SolisCloud Platform API Document

V2.0

Content

1 GLOBAL DESCRIPTION

1) All interface encryption is based on the HTTPS protocol.
2) The update frequency for all interface data is 5 minutes.
3) All interface request methods are POST.
4) All interface request types are application/JSON;Charset=UTF-8.
5) All interface requests require adding Content MD5, Content Type, Date, and Authorization to the header.
6) All interface returned data is in JSON format.
7) All interface returned data (power, energy, energy, frequency, etc.) must be used in conjunction with the unit.

2 INTERFACE INFORMATION

2.1 Interface Address and Key

Type	Content
API URL	https://www.soliscloud.com:13333/
API ID	Log in to www.soliscloud.com and go to "Account" - "Basic Settings" - "API Management" to obtain. Pay attention to confidentiality and prevent Data breach.
API Secret	

2.2 Request Standard Format

POST [API URL]
Content-MD5: [Content-MD5]
Content-Type: application/json;charset=UTF-8
Date: [Date]
Authorization: API {apiId}: [sign]
Body: [Body]

Name	Description	Example
API URL	Specific address of each interface.	https://www.soliscloud.com:13333/v1/api/inverterDetail

Content-MD5	1. Perform MD5 encryption on the body;
	2. Convert encrypted content into a 128 bit binary array;
	3. Base64 encoding of binary arrays.
		public static String getDigest(String test) {
		String result = "";
		try {
		MessageDigest md = MessageDigest.getInstance("MD5");
		md.update(test.getBytes());
		byte[] b = md.digest();
		result = Base64.encodeBytes(b);
		} catch (NoSuchAlgorithmException e) {
		e.prIntegerStackTrace();
		}
		return result;
		}

Content-Type	Fixed value	application/json;charset=UTF-8

Date	1. Obtain the current time in the GMT time zone;
	2. Convert the current time to a string in the following format. Format: EEE, d MMM yyyy HH: mm: ss' GMT '
	Note: The Date time cannot exceed the current time by more than plus or minus 15 minutes, otherwise a call failure may occur.
		public static String getGMTTime(){
		Calendar cd = Calendar.getInstance();
		SimpleDateFormat sdf = new SimpleDateFormat("EEE, d MMM yyyy HH:mm:ss 'GMT'", Locale.US);
		sdf.setTimeZone(TimeZone.getTimeZone("GMT"));
		String str = sdf.format(cd.getTime());
		return str;
		}

Authorization	The legitimacy authentication information of the interface request, in the format shown in the example, is explained as follows: apiId represents the visitor's identity ID. ApiSecret represents the key required for signing. CanonicalizedResource represents the API interface path that you want to access, such as "/v1/api/inverterDetail" Sign represents a digital signature, which is obtained by encrypting the HmacSHA1 key with base64 encoding. \n represents a line break.	Authorization : "API " + apiId + ":" + Sign Sign = base64(HmacSHA1(apiSecret,POST+ "\n" + Content-MD5 + "\n" + Content-Type + "\n" + Date + "\n" + CanonicalizedResource))

Body	Please refer to the request parameters for each business interface for details.	{
		"id": "1308675217944611083",
		"sn": "120B40198150131"
		}

2.3 Standard format for returns

Content-Type: application/json;charset=UTF-8

Date: [Date]

Body: [Body]

Name	Description	Example
Content-Type	Fixed value	application/json;charset=UTF-8
Date	GMT time in string format	Fri, 26 Jul 2019 06:00:46 GMT
Body	The body content includes: {success, code, msg, data}	{ "success": true,

	"Success": true represents success, while false represents failure. Code: 0 represents success, while others represent failure. Please refer to Appendix 1 for the failure code. "Msg": Description of the code value. Data ": Please refer to the return parameters of each business interface for details.	"code": "0", "msg": "success", "data": { } }

2.4 Interface Call Examples

Request parameters:

POST /v1/api/userStationList

Content-MD5: kxdxk7rbAsrzSIWgEwhH4w==

Content-Type: application/json

Date: Fri, 26 Jul 2019 06:00:46 GMT

Authorization: API {apiId}:nBYQWeuzy3Y+gp67BN8zXTmvSDk=

Body： {"pageNo":1,"pageSize":10}

Return parameters:

```
{
  "success": true,
  "code": "0",
  "msg": "success",
  "data": { }
}
```

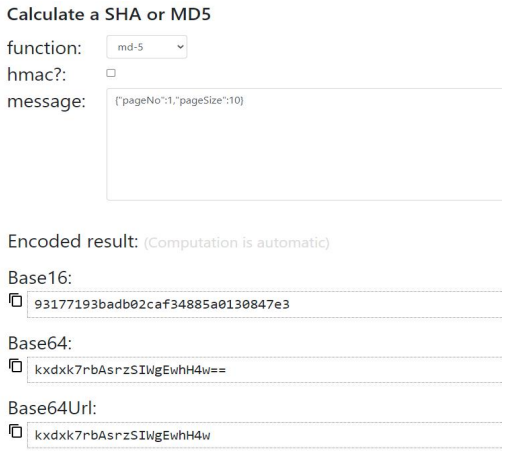
JAVA example (please download directly):

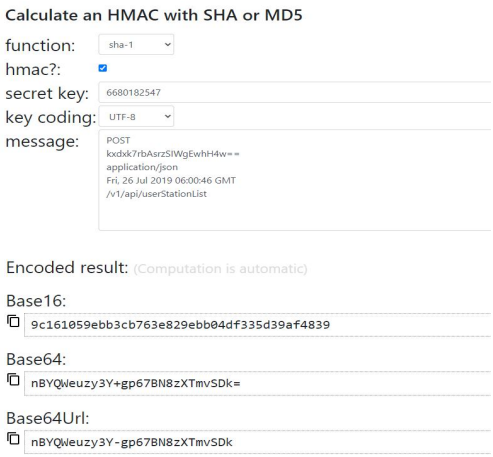
https://ginlong-product.oss-cn-shanghai.aliyuncs.com/templet/Authorization.java

2.5 Encryption Tool Reference

Reference website https://dinochiesa.github.io/hmachash/index.html

Content MD5 calculation example {"pageNo":1,"pageSize":10}





3 DEVICE INTERFACES

3.1 Obtain the inverter list under the account

Interface Name	Obtain the inverter list under the account		
Interface Description	Corresponding to the SolisCloud platform device overview - inverter list, a single call can obtain the list data of up to 100 devices.		
Request URL	https://www.soliscloud.com:13333/v1/api/inverterList		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
pageNo	String	Y	Specify the number of page numbers to return. The default value is 1, representing page 1.
pageSize	String	Y	Specify the number of returns per page. The default value is 20, and the maximum value is 100.
stationId	Integer	N	1. Specify stationId to represent the information under this power station, which can be obtained from the list of power stations. 2. If this value is blank, it represents querying all information under the account.
nmiCode	String	N	1. Specify nmiCode to represent the information under this nmi, which can be obtained from the list of power plants. 2. If this value is blank, it represents querying all information under the account.
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Object	Y	Data identification
page	Object	Y	Result list
inverterStatusVo	Object	Y	Number of results
total	Integer	N	Total number of lists
records	Array	N	Array of record
all	Integer	N	Total number of inverters
normal	Integer	N	Number of normal inverters
offline	Integer	N	Number of offline inverters
fault	Integer	N	Number of faulty inverters
id	Integer	N	Inverter ID

sn	String	N	Inverter SN
stationId	Integer	N	Station ID
stationName	String	N	Name of station
userId	Integer	N	Owner ID
power	String	N	Installed capacity
powerStr	String	N	Unit of installed capacity
etoday	Number	N	Daily power generation
etoday1	Number	N	Original value of daily electricity generation
etodayStr	Number	N	Unit of daily power generation
etotal	Number	N	Total power generation
etotal1	Number	N	Original value of total power generation
etotalStr	Number	N	Unit of total power generation
fullHour	Number	N	Full power hours, power generation divided by rated power
pac	Number	N	Power
pacStr	Number	N	Unit of power
state	Integer	N	Inverter status: 1=online, 2=offline, 3=alarm
dataTimestamp	Integer	N	Data update time under UTC+8. The format is a timestamp.
collectorSn	String	N	Collector SN
productModel	String	N	Inverter type: 1=grid, 2=storage
dcInputType	Integer	N	Number of DC input channels: value+1=actual number of channels. For example, 0=1 channel, 1=2 channels, 2=3 channels, and so on
acOutputType	Integer	N	AC output class: 0=single-phase, others=three-phase
series	String	N	Inverter series
name	String	N	Inverter name
addr	String	N	Station address
collectorState	Integer	N	Collector status: 1=online, 2=offline
stateExceptionFlag	Integer	N	Inverter offline status: 0=normal offline, 1=abnormal offline
totalFullHour	Number	N	Total full power hours, total power generation divided by rated power
inverterMeterModel	Integer	N	Type of inverter meter, see Appendix 3 for details
createDate	Integer	N	Date of data creation
updateShelfEndTime	Integer	N	End time of warranty
Code example			
Request parameters	POST /v1/api/inverterList Connection: keep-alive		

	Date: Tue, 27 Jun 2023 06:23:30 GMT
	Content-MD5: Trz24rS6Ot0X3mHzTjNPww==
	Authorization:API
	1300386381676644416:h8wghlL2V9593N8AjNMSNRZrnB8=
	Content-Type: application/json;charset=UTF-8
	Content-Length: 84
	Host: test.soliscloud.com:3333
	User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17)
	{
	"pageNo": 1,
	"pageSize": 10,
	"stationId": "1298491919448631809",
	"nmiCode": "41028459350"
	}

