Modbus Registers Map QA-POWER-M

Register Name	Comment	Register Type	R/W	Default Value	Range	Modbus Address
Machine ID	Machine ID (1)	Unsigned short	R	3		**40001**
FW version	Firmware version (0)	Unsigned short	R			**40002**
STATUS	Status : bit 0 = fail global, bit 1 = alarm, bit 2 = overrange, bit 3 = underrange, bit 4= ?, bit 5=dout status, bit 6 = fail hw, bit 7=fail log, bit 8=fail rtc, bit 9=fail eeprom	Unsigned short	R/W		0...65535	**40005**
Output Value	mV or uA	Unsigned short	R/W		0...20000	**40006**
Digital Output	bit 0=disabled/enabled	Unsigned short	R/W	0		**40007**
Dip switch status	bit 0-7=dip switch status, pos 1=bit 7,..., pos 8=bit 0	Unsigned short	R/W			**40008**
Vrms	Voltage measurement rms (V)	Float (MSW)	R/W		0...10000	**40009** **40010**
Irms	Current measurement rms (mA)	Float (MSW)	R/W		0...14000	**40011** **40012**
P	Active Power Measurement (W)	Float (MSW)	R			**40013** **40014**
Q	Reactive Power Measurement (VAR)	Float (MSW)	R			**40015** **40016**
S	Apparent Power Measurement (VA)	Float (MSW)	R			**40017** **40018**
Cosφ	Cosφ Measurement	Float (MSW)	R		0...1	**40019** **40020**
Frequency	Frequency Measurement (Hz)	Float (MSW)	R			**40021** **40022**
THD	THD Measurement	Float (MSW)	R			**40023** **40024**
Energy	Totale Energy Measurement (Wh)	Float (MSW)	R/W			**40025** **40026**
Energy positive	Only positive Energy Measurement (Wh)	Float (MSW)	R/W			**40027** **40028**
Energy negative	Only negative Energy Measurement (Wh)	Float (MSW)	R/W			**40029** **40030**
V peak	Instantaneous Voltage Peak (V)	Float (MSW)	R/W			**40031** **40032**
I peak	Instantaneous Current Peak (mA)	Float (MSW)	R/W			**40033** **40034**
V MAX	Max RMS Voltage (V)	Float (MSW)	R/W			**40035** **40036**
V min	Min RMS Voltage (V)	Float (MSW)	R/W			**40037** **40038**
I MAX	Max RMS Current (mA)	Float (MSW)	R/W			**40039** **40040**
I min	Min RMS Current (mA)	Float (MSW)	R/W			**40041** **40042**
P MAX	Max RMS Active Power (W)	Float (MSW)	R/W			**40043** **40044**
P min	Min RMS Active Power (W)	Float (MSW)	R/W			**40045** **40046**
Q MAX	Max Reactive Power (VAR)	Float (MSW)	R/W			**40047** **40048**
Q min	Min Reactive Power (VAR)	Float (MSW)	R/W			**40049** **40050**
S MAX	Max Apparent Power (VA)	Float (MSW)	R/W			**40051** **40052**
S min	Min Apparent Power (VA)	Float (MSW)	R/W			**40053** **40054**
Cosφ MAX	Max Cosφ	Float (MSW)	R/W			**40055** **40056**

