

| CurrentState / CollectedData | | | | | |
|--|-----------------|------|-------|--------|---------|
| For Grid, Load, Battery => Entity = UPS Number For Solar => Entity = Controller Number CollectedData includes Identifier Column (2=Min 1=Avg 4=Max) In CollectedData insert row with type=1 before logging the data and type=2 afterwards | | | | | |
| Group | Name | HEX | DEC | Entity | Unit |
| Grid | Voltage L1 | 111 | 273 | 1 | 0.01 V |
| Grid | Voltage L2 | 112 | 274 | 1 | 0.01 V |
| Grid | Voltage L3 | 113 | 275 | 1 | 0.01 V |
| Grid | Current L1 | 131 | 305 | 1 | 0.01 A |
| Grid | Current L2 | 132 | 306 | 1 | 0.01 A |
| Grid | Current L3 | 133 | 307 | 1 | 0.01 A |
| Grid | Power L1 | 151 | 337 | 1 | 1 W |
| Grid | Power L2 | 152 | 338 | 1 | 1 W |
| Grid | Power L3 | 153 | 339 | 1 | 1 W |
| Grid | Power Total | 161 | 353 | 1 | 1 W |
| Grid | Frequency | 162 | 354 | 1 | 0.01 Hz |
| Load | Voltage L1 | 511 | 1297 | 1 | 0.01 V |
| Load | Voltage L2 | 512 | 1298 | 1 | 0.01 V |
| Load | Voltage L3 | 513 | 1299 | 1 | 0.01 V |
| Load | Current L1 | 531 | 1329 | 1 | 0.01 A |
| Load | Current L2 | 532 | 1330 | 1 | 0.01 A |
| Load | Current L3 | 533 | 1331 | 1 | 0.01 A |
| Load | Power L1 | 551 | 1361 | 1 | 1 W |
| Load | Power L2 | 552 | 1362 | 1 | 1 W |
| Load | Power L3 | 553 | 1363 | 1 | 1 W |
| Load | Power Total | 561 | 1377 | 1 | 1 W |
| Load | Frequency | 562 | 1378 | 1 | 0.01 Hz |
| Bus | Voltage Minus-N | 311 | 785 | 1 | 0.01 V |
| Bus | Voltage Plus-N | 312 | 786 | 1 | 0.01 V |
| Bus | Current Minus | 321 | 801 | 1 | 0.01 A |
| Bus | Current Plus | 322 | 802 | 1 | 0.01 A |
| Battery | Voltage Minus-N | 411 | 1041 | 1 | 0.01 V |
| Battery | Voltage Plus-N | 412 | 1042 | 1 | 0.01 V |
| Battery | Current Minus | 421 | 1057 | 1 | 0.01 A |
| Battery | Current Plus | 422 | 1058 | 1 | 0.01 A |
| Battery | Power Total | 461 | 1121 | 1 | 1 W |
| Battery | Capacity % | 465 | 1125 | 1 | 1 % |
| Solar | Voltage X-1 | 611 | 1553 | X | 0.01 V |
| Solar | Voltage X-2 | 612 | 1554 | X | 0.01 V |
| Solar | Voltage X-3 | 613 | 1555 | X | 0.01 V |
| Solar | Voltage X-4 | 614 | 1556 | X | 0.01 V |
| Solar | Current X-1 | 621 | 1569 | X | 0.01 A |
| Solar | Current X-2 | 622 | 1570 | X | 0.01 A |
| Solar | Current X-3 | 623 | 1571 | X | 0.01 A |
| Solar | Current X-4 | 624 | 1572 | X | 0.01 A |
| Solar | Power X-1 | 651 | 1617 | X | 1 W |
| Solar | Power X-2 | 652 | 1618 | X | 1 W |
| Solar | Power X-3 | 653 | 1619 | X | 1 W |
| Solar | Power X-4 | 654 | 1620 | X | 1 W |
| Solar | Power X Total | 661 | 1633 | X | 1 W |
| Solar | Power Total | 662 | 1634 | 0 | 1 W |
| Fault | Fault Status | 4001 | 16385 | 1 | 0 / 1 |
| Fault | Latest Fault ID | 4002 | 16386 | 1 | |
| Status | PFC Status | 6001 | 24577 | 1 | 0 / 1 |
| Status | Boost Status | 6002 | 24578 | 1 | 0 / 1 |

