MODBUS REGISTER SET

EN

RESYS B40 Modbus version

Product reference: 49313602

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CONTENTS

1. REGISTERS 4
- 1.1. Measures – Long format (4 bytes) 4
- 1.2. Measures – Float format (4 bytes) 4
- 1.3. Harmonics Input 5
- 1.4. AC-Waveform *** 5
- 1.5. DC-Waveform *** 5
- 1.6. AC-Waveform Last Trip 5
- 1.7. DC-Waveform Last Trip 6
- 1.8. Event 1st [last] 6
- 1.9. Event 2nd 6
- 1.10. Event 3rd 7
- 1.11. Event 4th 7
- 1.12. Trip Setup 8
- 1.13. Alarm Setup 8
- 1.14. Remote reset [trip/warning] 8
- 1.15. Remote test 9
- 1.16. RTC - real time clock 9
- 1.17. Password Setup 9

1. REGISTERS

The following tables shown all the device registers.

1.1. Measures – Long format (4 bytes)

Register^{HEX}	Register^{DEC}	Word	Description	R/W	M.U.	Type
100	256	2	CURRENT TOTAL	R	mA	Unsigned
102	258	2	CURRENT DC	R	mA	Unsigned
104	260	2	CURRENT AC	R	mA	Unsigned
106	262	2	CURRENT AC-FILTER	R	mA	Unsigned
108	264	2	MAX CURRENT TOTAL	R	mA	Unsigned
10A	266	2	MAX CURRENT DC	R	mA	Unsigned
10C	268	2	MAX CURRENT AC	R	mA	Unsigned
10E	270	2	MAX CURRENT AC-FILTER	R	mA	Unsigned
110	272	2	THD	R	% * 100	Unsigned
112	274	2	TDD	R	% * 100	Unsigned
114	276	2	CREST FACTOR	R	[thousandths]	Unsigned
116	278	2	CURRENT DC-SIGN	R	mA	Signed
118	280	2	STATUS	R	bit 0 set: ALARM bit 1 set: TRIP bit 2 set: OPEN bit 3 set: DISABLE bit 4 set: AC OVER bit 5 set MEMORY bit 6 set DC OVER bit 7 set ERR TOROID	

1.2. Measures – Float format (4 bytes)

Register^{HEX}	Register^{DEC}	Word	Description	R/W	M.U.	Type
200	512	2	CURRENT TOTAL	R	mA	Float
202	514	2	CURRENT DC	R	mA	Float
204	516	2	CURRENT AC	R	mA	Float
206	518	2	CURRENT AC-FILTER	R	mA	Float
208	520	2	MAX CURRENT TOTAL	R	mA	Float
20A	522	2	MAX CURRENT DC	R	mA	Float
20C	524	2	MAX CURRENT AC	R	mA	Float
20E	526	2	MAX CURRENT AC-FILTER	R	mA	Float
210	528	2	THD	R	% * 100	Float
212	530	2	TDD	R	% * 100	Float
214	532	2	CREST FACTOR	R	[thousandths]	Float

1.3. Harmonics Input

Register^{HEX}	Register^{DEC}	Word	Description	R/W	Measure Unit	Type
1000	4096	2	1ST HARMONIC (Fundamental)	R	% * 100	Unsigned
1002	4098	2	2ND HARMONIC	R	% * 100	Unsigned
1004	4100	2	3RD HARMONIC	R	% * 100	Unsigned
---	---	---	---	---	---	---
107C	4220	2	63TH HARMONIC	R	% * 100	Unsigned

1.4. AC-Waveform ***

Register^{HEX}	Register^{DEC}	Word	Description	R/W	Range	Type
6000	24576	2	1ST SAMPLE	R	0 ÷ 4095	Short
6001	24577	2	2ND SAMPLE	R	0 ÷ 4095	Short
6002	24578	2	3RD SAMPLE	R	0 ÷ 4095	Short
---	---	---	---	---	---	---
60FE	24830	2	256TH SAMPLE	R	0 ÷ 4095	Short

***: to allow a correct and synchronous reading, the acquisition of a new waveform is performed after each reading of register 256 dec or 512 dec.

