

Modbus Protocol for P17

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Protocol in P17

1. Warning item

| Hex | Dec | Size | Content | Bit value | type |
|--------|-----|-------|---|----------------|-----------|
| 0x0000 | 0 | bit15 | bit15=Solar input 1 loss | 0:FALSE/1:TRUE | Read only |
| | | bit14 | bit14=Solar input 2 loss | 0:FALSE/1:TRUE | Read only |
| | | bit13 | bit13=Solar input 1 voltage too higher | 0:FALSE/1:TRUE | Read only |
| | | bit12 | bit12=Solar input 2 voltage too higher | 0:FALSE/1:TRUE | Read only |
| | | bit11 | bit11=Battery under | 0:FALSE/1:TRUE | Read only |
| | | bit10 | bit10=Battery low | 0:FALSE/1:TRUE | Read only |
| | | bit9 | bit9 =Battery open | 0:FALSE/1:TRUE | Read only |
| | | bit8 | bit8 =Battery voltage too higher | 0:FALSE/1:TRUE | Read only |
| | | bit7 | bit7 =Battery low in hybrid mode | 0:FALSE/1:TRUE | Read only |
| | | bit6 | bit6 =Grid voltage high loss | 0:FALSE/1:TRUE | Read only |
| | | bit5 | bit5 =Grid voltage low loss | 0:FALSE/1:TRUE | Read only |
| | | bit4 | bit4 =Grid frequency high loss | 0:FALSE/1:TRUE | Read only |
| | | bit3 | bit3 =Grid frequency low loss | 0:FALSE/1:TRUE | Read only |
| | | bit2 | bit2 =AC input long-time average voltage over | 0:FALSE/1:TRUE | Read only |
| | | bit1 | bit1 =AC input voltage loss | 0:FALSE/1:TRUE | Read only |
| | | bit0 | bit0 =AC input frequency loss | 0:FALSE/1:TRUE | Read only |
| 0x0001 | 1 | bit15 | bit15=AC input island | 0:FALSE/1:TRUE | Read only |
| | | bit14 | bit14=AC input phase dislocation | 0:FALSE/1:TRUE | Read only |
| | | bit13 | bit13=Over temperature | 0:FALSE/1:TRUE | Read only |
| | | bit12 | bit12=Over load | 0:FALSE/1:TRUE | Read only |
| | | bit11 | bit11=EPO active | 0:FALSE/1:TRUE | Read only |
| | | bit10 | bit10=AC input wave loss | 0:FALSE/1:TRUE | Read only |

2. Enable/Disable item

| Hex | Dec | Size | Content | Read | Write | type |
|--------|-----|-------|--|----------------|---------------|------------|
| 0x0002 | 2 | bit15 | Mute buzzer beep | 0:FALSE/1:TRUE | 7FFF:D/8000:E | Read/Write |
| | | bit14 | Mute buzzer beep in standby mode | 0:FALSE/1:TRUE | BFFF:D/4000:E | Read/Write |
| | | bit13 | Mute buzzer beep only on battery discharged status | 0:FALSE/1:TRUE | DFFF:D/2000:E | Read/Write |
| | | bit12 | Generator as AC input | 0:FALSE/1:TRUE | EFFF:D/1000:E | Read/Write |
| | | bit11 | Wide AC input range | 0:FALSE/1:TRUE | F7FF:D/0800:E | Read/Write |

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| Hex | Dec | Size | Content | Read | Write | type |
|--------|-----|-------|---|----------------|---------------|------------|
| 0x0007 | 7 | bit15 | Enable/disable charge battery | 0:FALSE/1:TRUE | 7FFF:D/8000:E | Read/Write |
| | | bit14 | Enable/disable AC charge battery | 0:FALSE/1:TRUE | BFFF:D/4000:E | Read/Write |
| | | bit13 | Enable/disable feed power to utility | 0:FALSE/1:TRUE | DFFF:D/2000:E | Read/Write |
| | | bit12 | Enable/disable battery discharge to loads when solar input normal | 0:FALSE/1:TRUE | EFFF:D/1000:E | Read/Write |
| | | bit11 | Enable/disable battery discharge to loads when solar input loss | 0:FALSE/1:TRUE | F7FF:D/0800:E | Read/Write |
| | | bit10 | Enable/disable battery discharge to feed power to utility when solar input normal | 0:FALSE/1:TRUE | FBFF:D/0400:E | Read/Write |
| | | bit9 | Enable/disable battery discharge to feed power to utility when solar input loss | 0:FALSE/1:TRUE | FDFD:D/0200:E | Read/Write |
| | | bit8 | Enable/disable auto adjust PF according to Feed power | 0:FALSE/1:TRUE | FEFF:D/0100:E | Read/Write |

| Hex | Dec | Size | Content | Write | type |
|--------|-----|------|--|---------------|-------|
| 0x0123 | 291 | 1 | Set enable/disable machine supply power to the loads | 0000:D/0001:E | Write |

| Hex | Dec | Size | Content | Write | type |
|--------|-----|------|---|---------------|------------|
| 0x011C | 284 | 1 | Enable/disable AC charger keep battery voltage function | 0000:D/0001:E | Read/Write |

