

**MODBUS REGISTER MAP****QA-8DO****REMARKS:**

- Modbus connections: A+ and B-;
- Modbus Register reference: with reference to the logical address, for ex. 40010, corresponds to physical address n°9 as per Modbus RTU standard;
- Modbus functions supported: 3 (Read multiple registers), 6 (Write single), 16 (Write multiple).

Register Name	Comment	Register Type	R/W	Default Value	Modbus Address
machine_id	Machine ID	unsigned short	R	27	40001
fw_ver	Firmware version	unsigned short	R	xxx	40002
status	bit[0]=fail eeprom calibration; bit[1]=fail eeprom configuration; bit[2] = fail hw; bit[3]=fail log; bit[4]=fail rtc; bit[5]=fail eeprom; bit[6]=fail fram_init; bit[7]=fail fram	unsigned short	R	0	40003
digital_output_eff	(bit 0 = dout1 ... bit 7 = dout8) real output state	unsigned short	R		40005
dip	DIPSW status : bit 0-7=dip switch status	unsigned short	R		40006
digital_output_imp	(bit 0 = dout1 ... bit 7 = dout8)	unsigned short	R/W		40011
timeout_comm	timeout [sec*10], after wich output are switched to dout_init_state. (0= disabled)	unsigned short	R/W	0	40079
dout_init_state	: bit 0 dout1 ... bit 7 dout8; bit14=1 enable timeout; bit15=1 enable FRAM for DOUT	unsigned short	R/W	0	40093
modbus_addr_parity_stopbits	: MSB = address (1); LSB = bit[1-0] parity = none/odd/even; bit[2] =stopbit 1 or 2	unsigned short	R/W	256	40094
modbus_baudrate	: value 0=1200,1=2400,2=4800,3=9600,4=19200,5=38400,6=57600,7=115200	unsigned short	R/W	3	40095
command	SAVE_TARAT = 0XC1B0; SAVE_SETT = 0XC1C0; LEGGIDIP = D166; RESET = C1A0	unsigned short	R/W	0	40121
uid_l	Calibration file name	unsigned short	R/W		40124
uid_m	Calibration file name	unsigned short	R/W		40125
uid_h	Calibration file name	unsigned short	R/W		40126
hw_version	Hardware version	unsigned short	R/W		40127

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Upgrade FIRMWARE

The QA-8DO is designed to upgrade the firmware via the USB port using a standard pen drive where the file will be placed. The firmware will allow you to implement the functionality of the card and correct any anomalies that may occur. In order to upgrade the firmware simply, remove power from the module, insert the pen drive with the file, restore power, at this point the card will automatically discharge the file and update the firmware without altering the configuration loaded during programming. During the update phase the LED light will be intermittent FAIL.

