

How-To-Do

YASKAWA MPiec with VIPA IM 053 over Modbus TCP

Content

1	General	2
1.1	Information	2
1.2	Reference	2
2	Hardware Configuration	3
2.1	Used Products for the Modbus TCP connection	3
3	Procedure	3
3.1	Configure a Modbus Slave in MotionWorks IEC Pro 2.....	3
3.2	Select the used function codes I/O Groups	4
3.3	Comments.....	4
4	Revision History.....	5
4.1	Changes.....	5

YASKAWA MPiec with VIPA IM 053 over Modbus TCP

1 General

1.1 Information

This 'How-To-Do' describes, how you can connect a YASKAWA MPiec with a VIPA SLIO IM 053 (053-1MT00) in MotionWorks IEC Pro2.

You can find a detailed description of the SLIO IM 053-1MT00 in the manual under the link:

SLIO IM 053-1MT00

<http://www.vipa.com/de/service-support/manuals/io-systems/slio/>

1.2 Reference

Liability for material defects and defects of this documentation, especially for the correctness, accuracy, freedom and protection or third party rights, completeness and / or usability - except for willful misconduct or bad faith - are excluded.

How-To-Do

YASKAWA MPiec with VIPA IM 053 over Modbus TCP

2 Hardware Configuration

2.1 Used Products for the Modbus TCP connection

1. YASKAWA Controller: MP2310iec
 2. VIPA SLIO IM 053: 053-1MT00
- SLIO Modules:
- | | |
|--------|-----------|
| DI 8x: | 021-1BF00 |
| DO 8x: | 022-1BF00 |
| AI 2x: | 031-1BB30 |
| AO 2x: | 032-1BB30 |