3. Setting Energy priority

| | | | | | |
|--------|-----|---|---------------------------------------|-----------------------|------------|
| 0x0315 | 789 | 1 | Solar energy distribution of priority | Notel | Read/Write |
|--------|-----|---|---------------------------------------|-----------------------|------------|

4. Control Items

| | | | | | |
|--------|-----|-------|--|------------------------|-------|
| 0x003B | 59 | bit15 | bit15 = Flag: Setting control parameter to default value | 7FFF:FAIL/8000:SUCCESS | Write |
| | | | b14-b0 = Reservation | | |
| 0x017B | 379 | 1 | Li-Fe battery self-test by charged at a time | Only Send: 1 | Write |

5. Working mode

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| | | | | | |
|--------|------|---|-----------------------------------|-------|-----------|
| 0x03F2 | 1010 | 1 | Battery piece number | | Read Only |
| 0x03F3 | 1011 | 1 | Battery standard voltage per unit | 0.1V | Read Only |
| 0x03F4 | 1012 | 1 | AC input phase number | | Read Only |
| 0x03F5 | 1013 | 1 | AC output phase number | | Read Only |
| 0x03F6 | 1014 | 1 | Norminal AC input voltage | 0.1V | Read Only |
| 0x03F7 | 1015 | 1 | Norminal AC output voltage | 0.1V | Read Only |
| 0x03F8 | 1016 | 1 | Output power factor | | Read Only |
| 0x03F9 | 1017 | 2 | Output rated VA | VA | Read Only |
| 0x03FB | 1019 | 2 | Machine number | ASCII | Read Only |

| | | | | | |
|--------|-----|---|--------------|-----------------------|-----------|
| 0x00D0 | 208 | 1 | working mode | Note2 | Read Only |
|--------|-----|---|--------------|-----------------------|-----------|

6. Working status

| | | | | | |
|--------|-----|---|------------------------------|-------------------------|-----------|
| 0x00BC | 188 | 1 | Battery voltage | 0.1V | Read Only |
| 0x00cc | 204 | 1 | External battery temperature | | Read Only |
| 0x00D3 | 211 | 2 | AC input active power R | W Note5 | Read Only |
| 0x00D8 | 216 | 1 | AC output voltage R | 0.1V | Read Only |
| 0x00D9 | 217 | 2 | AC output active power R | W | Read Only |
| 0x00DB | 219 | 1 | AC output frequency | 0.01Hz | Read Only |
| 0x00DC | 220 | 1 | AC output current R | 0.1A | Read Only |
| 0x00E2 | 226 | 1 | Battery capacity | % | Read Only |
| 0x00E4 | 228 | 2 | Solar input power 1 | W | Read Only |
| 0x00E6 | 230 | 2 | Battery current | 0.1A | Read Only |
| 0x00E8 | 232 | 2 | Solar input power 2 | W | Read Only |
| 0x00EA | 234 | 1 | Solar input voltage 1 | 0.1V | Read Only |
| 0x00EB | 235 | 1 | Solar input voltage 2 | 0.1V | Read Only |
| 0x00ED | 237 | 1 | Component max temperature | | Read Only |
| 0x00EF | 239 | 1 | AC output current S | 0.1A | Read Only |
| 0x00F0 | 240 | 1 | AC output current T | 0.1A | Read Only |
| 0x00F1 | 241 | 2 | AC output active power S | W | Read Only |
| 0x00F3 | 243 | 2 | AC output active power T | W | Read Only |
| 0x00F5 | 245 | 2 | AC output total active power | W | Read Only |
| 0x00F7 | 247 | 1 | AC output voltage S | 0.1V | Read Only |
| 0x00F8 | 248 | 1 | AC output voltage T | 0.1V | Read Only |
| 0x0101 | 257 | 2 | AC input active power S | W Note5 | Read Only |
| 0x0102 | 258 | 2 | AC input active power T | W Note5 | Read Only |
| 0x0179 | 377 | 2 | AC input total active power | W Note5 | Read Only |

