Sommario

1. P1R11FA10 - 001 : User manual

1.1 MODBUS mapping

	The following table shows the mapping of the MODBUS protocol WORD that you can be read. All the WORD must be read with the “Holding Registers”.

Modbus Word Address	HA548.04 parameter description	HA548.04 Address	Acces type R/W
0001	Progressive number of refresh cycles	n.d.	R
0002	Error numbers of the comunication toward the HA548.04	n.d.	R
0003	Co1 Torqe threshold	FC28	R/W
0004 0005	Basic differential speed (dn 0)	FC2A	R/W
0006	Co 2 Torque threshold	FC2E	R/W
0007 0008	Differential modulation speed (dn 1)	FC30	R/W
0009	Co 2 Torque threshold	FC34	R/W
0010 0011	Safety differential speed (dn 2)	FC36	R/W
0012	Calculated torque of the screw	FC4E	R
0013	Temperature reading to the analog input IA2	FC50	R
0014 0015	Absolute differential ratio cylinder / screw (long)	FC52	R
0016 0017	Screw speed	FC56	R
0018 0019	Cylinder speed	FC5A	R
0020	Couple read to the analog input IA1	FC5E	R
0021	Torque for screw torque calculation	FC60	R
0022	Torque differential for predictive calculation	FC62	R
0023	Couple preditive purposes	FC64	R
0024 0025	Adjusting differential speed set point	FC66	R
0026	Inputs state	FC6A	R
0027	Outputs state	FC6C	R
0028			
0029			
0030			
0031			
0032			

1.2 MODBUS settings

The default settings is of the MODBUS/RTU module is:

- Mode = Slave
- Protocol = RTU
- Card Id = 1
- Baud-rate = Selectable (See the CN2 paragraph)
- Stop-bit = 1
- Parity = none
- Responce-delay = 5 milliseconds

	Accepted modbus requests	
	Type request	***Description***
	3	Read Holding Register
	6	Write Single Holding Register
	16	Write Multiple Holding Register

1.3 HA548.04 setup data setting

Enter to the HA548.04 setup and to set the following parameters:

Code	Description	Value
rS	RS 485 Enable	1
br	RS 485 Speed transmission	9600
db	Number of the data bits	8
Sb	Number of the stop bits	1
PA	Paruty bit	0
rc	Delay of the character transmission	5
CI	Address code	1

1.4 Diagnostic

The 4 leds L1, L2, L3, L4 shows the diagnostic:

- L1 = Transmission to HA548.04 in progress
- L2 = Receive from the HA548.04 in progress
- L3 = Modbus message in working
- L4 = Configuration error

For reset the communication errors, press the RESET button

2. Testing with PC program

To test the modbus functionality on the PC, you must use a program “Modbus RTU Master”.
You can use the ModScan32 program of WinTech (www.win-tech.com)

Connect properly the USER port (CN2 pins 4A, 5A, 5B) to the serial port of the PC, and then set the dips SW2.1-5 OFF e SW2.6 ON.

2.1 Setup ModScan32 program

Press to menù Connection → Connect:

- Select the serial port on your PC (eample COM2)
- then in the Configuration section, to set Modbus communication data (Baudrate can be selected as described under CN2)
- then in Protocol Selection, to set the data as in the following picture

Length must not exceed the value of 32, otherwise it must be done a reboot of the instrument.