Return parameters	{
	"success": true,
	"code": "0",
	"msg": "success",
	"data": {
	"inverterStatusVo": {
	"all": 8,
	"normal": 0,
	"fault": 0,
	"offline": 8,
	"mppt": 0
	},
	"page": {
	"records": [
	{
	"id": "1308675217944611083",
	"sn": "120B40198150131",
	"model": "b4",
	"collectorSn": "404314859",
	"productModel": "b4",
	"nationalStandards": "0",
	"inverterSoftwareVersion": "000000",
	"inverterSoftwareVersion2": "000000",
	"dcInputType": 3,
	"acOutputType": 1,
	"stationId": "1298491919448631809",
	"tag": "YingZhen",
	"rs485ComAddr": "101",
	"simFlowState": -5,
	"power": 8.000,

	"powerStr": "kW", "pac": 5.025, "pac1": 0, "pacStr": "kW", "state": 1, "stateExceptionFlag": 0, "ivSupport": 0, "inverterConfig": "0", "fullHour": 4.38, "totalFullHour": 4549.63, "maxDcBus": 0.0, "maxDcBusTime": "0", "maxUac": 259.4, "maxUacTime": "1678591780000", "maxUpv": 392.7, "maxUpvTime": "1673747977000", "timeZone": -9.00, "timeZoneStr": "UTC-9:00", "dataTimestamp": "1687846773000", "dataTimestampStr": "2023-06-26 22:19:33 (UTC-9:00)", "fisTime": "1624441308000", "inverterMeterModel": 1, "updateShelfTime": "null", "collectorId": "1306858901386141423", "dispersionRate": 0.0, "currentState": "0", "pow1": 1825.85, "pow2": 1686.39, "pow3": 1640.24, ... "pow31": 0.0, "pow32": 0.0, "gridPurchasedTodayEnergy": 0.000, "gridPurchasedTodayEnergyStr": "kWh", "gridSellTodayEnergy": 0.000, "gridSellTodayEnergyStr": "kWh", "psumCalPec": "1", "batteryPower": 0.000, "batteryPowerStr": "kW", "batteryPowerPec": "1", "batteryCapacitySoc": 0.000, "parallelStatus": 0, "parallelAddr": 0,

```
                "parallelPhase": 0,
                "parallelBattery": 0,
                "batteryTodayChargeEnergy": 0.000,
                "batteryTodayChargeEnergyStr": "kWh",
                "batteryTotalChargeEnergy": 0.000,
                "batteryTotalChargeEnergyStr": "kWh",
                "batteryTodayDischargeEnergy": 0.000,
                "batteryTodayDischargeEnergyStr": "kWh",
                "batteryTotalDischargeEnergy": 0.000,
                "batteryTotalDischargeEnergyStr": "kWh",
                "bypassLoadPower": 0.000,
                "bypassLoadPowerStr": "kW",
                "backupTodayEnergy": 0.000,
                "backupTodayEnergyStr": "kWh",
                "backupTotalEnergy": 0.000,
                "backupTotalEnergyStr": "kWh",
                "nmiCode": "41028459350",
                "isS5": 0,
                "batteryModel": 1,
                "bypassAcOnoffSet": 0.0,
                "parallelOnoff01": 0.000,
                "parallelOnoff02": 0.000,
                "etotal": 36.397,
                "etoday": 27.800,
                "psum": 0.000,
                "psumCal": 5.025,
                "etotal1": 36397.000,
                "offlineLongStr": "--",
                "etoday1": 27.800000,
                "etotalStr": "MWh",
                "etodayStr": "kWh",
                "psumStr": "kW",
                "psumCalStr": "kW"
            }
        ],
        "total": 1,
        "size": 10,
        "current": 1,
        "orders": [
        ],
        "optimizeCountSql": false,
        "searchCount": true,
        "pages": 1
    },
```

	"mpptSwitch": 1 } }

3.2 Obtaining Details of a Single Inverter

Interface Name	Obtaining Details of a Single Inverter		
Interface Description	Obtain detailed data of the specified inverter, corresponding to the inverter detailed data on the SolisCloud platform.		
Request URL	https://www.soliscloud.com:13333/v1/api/inverterDetail		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
id	Integer	Y	Query the detailed data of the specified inverter ID or inverter SN, both ID and SN cannot be empty at the same time
sn	String	Y	
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Object	Y	Data identification
id	Integer	N	Inverter ID
sn	String	N	Inverter SN
stationId	Integer	N	Station ID
stationName	String	N	Name of station
userId	Integer	N	Owner ID
collectorId	Integer	N	Collector ID
collectorName	String	N	Name of the Collector
collectorsn	String	N	Collector SN
currentState	String	N	Current state
eToday	Number	N	Daily power generation
eTodayStr	String	N	Unit of daily power generation
eMonth	Number	N	Monthly power generation
eMonthStr	String	N	Unit of monthly power generation
eYear	Number	N	Yearly power generation
eYearStr	String	N	Unit of yearly power generation
eTotal	Number	N	Total power generation

eTotalStr	String	N	Unit of total power generation
fac	Number	N	Grid frequency
facStr	String	N	Unit of grid frequency
pac	Number	N	Real time power
pacStr	String	N	Unit of real time power
pacPec	Number	N	Power percentage
fullHour	Number	N	Full power hours, power generation divided by rated power
picName	String	N	Picture name
power	Number	N	Installed capacity
powerStr	String	N	Unit of installed capacity
iAc1	Number	N	AC side current-R
iAc2	Number	N	AC side current-S
iAc3	Number	N	AC side current-T
uAc1	Number	N	AC side voltage-R
uAc2	Number	N	AC side voltage-S
uAc3	Number	N	AC side voltage-T
iPv1	Number	N	DC side current-1
iPv2	Number	N	DC side current-2
iPv3	Number	N	DC side current-3
iPv4	Number	N	DC side current-4
...	Number	N	
iPv32	Number	N	DC side current-32
uPv1	Number	N	DC side voltage-1
uPv2	Number	N	DC side voltage-2
uPv3	Number	N	DC side voltage-3
uPv4	Number	N	DC side voltage-4
.....		N	.....
uPv32	Number	N	DC side voltage-32
pow1	Number	N	DC side power-1
Pow2	Number	N	DC side power-2
.....		N	.....
Pow32	Number	N	DC side power-32
state	Integer	N	Inverter status: 1=online, 2=offline, 3=alarm
dataTimestamp	Integer	N	Data update time under UTC+8. The format is a timestamp.
inverterTemperature	Number	N	Inverter temperature
nationalStandardstr	String	N	National Grid Standards
acOutputType	Integer	N	AC output class: 0=single-phase,

			others=three-phase
dcInputType	Integer	N	Number of DC input channels: value+1=actual number of channels. For example, 0=1 channel, 1=2 channels, 2=3 channels, and so on
powerFactor	Number	N	Power factor
batteryPower	Number	N	Battery power
batteryPowerStr	String	N	Unit of battery power
batteryPowerPec	Number	N	Battery power percentage
batteryCapacitySoc	Number	N	Battery SOC
batteryHealthSoh	Number	N	Battery SOH
socDischargeSet	Number	N	Overdischarge of SOC
socChargingSet	Number	N	Strong charging SOC
batteryType	String	N	Current battery model
batteryVoltage	Number	N	Battery voltage
batteryVoltageStr	String	N	Unit of battery voltage
bstteryCurrent	Number	N	Battery current
bstteryCurrentStr	String	N	Unit of battery current
batteryPower	Number	N	Battery power
batteryPowerStr	String	N	Unit of battery power
batteryPowerPec	Number	N	Battery power percentage
batteryFailureInformation01	String	N	Battery fault information-01
batteryFailureInformation02	String	N	Battery fault information-02
batteryTodayChargeEnergy	Number	N	Daily battery charging energy
batteryTodayChargeEnergyStr	String	N	Unit of daily battery charging energy
batteryMonthChargeEnergy	Number	N	Monthly battery charging energy
batteryMonthChargeEnergyStr	String	N	Unit of monthly battery charging energy
batteryYearChargeEnergy	Number	N	Yearly battery charging energy
batteryYearChargeEnergyStr	String	N	Unit of yearly battery charging energy
batteryTotalChargeEnergy	Number	N	Total battery charging energy
batteryTotalChargeEnergyStr	String	N	Unit of total battery charging energy
batteryTodayDischargeEnergy	Number	N	Daily battery discharging energy
batteryTodayDischargeEnergyStr	String	N	Unit of daily battery discharging energy
batteryMonthDischargeEnergy	Number	N	Monthly battery discharging energy
batteryMonthDischargeEnergyStr	String	N	Unit of monthly battery discharging energy
batteryYearDischargeEnergy	Number	N	Yearly battery discharging energy
batteryYearDischargeEnergyStr	String	N	Unit of yearly battery discharging energy
batteryTotalDischargeEnergy	Number	N	Total battery discharging energy

batteryTotalDischarg eEnergyStr	String	N	Unit of total battery discharging energy
gridPurchasedTodayEnergy	Number	N	Daily grid purchased energy
gridPurchasedTodayEnergyStr	String	N	Unit of daily grid purchased energy
gridPurchasedMonthEnergy	Number	N	Monthly grid purchased energy
gridPurchasedMonthEnergyStr	String	N	Unit of monthly grid purchased energy
gridPurchasedYearEnergy	Number	N	Yearly grid purchased energy
gridPurchasedYearEnergyStr	String	N	Unit of yearly grid purchased energy
gridPurchasedTotalEnergy	Number	N	Total grid purchased energy
gridPurchasedTotalEnergyStr	String	N	Unit of total grid purchased energy
gridSellTodayEnergy	Number	N	Daily grid selling energy
gridSellTodayEnergyStr	String	N	Unit of daily grid selling energy
gridSellMonthEnergy	Number	N	Monthly grid selling energy
gridSellMonthEnergyStr	String	N	Unit of monthly grid selling energy
gridSellYearEnergy	Number	N	Yearly grid selling energy
gridSellYearEnergyStr	String	N	Unit of yearly grid selling energy
gridSellTotalEnergy	Number	N	Total grid selling energy
gridSellTotalEnergyStr	String	N	Unit of total grid selling energy
familyLoadPower	Number	N	Family load power
familyLoadPowerStr	String	N	Unit of family load power
bypassLoadPower	Number	N	Bypass load power
bypassLoadPowerStr	String	N	Unit of bypass load power
pSum	Number	N	Total active power of the grid
pSumStr	String	N	Unit of total active power of the grid
psumPec	Number	N	Percentage of total active power of the power grid
homeLoadTodayEnergy	Number	N	Daily load consumption
homeLoadTodayEnergyStr	String	N	Unit of daily load consumption
homeLoadTotalEnergy	Number	N	Total load consumption
homeLoadTotalEnergyStr	String	N	Unit of total load consumption
model	String	N	Inverter model
type	Integer	N	Inverter type: 1=grid, 2=storage
name	String	N	Inverter name
inverterMeterModel	Integer	N	Type of inverter meter, see Appendix 3 for details
stateExceptionFlag	Integer	N	Inverter offline status: 0=normal offline, 1=abnormal offline
collectorState	Integer	N	Collector status: 1=online, 2=offline
collectorModel	String	N	Collector model
warningInfoData	Integer	N	Alarm information