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| | | | | | |
|--------------|----------------------|---------|----------------------------|-------------------------|-----------|
| 0x0266 | 614 | 1 | AC input current R | 0. 1A | Read Only |
| 0x0268 | 616 | 1 | AC input current S | 0. 1A | Read Only |
| 0x026A | 618 | 1 | AC input current T | 0. 1A | Read Only |
| 0x02B8 | 696 | 1 | Solar input current 1 | 0. 1A | Read Only |
| 0x02BA | 698 | 1 | Solar input current 2 | 0. 1A | Read Only |
| 0x030D | 781 | 2 | AC output apperent power R | VA | Read Only |
| 0x031E | 798 | 1 | AC input voltage R | 0. 1V | Read Only |
| 0x031F | 799 | 1 | AC input voltage S | 0. 1V | Read Only |
| 0x0320 | 800 | 1 | AC input voltage T | 0. 1V | Read Only |
| 0x0321 | 801 | 1 | AC input frequency | 0. 01Hz | Read Only |
| 0x0360 | 864 | 1 | AC output power percentage | % | Read Only |
| 0x037C | 892 | 1 | Inner temperature | | Read Only |
| 0x037E | 894 | 2 | AC output apperent power S | VA | Read Only |
| 0x0387 | 903 | byte 0 | AC output connect status | 0:NO /1:EN | Read Only |
| | | byte 1 | Solar input 1 work status | 0:Idle/1:Work | Read Only |
| | | byte 2 | Solar input 2 work status | 0:Idle/1:Work | Read Only |
| | | byte 3 | Battery power direction | 0:Do nothing | Read Only |
| | | | | 1:Charge | |
| | | byte 4 | DC/AC power direction | 2:Discharge | Read Only |
| 0:Do nothing | | | | | |
| byte 5 | Line power direction | 1:AC-DC | Read Only | | |
| | | 2:DC-AC | | | |
| 0x03D8 | 984 | 2 | AC output total power | VA | Read Only |
| 0x04AC | 1196 | 2 | Battery power | W(+:charge/-:discharge) | Read Only |
| 0x04D9 | 1241 | 2 | AC output apperent power T | VA | Read Only |

7. Time information

| | | | | | |
|--------|-----|---|------|------------------------|------------|
| 0x0113 | 275 | 7 | Time | ASCII (YYYYMMDDHHMMSS) | Read/Write |
|--------|-----|---|------|------------------------|------------|

8. Generated energy inquiry (look for Application example 7)

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| | | | | | |
|--------|------|---|-----------------------------------|-------|-----------|
| 0x0197 | 407 | 2 | total generated energy | KW/h | Read Only |
| 0x0199 | 409 | 2 | generated energy of hour | W/h | Read Only |
| 0x019B | 411 | 2 | generated energy of day | W/h | Read Only |
| 0x019D | 413 | 2 | generated energy of month | W/h | Read Only |
| 0x019F | 415 | 2 | generated energy of year | W/h | Read Only |
| 0x04B3 | 1203 | 5 | First generated energy saved time | ASCII | Read Only |
| 0x01C0 | 448 | 5 | The date of the hourly energy | ASCII | Write |
| 0x01C5 | 453 | 4 | The date of the daily energy | ASCII | Write |
| 0x01C9 | 457 | 3 | The date of the monthly energy | ASCII | Write |
| 0x01CC | 460 | 2 | The date of the yearly energy | ASCII | Write |

9. Fault information (look for Application example 6)

| | | | | | |
|--------|-----|-------|--|------------------------------------|------------|
| 0x02A6 | 678 | 1 | The latest fault code | Note6 | Read Only |
| 0x02A7 | 679 | 1 | The latest fault code ID stored in flash | | Read Only |
| 0x00CD | 205 | 1 | Inner temperature | | Read Only |
| 0x00CE | 206 | 1 | Component Max. temperature | | Read Only |
| 0x00CF | 207 | 1 | External battery temperature | | Read Only |
| 0x0122 | 290 | 1 | The fault code ID stored in flash | | Write Only |
| 0x025D | 605 | 1 | The fault code ID stored in flash | | Read Only |
| 0x0168 | 360 | bety0 | Fault code | | Read Only |
| | | bytel | Work mode | | Read Only |
| 0x0183 | 387 | 2 | Solar input power 1 | W | Read Only |
| 0x0184 | 389 | 2 | Solar input power 2 | W | Read Only |
| 0x02A4 | 676 | 1 | Battery voltage | 0.1V | Read Only |
| 0x02A5 | 677 | 1 | AC input frequency | 0.01Hz | Read Only |
| 0x0312 | 786 | 1 | AC output apperent power R | VA | Read Only |
| 0x0313 | 787 | 1 | AC output apperent power S | VA | Read Only |
| 0x0314 | 788 | 1 | AC output apperent power T | VA | Read Only |
| 0x031B | 795 | 2 | Battery current | 0.1V +: Charge - : Discharge | Read Only |
| 0x0322 | 802 | 1 | AC output voltage R | 0.1V | Read Only |
| 0x0323 | 803 | 1 | AC output voltage S | 0.1V | Read Only |
| 0x0324 | 804 | 1 | AC output voltage T | 0.1V | Read Only |
| 0x0325 | 805 | 1 | AC output frequency | 0.01Hz | Read Only |
| 0x0345 | 837 | 1 | AC output percentage | % | Read Only |

