



EED

QUALITY ELECTRONIC DESIGN

WWW.QEED.IT

D.E.M. S.p.A.
WWW.DEM-IT.COM

MODBUS REGISTER MAP_FW < 37

QI-POWER-485

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	QI-POWER-485 (7), QI-POWER-485-LV (19), QI-POWER-485-300 (18), QI-POWER-485-300-LV (22), QI-POWER-485-100 (48), QI-POWER-485-100-LV (49)	Unsigned short	R			40001
Firmware Version	Firmware version	Unsigned short	R	0		40002
Address	Modbus address	Unsigned short	R/W	1		40003
Delay	Machine answer delay (in characters)	Unsigned short	R/W	1	1...1000	40004
Baudrate	0=1200, 1=2400, 2=4800, 3=9600, 4=19200, 5=38400, 6=57600, 7=115200	Unsigned short	R/W	1	0...7	40005
Parity	0=NO, 1=ODD, 2=EVEN	Unsigned short	R/W	0	0..2	40006
DC Filter	Number of tenths of second (1/10) for all RMS calculation in DC	Unsigned short	R/W	10	1...65535	40007
Flag Measurement	bit 0 : [0= TRMS value (without sign); 1 = DC_measurement (with sign)]; bit 1 : [0= Energy storing disable; 1= Energy storing enable]; bit 2 : [0= Frequency detect on Voltage channel; 1= Frequency detect on Current channel].	Unsigned short	R/W	2		40008
TV_Ratio	Voltage trasnformer ratio	Float (LSW first)	R/W	1.0		40009 40010
TA_Ratio	Current transformer ratio	Float (LSW first)	R/W	1.0		40011 40012
Current and Power CUT OFF (*)	LSB: Current cutoff in mA for QI-POWER-485 and QI-POWER-485-LV (default 0xFA=250mA), in steps of 10mA for QI-POWER-485-300, QI-POWER-485-300-LV, QI-POWER-485-100 and QI-POWER-485-100-LV (default 0x96=1500mA). MSB: Power cutoff in W for QI-POWER-485 and QI-POWER-485-LV (default 0x01=1W), in steps of 10W for QI-POWER-485-300, QI-POWER-485-300-LV, QI-POWER-485-100 and QI-POWER-485-100-LV (default 0x01=10W)	Unsigned short	R/W	See comments in bold		40013
# of ZX for VI measurement	Number of ZX for AC Meas Number of line cycle Zero Crossings for AC measurement RMS.	Unsigned short	R/W	50	1...65535	40014
STATUS	bit 0: flash settings error; bit 1: flash calibration error; bit 2: Voltage Over Range; bit 3: Voltage Under Range; bit [4:5] don't care; bit 6: Zero crossing detecting; bit [7:9] don't care; bit 10: Energy storing error; bit 11: Energy initialization error; bit 12: don't care; bit 13: Current Over Range; bit 14: Current Under Range; bit 15: don't care.	Unsigned short	R	0		40072
V RMS	Voltage RMS Measurement (V)	Float (LSW first)	R			40073 40074
I RMS	Current RMS Measurement (Ma)	Float (LSW first)	R			40075 40076
P	Active Power Measurement (W)	Float (LSW first)	R			40077 40078
Q	Reactive Power Measurement (VAR)	Float (LSW first)	R			40079 40080
S	Apparent Power Measurement (VA)	Float (LSW first)	R			40081 40082
Cosφ	Cosφ Measurement	Float (LSW first)	R			40083 40084
Frequency	Frequency Measurement (Hz)	Float (LSW first)	R			40085 40086
THD	THD Measurement	Float (LSW first)	R			40087 40088
Energy	Total Energy Measurement (kWh)	Float (LSW first)	R			40089 40090
Energy positive	Only positive Energy Measurement (kWh)	Float (LSW first)	R			40091 40092
Energy negative	Only negative Energy Measurement (kWh)	Float (LSW first)	R			40093 40094
V peak	Instantaneous Voltage Peak (V)	Float (LSW first)	R/W			40095 40096
I peak	Instantaneous Current Peak (mA)	Float (LSW first)	R/W			40097 40098
V MAX	Max RMS Voltage (V)	Float (LSW first)	R/W			40099 40100
V min	Min RMS Voltage (V)	Float (LSW first)	R/W			40101 40102
I MAX	Max RMS Current (mA)	Float (LSW first)	R/W			40103 40104
I min	Min RMS Current (mA)	Float (LSW first)	R/W			40105 40106