productModel	String	N	Product model
nationalStandards	String	N	National Grid Standards
version	String	N	Inverter software version
reactivePower	Number	N	Inverter reactive power
reactivePowerStr	String	N	Unit inverter reactive power
apparentPower	Number	N	Inverter apparent power
apparentPowerStr	String	N	Unit of inverter apparent power
dcPac	Number	N	Total DC input power of inverter
dcPacStr	String	N	Unit of total DC input power of inverter
updateShelfEndTime	Integer	N	End time of warranty
iA	Number	N	Meter item A current
uA	Number	N	Meter item A voltage
pA	Number	N	Meter item A power
aLookedPower	Number	N	Meter item A apparent power
aReactivePower	Number	N	Meter item A reactive power
aphasePowerFactor	Number	N	Meter item A active power
averagePowerFactor	Number	N	Meter power factor
iB	Number	N	Meter item B current
uB	Number	N	Meter item B voltage
pB	Number	N	Meter item B power
bLookedPower	Number	N	Meter item B apparent power
bReactivePower	Number	N	Meter item B reactive power
bphasePowerFactor	Number	N	Meter item B active power
iC	Number	N	Meter item C current
uC	Number	N	Meter item C voltage
pC	Number	N	Meter item C power
cLookedPower	Number	N	Meter item C apparent power
cReactivePower	Number	N	Meter item C reactive power
cphasePowerFactor	Number	N	Meter item C active power
fAc	Number	N	Grid frequency
pSum	Number	N	Total power of the meter
Code example			
Request parameters	POST /v1/api/inverterDetail Connection: keep-alive Date: Tue, 27 Jun 2023 06:27:04 GMT Content-MD5: L8Cn6A73DbGlYSSwqZrhUA== Authorization:API 1300386381676644416:aGrbjf3lEidLNAMjN63o3tw/Eeo= Content-Type: application/json;charset=UTF-8 Content-Length: 32		

	Host: test.soliscloud.com:3333
	User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17)
	{
	"id": "1308675217944611083",
	"sn": "120B40198150131"
	}

Return parameters	{
	"success": true,
	"code": "0",
	"msg": "success",
	"data": {
	"fullHour": 0.00,
	"fullHourStr": "h",
	"ctrlCommand": 0,
	"reactivePower": 0,
	"apparentPower": 0,
	"dcPac": 0,
	"uInitGnd": 0,
	"uInitGndStr": "V",
	"dcBus": 0,
	"dcBusStr": "V",
	"dcBusHalf": 0,
	"dcBusHalfStr": "V",
	"power": 0,
	"powerStr": "kWp",
	"powerPec": "1",
	"porwerPercent": 0,
	"pac": 0,
	"pacStr": "kW",
	"pacPec": "1",
	"oneSelf": 0,
	"eToday": 0,
	"eTodayStr": "kWh",
	"eMonth": 0,
	"eMonthStr": "kWh",
	"eYear": 0,
	"eYearStr": "kWh",
	"eTotal": 0,
	"eTotalStr": "kWh",
	"uPv1": 0,
	"uPv1Str": "V",
	"iPv1": 0,
	"iPv1Str": "A",
	"uPv2": 0,

	"uPv2Str": "V", "iPv2": 0, "iPv2Str": "A", ... "uPv32": 0, "uPv32Str": "V", "iPv32": 0, "iPv32Str": "A", "pow1": 0, "pow1Str": "W", "pow2": 0, "pow2Str": "W", "pow3": 0, "pow3Str": "W", ... "pow32": 0, "pow32Str": "W", "uAc1": 0, "uAc1Str": "V", "iAc1": 0, "iAc1Str": "A", "uAc2": 0, "uAc2Str": "V", "iAc2": 0, "iAc2Str": "A", "uAc3": 0, "uAc3Str": "V", "iAc3": 0, "iAc3Str": "A", "batteryDischargeEnergy": 0, "batteryDischargeEnergyStr": "kWh", "batteryChargeEnergy": 0, "batteryChargeEnergyStr": "kWh", "homeLoadEnergy": 0, "homeLoadEnergyStr": "kWh", "gridPurchasedEnergy": 0, "gridPurchasedEnergyStr": "kWh", "gridSellEnergy": 0, "gridSellEnergyStr": "kWh", "facStr": "Hz", "batteryPower": 0, "batteryPowerStr": "kW", "batteryPowerPec": "1", "batteryPowerZheng": 0,

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	"cReactivePower": 0, "cLookedPower": 0, "cPhasePowerFactor": 0, "averagePowerFactor": 0, "dcPacStr": "W", "psum": 0, "reactivePowerStr": "Var", "apparentPowerStr": "VA", "familyLoadPowerPec": "1", "psumCal": 0, "psumStr": "kW", "psumCalStr": "kW" } }

3.3 Obtaining Details of Multiple Inverters

Interface Name	**Obtaining Details of Multiple Inverters**		
Interface Description	Details of multiple inverters corresponding to SolisCloud platform.		
Request URL	https://www.soliscloud.com:13333/v1/api/inverterDetailList		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
pageNo	String	N	Specify the number of page numbers to return. The default value is 1, representing page 1.
pageSize	Integereger	Y	Specify the number of returns per page. The default value is 20, and the maximum value is 100.
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	array	Y	Data identification
id	Integereger	Y	Inverter ID
sn	String	N	Inverter SN
stationId	Integereger	N	Station ID
stationName	String	N	Name of station

userId	Integereger	N	Owner ID
collectorId	Integereger	N	Collector ID
collectorName	String	N	Name of the Collector
collectorsn	String	N	Collector SN
currentState	String	N	Current state
eToday	Number	N	Daily power generation
eTodayStr	String	N	Unit of daily power generation
eMonth	Number	N	Monthly power generation
eMonthStr	String	N	Unit of monthly power generation
eYear	Number	N	Yearly power generation
eYearStr	String	N	Unit of yearly power generation
eTotal	Number	N	Total power generation
eTotalStr	String	N	Unit of total power generation
fac	Number	N	Grid frequency
facStr	String	N	Unit of grid frequency
pac	Number	N	Real time power
pacStr	String	N	Unit of real time power
pacPec	Number	N	Power percentage
fullHour	Number	N	Full power hours, power generation divided by rated power
picName	String	N	Picture name
power	Number	N	Installed capacity
powerStr	String	N	Unit of installed capacity
iAc1	Number	N	AC side current-R
iAc2	Number	N	AC side current-S
iAc3	Number	N	AC side current-T
uAc1	Number	N	AC side voltage-R
uAc2	Number	N	AC side voltage-S
uAc3	Number	N	AC side voltage-T
iPv1	Number	N	DC side current-1
iPv2	Number	N	DC side current-2
iPv3	Number	N	DC side current-3
iPv4	Number	N	DC side current-4
uPv1	Number	N	DC side voltage-1
uPv2	Number	N	DC side voltage-2
uPv3	Number	N	DC side voltage-3
uPv4	Number	N	DC side voltage-4
.....	Number	N	5~31
iPv32	Number	N	DC side current-32
uPv32	Number	N	DC side voltage-32

pow1	Number	N	DC side power-1
Pow2	Number	N	DC side power-2
.....	Number	N	3~31
Pow32	Number	N	DC side power-32
state	Integer	N	Inverter status: 1=online, 2=offline, 3=alarm
dataTimestamp	Integereger	N	Data update time under UTC+8. The format is a timestamp.
inverterTemperature	Number	N	Inverter temperature
nationalStandardstr	String	N	National Grid Standards
acOutputType	Integer	N	AC output class: 0=single-phase, others=three-phase
dcInputType	Integer	N	Number of DC input channels: value+1=actual number of channels. For example, 0=1 channel, 1=2 channels, 2=3 channels, and so on
powerFactor	Number	N	Power factor
batteryPower	Number	N	Battery power
batteryPowerStr	String	N	Unit of battery power
batteryPowerPec	Number	N	Battery power percentage
batteryCapacitySoc	Number	N	Battery SOC
batteryHealthSoh	Number	N	Battery SOH
socDischargeSet	Number	N	Overdischarge of SOC
socChargingSet	Number	N	Strong charging SOC
batteryType	String	N	Current battery model
batteryVoltage	Number	N	Battery voltage
batteryVoltageStr	String	N	Unit of battery voltage
bstteryCurrent	Number	N	Battery current
bstteryCurrentStr	String	N	Unit of battery current
batteryPower	Number	N	Battery power
batteryPowerStr	String	N	Unit of battery power
batteryPowerPec	Number	N	Battery power percentage
batteryFailureInformation01	String	N	Battery fault information-01
batteryFailureInformation02	String	N	Battery fault information-02
batteryTodayChargeEnergy	Number	N	Daily battery charging energy
batteryTodayChargeEnergyStr	String	N	Unit of daily battery charging energy
batteryMonthChargeEnergy	Number	N	Monthly battery charging energy
batteryMonthChargeEnergyStr	String	N	Unit of monthly battery charging energy
batteryYearChargeEnergy	Number	N	Yearly battery charging energy
batteryYearChargeEnergyStr	String	N	Unit of yearly battery charging energy