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| | | | | | |
|--------|------|---|-----------------------|------------------|-----------|
| 0x0403 | 1027 | 1 | Time | YYMMDD HHMMSS | Read Only |
| 0x058D | 1421 | 1 | Solar input voltage 1 | 0.1V | Read Only |
| 0x058E | 1422 | 1 | Solar input voltage 2 | 0.1V | Read Only |
| 0x058F | 1423 | 1 | AC input voltage R | 0.1V | Read Only |
| 0x0590 | 1424 | 1 | AC input voltage S | 0.1V | Read Only |
| 0x0591 | 1425 | 1 | AC input voltage T | 0.1V | Read Only |

10. Loss point

| | | | | | |
|--------|------|---|--|--------|------------|
| 0x034E | 846 | 1 | The highest back voltage | 0.1V | Read Only |
| 0x034F | 847 | 1 | The lowest back voltage | 0.1V | Read Only |
| 0x0350 | 848 | 1 | The highest back frequency | 0.01Hz | Read Only |
| 0x0351 | 849 | 1 | The lowest back frequency | 0.01Hz | Read Only |
| 0x0352 | 850 | 1 | The feeding voltage high loss point | 0.1V | Read/Write |
| 0x0353 | 851 | 1 | The feeding voltage low loss point | 0.1V | Read/Write |
| 0x0354 | 852 | 1 | The feeding freq high loss point | 0.1Hz | Read/Write |
| 0x0355 | 853 | 1 | The feeding freq low loss point | 0.1Hz | Read/Write |
| 0x0495 | 1173 | 1 | Solar input highest voltage | 0.1V | Read/Write |
| 0x0496 | 1174 | 1 | Solar input lowest voltage | 0.1V | Read/Write |
| 0x05CC | 1484 | 1 | The grid long time average voltage high loss point | 0.1V | Read/Write |

11. CPU information

| | | | | | |
|--------|------|---|--------------------------------|-------|-----------|
| 0x03E0 | 992 | 1 | Protocol ID Inquiry | ASCII | Read only |
| 0x03E1 | 993 | 4 | Main CPU Firmware version | ASCII | Read only |
| 0x049C | 1180 | 4 | Secondary CPU Firmware version | ASCII | Read only |

12. Output power

| | | | | | |
|--------|------|---|-------------------------------------|---|------------|
| 0x04E5 | 1253 | 2 | The max power limit to feed to grid | W | Read/Write |
| 0x05B3 | 1459 | 1 | Feeding grid calibration power | W | Read/Write |

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| | | | | | |
|--------|-----|---|-----------------------|--|------------|
| 0x035D | 861 | 1 | Feed- in power factor | | Read/Write |
|--------|-----|---|-----------------------|--|------------|

13. LCD sleep time

| | | | | | |
|--------|------|---|-----------------------------------|-------------|------------|
| 0x0411 | 1041 | 1 | The LCD sleep time inquiry or set | unit is 30s | Read/Write |
|--------|------|---|-----------------------------------|-------------|------------|