1.5. DC-Waveform ***

Register^{HEX}	Register^{DEC}	Word	Description	R/W	Range	Type
6200	25088	2	1ST SAMPLE	R	0 ÷ 4095	Short
6201	25090	2	2ND SAMPLE	R	0 ÷ 4095	Short
6202	25092	2	3RD SAMPLE	R	0 ÷ 4095	Short
---	---	---	---	---	---	---
62FE	25342	2	256TH SAMPLE	R	0 ÷ 4095	Short

***: to allow a correct and synchronous reading, the acquisition of a new waveform is performed after each reading of register 256 dec or 512 dec.

1.6. AC-Waveform Last Trip

Register^{HEX}	Register^{DEC}	Word	Description	R/W	Range	Type
7000	28672	2	1ST SAMPLE	R	0 ÷ 4095	Short
7001	28673	2	2ND SAMPLE	R	0 ÷ 4095	Short
7002	28674	2	3RD SAMPLE	R	0 ÷ 4095	Short
---	---	---	---	---	---	---
70FE	28926	2	256TH SAMPLE	R	0 ÷ 4095	Short

1.7. DC-Waveform Last Trip

Register^{HEX}	Register^{DEC}	Word	Description	R/W	Range	Type
7200	29184	2	1ST SAMPLE	R	0 ÷ 4095	Short
7201	29186	2	2ND SAMPLE	R	0 ÷ 4095	Short
7202	29188	2	3RD SAMPLE	R	0 ÷ 4095	Short
---	---	---	---	---	---	---
72FE	29438	2	256TH SAMPLE	R	0 ÷ 4095	Short

1.8. Event 1st [last]

Register^{HEX}	Register^{DEC}	Word	Description	R/W	M.U.
6800	26624	2	TYPE	R	1: TRIP 2: ALARM 3: TEST 4: AC OPEN 5: DC OPEN 5: POWER ON
6802	26626	2	TIME	R	byte order/meaning: EMPTY, HOUR, MINUTE, SECOND
6804	26628	2	DATE	R	byte order/meaning: DAY, MONYH, YEAR, YEAR
6806	26630	2	CURRENT TOTAL	R	mA
6808	26632	2	CURRENT DC	R	mA
680A	26634	2	CURRENT AC	R	mA

1.9. Event 2nd

Register^{HEX}	Register^{DEC}	Word	Description	R/W	M.U.
6820	26656	2	TYPE	R	1: TRIP 2: ALARM 3: TEST 4: AC OPEN 5: DC OPEN 5: POWER ON
6822	26658	2	TIME	R	byte order/meaning: EMPTY, HOUR, MINUTE, SECOND
6824	26660	2	DATE	R	byte order/meaning: DAY, MONYH, YEAR, YEAR
6826	26662	2	CURRENT TOTAL	R	mA
6828	26664	2	CURRENT DC	R	mA
682A	26666	2	CURRENT AC	R	mA

1.10. Event 3rd

Register^{HEX}	Register^{DEC}	Word	Description	R/W	M.U.
6840	26688	2	TYPE	R	1: TRIP 2: ALARM 3: TEST 4: AC OPEN 5: DC OPEN 5: POWER ON
6842	26690	2	TIME	R	byte order/meaning: EMPTY, HOUR, MINUTE, SECOND
6844	26692	2	DATE	R	byte order/meaning: DAY, MONYH, YEAR, YEAR
6846	26694	2	CURRENT TOTAL	R	mA
6848	26696	2	CURRENT DC	R	mA
684A	26698	2	CURRENT AC	R	mA

1.11. Event 4th

Register^{HEX}	Register^{DEC}	Word	Description	R/W	M.U.
6860	26720	2	TYPE	R	1: TRIP 2: ALARM 3: TEST 4: AC OPEN 5: DC OPEN 5: POWER ON
6862	26722	2	TIME	R	byte order/meaning: EMPTY, HOUR, MINUTE, SECOND
6864	26724	2	DATE	R	byte order/meaning: DAY, MONYH, YEAR, YEAR
6866	26726	2	CURRENT TOTAL	R	mA
6868	26728	2	CURRENT DC	R	mA
686A	26730	2	CURRENT AC	R	mA

1.12. Trip Setup

WARNING!
Must be send the entire parameter length (2 words or 1 word – see the long of each parameter) for a correct command setting.