batteryTotalChargeEnergy	Number	N	Total battery charging energy
batteryTotalChargeEnergyStr	String	N	Unit of total battery charging energy
batteryTodayDischargeEnergy	Number	N	Daily battery discharging energy
batteryTodayDischargeEnergyStr	String	N	Unit of daily battery discharging energy
batteryMonthDischargeEnergy	Number	N	Monthly battery discharging energy
batteryMonthDischargeEnergyStr	String	N	Unit of monthly battery discharging energy
batteryYearDischargeEnergy	Number	N	Yearly battery discharging energy
batteryYearDischargeEnergyStr	String	N	Unit of yearly battery discharging energy
batteryTotalDischargeEnergy	Number	N	Total battery discharging energy
batteryTotalDischarg eEnergyStr	String	N	Unit of total battery discharging energy
gridPurchasedTodayEnergy	Number	N	Daily grid purchased energy
gridPurchasedTodayEnergyStr	String	N	Unit of daily grid purchased energy
gridPurchasedMonthEnergy	Number	N	Monthly grid purchased energy
gridPurchasedMonthEnergyStr	String	N	Unit of monthly grid purchased energy
gridPurchasedYearEnergy	Number	N	Yearly grid purchased energy
gridPurchasedYearEnergyStr	String	N	Unit of yearly grid purchased energy
gridPurchasedTotalEnergy	Number	N	Total grid purchased energy
gridPurchasedTotalEnergyStr	String	N	Unit of total grid purchased energy
gridSellTodayEnergy	Number	N	Daily grid selling energy
gridSellTodayEnergyStr	String	N	Unit of daily grid selling energy
gridSellMonthEnergy	Number	N	Monthly grid selling energy
gridSellMonthEnergyStr	String	N	Unit of monthly grid selling energy
gridSellYearEnergy	Number	N	Yearly grid selling energy
gridSellYearEnergyStr	String	N	Unit of yearly grid selling energy
gridSellTotalEnergy	Number	N	Total grid selling energy
gridSellTotalEnergyStr	String	N	Unit of total grid selling energy
familyLoadPower	Number	N	Family load power
familyLoadPowerStr	String	N	Unit of family load power
bypassLoadPower	Number	N	Bypass load power
bypassLoadPowerStr	String	N	Unit of bypass load power
pSum	Number	N	Total active power of the grid
pSumStr	String	N	Unit of total active power of the grid
psumPec	Number	N	Percentage of total active power of the power grid
homeLoadTodayEnergy	Number	N	Daily load consumption
homeLoadTodayEnergyStr	String	N	Unit of daily load consumption

homeLoadTotalEnergy	Number	N	Total load consumption
homeLoadTotalEnergyStr	String	N	Unit of total load consumption
model	String	N	Inverter model
type	Integereger	N	Inverter type: 1=grid, 2=storage
name	String	N	Inverter name
inverterMeterModel	Integereger	N	Type of inverter meter, see Appendix 3 for details
stateExceptionFlag	Integereger	N	Inverter offline status: 0=normal offline, 1=abnormal offline
collectorState	Integereger	N	Collector status: 1=online, 2=offline
collectorModel	String	N	Collector model
warningInfoData	Integereger	N	Alarm information
productModel	String	N	Product model
nationalStandards	String	N	National Grid Standards
version	String	N	Inverter software version
reactivePower	Number	N	Inverter reactive power
reactivePowerStr	String	N	Unit inverter reactive power
apparentPower	Number	N	Inverter apparent power
apparentPowerStr	String	N	Unit of inverter apparent power
dcPac	Number	N	Total DC input power of inverter
dcPacStr	String	N	Unit of total DC input power of inverter
updateShelfEndTime	Integereger	N	End time of warranty
Code example			

Request parameters	POST /v1/api/inverterDetailList
	Connection: keep-alive
	Date: Wed, 28 Jun 2023 02:18:54 GMT
	Content-MD5: sAGxE9QzeBN88qPrz+sCZQ==
	Authorization:API 1300386381676644416:ewHgoms8cJSVoFo9wtCb40R6n7g=
	Content-Type: application/json;charset=UTF-8
	Content-Length: 30
	Host: test.soliscloud.com:3333
	User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17)
	{
	"pageNo": "1",
	"pageSize": "10"
	}		

Return parameters	{ "success": true, "code": "0", "msg": "success",		

	"data": {
	"records": [{
	"id": "1308675217944612385",
	"sn": "00FFFC445594901",
	"inverterMeterModel": 1,
	"collectorsn": "FFFC4455949",
	"collectorId": "1306858901386142563",
	"state": 2,
	"stateExceptionFlag": 0,
	"simFlowState": -4,
	"fullHour": 0,
	"fullHourStr": "h",
	"currentState": "4dd",
	"warningInfoData": 0,
	"updateShelfEndTime": 0,
	"timeZone": 8.00,
	"timeZoneStr": "UTC+08:00",
	"daylight": 0,
	"daylightSwitch": 0,
	"model": "1E",
	"productModel": "1E",
	"ctrlCommand": 0,
	"inverterTemperature": 57.2,
	"inverterTemperatureUnit": "°F",
	"temp": 175,
	"tempName": "IGBT",
	"sno": "108B3B",
	"stationId": "1298491919448633624",
	"version": "000A08",
	"acOutputType": 1,
	"dcInputType": 19,
	"rs485ComAddr": "e46",
	"dataTimestamp": "1685416761952",
	"timeStr": "2023-05-30 11:19:21",
	"reactivePower": 55.943,
	"apparentPower": 44.899,
	"dcPac": 0.000,
	"uInitGnd": 0,
	"uInitGndStr": "V",
	"dcBus": 10.000,
	"dcBusStr": "V",
	"dcBusHalf": 10.000,
	"dcBusHalfStr": "V",
	"power": 0.000,

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	"batteryTodayChargeEnergy": 0.000, "batteryTodayChargeEnergyStr": "kWh", "batteryMonthChargeEnergy": 0, "batteryMonthChargeEnergyStr": "kWh", "batteryYearChargeEnergy": 0, "batteryYearChargeEnergyStr": "kWh", "batteryYesterdayChargeEnergy": 0.000, "batteryYesterdayChargeEnergyStr": "kWh", "batteryTotalDischargeEnergy": 0.000, "batteryTotalDischargeEnergyStr": "kWh", "batteryTodayDischargeEnergy": 0.000, "batteryTodayDischargeEnergyStr": "kWh", "batteryMonthDischargeEnergy": 0, "batteryMonthDischargeEnergyStr": "kWh", "batteryYearDischargeEnergy": 0, "batteryYearDischargeEnergyStr": "kWh", "batteryYesterdayDischargeEnergy": 0.000, "batteryYesterdayDischargeEnergyStr": "kWh", "gridPurchasedTotalEnergy": 0.000, "gridPurchasedTotalEnergyStr": "kWh", "gridPurchasedYearEnergy": 0, "gridPurchasedYearEnergyStr": "kWh", "gridPurchasedMonthEnergy": 0, "gridPurchasedMonthEnergyStr": "kWh", "gridPurchasedTodayEnergy": 0.000, "gridPurchasedTodayEnergyStr": "kWh", "gridPurchasedYesterdayEnergy": 0.000, "gridPurchasedYesterdayEnergyStr": "kWh", "gridSellTotalEnergy": 0.000, "gridSellTotalEnergyStr": "kWh", "gridSellYearEnergy": 0, "gridSellYearEnergyStr": "kWh", "gridSellMonthEnergy": 0, "gridSellMonthEnergyStr": "kWh", "gridSellTodayEnergy": 0.000, "gridSellTodayEnergyStr": "kWh", "gridSellYesterdayEnergy": 0.000, "gridSellYesterdayEnergyStr": "kWh", "homeLoadTotalEnergy": 0.000, "homeLoadTotalEnergyStr": "kWh", "homeLoadTodayEnergy": 0.000, "homeLoadTodayEnergyStr": "kWh", "totalLoadPower": 0, "totalLoadPowerStr": "kW",

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"psumCalPec": "1",
"insulationResistance": 0.0,
"dispersionRate": 219.09,
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"iLeakLimt": 0,
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"upvTotalStr": "V",
"ipvTotal": 0,
"ipvTotalStr": "A",
"powTotal": 0,
"powTotalStr": "W",
"parallelStatus": 0,
"parallelAddr": 0,
"parallelPhase": 0,
"parallelBattery": 0,
"batteryAlarm": "0",
"bypassAcOnoffSet": 0.0,
"bypassAcVoltageSet": 0.0,
"bypassAcCurrentSet": 0.0,
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"batteryCDISet": 0.0,
"batteryCMaxiSet": 0.0,
"batteryDMaxiSet": 0.0,
"batteryUvpSet": 0.0,
"batteryFcvSet": 0.0,
"batteryAcvSet": 0.0,
"batteryOvpSet": 0.0,
"batteryOlvEnableSet": 0.0,
"batteryLaTemp": 0.0,
"offGridDDepth": 0.0,
"epsDDepth": 0.0,
"epsSwitchTime": "0",
"bmsState": 0,
"acInType": 0,
"energyStorageControl": "0",
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"meter2Type": 0,
"meter1SiteHigh": 0,
"meter2SiteHigh": 0,
"meter1TypeLow": 0,
"meter2TypeLow": 0,
"generatorPower": 0.000,
```

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                "generatorPowerStr": "kW",
                "generatorPowerPec": "1",
                "generatorTodayEnergy": 0.000,
                "generatorTodayEnergyStr": "kW",
                "generatorTodayEnergyPec": "1",
                "generatorTotalEnergy": 0.000,
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                "generatorTotalEnergyPec": "1",
                "generatorWarning": "0",
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                "parallelOnoff01": 0.000,
                "parallelOnoff02": 0.000,
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                "uA": 0,
                "iB": 0,
                "uB": 0,
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                "uC": 0,
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                "aLookedPower": 0,
                "aPhasePowerFactor": 0,
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                "cPhasePowerFactor": 0,
                "averagePowerFactor": 0,
                "dcPacStr": "VA",
                "psum": 5.000,
                "reactivePowerStr": "kVar",
                "apparentPowerStr": "kVA",
                "familyLoadPowerPec": "1",
                "psumCal": 21.046,
                "psumStr": "kW",
                "psumCalStr": "kW"
            }]
        }
}
```