14. Battery information

| | | | | | |
|--------|------|---|---|-------------------------|------------|
| 0x00F9 | 249 | 1 | Battery stop charger current level in floating charging | 0.1A | Read/Write |
| 0x00FA | 250 | 1 | Keep charged time of battery catch stopped charging current level | Minute | Read/Write |
| 0x00FB | 251 | 1 | Battery voltage of recover to charge when battery stop charger in floating charging | 0.1V | Read/Write |
| 0x00FC | 252 | 1 | Battery under voltage | 0.1V | Read/Write |
| 0x00FD | 253 | 1 | Battery under back voltage | 0.1V | Read/Write |
| 0x00FE | 254 | 1 | Battery weak voltage in hybrid mode | 0.1V | Read/Write |
| 0x011A | 282 | 1 | Battery weak back voltage in hybrid mode | 0.1V | Read/Write |
| 0x011B | 283 | 1 | Battery Max. discharge current in hybrid mode | 0.1A | Read only |
| 0x011C | 284 | 1 | AC charger keep battery voltage function enable/diable | 0: disable 1: enable | Read/Write |
| 0x011D | 285 | 1 | AC charger keep battery voltage | 0.1V | Read/Write |
| 0x011E | 286 | 1 | Battery temperature sensor compensation | 0.1mV | Read/Write |
| 0x011F | 287 | 1 | Max. AC charging current | 0.1A | Read/Write |
| 0x025E | 606 | 7 | Battery install time | YYYYMM DDHHMMSS | Read/Write |
| 0x026F | 623 | 1 | Battery constant charge voltage(C.V.) | 0.1V | Read/Write |
| 0x0270 | 624 | 1 | Battery floating charge voltage | 0.1V | Read/Write |
| 0x04D8 | 1240 | 1 | Battery discharge max current in hybrid mode | A | Read/Write |
| 0x05B1 | 1457 | 1 | Battery maximum charge current | 0.1A | Read/Write |
| 0x05C6 | 1478 | 1 | Battery type | 0:Other/1: Li-Fe | Read/Write |

15. MPPT information

| | | | | | |
|--------|------|---|----------------------------------|------|------------|
| 0x05CD | 1485 | 1 | Solar input MPPT highest voltage | 0.1V | Read/Write |
| 0x05CE | 1486 | 1 | Solar input MPPT lowest voltage | 0.1V | Read/Write |

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16. Default information

| | | | | | |
|--------|------|---|---|---------------|-----------|
| 0x00B7 | 183 | 1 | Battery weak back voltage in hybrid mode | 0.1V | Read only |
| 0x00B8 | 184 | 1 | Battery stop charger current level in floating charging | 0.1A | Read only |
| 0x00C0 | 192 | 1 | Battery voltage of recover to charge when battery stop charger in floating charging | 0.1V | Read only |
| 0x00C1 | 193 | 1 | Battery under back voltage | 0.1V | Read only |
| 0x00C2 | 194 | 1 | Battery float charge voltage | 0.1V | Read only |
| 0x00C3 | 195 | 1 | Battery weak voltage in hybrid mode | 0.1V | Read only |
| 0x00C5 | 197 | 1 | Keep charged time of battery catch stop charger current level | Minute | Read only |
| 0x0356 | 854 | 1 | The wait time for feed power | Second | Read only |
| 0x0362 | 866 | 1 | AC input long-time highest average voltage | 0.1V | Read only |
| 0x040F | 1039 | 1 | Solar input highest voltage | 0.1V | Read only |
| 0x0410 | 1040 | 1 | Solar input lowest voltage | 0.1V | Read only |
| 0x04AA | 1194 | 1 | Solar input highest MPPT voltage | 0.1V | Read only |
| 0x04AB | 1195 | 1 | Solar input lowest MPPT voltage | 0.1V | Read only |
| 0x04AF | 1199 | 1 | LCD sleep wait time | unit:30second | Read only |
| 0x04E8 | 1256 | 2 | Start time for support loads | ASCII | Read only |
| | | 2 | Ending time for support loads | ASCII | Read only |
| 0x04EC | 1260 | 2 | Start time for AC charger | ASCII | Read only |
| | | 2 | Ending time for AC charger | ASCII | Read only |
| 0x05B4 | 1460 | 1 | Battery maximum charge current | 0.1A | Read only |
| 0x05C5 | 1477 | 1 | Battery under voltage | 0.1V | Read only |
| 0x05CF | 1487 | 1 | AC input highest voltage for feed power | 0.1V | Read only |
| 0x05D0 | 1488 | 1 | AC input lowest voltage for feed power | 0.1V | Read only |
| 0x05D1 | 1489 | 1 | AC input highest frequency for feed power | 0.01Hz | Read only |
| 0x05D2 | 1490 | 1 | AC input lowest frequency for feed power | 0.01Hz | Read only |
| 0x05D8 | 1496 | 1 | Battery constant charge voltage(C.V.) | 0.1V | Read only |

17. Feeding wait time

| | | | | | |
|--------|-----|---|-----------------------|--------|------------|
| 0x0358 | 288 | 1 | The feeding wait time | Second | Read/Write |
|--------|-----|---|-----------------------|--------|------------|

18. Setting range information

| | | | | | |
|--------|-----|---|--|------|-----------|
| 0x00C6 | 198 | 1 | The upper limit of AC input highest voltage for feed power | 0.1V | Read only |
|--------|-----|---|--|------|-----------|

