

R610 Modbus – 8 × AO (0 ... 10 V)

- **bit address = 16 * (word address -1) +1**
- **supported Modbus functions – F01, F03, F15, F16**

name	address	type (def)	description	note
module ID	1 LSB 1 MSB	R	Module identification	Module ID: 8061hex
firmware MSB	2 LSB 2 MSB	R	Firmware version	FW version (in dec) corresponds with version of this document; for example: FW 13 hex (19 dec) = document V 01900 first three digits: FW version, remaining two digits: document revision
status LSB	3 LSB	R, W RAM	module status lower byte bit 0 – enable EEPROM write bit 1 – SW reset enable bit 4 – enable EEPROM init bit 5 – central write disable (all RW registers)	EEPROM init is enabled when the INIT switch was ON at power-up, and switched OFF before bit 4 was set to 1 (indicated by bit 2 in status MSB) SW reset enables device restart (see register 1002)
status MSB	3 MSB	R	module status upper byte bit 0 - 0 normal mode - 1 init mode bit 1 - 1 at the next write attempt received data will be written to EEPROM - 0 at the next write attempt received data will be written to RAM only bit 2 – EEPROM init bit 3 – central write disable indication bit 4 – 0 bit 5 – SW reset enable bit 6 – 0 bit 7 – 1	

address	4 LSB	R, W EEPROM (1)	Modbus module address	!!! The changes will become active only after module restart (the register is written immediately, but the new address is effective after restart)
baud rate (comm speed)	4 MSB	R, W EEPROM (13)	10dec ... 1 200bps 11dec ... 2 400bps 12dec ... 4 800bps 13dec ... 9 600bps 14dec ... 19 200bps 15dec ... 38 400bps 16dec ... 57 600bps 17dec ... 115 200bps	!!! The changes will become active only after module restart (the register is written immediately, but the new baud rate is effective after restart)
output range, channels 1, 2	5 LSB	R, W EEPROM (0x22)	2... voltage 0 – 10 V	bit 0 ... bit 3 ... channel 1 bit 4 ... bit 7 ... channel 2
output range, channels 3, 4	5 MSB	R, W EEPROM (0x22)		bit 0 ... bit 3 ... channel 3 bit 4 ... bit 7 ... channel 4
output range, channels 5, 6	6 LSB	R, W EEPROM (0x22)		bit 0 ... bit 3 ... channel 5 bit 4 ... bit 7 ... channel 6
output range, channels 7, 8	6 MSB	R, W EEPROM (0x22)		bit 0 ... bit 3 ... channel 7 bit 4 ... bit 7 ... channel 8
channel 1 value	7 LSB 7 MSB	R, W RAM	the AO values are ranged 0000 hex – 0FFF hex which is 0 dec – 4095 dec; 0000 hex is for 0 V 0FFF hex is for 10 V	set values at analogue output channels
channel 2 value	8 LSB 8 MSB	R, W RAM		
channel 3 value	9 LSB 9 MSB	R, W RAM		
channel 4 value	10 LSB 10 MSB	R, W RAM		
channel 5 value	11 LSB 11 MSB	R, W RAM		
channel 6 value	12 LSB 12 MSB	R, W RAM		
channel 7 value	13 LSB 13 MSB	R, W RAM		

channel 8 value	14 LSB 14 MSB	R, W RAM		
up time	15 LSB 15 MSB 16 LSB 16 MSB	R	Time [in seconds] since module power-up or reset	
number EE writes	17 LSB 17 MSB	R EEPROM	number of EEPROM writing cycles (address, baud rate, range, ...), just for information	Counter 0 ... FFFE h; no overflow, when FFFE h is reached, the counter stops
uptime	1000 LSB 1000 MSB 1001 LSB 1001 MSB	R	Uptime [s]	
SW reset	1002 LSB 1002 MSB	R, W RAM	Writing of a non-zero value executes software restart (function must be enabled in Status LSB bit 1).	
serial number	1003 LSB 1003 MSB 1004 LSB 1004 MSB	R, W OTP EEPROM	Module serial number (one-time programmable only, at production)	
serial port settings	1005 LSB	R,W EEPROM (0)	Serial port settings bits 0,1 – parity 0 none 1 even 2 odd bit 2 – 0 one stopbit 1 two stopbits	!!! The changes will become active only after module restart (the register is written immediately, but the new settings are effective after restart)
reserved	1005 MSB	R		
dip switch	1006 LSB	R	Actual value of the addressing DIP switch	
reserved	1006 MSB	R		

Revision:

19. 11. 2019 ver. 102

14. 01. 2022 ver. 102 – stylistic adjustments, change logo