3.4 Obtain real-time data of a single inverter on a certain day

Interface Name	Obtain real-time data of a single inverter on a certain day		
Interface Description	Corresponding daily chart of SolisCloud platform inverter details.		
Request URL	https://www.soliscloud.com:13333/v1/api/inverterDay		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
id	Integer	N	Query the data of the specified inverter ID or inverter SN, and both ID and SN cannot be empty at the same time.
sn	String	N	
money	String	Y	Used to calculate revenue, e.g. EUR, CNY
time	String	Y	Specify to query data for a certain day, format: yyyy-MM-dd
timeZone	Integer	Y	The time zone where the device is located. Example: 8
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Array	Y	Data identification
dataTimestamp	Integer	N	Data update time under UTC+8. The format is a timestamp.
timeStr	String	N	Update time, string converted based on time zone
eToday	Number	N	Daily power generation
eTotal	Number	N	Total power generation
fac	Number	N	Grid frequency
pac	Number	N	Real time power
pacStr	String	N	Unit of real time power
pacPec	Number	N	Power percentage
iAc1	Number	N	AC side current-R
iAc2	Number	N	AC side current-S
iAc3	Number	N	AC side current-T
uAc1	Number	N	AC side voltage-R
uAc2	Number	N	AC side voltage-S
uAc3	Number	N	AC side voltage-T
iPv1	Number	N	DC side current-1
iPv2	Number	N	DC side current-2

iPv3	Number	N	DC side current-3
iPv4	Number	N	DC side current-4
uPv1	Number	N	DC side voltage-1
uPv2	Number	N	DC side voltage-2
uPv3	Number	N	DC side voltage-3
uPv4	Number	N	DC side voltage-4
inverterTemperature	Number	N	Inverter temperature
acOutputType	Integer	N	AC output class: 0=single-phase, others=three-phase
dcInputType	Integer	N	Number of DC input channels: value+1=actual number of channels. For example, 0=1 channel, 1=2 channels, 2=3 channels, and so on
powerFactor	Number	N	Power factor
batteryCapacitySoc	Number	N	Battery SOC
batteryHealthSoh	Number	N	Battery SOH
socDischargeSet	Number	N	Overdischarge of SOC
socChargingSet	Number	N	Strong charging SOC
batteryVoltage	Number	N	Battery voltage
bstteryCurrent	Number	N	Battery current
batteryPower	Number	N	Battery power
batteryTodayChargeEnergy	Number	N	Daily battery charging energy
batteryTotalChargeEnergy	Number	N	Total battery charging energy
batteryTodayDischargeEnergy	Number	N	Daily battery discharging energy
batteryTotalDischargeEnergy	Number	N	Total battery discharging energy
gridPurchasedTodayEnergy	Number	N	Daily grid purchased energy
gridPurchasedTotalEnergy	Number	N	Total grid purchased energy
gridSellTodayEnergy	Number	N	Daily grid selling energy
gridSellTotalEnergy	Number	N	Total grid selling energy
familyLoadPower	Number	N	Family load power
bypassLoadPower	Number	N	Bypass load power
pSum	Number	N	Total active power of the grid
homeLoadTodayEnergy	Number	N	Daily load consumption
homeLoadTotalEnergy	Number	N	Total load consumption
Code example			
Request parameters	POST /v1/api/inverterDay Connection: keep-alive Date: Tue, 27 Jun 2023 11:21:04 GMT Content-MD5: uS4IZTyKQmsv606fXNjQ0A== Authorization:API 1300386381676644416:xNtp1S0/KMJ60iUURwmsSAH7azs=		

	Content-Type: application/json;charset=UTF-8
	Content-Length: 100
	Host: test.soliscloud.com:3333
	User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17)
	{
	"id":"1308675217944611083",
	"sn":"120B40198150131",
	"money":"",
	"time":"2023-06-27",
	"timeZone":"8"
	}

Return parameters	{
	"success": true,
	"code": "0",
	"msg": "success",
	"data": [
	{
	"dataTimestamp": "1687813291000",
	"timeStr": "2023-06-27 05:01:31",
	"acOutputType": 1,
	"dcInputType": 3,
	"state": 1,
	"time": "05:01:31",
	"pac": 74.000,
	"pacStr": "kW",
	"pacPec": "0.001",
	"eToday": 0.000,
	"eTotal": 36362.000,
	"uPv1": 245.3,
	"iPv1": 0.1,
	"uPv2": 243.0,
	"iPv2": 0.1,
	"uPv3": 244.7,
	}
	]
	}

3.5 Obtaining Daily Data of a Single Inverter for a Month

Interface Name	Obtaining Daily Data of a Single Inverter for a Month
Interface Description	Monthly chart corresponding to SolisCloud platform inverter details.
Request URL	https://www.soliscloud.com:13333/v1/api/inverterMonth
Interface frequency limit	2 times/sec

Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
id	number	N	Query the data of the specified inverter ID or inverter SN, and both ID and SN cannot be empty at the same time.
sn	String	N	
money	String	Y	Used to calculate revenue, e.g. EUR, CNY
month	String	Y	Query data for a specified month in the format of 'yyyy MM'
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Object	Y	Data identification
energy	number	N	Power generation
energyStr	String	N	Unit of power generation
date	Number	N	Data, format timestamp
dateStr	String	N	Data, format string
money	Number	N	Income
moneyStr	String	N	Unit of income
batteryDischargeEnergy	number	N	Battery discharge energy
batteryChargeEnergy	Number	N	Battery charging energy
gridPurchasedEnergy	number	N	Grid purchased energy
gridSellEnergy	Number	N	Grid sell energy

Code example

Request parameters

```
POST /v1/api/inverterMonth
Connection: keep-alive
Date: Tue, 27 Jun 2023 11:25:25 GMT
Content-MD5: Sdjc8y5oT63JIHwqy/J5ew==
Authorization:API 1300386381676644416:lrfIOa5z7mm6TnKGxT0lDV1lRmk=
Content-Type: application/json;charset=UTF-8
Content-Length: 98
Host: test.soliscloud.com:3333
User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17)

{
    "id": "1308675217944611083",
    "sn": "120B40198150131",
    "money": "",
    "month": "2023-06",
    "timeZone": "8"
}
```

Return parameters	{ "success": true, "code": "0", "msg": "success", "data": [{ "inverterId": "1308675217944611083", "id": "1308676247344233516", "money": 41.600, "moneyStr": "AUD", "moneyPec": "1", "energy": 41.600, "energyStr": "kWh", "energyPec": "1", "fullHour": 5.20000, "date": 1685592000000, "dateStr": "2023-06-01", "timeZone": 8, "batteryDischargeEnergy": 0.00000, "batteryChargeEnergy": 0.00000, "gridPurchasedEnergy": 0.00000, "gridPurchasedIncome": 0.000, "gridSellEnergy": 0.00000, "gridSellIncome": 0.000, "homeLoadEnergy": 0.00000, "consumeEnergy": 0, "produceEnergy": 0, "offSetEnergy": 0, "offSetIncome": 0, "errorFlag": 0 }, ... 2023-06-01 ~ 2023-06-26 { "inverterId": "1308675217944611083", "id": "1308676247344236300", "money": 44.900, "moneyStr": "AUD", "moneyPec": "1", "energy": 44.900, "energyStr": "kWh", "energyPec": "1", "fullHour": 5.61, "date": 1687838400000, "dateStr": "2023-06-27",

```
                "timeZone": 8,
                "batteryDischargeEnergy": 0,
                "batteryChargeEnergy": 0,
                "gridPurchasedEnergy": 0,
                "gridPurchasedIncome": 0.000,
                "gridSellEnergy": 0,
                "gridSellIncome": 0.000,
                "homeLoadEnergy": 0,
                "consumeEnergy": 0,
                "produceEnergy": 0,
                "offSetEnergy": 0,
                "offSetIncome": 0,
                "errorFlag": 0
            }
        ]
}
```


3.6 Obtain monthly data of a single inverter for a certain year

Interface Name	Obtain monthly data of a single inverter for a certain year		
Interface Description	Annual chart corresponding to the inverter details of the SolisCloud platform.		
Request URL	https://www.soliscloud.com:13333/v1/api/inverterYear		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
id	number	N	Query the data of the specified inverter ID or inverter SN, and both ID and SN cannot be empty at the same time.
sn	String	N	
money	String	Y	Used to calculate revenue, e.g. EUR, CNY
year	String	Y	Query data for a specified year, time format: "yyyy"
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Object	Y	Data identification
energy	number	N	Power generation
energyStr	String	N	Unit of power generation
date	Number	N	Data, format timestamp

dateStr	String	N	Data, format string
money	Number	N	Income
moneyStr	String	N	Unit of income
batteryDischargeEnergy	number	N	Battery discharge energy
batteryChargeEnergy	Number	N	Battery charging energy
gridPurchasedEnergy	number	N	Grid purchased energy
gridSellEnergy	Number	N	Grid sell energy