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|--------|------|---|--|--------|-----------|
| 0x00C7 | 199 | 1 | The lower limit of AC input highest voltage for feed power | 0.1V | Read only |
| 0x00C8 | 200 | 1 | The upper limit of AC input lowest voltage for feed power | 0.1V | Read only |
| 0x00C9 | 201 | 1 | The lower limit of AC input lowest voltage for feed power | 0.1V | Read only |
| 0x00CA | 202 | 1 | The upper limit of AC input highest frequency for feed power | 0.01Hz | Read only |
| 0x00CB | 203 | 1 | The lower limit of AC input highest frequency for feed power | 0.01Hz | Read only |
| 0x0107 | 263 | 1 | The upper limit of battery charged voltage | 0.1V | Read only |
| 0x0108 | 264 | 1 | The lower limit of battery charged voltage | 0.1V | Read only |
| 0x0109 | 265 | 1 | The upper limit of battery Max. charged current | 0.1A | Read only |
| 0x010A | 266 | 1 | The lower limit of battery Max. charged current | 0.1A | Read only |
| 0x010B | 267 | 1 | The lower limit of solar minimum input voltage | 0.1V | Read only |
| 0x010C | 268 | 1 | The upper limit of AC input lowest frequency for feed power | 0.01Hz | Read only |
| 0x010D | 269 | 1 | The lower limit of AC input lowest frequency for feed power | 0.01Hz | Read only |
| 0x010E | 270 | 1 | The upper limit of wait time for feed power | Second | Read only |
| 0x010F | 271 | 1 | The lower limit of wait time for feed power | Second | Read only |
| 0x0110 | 272 | 1 | The upper limit of solar maximum input voltage | 0.1V | Read only |
| 0x0111 | 273 | 1 | The lower limit of solar maximum input voltage | 0.1V | Read only |
| 0x0112 | 274 | 1 | The upper limit of solar minimum input voltage | 0.1V | Read only |
| 0x016D | 365 | 2 | The upper limit of maximum feeding power | W | Read only |
| 0x016E | 367 | 2 | The lower limit of maximum feeding power | W | Read only |
| 0x04D3 | 1235 | 1 | The upper limit of solar maximum MPPT voltage | 0.1V | Read only |
| 0x04D4 | 1236 | 1 | The lower limit of solar maximum MPPT voltage | 0.1V | Read only |
| 0x04D5 | 1237 | 1 | The upper limit of solar minimum MPPT voltage | 0.1V | Read only |
| 0x04D6 | 1238 | 1 | The lower limit of solar minimum MPPT voltage | 0.1V | Read only |

19. PV model and rating information

| | | | | | |
|--------|------|---|-------------------------------|-------------------------------|------------|
| 0x03EB | 1003 | 4 | Series number | ASCII | Read only |
| 0x0125 | 293 | 1 | AC input rated frequency | (0.1Hz) Note7 | Read/Write |
| 0x0127 | 295 | 1 | AC input rated current | 0.1A | Read only |
| 0x048A | 1162 | 1 | Battery rated voltage | 0.1V | Read only |
| 0x0493 | 1171 | 1 | AC output rated voltage | (0.1V) Note8 | Read/Write |
| 0x0494 | 1172 | 1 | AC output rated current | 0.1A | Read only |
| 0x0497 | 1175 | 1 | MPPT rated current per string | 0.1A | Read only |
| 0x0499 | 1177 | 1 | MPPT track number | | Read only |
| 0x049A | 1178 | 1 | Machine type | Note3 (ASCII) | Read only |
| 0x049B | 1179 | 1 | Topology | Note4 | Read only |
| 0x04A8 | 1192 | 1 | AC input rated voltage | 0.1V | Read only |

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20. Set Allow AC-charging duration /Off-Peak duration

| | | | | | |
|--------|-----|---|---|-----------------------|------------|
| 0x0361 | 865 | 1 | Start time for enable AC charger working | Note9 | Read/Write |
| 0x0362 | 867 | 1 | Ending time for enable AC charger working | | Read/Write |

21. Set AC Output ON/Off Timer

| | | | | | |
|--------|-----|---|---|------------------------|------------|
| 0x0363 | 868 | 1 | Start time for enable AC supply the load | Note10 | Read/Write |
| 0x0364 | 869 | 1 | Ending time for enable AC supply the load | | Read/Write |

22. Change inverter mode

| | | | | | |
|--------|------|---|----------------------|------------------------|------------|
| 0x05C3 | 1475 | 1 | Change machine model | Note11 | Read/Write |
|--------|------|---|----------------------|------------------------|------------|

Note

1. Note1

| Address | Value(ASCII) | Remarks |
|---------|--------------|-------------------|
| 0x0315 | '0' '0' | Battery-Load-Grid |
| | '0' '1' | Load-Battery-Grid |
| | '0' '2' | Load-Grid-Battery |

