MAPPA DEI REGISTRI MODBUS QA-POWER-M

ADDRESS LIST BASE 1 (40001)
MICROPROCESSOR'S REGISTERS BASE 0 (0000)
EXAMPLE _ to read register 40003 (address device = 1)
Tx: <01> <03> <00> <02> <00> <01> <25> <CA>

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	FLOAT (MSW)	R		0...10000	**40008**
Vrms	Voltage measurement rms (V)	FLOAT (MSW)	R		0...14000	**40009** **40010**
Irms	Current measurement rms (mA)	FLOAT (MSW)	R			**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**

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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 avarage (V)	FLOAT (MSW)	R			**40067** **40068**
Iavg	I avarage (mA)	FLOAT (MSW)	R			**40069** **40070**
Totalizer	Total pulse Dout	UNIT32 (MSW)	R			**40071** **40072**
data L	Calibration data L (min/sec)	UNIT16	R			**40073**
data M	Calibration data M (day/hour)	UNIT16	R R			**40074**
data H	Calibration data H (yy/mm)	UNIT16				**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/1 threshold under/2 thresholds external/2 thresholds internal , bit 14= Manual mode	UNIT16	R/W	0		**40101**
Current Ratio	Current Ratio	FLOAT (MSW)	R/W R/W	1		**40102** **40103**
Output Analog Input Begin Scale	Output Analog Input Begin Scale	FLOAT (MSW)	R/W R/W	0		**40104** **40105**
Output Analog Input End Scale	Output Analog Input End Scale	FLOAT (MSW)	R/W R/W	300		**40106** **40107**
Output Analog Begin Scale	Output Analog Begin Scale	UNIT16	R/W	0		**40108**
Output Analog End Scale	Output Analog End Scale	UNIT16	R/W	10		**40109**
Delta ENERGY	Delta Energy (Wh) per pulse (50 ms)	FLOAT (MSW)	R/W 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	UNIT16	R/W	0		**40112**
ALARM LOW	Alarm Low Trip value	FLOAT (MSW)	R/W R/W	0		**40113** **40114**
ALARM HIGH	Alarm High Trip value	FLOAT (MSW)	R/W R/W	0		**40115** **40116**
ALARM HYSTERESIS	Alarm Hysteresis value	FLOAT (MSW)	R/W 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	UNIT16	R/W	260		**40119**
Modbus Boudrate	value 0=1200,1=2400,2=4800,3=9600,4=19200,5=38400,6=57600,7=115200	UNIT16	R/W R/W	5		**40120**
Log Mode	bit 0=disabled/enabled	UNIT16	R/W	0		**40121**
Log Sample time	Log sample time (s)	UNIT16	R/W	0		**40122**
Log name	Log name (15 characters MAX)	UNIT16				**40123**
Log name	Log name (15 characters MAX)	UNIT16	R/W			**40124**
Log name	Log name (15 characters MAX)	UNIT16	R/W			**40125**
Log name	Log name (15 characters MAX)	UNIT16	R/W			**40126**
Log name	Log name (15 characters MAX)	UNIT16	R/W			**40127**
Log name	Log name (15 characters MAX)	UNIT16	R/W			**40128**
Log name	Log name (15 characters MAX)	UNIT16	R/W			**40129**
Log name	Log name (15 characters MAX)	UNIT16	R/W			**40130**
RMS Filter	Coeff. Filter RMS (0.99990 – 0.99999)	FLOAT (MSW)	R/W R/W	0,99990		**40131** **40132**
Average measurement filter	Average measurement filter (0.99990 – 0.99999)	FLOAT (MSW)		0,9990		**40133** **40134**

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Register Name	Comment	Register Type	R/W	Default Value	Range	Modbus Address
Cut off Voltage	Cut off Voltage (V)	FLOAT (LSW)	R/W	0		40135 40136
Cut off Current	Cut off Current (mA)	FLOAT (LSW)	R/W	0		40137 40138
Cut off P	Cut off P (W)	FLOAT (LSW)	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

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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**

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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)	UNIT16	R/W			**41001**
RTC MOUNTH	RTC : month (1-12)	UNIT16	R/W			**41002**
RTC DAY	RTC : day month (1-31)	UNIT16	R/W			**41003**
RTC HOUR	RTC : hour (0-23)	UNIT16	R/W			**41004**
RTC MINUTE	RTC : minute (0-59)	UNIT16	R/W			**41005**
RTC SEC	RTC : second (0-59)	UNIT16	R/W			**41006**

OSSERVAZIONI:

- Connessioni Modbus: A+ e B- ;
- Riferimenti di Registro Modbus: all'indirizzo logico, per es. 40010, corrisponde l' indirizzo fisico n°9, come previsto dagli standard Modbus;
- Dip Switch Settings: l'impostazione non è abilitata se il primo ed il sesto dip-switch sono impostati su 000000, il restanti dip-switch sono disabilitati. Tutte le impostazioni provengono da EEPROM;
- Funzioni Modbus supportate: 3 (Read multiple register), 6 (Write single register) e 16 (Write Multiple register).

Per rendere attive tutte le modifiche via dip-switch è necessario togliere l'alimentazione al dispositivo.