MODBUS RTU Communication

Communication interface

the integrated drive linear motors are provide with MODBUS RTU communication interface for programming. Any PLC with MODBUS RTU interface can be used in combination with this motor.

The supported MODBUS mode are :

1. Read Multiple Holding Registers - Function code 3
2. Write Single Holding Register - Function code 6

Please note that you can read a maximum of 2 registers per read operation with standard communication speed of 38400 and parity Even. The MODBUS parameters are organized in different area in respect to the function involved.

PARAMETER AREA	STARTING ADDRESS Decimal	ENDING ADDRESS Decimal	SIZE
Drive Parameter	0	1024	1024
Application parameter	1536	1792	256
Motion table	1793	1902	109
Oscilloscope configuration	2000	2008	8
Input Variables	4096	4159	63
Output Variables	4608	4671	63
Oscilloscope data	4672	6723	2051
Diagnostic data logging temperature	7000	7512	512
Diagnostic data logging current	7513	8025	512

Command Word - Address 4096

Please note that with function code 6 (write register), the reply at this register write will be not present.

VALUE	DESCRIPTION
0	No command
1	Star Homing
2	Reserved
3	Enable drive
4	Disable drive
5	Manual Homing
6	Fault reset
7	Phase calculation - Motion test
8	Store configuration to Flash
9	Read configration from Flash
10	Start Motion
11	Stop Moiton

12	Drive reset

Status Word - Address 4608

VALUE	DESCRIPTION
0	Drive Init state
1	Ready
2	Phase calculation - Motion test
3	Automatic Homing
4	Manual mode operation
5	Run
6	I2T Fault
7	Manual Homing
8	Write configuration to FLash
9	Write to flash done
10	Flash error
11	Read configuration from Flash
12	Flash fault
13	SIN/COS encoder overrange
14	Motor overtemperature
15	Power stage overcurrent
16	DC Link overange

DOCUMENT	FILE
List of MODBUS registers	:integrated_drive_motors:modbus_register_microdrive.xlsx

Digital Input and Output Signals

the integrated drive linear motors are equipped with 2 digital inputs and 3 digital outputs. The Logic level is 24V and the input are protected against excessive voltage level. The output logic can be NPN (default) or PNP output with internal pull-up resistors.

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