2. Note2

| Address | Value | Remarks |
|---------|-------|---------------|
| 0x00D0H | 00 | Power on mode |
| | 01 | Standby mode |
| | 02 | Bypass mode |
| | 03 | Battery mode |

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| | | |
|--|----|-----------------------------------|
| | 04 | Fault mode |
| | 05 | Hybrid mode(Line mode, Grid mode) |
| | 06 | Charge mode |

3. Note3

| Address | ASCII | Remarks |
|---------|---------|---------------|
| 0x049AH | '0' '0' | Grid type |
| | '0' '1' | Off-grid type |
| | '1' '0' | Hybrid type |

4. Note4

| Address | Value | Remarks |
|---------|-------|------------------|
| 0x049BH | 0 | Transformer less |
| | 1 | Transformer |

5. Note5

| | |
|-------|--------|
| + | - |
| input | output |

6. Note6

| Note3 explain | Fault Number(ASCII) | Fault Name |
|---|---------------------|---|
| Read the history error of machine from here | '0' '1' | BUS exceed the upper limit |
| | '0' '2' | BUS dropp to the lower limit |
| | '0' '3' | BUS soft start circuit timeout |
| | '0' '4' | Inverter voltage soft start timeout |
| | '0' '5' | Inverter current exceed the upper limit |
| | '0' '6' | Temperature over |
| | '0' '7' | Inverter relay work abnormal |

Modbus Protocol for P17

| | |
|---------|--|
| '0' '8' | Current sample abnormal when inverter doesn't work |
| '0' '9' | Solar input voltage exceed upper limit |
| '1' '0' | SPS power voltage abnormal |
| '1' '1' | Solar input current exceed upper limit |
| '1' '2' | Leakage current exceed permit range |
| '1' '3' | Solar insulation resistance too low |
| '1' '4' | Inverter DC current exceed permit range when feed power |
| '1' '5' | The AC input voltage or frequency has been detected different between master CPU and slave CPU |
| '1' '6' | Leakage current detect circuit abnormal when inverter doesn't work |
| '1' '7' | Communication loss between master CPU and slave CPU |
| '1' '8' | Communicate data discordant between master CPU and slave CPU |
| '1' '9' | AC input ground wire loss |
| '2' '2' | Battery voltage exceed upper limit |
| '2' '3' | Over load |
| '2' '4' | Battery disconnected |
| '2' '6' | AC output short |
| '2' '7' | Fan lock |
| '3' '2' | Battery DC-DC current over |
| '3' '3' | AC output voltage too low |
| '3' '4' | AC output voltage too high |
| '3' '5' | Control board wiring error |
| '3' '6' | AC circuit voltage sample error |

7. Note7

| Address | Value(Hex) | Remarks(Write) |
|---------|------------|----------------|
| 0x0125 | 0x0032 | Only 50Hz |
| | 0x003C | or 60Hz |

8. Note8

| Address | Value(Hex) | Remarks(Write) unit: 0.1V |
|---------|------------|---------------------------|
|---------|------------|---------------------------|

Modbus Protocol for P17

| | | |
|--------|--------|------|
| 0x0493 | 0x07E4 | 2020 |
| | 0x0820 | 2080 |
| | 0x0898 | 2200 |
| | 0x08FC | 2300 |
| | 0x0960 | 2400 |

9. Note9

| Address | Value | Remarks |
|---------|-------|---|
| 0x0361H | HHMM | For :1420 Means Start time for enable AC charger working is 14:20 |
| 0x0362H | HHMM | For :1534 Means Ending time for enable AC charger working is 15:34 |

10. Note10

| Address | Value | Remarks |
|---------|-------|---|
| 0x0363H | HHMM | For :1420 Start time for enable AC supply the load is 14:20 |
| 0x0364H | HHMM | For :1534 Ending time for enable AC supply the load is 15:34 |

11. Note11

| Address | Value | Remarks |
|---------|-------|----------------------------------|
| 0x05C3 | 050 | Hybrid type VDE certification |
| | 051 | Hybrid type AS4777 certification |

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| | |
|-----|-----------------------------------|
| 052 | Hybrid type DK certification |
| 053 | Hybrid type RD1663 certification |
| 054 | Hybrid type G83 certification |
| 055 | Hybrid type Taiwan certification |
| 056 | Hybrid type USH certification |
| 057 | Hybrid type USL certification |
| 058 | Hybrid type VDE4105 certification |
| 059 | Hybrid type Korea certification |
| 060 | Hybrid type HongSun certification |
| 061 | Hybrid type Sweden certification |
| 100 | Grid type VDE certification |
| 101 | Grid type AS4777 certification |
| 102 | Grid type DK certification |
| 103 | Grid type RD1663 certification |
| 104 | Grid type G83 certification |
| 105 | Grid type Taiwan certification |
| 106 | Grid type USH certification |
| 107 | Grid type USL certification |
| 108 | Grid type VDE4105 certification |
| 109 | Grid type Korea certification |
| 110 | Grid type HongSun certification |
| 111 | Grid type Sweden certification |
| 150 | Off Grid type |
| 151 | Off Grid 3 type |