Code example

Request parameters

```
POST /v1/api/inverterYear
Connection: keep-alive
Date: Tue, 27 Jun 2023 11:27:46 GMT
Content-MD5: DX2ecuD6A/Nd1CyX7dOZyg==
Authorization: API 1300386381676644416:Sh/MgB/ddIuRItuE6zj238qkxd4=
Content-Type: application/json;charset=UTF-8
Content-Length: 94
Host: test.soliscloud.com:3333
User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17)

{
    "id": "1308675217944611083",
    "sn": "120B40198150131",
    "money": "元",
    "year": "2023",
    "timeZone": "8"
}
```

Return parameters

```
{
    "success": true,
    "code": "0",
    "msg": "success",
    "data": [
        {
            "inverterId": "1308675217944611083",
            "id": "1308675218175749632",
            "money": 359.476,
            "moneyStr": "KAUD",
            "moneyPec": "0.001",
            "energy": 866.000,
            "energyStr": "MWh",
            "energyPec": "0.001",
            "fullHour": 108.25000,
            "date": 1672545600000,
            "dateStr": "2023-01",
            "timeZone": 8,
```

	"batteryDischargeEnergy": 0.00000,
	"batteryChargeEnergy": 0.00000,
	"gridPurchasedEnergy": 0.00000,
	"gridPurchasedIncome": 0.000,
	"gridSellEnergy": 0.00000,
	"gridSellIncome": 0.000,
	"homeLoadEnergy": 0.00000,
	"consumeEnergy": 0,
	"produceEnergy": 0,
	"offSetEnergy": 0,
	"offSetIncome": 0,
	"errorFlag": 0
	},
	..... 2023-02 ~ 2023-05
	{
	"inverterId": "1308675217944611083",
	"id": "130867521817575631 5",
	"money": 852.000,
	"moneyStr": "KAUD",
	"moneyPec": "0.001",
	"energy": 852.000,
	"energyStr": "MWh",
	"energyPec": "0.001",
	"fullHour": 106.50,
	"date": 1685592000000,
	"dateStr": "2023-06",
	"timeZone": 8,
	"batteryDischargeEnergy": 0,
	"batteryChargeEnergy": 0,
	"gridPurchasedEnergy": 0,
	"gridPurchasedIncome": 0.000,
	"gridSellEnergy": 0,
	"gridSellIncome": 0.000,
	"homeLoadEnergy": 0,
	"consumeEnergy": 0,
	"produceEnergy": 0,
	"offSetEnergy": 0,
	"offSetIncome": 0,
	"errorFlag": 0
	}
	]
	}

3.7 Obtaining Annual Data of a Single Inverter

Interface Name	Obtaining Annual Data of a Single Inverter		
Interface Description	The cumulative chart corresponding to the SolisCloud platform inverter.		
Request URL	https://www.soliscloud.com:13333/v1/api/inverterAll		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
id	number	N	Query the data of the specified inverter ID or inverter SN, and both ID and SN cannot be empty at the same time.
sn	String	N	
money	String	Y	Used to calculate revenue, e.g. EUR, CNY
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Object	Y	Data identification
year	Integer	Y	Year
energy	number	N	Power generation
energyStr	String	N	Unit of power generation
batteryDischargeEnergy	number	N	Battery discharge energy
batteryChargeEnergy	Number	N	Battery charging energy
gridPurchasedEnergy	number	N	Grid purchased energy
gridSellEnergy	Number	N	Grid sell energy
Code example			

Request parameters	POST /v1/api/userStationList
	Connection: keep-alive
	Date: Wed, 31 May 2023 09:12:23 GMT
	Content-MD5: nyUAGqC1qeRnZ4vvgxK2ow==
	Authorization: API 1300386381676565707:PqHiyhsQ8BILCrfIHshkSue5yzg=
	Content-Type: application/json;charset=UTF-8
	Content-Length: 70
	Host: www.soliscloud.com:13333
	User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17)
	{
	"pageNo": 1,
	"pageSize": 10,
	"nmiCode": ""
	}		

Return parameters	{ "code": "0",		

```
"msg": "success",
"data": {
  "stationStatusVo": {
    "all": 0,
    "normal": 0,
    "fault": 0,
    "offline": 0,
    "building": 0,
    "mppt": 0
  },
  "page": {
    "records": [ ],
    "total": 0,
    "size": 10,
    "current": 1,
    "orders": [ ],
    "optimizeCountSql": false,
    "searchCount": true,
    "pages": 0
  },
  "mpptSwitch": 0
}
}
```


3.8 Obtaining Quality Assurance Data for Multiple Inverters

Interface Name	Obtaining Quality Assurance Data for Multiple Inverters		
Interface Description	Corresponding to SolisCloud platform warranty query.		
Request URL	https://www.soliscloud.com:13333/v1/api/inverter/shelfTime		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
pageNo	number	Y	Specify the number of page numbers to return. The default value is 1, representing page 1.
pageSize	number	Y	Specify the number of returns per page. The default value is 20, and the maximum value is 100.
sn	String	N	Specify to query single or multiple inverter SNs. When querying multiple, the SN is separated by ','. A maximum of 1000 SNs at a time.
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	String	Y	0 represents success, while others represent failure.

			The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Object	Y	Data identification
page	Object	Y	result list
total	Integer	Y	Total number of lists
records	Array	Y	Array of record
id	number	Y	Inverter ID
sn	String	Y	Inverter SN
shelfBeginTime	number	N	Start time of warranty
shelfEndTime	number	N	End time of warranty
shelfTime	number	N	Warranty period
shelfState	number	N	Warranty status: 0=Under warranty, 1=Over warranty
Code example			

Request parameters	POST /v1/api/inverter/shelfTime
	Connection: keep-alive
	Date: Wed, 28 Jun 2023 06:42:38 GMT
	Content-MD5: YyrTpXdCTJN377g1hYLcJw==
	Authorization:API 1300386381676644416:k+aaQOt5Tr3M4YmLpKjJUoQgum4=
	Content-Type: application/json;charset=UTF-8
	Content-Length: 45
	Host: test.soliscloud.com:3333
	User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17)
	{
	"pageNo": "1",
	"pageSize": "20",
	"sn": "120B40198150131"
	}		

Return parameters	{
	"success": true,
	"code": "0",
	"msg": "success",
	"data": {
	"records": [
	{
	"id": "1308675217944612369",
	"deleteFlag": 0,
	"sn": "00FFC1155339601",
	"shelfState": "--",
	"shelfTime": 0,
	"shelfWarrantyType": 0
	},
	{		

```
                "id": "1308675217944611083",
                "deleteFlag": 0,
                "sn": "120B40198150131",
                "shelfState": "--",
                "shelfTime": 0,
                "shelfWarrantyType": 0
            }
        ],
        "total": 2,
        "size": 20,
        "current": 1,
        "orders": [                                ],
        "optimizeCountSql": true,
        "searchCount": true,
        "pages": 1
    }
}
```


3.9 Obtain the device alarm list under the account

Interface Name	Obtain the device alarm list under the account		
Interface Description	Corresponding SolisCloud platform alarm information query.		
Request URL	https://www.soliscloud.com:13333/v1/api/alarmList		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
pageNo	String	N	Specify the number of page numbers to return. The default value is 1, representing page 1.
pageSize	Integereger	Y	Specify the number of returns per page. The default value is 20, and the maximum value is 100.
stationId	Integereger	N	1. Specify stationId to represent the information under this power station, which can be obtained from the list of power stations. 2. If this value is blank, it represents querying all information under the account.
alarmDeviceSn	String	N	1. Specify alarmDeviceSn to represent the query of alarm information under this inverter. 2. If this value is blank, it means querying all alarm information of all inverters under this account.
alarmBegIntegerime	String	N	1. Specify the alarm information since querying yyyy-MM-dd 2. If this value is blank, it represents querying all.

alarmEndTime	String	N	1. Specify the alarm information found for yyyy-MM-dd. 2. If this value is blank, it represents querying all.
nmiCode	String	N	1. Specify nmiCode to represent the information under this nmi, which can be obtained from the list of power plants. 2. If this value is blank, it represents querying the information under the account.
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Object	Y	Data identification
page	Object	Y	result list
total	Integer	Y	Total number of lists
records	Array	Y	Array of record
stationId	Long	Y	Station ID
stationName	String	N	Name of station
alarmDeviceSn	String	N	Inverter SN
alarmCode	String	N	Alarm code. Please refer to the fault information table for detailed analysis.
alarmLevel	String	N	Alarm level: 1=tip, 2=general, 3=emergency
alarmBegIntegerime	Long	N	Alarm start time
alarmEndTime	Long	N	Alarm end time
alarmMsg	String	N	Alarm content
advice	String	N	Alarm handling suggestions
state	String	N	Alarm status: 0=pending, 1=processed, 2=restored
warningInfoData	Integereger	N	Sub alarm code
Code example			

Request parameters

```
POST /v1/api/alarmList
Connection: keep-alive
Date: Wed, 28 Jun 2023 02:14:44 GMT
Content-MD5: vSNnxiqefqgVUnS7iLaT5Q==
Authorization: API 1300386381676644416:0AkbOnxxeTgBIo9mjy2811KB98o=
Content-Type: application/json;charset=UTF-8
Content-Length: 122
Host: test.soliscloud.com:3333
User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17)
{
    "pageNo": "1",
    "pageSize": "10",
```

	"stationId": "1298491919448631809", "alarmDeviceSn": "00FFC0011557001", "nmiCode": "41028459350" }

Return parameters	{
	"success": true,
	"code": "0",
	"msg": "success",
	"data": {
	"records": [
	{
	"id": "-1",
	"stationId": "1298491919448631809",
	"alarmDeviceSn": "00FFC0011557001",
	"alarmDeviceType": "3",
	"alarmType": 0,
	"alarmLevel": "1",
	"alarmCode": "2129",
	"alarmBeginTime": 1687918458326,
	"alarmEndTime": 1687918484635,
	"alarmLong": "26308",
	"state": "0",
	"advice": "",
	"alarmMsg": "",
	"model": "1e",
	"warningInfoData": 0,
	"type": 0
	}
	],
	"total": 1,
	"size": 10,
	"current": 1,
	"orders": [ ],
	"optimizeCountSql": true,
	"searchCount": true,
	"pages": 1
	}
	}

