



MODBUS REGISTER MAP

QA-OMNI

REMARKS:

- Modbus connections: A+ and B- as per Modbus RTU standards;
- Modbus Register reference: with reference to the logical address, for ex. 40010, corresponds to physical address n°9 as per Modbus RTU standard;
- Dip Switch Settings: the setting is not enabled if the first sixth dip-switches are set to 000000, the rest of dip-switch are disabled. All settings coming from EEPROM.
- Modbus functions supported: 3 (Read multiple registers), 6 (Write single), 16 (Write multiple).
- Any changes made by dip-switch required to switch off the power supply

Register Name	Comment	Register Type	R/W	Default Value	Range	Modbus Address
Machine ID	Machine ID	UINT16	R	5		40001
Firmware ID	Firmware ID	UINT16	R	0		40002
Unit ID	Serial number	UINT16	R		0...65535	40003(MSW) 40004 (LSW)
Status	Status Register: bit 0 = fail global, bit 1 = alarm, bit 2 = over range, bit 3 = under range, bit 4 = din status, bit 5 =dout status, bit 6 = fail hw, bit 7 =fail log, bit 8 =fail rtc, bit 9 =fail eeprom, bit 10 =fail sensor	UINT16	R			40005
Input Value	Input Value Normalized	INT16	R		-32768...32767	40006
Totalizer	Totalizer	UINT32 (MSW)	R/W		0...4294967295	40007 40008
Output Value	Output Value (mV or uA)	UINT16	R/W		0...65535	40009
Input Value	Input Value	Float (MSW)	R			40010 40011
Period	Period (usec)	Float (MSW)	R			40012 40013
Frequency	Frequency	Float (MSW)	R			40014 40015
Cold Junction Temp	Cold Junction Temperature	Float (MSW)	R			40016 40017
TC read	TC uV readed	Float (MSW)	R			40018 40019
Digital Output	Digital Output: bit 0= disabled/enabled	UNIT16	R/W			40020
Dip-switch status	DIPSW status : bit 0-7 =dip switch status, pos 1=bit 8,..., pos 8=bit 1	UNIT16	R			40021
Third wire resistance	Third wire Resistance Ohm	FLOAT (MSW)	R/W			40022 40023
Analog input type	Analog Input type : value 0=Voltage, 1=Current, 2=Potentiometer, 3=Resistor400-2W, 4=Resistor400-3W, 5=Resistor400-4W, 6=Resistor4000-2W, 7=Resistor4000-3W, 8=Resistor4000-4W, 9=NI100-2W, 10=NI100-3W, 11=NI100-4W, 12=PT100-2W, 13=PT100-3W, 14=PT100-4W, 15=PT500-2W, 16=PT500-3W, 17=PT500-4W, 18=PT1000-2W, 19=PT1000-3W, 20=PT1000-4W, 21=TC J, 22=TC K, 23=TC R, 24=TC S, 25=TC T, 26=TC B, 27=TC E, 28=TC N	UNIT16	R/W	0	0...28	40101
Digital Input type	Digital Input Type : 0=Reed, 1=npn 2 fili, 2=npn 12 V (3 fili), 3=pnp 12 V (3 fili), 4=NAMUR, 5=Fotoelettrico, 6=Hall, 7=Ingresso 24 V,8=TTL, 9=Riluttanza variabile)	UNIT16	R/W	0		40102
Temperature mode	Temperature mode : bit 0-1 = unit measure °C/°F, bit 7-15 analog filter value	UNIT16	R/W	1	MSB: 1...32	40103
Totalizer mode	Totalizer mode : bit 1 = rising/falling edge,	UNIT16	R/W	0		40104
Digital Input filter	Digital Input filter : value 0=disabled, n sample average	UNIT16	R/W	0	0...65535	40105
Output Analog mode	Output Analog mode : bit 0 =Voltage/Current, bit 1-2 =analog input, frequency, period,totalizer, bit 3 = fail ur, bit 4 = fail or, bit 5 = fail hw, bit 6 = fail log, bit 7 = fail rtc, bit 8 = fail eeprom, bit 9 = fail alarm, bit 10-11 = 1threshold greater/1threshold less/2thresholds external/2thresholds inside, bit 12 =Manual mode	UNIT16	R/W	0		40106

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Register Name	Comment	Register Type	R/W	Default Value	Range	Modbus Address
Output Analog Input Begin scale	Output Analog Input Begin Scale	FLOAT (MSW)	R/W	0.0		40107
						40108
Output Analog Input End scale	Output Analog Input End Scale	FLOAT (MSW)	R/W	10000.0		40109
						40110
Output Analog Begin scale	Output Analog Begin Scale	UINT16	R/W	0	0...65535	40111
Output Analog End scale	Output Analog End Scale	UINT16	R/W	10000	0...65535	40112
Digital Output	Digital Output : bit 0 =default value, bit 1 = fail ur, bit 2 = fail or, bit 3 = fail hw, bit 4 = fail log, bit 5 = fail rtc, bit 6 = fail eeprom, bit 7 = fail alarm, bit 8 = fail din, bit 9 = din/din inv, bit 10 =low/high	UINT16	R/W	0		40113
Alarm Low Trip value	Alarm Low trip value	FLOAT (MSW)	R/W	0.0		40114
						40115
Alarm High Trip value	Alarm High trip value	FLOAT (MSW)	R/W	0.0		40116
						40117
Alarm Hysteresis value	Alarm Hysteresys value	FLOAT (MSW)	R/W	0.0		40118
						40119
Modbus Address	Modbus address +parity +stopbits : MSB Modbus address, bit 0-1 =parity none/odd/even, bit 2 =stop bits 1/2	UINT16	R/W	256		40120
Modbus Baudrate	Modbus Baudrate : value 0=1200, 1=2400, 2=4800, 3=9600, 4=19200, 5=38400, 6=57600, 7=115200	UINT16	R/W	3	0...7	40121
Log mode	Log mode : bit 0=disabled/enabled	UINT16	R/W	0		40122
Log sample time	Log sample time (sec)	UINT16	R/W	1	1...65535	40123
Log name	Log name 15 letters max	UINT16	R/W	0		40124
Log name	Log name 15 letters max	UINT16	R/W	0		40125
Log name	Log name 15 letters max	UINT16	R/W	0		40126
Log name	Log name 15 letters max	UINT16	R/W	0		40127
Log name	Log name 15 letters max	UINT16	R/W	0		40128
Log name	Log name 15 letters max	UINT16	R/W	0		40129
Log name	Log name 15 letters max	UINT16	R/W	0		40130
Log name	Log name 15 letters max	UINT16	R/W	0		40131
RTC Year	RTC Year	UINT16	R/W		2000...2099	41001
RTC Month	RTC Month	UINT16	R/W		1...12	41002
RTC Day	RTC Day	UINT16	R/W		1...31	41003
RTC Hour	RTC Hour	UINT16	R/W		1...23	41004
RTC Minute	RTC Minute	UINT16	R/W		0...59	41005
RTC Second	RTC Second	UINT16	R/W		0...59	41006
Command	Command : value 1=Reset, 2=Save Cfg to EEPROM, 3=Set Factory CFG, 4=Reset Tot., 5=Load Tot.	UINT16	R/W			42001
Command 1	Command parameter 1	UINT16	R/W			42002
Command 2	Command parameter 2	UINT16	R/W			42003

Upgrade FIRMWARE :

The QA-TEMP 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.