| | | | | | |
|--------|----------------------------------|------|-------|---|-------|
| Status | Eco Mode Status | 6003 | 24579 | 1 | 0 / 1 |
| Status | CloudStream Connection Timestamp | 6FFF | 28671 | 0 | |
| I/O | Output 1 State | 921 | 2337 | 1 | 0 / 1 |
| I/O | Output 2 State | 921 | 2337 | 2 | 0 / 1 |
| I/O | Output 3 State | 921 | 2337 | 3 | 0 / 1 |
| I/O | Output 4 State | 921 | 2337 | 4 | 0 / 1 |
| I/O | Input 1 State | 911 | 2321 | 1 | 0 / 1 |
| I/O | Input 2 State | 911 | 2321 | 2 | 0 / 1 |
| I/O | Input 3 State | 911 | 2321 | 3 | 0 / 1 |
| I/O | Input 4 State | 911 | 2321 | 4 | 0 / 1 |
| I/O | Switch 1 State | 915 | 2325 | 1 | 0 / 1 |
| I/O | Switch 2 State | 915 | 2325 | 2 | 0 / 1 |
| I/O | Switch 3 State | 915 | 2325 | 3 | 0 / 1 |
| I/O | Switch 4 State | 915 | 2325 | 4 | 0 / 1 |

| PowerData / EnergyData | | | | |
|--|----------|--------|------|--------|
| In EnergyData is logged only the Daily Energy In PowerData are logged arrays (as string separated with space) with 96 items, each item represents 15 minutes | | | | |
| Name | Type | Entity | Unit | |
| Solar Produced | YYYYMMDD | 60 | 1 | W / Wh |
| Load Consumed | YYYYMMDD | 50 | 1 | W / Wh |
| Solar -> Load | YYYYMMDD | 61 | 1 | W / Wh |
| Grid (In) (Injection) | YYYYMMDD | 11 | 1 | W / Wh |
| Battery (In) (Charging) | YYYYMMDD | 41 | 1 | W / Wh |
| Grid (Out) (Consumption) | YYYYMMDD | 10 | 1 | W / Wh |
| Battery (Out) (Discharging) | YYYYMMDD | 40 | 1 | W / Wh |

| WarningsData | | |
|--|----------------------|-------|
| Logged as array with Type = 0x4003 and Entity = UPS Number | | |
| Group | Name | ID |
| AC Input | Loss | 16640 |
| AC Input | Island | 16641 |
| AC Input | Phase Dislocation | 16642 |
| AC Input | Wave Loss | 16643 |
| AC Input | Ground Loss | 16644 |
| AC Input | Voltage Loss | 16657 |
| AC Input | Voltage High Loss | 16658 |
| AC Input | Voltage Low Loss | 16659 |
| AC Input | Average Voltage Over | 16660 |
| AC Input | Frequency Loss | 16738 |
| AC Input | Frequency High Loss | 16739 |
| AC Input | Frequency Low Loss | 16740 |
| AC Output | Short | 17665 |
| AC Output | Voltage High Loss | 17682 |
| AC Output | Voltage Low Loss | 17683 |
| AC Output | Over Load | 17761 |
| Battery | Open | 17408 |
| Battery | Voltage Too High | 17425 |
| Battery | Low | 17426 |
| Battery | Weak | 17441 |
| Battery | Discharge Low | 17442 |

| | | |
|------------|--|-------|
| Battery | Low in Hybrid Mode | 17443 |
| Battery | Over Charge | 17444 |
| Battery | Over Current | 17457 |
| Solar | Loss | 17920 |
| Solar | Input 1 Loss | 17921 |
| Solar | Input 2 Loss | 17922 |
| Solar | Input Short | 17929 |
| Solar | Voltage Too High | 17937 |
| Solar | Voltage Too Low | 17938 |
| Solar | Input 1 Voltage Too High | 17953 |
| Solar | Input 2 Voltage Too High | 17954 |
| Solar | Over Current | 17969 |
| Solar | Input Power Abnormal | 18017 |
| Solar | Insulation Fault | 18065 |
| Bus | Soft Start Timeout | 17152 |
| Bus | Over Voltage | 17169 |
| Bus | Under Voltage | 17170 |
| Inverter | Soft Start Timeout | 18176 |
| Inverter | Relay Fault | 18177 |
| Inverter | Current Too High | 18225 |
| Inverter | Over Current For Long Time | 18226 |
| Other | Over Temperature | 18689 |
| Other | Control Board Wiring Error | 18690 |
| Other | External Flash Fail | 18691 |
| Other | Initial Fail | 18692 |
| Other | Fan Stop | 18693 |
| Other | EPO Active | 18694 |
| Other | DC Current Sensor Fail | 18696 |
| Other | Power Down | 18697 |
| Other | Leakage current too high | 18704 |
| Other | Leakage current sensor fault | 18705 |
| Other | Line value consistent fail between MCU & DSP | 18706 |
| Other | Connect fail between MCU & DSP | 18707 |
| Other | Current Sensor Fault | 18708 |
| Other | Discharge Fault | 18709 |
| Other | Discharge Fail | 18710 |
| Other | Discharge Soft Time Out | 18711 |
| Other | SPS Power Voltage Abnormal | 18712 |
| Other | AC Circuit Voltage Sample Error | 18713 |
| Live&Smart | Energy Meter Not Working | 18928 |