Application example

1. Audible alarm Enable or Disable

Look for Enable audible alarm, It in table address 0x000E bit15. Then you may write 0x8000 to 0x000E to Enable audible alarm or write 0xEFFF to 0x0E to disable audible alarm.

For example:

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[XX 10 00 0E 00 01 02 80 00 CRCL CRCH]Mean: Enable audible alarm.

[XX 10 00 0E 00 01 02 7F FF CRCL CRCH]Mean: Disable audible alarm.

Inquire the result of execute, you may read the follow address 0x10 bit15.

For example:

[XX 03 00 10 00 01 CRCL CRCH]

[XX 03 02 80 00 CRCL CRCH]Mean: Execute success

[XX 03 02 00 00 CRCL CRCH]Mean: Execute fail

2. Remote turn on

Look for silence buzzer beep in address 0x001A bit 11 . Then you may write 0x0800 to 0x001A.

For example:

[XX 10 00 1A 00 01 02 08 00 CRCL CRCH] Remote turn on.

Inquire the execution result. You may read 0x0025

[XX 03 00 25 00 01 CRCL CRCH] to inquire the results of command.

3. Setting control parameter to default value

Look for setting control parameter to default value it ,then write 0x8000 to 0x0030.If execute success then set 0x003B bit15 to 1;

For example:

[XX 10 00 30 00 01 02 80 00 CRCL CRCH]Setting control parameter to default value.

[XX 03 00 3B 00 01 CRCL CRCH]to inquire the results of command.

4. Get Grid voltage

Look for input voltage in address 0x00D1, when read 0x00D1 to get input voltage and it units is 0.1V

For example:

PC:[XX 03 00 D1 00 01 CRCL CRH]

DEVICE:[XX 03 02 00 E6 CRCL CRCH]

Mean: HEX [0x00E6] to DEC[230] .Gridvoltage:230V.

5. Setting Parameter item

Set The bypass Voltage high loss point, You want to Set the value 286V. Then write 0x011E to 0x0350.

For example:

PC:[XX 10 03 50 00 01 02 01 1E CRCL CRCH]

Mean: Set The bypass Voltage high loss point for 286V.

6. Read the history error

When you want to read the error which fault id is 1. Then write 0x0001 to 0x035B.

For example:

PC:[XX 10 03 5B 00 01 02 00 01 CRCL CRCH]

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Mean: Set The fault ID for 1 that mean you want read the error information of ID 1.

After that action please wait one second. Then you can read the error information of this fault ID from the address of 0x02AF to 0x02C9.

For example:

PC:[XX 03 02 AF 00 01 CRCL CRH]

DEVICE:[XX 03 02 31 32 CRCL CRCH]

Mean: HEX [0x31] and [0x32] to ASCII '1' and '2' , 12 fault

If DEVICE:[XX 03 02 46 46 CRCL CRCH]

Mean: HEX [0x46] and [0x46] to ASCII 'F' and 'F' , means read failed. Please operate again.

If DEVICE:[XX 03 02 45 45 CRCL CRCH]

Mean: HEX [0x45]and[0x45] to ASCII 'E' and 'E' , means now is reading. Please wait.

7. Read the energy generated of the history

When you want to read the energy of the 2011 years . Then write 0x32 0x30 0x31 0x31 to 0x01CC.

For example:

PC:[XX 10 01 CC 00 02 04 32 30 31 31 CRCL CRCH]

Mean: Set 0x01CC for 2011 that mean you want read the energy of 2011.

After that action please wait one second. Then you can read the energy of this year from the address of 0x019F.

For example:

PC:[XX 03 01 9F 00 02 CRCL CRCH]

DEVICE:[XX 03 04 00 00 75 30 CRCL CRCH]

Mean: HEX [0x00007530]to DEC[30000] energy is 30000W

If DEVICE:[XX 03 04 FF FF FF FF CRCL CRCH]

Mean: HEX [0xFFFFFFFF] means read failed. Please write operate again.

If DEVICE:[XX 03 04 FE FF FF FF CRCL CRCH]

Mean: HEX [0xFEFFFFFF] means now is reading. Please wait.