3.10 Obtain the collector list under the account

Interface Name	Obtain the collector list under the account
Interface Description	List of collectors corresponding to the SolisCloud platform.
Request URL	https://www.soliscloud.com:13333/v1/api/collectorList
Interface frequency limit	2 times/sec

Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
pageNo	String	Y	Specify the number of page numbers to return. The default value is 1, representing page 1.
pageSize	String	Y	Specify the number of returns per page. The default value is 20, and the maximum value is 100.
stationId	Integer	N	1. Specify stationId to represent the information under this power station, which can be obtained from the list of power stations. 2. If this value is blank, it represents querying all information under the account.
nmiCode	String	N	1. Specify nmiCode to represent the information under this nmi, which can be obtained from the list of power plants. 2. If this value is blank, it represents querying the information under the account.
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Object	Y	Data identification
page	Object	N	result list
collectionStatusVo	Object	N	Number of results
total	Integer	N	Total number of lists
records	Array	N	Array of record
all	Integer	N	Total number of Collectors
normal	Integer	N	Normal number of Collectors
offline	Integer	N	Number of offline Collectors
fault	Integer	N	Number of Collectors faults
id	Integer	N	Collector ID
stationName	String	N	Name of station
stationId	Integer	N	Station ID
userId	Integer	N	Owner ID
sn	String	N	Collector SN
model	String	N	Collector Model
name	String	N	Name of the Collector
rssiLevel	String	N	Collector signal strength

state	Integer	N	Inverter status: 1=online, 2=offline, 3=alarm
dataTimestamp	Integer	N	Data update time under UTC+8. The format is a timestamp.
contractTime	Integer	N	Traffic expiration time
Code example			

Request parameters	POST /v1/api/collectorList
	Connection: keep-alive
	Date: Tue, 27 Jun 2023 06:08:42 GMT
	Content-MD5: Trz24rS6Ot0X3mHzTjNPww==
	Authorization:API 1300386381676644416:H5snoTcVYy8btETT9efTikfo1Vk=
	Content-Type: application/json;charset=UTF-8
	Content-Length: 84
	Host: test.soliscloud.com:3333
	User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17)
	{
	"pageNo": 1,
	"pageSize": 10,
	"stationId": "",
	"nmiCode": "41028459350"
	}		

Return parameters	{
	"success": true,
	"code": "0",
	"msg": "success",
	"data": {
	"collectionStatusVo": {
	"all": 9,
	"normal": 0,
	"fault": 0,
	"offline": 9
	},
	"page": {
	"records": [
	{
	"id": "1306858901386141423",
	"sn": "404314859",
	"stationId": "1298491919448631809",
	"state": 1,
	"stateExceptionFlag": 0,
	"gprsPackage": "A",
	"simFlowState": -5,
	"model": "",		

```
                        "runingTime": "0",
                        "currentWorkingTime": "0",
                        "totalWorkingTime": "0",
                        "dataUploadCycle": "0",
                        "factoryTime": "0",
                        "dataTimestamp": "1687845861000",
                        "dataTimestampStr":  "2023-06-27  16:04:21
(UTC+10:00)",
                        "rssiLevel": 0,
                        "rssi": 0,
                        "iccid": "",
                        "collectorMode": 0,
                        "collectorModeSet": 0,
                        "dataloggerModel": 0,
                        "connectionOperator": "",
                        "lac": "0",
                        "ci": "0",
                        "countryStr": "",
                        "regionId": 423,
                        "regionStr": "",
                        "cityId": 11393,
                        "cityStr": "Forster",
                        "countyId": 11379,
                        "countyStr": "Forster",
                        "addr": "Aquatic Drive",
                        "buildAddr": "Aquatic Drive,Forster",
                        "timeZone": 10.00,
                        "timeZoneStr": "UTC+10:00",
                        "timeZoneName": "(UTC+10:00) ",
                        "shelfStateTag": 0,
                        "tag": "YingZhen"
                    }
                ],
                "total": 1,
                "size": 10,
                "current": 1,
                "orders": [                    ],
                "optimizeCountSql": true,
                "searchCount": true,
                "pages": 1
            },
            "mpptSwitch": 1
        }
}
```

3.11 Obtaining Details of a Single Collector

Interface Name	Obtaining Details of a Single Collector		
Interface Description	Corresponding SolisCloud platform collector details		
Request URL	https://www.soliscloud.com:13333/v1/api/collectorDetail		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
id	Integer	Y	Query the detailed data of the specified collector ID or collector SN, where both ID and SN cannot be empty.
sn	String	Y	
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Object	Y	Data identification
id	Integer	N	Collector ID
stationId	Integer	N	Station ID
stationName	String	N	Name of station
addr	String	N	Station address
userId	Integer	N	Owner ID
state	Integer	N	Plant station status: 1=online, 2=offline, 3=alarm
dataTimestamp	Integer	N	Plant update time
totalWorkingTime	Integer	N	Total Working Time
sn	String	N	Collector SN
model	String	N	Collector Model
name	String	N	Name of the Collector
rssiLevel	String	N	Collector signal strength
lanIp	String	N	LAN IP
maximumNumber	Integer	N	Maximum number of connections
actualNumber	Integer	N	Actual number of connected units
connectedSsid	String	N	Connected ssid
connectionOperator	String	N	Operator Name
currentWorkingTime	Integer	N	The working time of this power on
totalWorkingTime	Integer	N	Total Working Time
dataUploadCycle	Integer	N	Data upload interval
factoryTime	Integer	N	Delivery time

contractTime	Integer	N	Traffic expiration time
Code example			

Request parameters	POST /v1/api/collectorDetail
	Connection: keep-alive
	Date: Tue, 27 Jun 2023 06:15:09 GMT
	Content-MD5: qycSZycxVX/XDeFD5Ek1eA==
	Authorization:API 1300386381676644416:cWtufLl7zXVVM264SRjBuTJUDVc=
	Content-Type: application/json;charset=UTF-8
	Content-Length: 26
	Host: test.soliscloud.com:3333
	User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17)
	{
	"id": "",
	"sn": "404314859"
	}		

Return parameters	{
	"success": true,
	"code": "0",
	"msg": "success",
	"data": {
	"id": "1306858901386141423",
	"sn": "404314859",
	"model": "",
	"stationId": "1298491919448631809",
	"version": "0",
	"actualNumber": 0,
	"maximumNumber": 0,
	"connectionOperator": "",
	"iccid": "",
	"state": 1,
	"factoryTime": "0",
	"dataUploadCycle": 0,
	"currentWorkingTime": "0",
	"totalWorkingTime": "0",
	"gprsPackage": "A",
	"dataTimestamp": "1687846165000",
	"rssiLevel": 0,
	"timeZone": 10.00,
	"daylight": 0,
	"timeZoneStr": "UTC+10:00"
	}
	}		

3.12 Obtaining Single Collector Signal Values

Interface Name	Obtaining Single Collector Signal Values		
Interface Description	Corresponding SolisCloud Platform Collector Signal Chart.		
Request URL	https://www.soliscloud.com:13333/v1/api/collector/day		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
sn	String	Y	Query the information of the specified collector SN
time	String	Y	Query information for a specified date, for example: yyyy-MM-dd
timeZone	number	Y	The time zone where the device is located. Example: 8
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Object	Y	Data identification
collectorId	number	N	Collector ID
collectorSn	String	N	Collector SN
dataTimestamp	number	N	Data update time under UTC+8. The format is a timestamp.
timeStr	String	N	Update time, string converted based on the time zone of the collector
pec	number	N	Signal strength percentage, in%
rssi	number	N	Signal strength value
rssiLevel	number	N	Signal strength level
Code example			
Request parameters	POST /v1/api/collector/day Connection: keep-alive Date: Wed, 28 Jun 2023 06:42:38 GMT Content-MD5: YyrTpXdCTJN377g1hYLcJw== Authorization:API 1300386381676644416:k+aaQOt5Tr3M4YmLpKjJUoQgum4= Content-Type: application/json;charset=UTF-8 Content-Length: 45 Host: test.soliscloud.com:3333 User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17) { "sn": "FFC11553396",		

	"time": "2023-05-22" }

Return parameters	{
	"success": true,
	"code": "0",
	"msg": "success",
	"data": [
	{
	"dataTimestamp": "1687899787000",
	"timeStr": "05:03:07",
	"daylight": 0,
	"daylightSwitch": 0,
	"collectorId": "1306858901386141423",
	"collectorSn": "404314859",
	"rssiLevel": 0,
	"rssi": 0,
	"lac": "0.0",
	"pec": 0,
	"collectorMode": 0
	},
	{
	"dataTimestamp": "1687900091000",
	"timeStr": "05:08:11",
	"daylight": 0,
	"daylightSwitch": 0,
	"collectorId": "1306858901386141423",
	"collectorSn": "404314859",
	"rssiLevel": 0,
	"rssi": 0,
	"lac": "0.0",
	"pec": 0,
	"collectorMode": 0
	}
	]
	}

3.13 Obtain EPM list under account

Interface Name	Obtain EPM list under account

Interface Description	Corresponding SolisCloud Platform EPM List.		
Request URL	https://www.soliscloud.com:13333/v1/api/epmList		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
pageNo	number	Y	Specify the number of page numbers to return. The default value is 1, representing page 1.
pageSize	number	Y	Specify the number of returns per page. The default value is 20, and the maximum value is 100.
stationId	String	N	1. Specify stationId to represent the information under this power station, which can be obtained from the list of power stations. 2. If this value is blank, it represents querying all information under the account.
nmiCode	String	N	1. Specify nmiCode to represent the information under this nmi, which can be obtained from the list of power plants. 2. If this value is blank, it represents querying the information under the account.
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Object	Y	Data identification
page	Object	Y	result list
total	Integer	Y	Total number of lists
records	Array	Y	Array of record
id	number	Y	EPM_Id
sn	String	Y	EPM_SN
collectorId	number	N	Collector ID
collectorSn	String	N	Collector SN
userId	number	N	Owner ID
stationId	number	N	Station ID
stationName	String	N	Name of station
state	number	N	EPM device status: 1=online, 2=offline
dataTimestamp	number	N	Data update time under UTC+8. The format is a timestamp.
failSafe	number	N	FailSafe switch

pEpmTotal	number	N	EPM total power
pEpmTotalStr	String	N	Unit of EPM total power
eTotalBuy	number	N	Total purchase energy of grid
eTotalBuyStr	String	N	Unit of total energy volume of grid
eTotalSell	number	N	Total selling energy of grid
eTotalSellStr	String	N	Unit of total selling energy of grid
Code example			