QI-POWER-485

MODBUS REGISTER MAP





MODBUS REGISTER MAP_FW < 37

QI-POWER-485

QI-POWER-485

MODBUS REGISTER MAP



Register Name	Comment	Register Type	R/W	Default Value	Range	Modbus Address
P MAX	Max RMS Power (W)	Float (LSW first)	R/W			40107
P min	Min RMS Power (W)	Float (LSW first)	R/W			40108
Q MAX	Max Reactive Power (VAR)	Float (LSW first)	R/W			40109
Q min	Min Reactive Power (VAR)	Float (LSW first)	R/W			40110
S MAX	Max Apparent Power (W)	Float (LSW first)	R/W			40111
S min	Min Apparent Power (W)	Float (LSW first)	R/W			40112
Cosφ MAX	Max Cosφ	Float (LSW first)	R/W			40113
Cosφ min	Min Cosφ	Float (LSW first)	R/W			40114
Frequency MAX	Max Frequency (Hz)	Float (LSW first)	R/W			40115
Frequency min	Min Frequency (Hz)	Float (LSW first)	R/W			40116
THD MAX	Max THD	Float (LSW first)	R/W			40117
THD min	Min THD	Float (LSW first)	R/W			40118
STATUS SW	bit 0: flash settings error; bit 1: flash calibration error; bit 2: Voltage Over Range; bit 3: Voltage Under Range; bit [4:5] don't care; bit 6: Zero crossing detecting; bit [7:9] don't care; bit 10: Energy storing error; bit 11: Energy initialization error; bit 12: don't care; bit 13: Current Over Range; bit 14: Current Under Range; bit 15: don't care.	Unsigned short	R			40119
V RMS SW	Voltage RMS measurement (V) swapped	Float (MSW first)	R			40120
I RMS SW	Current RMS measurement (mA) swapped	Float (MSW first)	R			40121
P SW	Power measurement (W) swapped	Float (MSW first)	R			40122
Q SW	Reactive Power measurement Q (VAR) swapped	Float (MSW first)	R			40123
S SW	Apparent Power measurement S (VA) swapped	Float (MSW first)	R			40124
Cosφ SW	Cosφ measurement swapped	Float (MSW first)	R			40125
Frequency SW	Frequency measurement (Hz) swapped	Float (MSW first)	R			40126
THD SW	THD swapped	Float (MSW first)	R			40127
Energy SW	Total Energy measurement (kWh) swapped	Float (MSW first)	R			40128
Energy positive SW	Only positive Energy Measurement (kWh) swapped	Float (MSW first)	R			40129
Energy negative SW	Only negative Energy Measurement (kWh) swapped	Float (MSW first)	R			40130
V peak SW	Instantaneous Voltage Peak (V) swapped	Float (MSW first)	R/W			40131
I peak SW	Instantaneous Current Peak (mA) swapped	Float (MSW first)	R/W			40132
V MAX SW	Max RMS Voltage (V) swapped	Float (MSW first)	R/W			40133
V min SW	Min RMS Voltage (V) swapped	Float (MSW first)	R/W			40134
I MAX SW	Max RMS Current (mA) swapped	Float (MSW first)	R/W			40135
I min SW	Min RMS Current (mA) swapped	Float (MSW first)	R/W			40136