Modbus Register Map

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Register Name	Comment	Register Type	R/W	Default Value	Range	Modbus Address
Cosφ min	Min Cosφ	Float (MSW)	R/W			**40057** **40058**
Frequency MAX	Max Frequency (Hz)	Float (MSW)	R/W			**40059** **40060**
Frequency min	Min Frequency (Hz)	Float (MSW)	R/W			**40061** **40062**
THD MAX	Max THD	Float (MSW)	R/W			**40063** **40064**
THD min	Min THD	Float (MSW)	R/W			**40065** **40066**
Vavg	V average (V)	Float (MSW)	R			**40067** **40068**
Iavg	I average (mA)	Float (MSW)	R			**40069** **40070**
Totalizer	Total Pulse Dout	UINT 32 (MSW)	R			**40071** **40072**
data L	Calibration data L	UINT 16	R			**40073**
data M	Calibration data M	UINT 16	R			**40074**
data H	Calibration data H	UINT 16	R			**40075**
Output Analog mode	bit 0=Voltage/Current, bit 1-4=input Vrms,Irms, Active Power, Reactive Power, Apparent Power, cos (Φ), Frequency, bit 5 = fail ur, bit 6 = fail or, bit 7 = fail hw, bit 8 = fail log, bit 9 = fail rtc, bit 10 = fail eeprom, bit 11 = fail alarm, bit 12-13 = 1 threshold over/1threshold under/2thresholds external/2 thresholds internal , bit 14= Manual mode	UINT 16	R/W	0		**40101**
Current Ratio	Current Ratio	Float (MSW)	R/W	1		**40102** **40103**
Output Analog Input Begin Scale	Output Analog Input Begin Scale	Float (MSW)	R/W	0		**40104** **40105**
Output Analog Input End Scale	Output Analog Input End Scale	Float (MSW)	R/W	300		**40106** **40107**
Output Analog Begin Scale	Output Analog Begin Scale	UINT 16	R/w	0		**40108**
Output Analog End Scale	Output Analog End Scale	UINT 16	R/W	10		**40109**
Delta ENERGY	Delta Energy (Wh) per pulse (50ms)	Float (MSW)	R/W	10		**40110** **40111**
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 8-9 = manual/pulse/fail, bit 10=low/high	UINT 16	R/W	0		**40112**
ALARM LOW	Alarm Low Trip value	Float (MSW)	R/W	0		**40113** **40114**
ALARM HIGH	Alarm High Trip value	Float (MSW)	R/W	0		**40115** **40116**
ALARM HYSTERESIS	Alarm Hysteresis value	Float (MSW)	R/W	0		**40117** **40118**
Modbus Address + Parity + StopBits	MSB modbus address, bit 0-1 = parity none/odd/even, bit 2=stop bits 1/2	UINT 16	R/W	260		**40119**
Modbus Baudrate	value 0=1200,1=2400,2=4800,3=9600,4=19200,5=38400,6 =57600,7=115200	UINT 16	R/W	5		**40120**
Log Mode	bit 0=disabled/enabled	UINT 16	R/W	0		**40121**
Log Sample time	Log sample time (s)	UINT 16	R/W	0		**40122**
Log name	Log name (15caratteri MAX)	UINT 16	R/W			**40123**
Log name	Log name (15caratteri MAX)	UINT 16	R/W			**40124**
Log name	Log name (15caratteri MAX)	UINT 16	R/W			**40125**
Log name	Log name (15caratteri MAX)	UINT 16	R/W			**40126**
Log name	Log name (15caratteri MAX)	UINT 16	R/W			**40127**
Log name	Log name (15caratteri MAX)	UINT 16	R/W			**40128**
Log name	Log name (15caratteri MAX)	UINT 16	R/W			**40129**
Log name	Log name (15caratteri MAX)	UINT 16	R/W			**40130**
RMS Filter	Coeff. Filter RMS (0.99990 – 0.99999)	Float (MSW)	R/W	0,99990		**40131** **40132**
Average measurement filter	Average measurement filter (0.99990 – 0.99999)	Float (MSW)	R/W	0,9990		**40133** **40134**

Modbus Registers Map

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Register Name	Comment	Register Type	R/W	Default Value	Range	Modbus Address
Cut off Voltage	Cut off Voltage (V)	Float (MSW)	R/W	0		**40135**
						40136
Cut off Current	Cut off Current (mA)	Float (MSW)	R/W	0		**40137**
						40138
Cut off P	Cut off P (W)	Float (MSW)	R/W	0		**40139**
						40140
Vrms SW	Vrms (V)	Float (LSW)	R			**40201**
						40202
Irms SW	Irms (mA)	Float (LSW)	R			**40203**
						40204
P SW	Active Power (W)	Float (LSW)	R			**40205**
						40206
Q SW	Reactive Power (VAR)	Float (LSW)	R			**40207**
						40208
S SW	Apparent Power (VA)	Float (LSW)	R			**40209**
						40210
Cosφ SW	Cosφ	Float (LSW)	R			**40211**
						40212
Frequency SW	Frequency (Hz)	Float (LSW)	R			**40213**
						40214
THD SW	THD	Float (LSW)	R			**40215**
						40216
TOTAL ENERGY SW	Total Energy (Wh)	Float (LSW)	R/W			**40217**
						40218
Positive Energy SW	Positive Energy (Wh)	Float (LSW)	R/W			**40219**
						40220
Negative Energy SW	Negative Energy (Wh)	Float (LSW)	R/W			**40221**
						40222
Vpeak SW	Vpk (V)	Float (LSW)	R/W			**40223**
						40224
Ipeak SW	Ipk (mA)	Float (LSW)	R/W			**40225**
						40226
Vrms MAX SW	Vrms MAX (V)	Float (LSW)	R/W			**40227**
						40228
Vrms min SW	Vrms MIN (V)	Float (LSW)	R/W			**40229**
						40230
Irms MAX SW	Irms MAX (A)	Float (LSW)	R/W			**40231**
						40232
Irms min SW	Irms MIN (mA)	Float (LSW)	R/W			**40233**
						40234
P MAX SW	Active Power MAX (W)	Float (LSW)	R/W			**40235**
						40236
P min SW	Active Power MIN (W)	Float (LSW)	R/W			**40237**
						40238
Q MAX SW	Reactive Power MAX (VAR)	Float (LSW)	R/W			**40239**
						40240
Q min SW	Reactive Power MIN (VAR)	Float (LSW)	R/W			**40241**
						40242
S MAX SW	Apparent Power MAX (VA)	Float (LSW)	R/W			**40243**
						40244
S min SW	Apparent Power MIN (VA)	Float (LSW)	R/W			**40245**
						40246
Cosφ MAX SW	Cosφ MAX	Float (LSW)	R/W			**40247**
						40248
Cosφ min SW	Cosφ min	Float (LSW)	R/W			**40249**
						40250
Frequency MAX SW	Frequency MAX (Hz)	Float (LSW)	R/W			**40251**
						40252
Frequency MIN SW	Frequency MIN (Hz)	Float (LSW)	R/W			**40253**
						40254