Register^{HEX}	Register^{DEC}	Word	Description	R/W	Parameters.	Default
2100	8448	2	RESET MODE	R/W	0: manual 1: automatic 2: reclosing	0
2102	8450	2	THRESHOLD [mA]	R/W	20 ÷ 30’000	**
2104	8452	2	DELAY [ms]	R/W	20 ÷ 10’000 Note: the value must be a multiple of 20 ms at 50Hz	**
2106	8454	2	HYSTERESIS	R/W	95 ÷ 50% over the limit set	90
2108	8456	2	FAIL SAFE	R/W	0: disable 1: enable	0
210A	8458	2	AC-FILTER	R/W	0: disable 1: 3° harmonic [RCM] 2: 21° harmonic [RCM] 3: 60479 [RCM] 4: 62423 [RCM]	**
210C	8460	2	SELF RECLOSING NUMBER	R/W	1 ÷ 10	3
210E	8462	2	SELF RECLOSING DELAY	R/W	5 ÷ 600	10
2110	8464	2	SELF RECLOSING RESET TRY	R/W	10 ÷ 600	60

**: according with version/model.

1.13. Alarm Setup

WARNING!
Must be send the entire parameter length (2 words or 1 word – see the long of each parameter) for a correct command setting.

Register^{HEX}	Register^{DEC}	Word	Description	R/W	Parameters.	Default
2180	8576	2	RESET MODE	R/W	0: off 1: manual 2: automatic	2
2182	8578	2	THRESHOLD [mA]	R/W	20 ÷ 30’000	20
2184	8580	2	DELAY [ms]	R/W	20 ÷ 10’000 Note: the value must be a multiple of 20 ms at 50Hz	20
2186	8582	2	HYSTERESIS	R/W	95 ÷ 50% over the limit set	90
2188	8584	2	FAIL SAFE	R/W	0: disable 1: enable	0

1.14. Remote reset [trip/warning]

WARNING!
Must be send the entire parameter length (2 words or 1 word – see the long of each parameter) for a correct command setting.

Register^{HEX}	Register^{DEC}	Word	Description	R/W	Parameters.
2A00	10752	2	MANUAL RESET	W	Write 0x0A0Ahex (2570dec) to reset

1.15. Remote test

WARNING!
Must be send the entire parameter length (2 words or 1 word – see the long of each parameter) for a correct command setting.

Register^{HEX}	Register^{DEC}	Word	Description	R/W	Parameters.
2A20	10784	2	MANUAL TEST	W	Write 0x5050hex (20560dec) to test

1.16. RTC - real time clock

Register^{HEX}	Register^{DEC}	Word	Description	R/W	Parameters.
2A80	10880	2	HOUR	R/W	0 ÷ 23
2A82	10882	2	MINUTE	R/W	0 ÷ 59
2A84	10884	2	SECOND	R/W	0 ÷ 59
2A86	10886	2	DAY	R/W	1 ÷ 31
2A88	10888	2	MOUNTH	R/W	1 ÷ 12
2A8A	10890	2	YEAR	R/W	2023 ÷ 2099

1.17. Password Setup

WARNING!
Must be send the entire parameter length (2 words or 1 word – see the long of each parameter) for a correct command setting.

Register^{HEX}	Register^{DEC}	Word	Description	R/W	Parameters.	Default
2180	8576	2	PASSWORD	R/W	0: disabled	0
2182	8578	2	MAINTENANCE	R/W	2313 dec: disable relays ***	0

***: Write 0 to enable; at startup the value is always set to 0 (disable).

CORPORATE HQ CONTACT:
SOCOMEC SAS
1-4 RUE DE WESTHOUSE
67235 BENFELD, FRANCE

www.socomec.com

553488A

socomec
Innovative Power Solutions