EED

QUALITY ELECTRONIC DESIGN

WWW.QEED.IT

D.E.M. S.p.A.
WWW.DEM-IT.COM

MODBUS REGISTER MAP_FW < 37

QI-POWER-485

Register Name	Comment	Register Type	R/W	Default Value	Range	Modbus Address
P MAX SW	Max RMS Power (W) swapped	Float (MSW first)	R/W			40167
						40168
P min SW	Min RMS Power (W) swapped	Float (MSW first)	R/W			40169
						40170
Q MAX SW	Max Reactive Power (VAR) swapped	Float (MSW first)	R/W			40171
						40172
Q min SW	Min Reactive Power (VAR) swapped	Float (MSW first)	R/W			40173
						40174
S MAX SW	Max Apparent Power (W) swapped	Float (MSW first)	R/W			40175
						40176
S min SW	Min Apparent Power (W) swapped	Float (MSW first)	R/W			40177
						40178
Cosφ MAX SW	Max Cosφ swapped	Float (MSW first)	R/W			40179
						40180
Cosφ min SW	Min Cosφ swapped	Float (MSW first)	R/W			40181
						40182
Frequency MAX SW	Max Frequency (Hz) swapped	Float (MSW first)	R/W			40183
						40184
Frequency min SW	Min Frequency (Hz) swapped	Float (MSW first)	R/W			40185
						40186
THD MAX SW	Max THD swapped	Float (MSW first)	R/W			40187
						40188
THD min SW	Min THD swapped	Float (MSW first)	R/W			40189
						40190
STATUS 100	bit 0: flash settings error; bit 1: flash calibration error; bit 2: Voltage Over Range; bit 3: Voltage Under Range; bit [4:5] don't care; bit 6: Zero crossing detecting; bit [7:9] don't care; bit 10: Energy storing error; bit 11: Energy initialization error; bit 12: don't care; bit 13: Current Over Range; bit 14: Current Under Range; bit 15: don't care.	Unsigned short	R			40192
V RMS 100	Voltage RMS measurement (V/100) in hundredths	Signed long (LSW first)	R			40193
						40194
I RMS 100	Current RMS measurement (mA/100) in hundredths	Signed long (LSW first)	R			40195
						40196
P 100	Power measurement (W/100) in hundredths	Signed long (LSW first)	R			40197
						40198
Q 100	Reactive Power measurement Q (VAR/100) in hundredths	Signed long (LSW first)	R			40199
						40200
S 100	Apparent Power measurement S (VA/100) in hundredths	Signed long (LSW first)	R			40201
						40202
Cosφ 100	Cosφ measurement in hundredths	Signed long (LSW first)	R			40203
						40204
Frequency 100	Frequency measurement (Hz/100) in hundredths	Signed long (LSW first)	R			40205
						40206
THD 100	THD in hundredths	Signed long (LSW first)	R			40207
						40208
Energy 100	Total Energy measurement (kWh) swapped	Signed long (LSW first)	R			40209
						40210
Energy positive 100	Only positive Energy Measurement (kWh/100) in hundredths	Signed long (LSW first)	R			40211
						40212
Energy negative 100	Only negative Energy Measurement (kWh/100) in hundredths	Signed long (LSW first)	R			40213
						40214
V peak 100	Instantaneous Voltage Peak (V/100) in hundredths	Signed long (LSW first)	R/W			40215
						40216
I peak 100	Instantaneous Current Peak (mA/100) in hundredths	Signed long (LSW first)	R/W			40217
						40218
V MAX 100	Max RMS Voltage (V/100) in hundredths	Signed long (LSW first)	R/W			40219
						40220
V min 100	Min RMS Voltage (V/100) in hundredths	Signed long (LSW first)	R/W			40221
						40222
I MAX 100	Max RMS Current (mA/100) in hundredths	Signed long (LSW first)	R/W			40223
						40224
I min 100	Min RMS Current (mA/100) in hundredths	Signed long (LSW first)	R/W			40225
						40226

QI-POWER-485

MODBUS REGISTER MAP





EED

QUALITY ELECTRONIC DESIGN

WWW.QEED.IT

D.E.M. S.p.A.
WWW.DEM-IT.COM

MODBUS REGISTER MAP_FW < 37

QI-POWER-485

QI-POWER-485

MODBUS REGISTER MAP

Register Name	Comment	Register Type	R/W	Default Value	Range	Modbus Address
P MAX 100	Max RMS Power (W/100) in hundredths	Signed long (LSW first)	R/W			40227
P min 100	Min RMS Power (W/100) in hundredths	Signed long (LSW first)	R/W			40228
Q MAX 100	Max Reactive Power (VAR/100) in hundredths	Signed long (LSW first)	R/W			40229
Q min 100	Min Reactive Power (VAR/100) in hundredths	Signed long (LSW first)	R/W			40230
S MAX 100	Max Apparent Power (W/100) in hundredths	Signed long (LSW first)	R/W			40231
S min 100	Min Apparent Power (W/100) in hundredths	Signed long (LSW first)	R/W			40232
Cosφ MAX 100	Max Cosφ swapped in hundredths	Signed long (LSW first)	R/W			40233
Cosφ min 100	Min Cosφ swapped in hundredths	Signed long (LSW first)	R/W			40234
Frequency MAX 100	Max Frequency (Hz/100) in hundredths	Signed long (LSW first)	R/W			40235
Frequency min 100	Min Frequency (Hz/100) in hundredths	Signed long (LSW first)	R/W			40236
THD MAX 100	Max THD swapped in hundredths	Signed long (LSW first)	R/W			40237
THD min 100	Min THD swapped in hundredths	Signed long (LSW first)	R/W			40238
Command	Flash settings save command = 0xC1C0; Reset command = 0xC1A0; Load Energy command = 0xBABA (energy to load must be written in Command_aux); Load Positive Energy command = 0xBABB (positive energy to load must be written in Command_aux); Load Negative Energy command = 0xBABC (negative energy to load must be written in Command_aux).	Unsigned short	R/W	0		40239
Command aux	Auxiliary Register for Energy Command (see command register)	Float (LSW first)	R/W	0		40240
						40241
						40242
						40243
						40244
						40245
						40246
						40247
						40248
						40249
						40250
						40251
						40252
						40253
						40254