Modbus Registers Map

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Register Name	Comment	Register Type	R/W	Default Value	Range	Modbus Address
THD MAX SW	THD MAX	Float (LSW)	R/W			**40255**
						40256
THD min SW	THD MIN	Float (LSW)	R/W			**40257**
						40258
Vrms x 100	Vrms (V) x 100	SIGNED LONG(MSW)	R			**40301**
						40302
Irms x 100	Irms (mA) x 100	SIGNED LONG(MSW)	R			**40303**
						40304
P x 100	Active Power (W) x 100	SIGNED LONG(MSW)	R			**40305**
						40306
Q x 100	Reactive Power (VAR) x 100	SIGNED LONG(MSW)	R			**40307**
						40308
S x 100	Apparent Power (VA) x 100	SIGNED LONG(MSW)	R			**40309**
						40310
Cosφ x 100	Cosφ x 100	SIGNED LONG(MSW)	R			**40311**
						40312
Frequency x 100	Frequency (Hz) x 100	SIGNED LONG(MSW)	R			**40313**
						40314
THD x 100	THD x 100	SIGNED LONG(MSW)	R			**40315**
						40316
ENERGY x 100	Energy (Wh) x 100	SIGNED LONG(MSW)	R/W			**40317**
						40318
Positive Energy x 100	Positive Energy (Wh) x 100	SIGNED LONG(MSW)	R/W			**40319**
						40320
Negative Energy x 100	Negative Energy (Wh) x 100	SIGNED LONG(MSW)	R/W			**40321**
						40322
V peak x 100	Vpk (V) x 100	SIGNED LONG(MSW)	R/W			**40323**
						40324
I peak x 100	Ipk (mA) x 100	SIGNED LONG(MSW)	R/W			**40325**
						40326
Vrms MAX x 100	Vrms MAX (V) x 100	SIGNED LONG(MSW)	R/W			**40327**
						40328
Vrms min x 100	Vrms MIN (V) x 100	SIGNED LONG(MSW)	R/W			**40329**
						40330
Irms MAX x 100	Irms MAX (mA) x 100	SIGNED LONG(MSW)	R/W			**40331**
						40332
Irms min x 100	Irms MIN (mA) x 100	SIGNED LONG(MSW)	R/W			**40333**
						40334
P MAX x 100	Active Power MAX (W) x 100	SIGNED LONG(MSW)	R/W			**40335**
						40336
P min x 100	Active Power MIN (W) x 100	SIGNED LONG(MSW)	R/W			**40337**
						40338
Q MAX x 100	Reactive Power MAX (VAR) x 100	SIGNED LONG(MSW)	R/W			**40339**
						40340
Q min x 100	Reactive Power MIN (VAR) x 100	SIGNED LONG(MSW)	R/W			**40341**
						40342
S MAX x 100	Apparent Power MAX (VA) x 100	SIGNED LONG(MSW)	R/W			**40343**
						40344
S min x 100	Apparent Power MIN (VA) x 100	SIGNED LONG(MSW)	R/W			**40345**
						40346
Cosφ MAX x 100	Cosφ MAX x 100	SIGNED LONG(MSW)	R/W			**40347**
						40348
Cosφ min x 100	Cosφ MIN x 100	SIGNED LONG(MSW)	R/W			**40349**
						40350
Frequency MAX x 100	Frequency MAX (Hz) x 100	SIGNED LONG(MSW)	R/W			**40351**
						40352
Frequency min x 100	Frequency MIN (Hz) x 100	SIGNED LONG(MSW)	R/W			**40353**
						40354

Modbus Registers Map QA-POWER-M

Register Name	Comment	Register Type	R/W	Default Value	Range	Modbus Address
THD MAX x 100	THD MAX x 100	SIGNED LONG(MSW)	R/W			**40355**
						40356
THD min x 100	THD MIN x 100	SIGNED LONG(MSW)	R/W			**40357**
						40358
RTC YEAR	RTC : year (2000-2099)	UINT16	R/W			**41001**
RTC MONTH	RTC : month (1-12)	UINT16	R/W			**41002**
RTC DAY	RTC : day month (1-31)	UINT16	R/W			**41003**
RTC HOUR	RTC : hour (0-23)	UINT16	R/W			**41004**
RTC MINUTE	RTC : minute (0-59)	UINT16	R/W			**41005**
RTC SEC	RTC : second (0-59)	UINT16	R/W			**41006**

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**