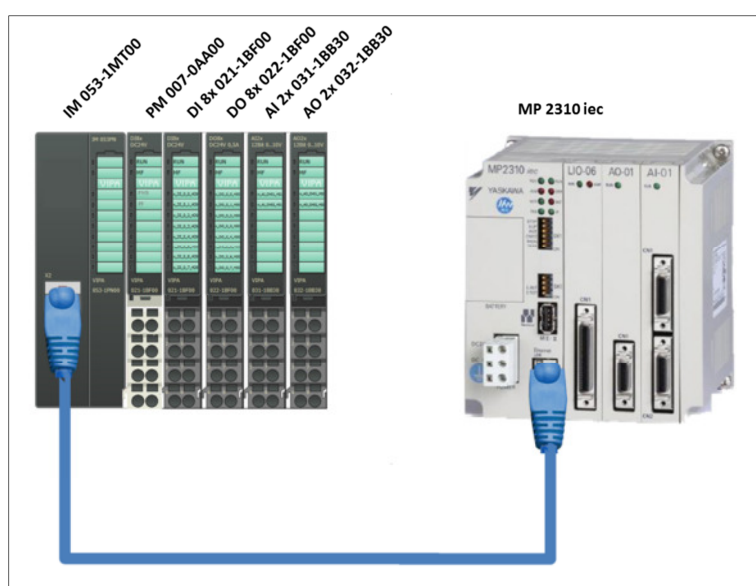


Figure 1: Hardware Configuration

3 Procedure

3.1 Configure a Modbus Slave in MotionWorks IEC Pro 2

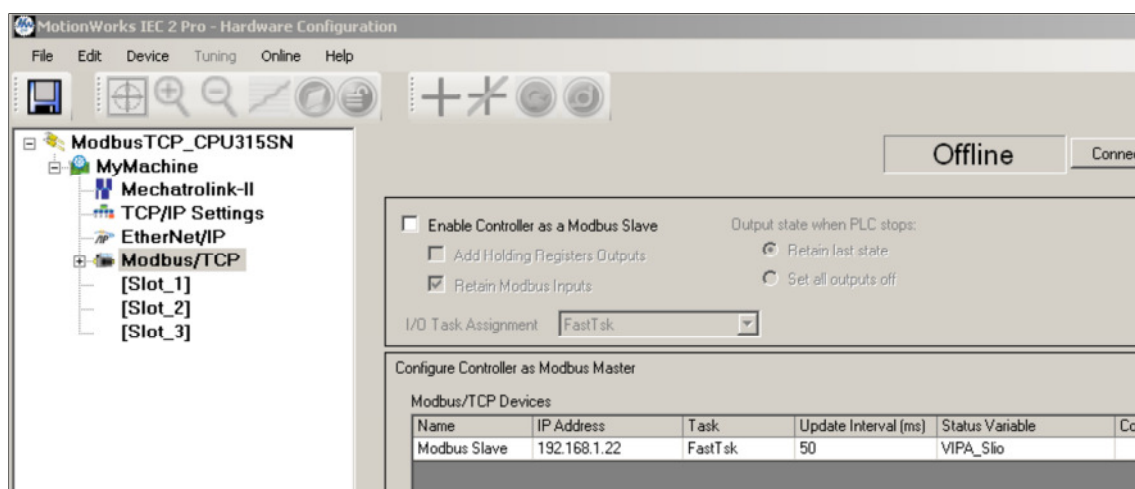


Figure 2: Configuration of the Modbus Slave

How-To-Do

YASKAWA MPieC with VIPA IM 053 over Modbus TCP

3.2 Select the used function codes I/O Groups

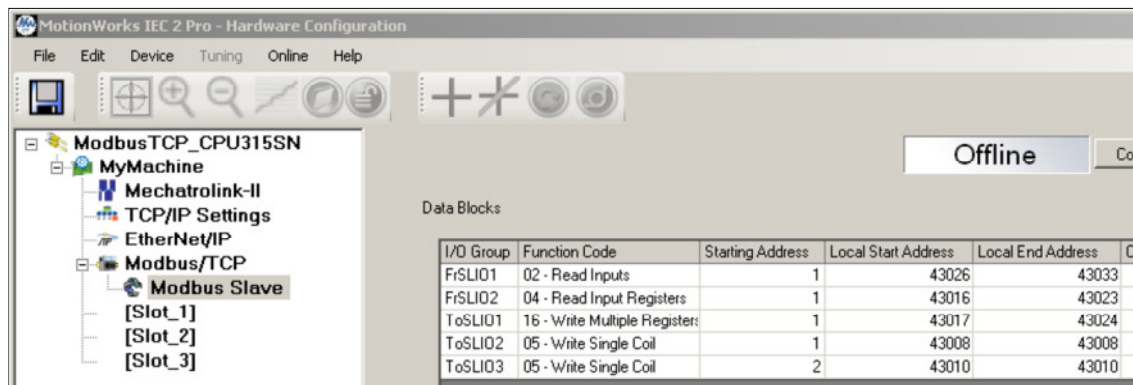


Figure 3: Select Modbus TCP function codes

Configuring the outputs and inputs of the SLIO is according to the slot position of the module. In the example, it is as follows:

- **FrSLIO1** is configured to read 64 bits starting from Modbus address 1. The first 8 bit are for DI8 in slot 1 and the bits 48-56 are for DI8 slot 5
- **FrSLIO2** is to read 4 registers
- **ToSLIO1** writes 4 registers
- **ToSLIO2** is to write the 1st bit of the DO8 on slot 2
- **ToSLIO3** is to write the 2nd bit of the DO8 on slot 2

[<Modbus Slave> 'FrSLIO1' Address Range: %IB43026 - %IB43033 (' Do Not Modify Group Name or Status				
DI1_Slot1	BOOL	VAR_GLOBAL		%IX43026.0
DI2_Slot1	BOOL	VAR_GLOBAL		%IX43026.1
DI3_Slot1	BOOL	VAR_GLOBAL		%IX43026.2
DI4_Slot1	BOOL	VAR_GLOBAL		%IX43026.3
DI5_Slot1	BOOL	VAR_GLOBAL		%IX43026.4
DI6_Slot1	BOOL	VAR_GLOBAL		%IX43026.5
DI7_Slot1	BOOL	VAR_GLOBAL		%IX43026.6
DI8_Slot1	BOOL	VAR_GLOBAL		%IX43026.7
DI1_Slot5	BOOL	VAR_GLOBAL		%IX43032.0
DI2_Slot5	BOOL	VAR_GLOBAL		%IX43032.1
DI3_Slot5	BOOL	VAR_GLOBAL		%IX43032.2
DI4_Slot5	BOOL	VAR_GLOBAL		%IX43032.3
DI5_Slot5	BOOL	VAR_GLOBAL		%IX43032.4
DI6_Slot5	BOOL	VAR_GLOBAL		%IX43032.5
DI7_Slot5	BOOL	VAR_GLOBAL		%IX43032.6
DI8_Slot5	BOOL	VAR_GLOBAL		%IX43032.7
VIPA_Slio	WORD	VAR_GLOBAL	(* Do Not Modify. *) Mod...	%M43034
[<Modbus Slave> 'FrSLIO2' Address Range: %IB43016 - %IB43023 (' Do Not Modify Group Name or Status				
DI_Slot1	WORD	VAR_GLOBAL		%M43016
AI_1_Slot3	WORD	VAR_GLOBAL		%M43018
AI_2_Slot3	WORD	VAR_GLOBAL		%M43020
DI_Slot5	WORD	VAR_GLOBAL		%M43022
[<Modbus Slave> 'ToSLIO1' Address Range: %OB43017 - %OB43024 (' Do Not Modify Group Name or Stat				
DO_Slot2	WORD	VAR_GLOBAL		%QW43017
AO_1_Slot4	WORD	VAR_GLOBAL		%QW43019
AO_2_Slot4	WORD	VAR_GLOBAL		%QW43021
DO_Slot6	WORD	VAR_GLOBAL		%QW43023
[<Modbus Slave> 'ToSLIO2' Address Range: %OB43008 - %OB43008 (' Do Not Modify Group Name or Stat				
DO1_Slot2	BOOL	VAR_GLOBAL		%QX43008.0
[<Modbus Slave> 'ToSLIO3' Address Range: %OB43010 - %OB43010 (' Do Not Modify Group Name or Stat				
DO2_Slot2	BOOL	VAR_GLOBAL		%QX43010.0

Figure 4: Selected Modbus TCP function codes

3.3 Comments

For more detailed information, please have a look at the Vipa SLIO manual. Or write us at mac@yaskawa.eu.com

4 Revision History

4.1 Changes

Date	Changes	Editor
10.06.2014	Erstellung Dokument	M. Dörnhöfer