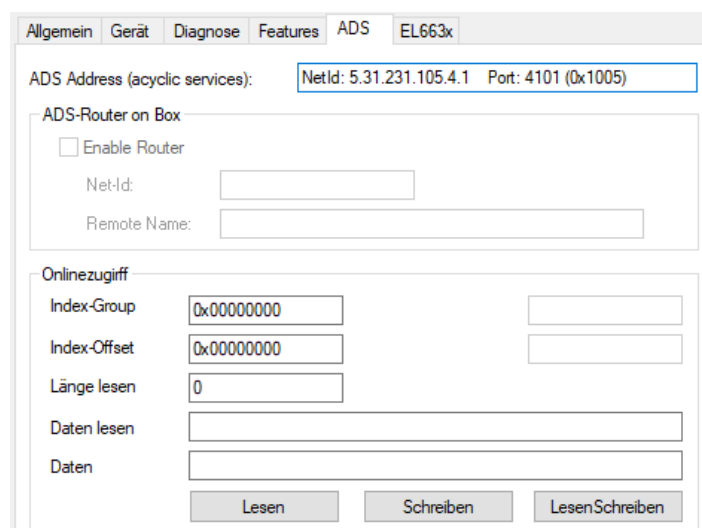
Example EtherCat – network ID:



1.5.2 Profinet

The Profinet also shows the necessary network ID to the System Manager. Select the desired device, change to the tab "ADS" and enter the values "NetId" in sNetID and "Port" in uiID.

Example Profinet – network ID:



2 Appendix

2.1 List of abbreviations

abbreviation	description
FB	Function block
EPC	Energy- and Processcontrol
CM	Condition Monitoring
EM	Energy Monitoring
PM	Predictive Maintenance

2.2 Note

- The byte order of the product is represented as big endian.

At your service worldwide



● **Headquarters**
Hauptsitz

Schmalz Germany – Glatten

● **Sales and production companies**
Vertriebs- und Produktionsgesellschaften

Schmalz China – Shanghai
Schmalz India – Pune
Schmalz Japan – Yokohama
Schmalz USA – Raleigh (NC)

● **Sales companies**
Vertriebsgesellschaften

Schmalz Australia – Melbourne
Schmalz Benelux – Hengelo (NL)
Schmalz Canada – Mississauga
Schmalz Finland – Vantaa
Schmalz France – Champs-sur-Marne
Schmalz Italia – Novara
Schmalz Mexiko – Querétaro

Schmalz Poland – Suchy Las (Poznan)
Schmalz Russia – Moskow
Schmalz South Korea – Anyang
Schmalz Spain – Erandio (Vizcaya)
Schmalz Switzerland – Nürensdorf
Schmalz Turkey – Istanbul

• **Sales partners**
Vertriebspartner

You can find the Schmalz sales partner in your country at:
WWW.SCHMALZ.COM/SALESNETWORK

Den Schmalz Vertriebspartner in Ihrem Land finden Sie auf:
WWW.SCHMALZ.COM/VERTRIEBSNETZ

J. Schmalz GmbH
Johannes-Schmalz-Str. 1
72293 Glatten, Germany
T: +49 7443 2403-0
schmalz@schmalz.de
WWW.SCHMALZ.COM

Version 01 | 01.2020