Settings

VarName => Setting Variable Identifier

Name => Label of the Setting, set by the end-user, appears in the GPIO menu

| | | |
|----|------------------------|---------------------------------------|
| V4 | => Minimal-Active-Time | => Used with Outputs and UPS Commands |
| V5 | => Switch-off delay | => Used with Outputs and UPS Commands |
| V6 | => Switch-on delay | => Used with Outputs and UPS Commands |
| S1 | => Statement | => Used with Outputs and UPS Commands |

Mode => For Outputs
=> IF '0' the output will always be LOW
=> IF '1' the statement will be evaluated and output set
=> For UPS Commands
=> IF '0' the command will be ignored
=> IF '1' the statement will be evaluated and
=> IF returned 'TRUE' the UPS Setting will be set to ENABLED
=> IF returned 'FALSE' the UPS Setting will be set to DISABLED
=> IF '2' the statement will be evaluated and
=> IF returned 'TRUE' the UPS Setting will be set to DISABLED
=> IF returned 'FALSE' the UPS Setting will be set to ENABLED

| VarName | Entity | Description |
|--------------------|--------|--|
| BxOutPin | 1 | Output 1 |
| BxOutPin | 2 | Output 2 |
| BxOutPin | 3 | Output 3 |
| BxOutPin | 4 | Output 4 |
| BxInPin | 1 | Input 1 |
| BxInPin | 2 | Input 2 |
| BxInPin | 3 | Input 3 |
| BxInPin | 4 | Input 4 |
| Switch | 1 | Software Switch 1 |
| Switch | 2 | Software Switch 2 |
| Switch | 3 | Software Switch 3 |
| Switch | 4 | Software Switch 4 |
| CloudLogging | 0 | Enable/Disable Logging Data to Cloud |
| GridInjection | 0 | Enable/Disable Grid Injection |
| BatteryCharging | 0 | Enable/Disable Battery Charging |
| BatteryChargingAC | 0 | Enable/Disable Battery Charging from AC |
| BatteryDischarging | 0 | Enable/Disable Battery Discharging to Load |
| NGRelayFunction | 0 | Enable/Disable N/G Relay Function |
| IgnoreWarnings | 0 | Ignore Warning IDs typed in S1 (ex. '17922 17954') |

CommandsIn

Commands that can be sent using the API, or other external programs

| HEX | DEC | Entity | Text1 | Text2 |
|------|-------|--------|--------------------------|---------------------|
| 5100 | 20736 | 0 | Switch Number => 1 2 3 4 | 0=OFF 1=ON 2=TOGGLE |

EventLog

In EventLog are logged events that occur during execution of the Monitoring program

| Source | Text1 | Text2 | HEX | DEC | Entity |
|---------|-------------------------|-----------|------|-------|--------|
| BatterX | Start | vYY.MM.DD | 400A | 16394 | 0 |
| GPIO | Set BxOutPin X | 0 / 1 | 5000 | 20480 | 0 |
| GPIO | Set BxInPin X | 0 / 1 | 5000 | 20480 | 0 |
| Command | Set Switch X | 0 / 1 | 5100 | 20736 | 0 |
| UPS | Set Grid Injection | 0 / 1 | 5110 | 20752 | 0 |
| UPS | Set Battery Charging | 0 / 1 | 5111 | 20753 | 0 |
| UPS | Set AC Battery Charging | 0 / 1 | 5112 | 20754 | 0 |
| UPS | Set Battery Discharging | 0 / 1 | 5113 | 20755 | 0 |
| UPS | Set N/G Relay Function | 0 / 1 | 5114 | 20755 | 0 |

Commands - CLOUD TABLE - SERVICE ONLY

Commands that can be sent over the Cloud.

The following table is to be used by the batterX service team only.

| HEX | DEC | Entity | Text1 | Text2 |
|------|-------|--------|-----------------------------------|------------------------------|
| 5F00 | 24320 | 0 | Shutdown | |
| 5F01 | 24321 | 0 | Reboot | |
| 5F10 | 24336 | 0 | Update | |
| 5FF0 | 24560 | 0 | Shell (Execute Shell Command) | {"command": "", "input": ""} |
| 5FFF | 24575 | 0 | Settings (Changes Local Settings) | Array with 13 elements |
| 5100 | 20736 | 0 | Switch Number => 1 2 3 4 | 0=OFF 1=ON 2=TOGGLE |