Request parameters	POST /v1/api/epmList
	Connection: keep-alive
	Date: Wed, 28 Jun 2023 02:35:23 GMT
	Content-MD5: eJ3ZPauZc7s2G8vzz8U66Q==
	Authorization:API 1300386381676644416:tlS4UEPtWVCA0/qdhKThq9A7BH8=
	Content-Type: application/json;charset=UTF-8
	Content-Length: 89
	Host: test.soliscloud.com:3333
	User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17)
	{
	"pageNo": "1",
	"pageSize": "100",
	"stationId": "1298491919448631809",
	"nmiCode": "41028459350"
	}		

Return parameters	{
	"success": true,
	"code": "0",
	"msg": "success",
	"data": {
	"epmStatusVo": {
	"all": 20,
	"normal": 1,
	"fault": 0,
	"offline": 19,
	"mppt": 0
	},
	"page": {
	"records": [
	{
	"id": "1306507149505459510",
	"sn": "00FFC0011557002",
	"collectorId": "1306858901386142611",
	"collectorSn": "FFC00115570",
	"simFlowState": -4,		

	"stationId": "1298491919448631809", "state": 1, "stateExceptionFlag": 0, "dataTimestamp": "1687918466519", "dataTimestampStr": "2023-06-28 12:14:26 (UTC+10:00)", "failSafe": 0, "pEpmTotal": 3.900, "pEpmTotalStr": "kW", "eTotalBuy": 8.519, "eTotalBuyStr": "MWh", "eTotalSell": 8.819, "eTotalSellStr": "MWh", "pLimit": 90.190, "timeZone": 10.00, "timeZoneStr": "(UTC+10:00)", "timeZoneName": "(UTC+10:00) ", "idStr": "1306507149505459510" }], "total": 1, "size": 100, "current": 1, "orders": [ ], "optimizeCountSql": false, "searchCount": true, "pages": 1 } } }

3.14 Obtaining Details of a Single EPM

Interface Name	Obtaining Details of a Single EPM		
Interface Description	Corresponding SolisCloud Platform EPM Details		
Request URL	https://www.soliscloud.com:13333/v1/api/epmDetail		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
sn	String	Y	Specify to query a certain EPM
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**

code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Object	Y	Data identification
id	number	Y	EPM_Id
sn	String	Y	EPM_SN
collectorId	number	N	Collector ID
collectorSn	String	N	Collector SN
userId	number	N	Owner ID
stationId	number	N	Station ID
stationName	String	N	Name of station
state	number	N	EPM status: 1=online, 2=offline
dataTimestamp	number	N	Data update time under UTC+8. The format is a timestamp.
failSafe	number	N	FailSafe switch
empSoftwareVersion	String	N	EPM software version
pLimit	number	N	Power limit percentage
ctRatio	number	N	Current sensor ratio
pSet	number	N	Return power setting value
pSetStr	String	N	Unit of return power setting value
pInverterTotal	number		Total power of inverter
pInverterTotalStr	String		Unit of total power of inverter
eToaalInverter	number		Total generation energy of inverter
eToaalInverterStr	String		Unit of total generation energy of inverter
pLoad	number		Total power consumption
pLoadStr	String		Unit of total power consumption
eTotalLoad	number		Total energy consumption
eTotalLoadStr	String		Unit of total energy consumption
pEpmTotal	number	N	EPM total power
pEpmTotalStr	String	N	Unit of EPM total power
eTotalBuy	number	N	Total purchased energy
eTotalBuyStr	String	N	Unit of total purchased energy
eTotalSell	number	N	Total sell energy
eTotalSellStr	String	N	Unit of total sell energy
iAc1	number	N	Current U
iAc2	number	N	Current V
iAc3	number	N	Current W
uAc1	number	N	Voltage U
uAc2	number	N	Voltage V
uAc3	number	N	Voltage W

pAc1	number	N	Power U
pAc2	number	N	Power V
pAc3	number	N	Power W
powerFactor	number	N	Power factor
facMeter	number	N	Grid frequency
Code example			

Request parameters	POST /v1/api/epmDetail
	Connection: keep-alive
	Date: Wed, 28 Jun 2023 02:35:23 GMT
	Content-MD5: eJ3ZPauZc7s2G8vzz8U66Q==
	Authorization:API 1300386381676644416:tlS4UEPtWVCA0/qdhKThq9A7BH8=
	Content-Type: application/json;charset=UTF-8
	Content-Length: 89
	Host: test.soliscloud.com:3333
	User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17)
	{
	"sn": "00FFC0011557002"
	}		

Return parameters	{
	"success": true,
	"code": "0",
	"msg": "success",
	"data": {
	"id": "1306507149505459510",
	"sn": "00FFC0011557002",
	"collectorSn": "FFC00115570",
	"collectorId": "1306858901386142611",
	"stationId": "1298491919448631809",
	"stationType": 0,
	"stationTypeNew": 3,
	"epmType": 1,
	"synchronizationType": 0,
	"gridSwitch1": 0,
	"sno": "1085AC",
	"timeZone": 10.00,
	"timeZoneStr": "UTC+10:00",
	"daylight": 0,
	"state": 1,
	"stateExceptionFlag": 0,
	"epmDataTime": "1624959259",
	"dataTimestamp": "1687918466519",
	"rs485ComAddr": "101",		

```
"empSoftwareVersion": 1,
"uAc1": 901.900,
"uAc1Str": "V",
"iAc1": 901.900,
"iAc1Str": "A",
"pAc1": 901900.000,
"pAc1Str": "W",
"uAc2": 901.900,
"uAc2Str": "V",
"iAc2": 901.900,
"iAc2Str": "A",
"pAc2": 901900.000,
"pAc2Str": "W",
"uAc3": 901.900,
"uAc3Str": "V",
"iAc3": 901.900,
"iAc3Str": "A",
"pAc3": 901900.000,
"pAc3Str": "W",
"pEpmTotal": 3.900,
"pEpmTotalStr": "kW",
"pInverterTotal": 2.200,
"pInverterTotalStr": "kW",
"inverterModel": 1,
"pLimit": 90.190,
"ctRatio": 9019.000,
"pSet": 901.900,
"pSetStr": "kW",
"inverterNum": 1,
"failSafe": 0,
"powerFactor": 90.190,
"facMeter": 90.190,
"pLoad": 3.400,
"pLoadStr": "kW",
"eToaalInverter": 24.019,
"eToaalInverterStr": "MWh",
"eTotalLoad": 5.219,
"eTotalLoadStr": "MWh",
"eTotalBuy": 8.519,
"eTotalBuyStr": "MWh",
"eTotalSell": 8.819,
"eTotalSellStr": "MWh",
"tag": "zhichuan",
"epmModel": "0",
```

	"pEpmTotalOrigin": 3900, "pEpmTotalPec": "1", "pInverterTotalOrigin": 2200, "pLoadOrigin": 3400, "pSetOrigin": 901900, "eToaalInverterOrigin": 24019, "eTotalLoadOrigin": 5219, "eTotalBuyOrigin": 8519, "eTotalSellOrigin": 8819 } }

3.15 Obtain real-time data of a single EPM on a certain day

Interface Name	Obtain real-time data of a single EPM on a certain day		
Interface Description	Corresponding SolisCloud Platform EPM Daily Chart		
Request URL	https://www.soliscloud.com:13333/v1/api/epm/day		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
sn	String	Y	EPM_SN
searchinfo	String	Y	Query fields, separated by commas for multiple queries: u_ac1=Voltage U, u_ac2=Voltage V, u_ac3=Voltage W i_ac1=Current U, i_ac2=Current V, i_ac3=current W p_ac1=Power U, p_ac2=Power V, p_ac3=power W power_factor=grid power factor fac_meter=Grid frequency (Meter) p_load=total power of the load e_total_inverter=total output of the inverter e_total_load=total power consumption of the load e_total_buy=total electricity purchased e_total_sell=total electricity sold
time	String	Y	Specify to query data for a certain day, format: yyyy-MM-dd
timeZone	number	Y	The time zone where the device is located. Example: 8
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Array	Y	Data identification

dataTimestamp	number	Y	Data update time under UTC+8. The format is a timestamp.
timeStr	String	Y	Update time, string converted based on time zone
pEpmTotal	number	N	Total power of grid, where a negative value represents buying electricity and a positive value represents selling electricity. Transmit e_epm_total acquisition
pEpmTotalStr	String	N	Unit of total power of grid
pEpmTotalPec	number	N	Percentage of total power of grid
eTotalBuy	number	N	Total active energy from grid, transmission e_total_buy Get
eTotalSell	number	N	Total active energy transmitted by the power grid, transmission e_total_sell acquisition
uAc1	number	N	EPM AC voltage U, transmission u_ac1 acquisition
iAc1	number	N	EPM AC current U, transmission i_ac1 acquisition
pAc1	number	N	EPM active power U, transmission p_ac1 acquisition
uAc2	number	N	EPM AC voltage V, transmission u_ac2 acquisition
iAc2	number	N	EPM AC current V, transmission i_ac2 acquisition
pAc2	number	N	EPM active power V, transmission p_ac2 acquisition
uAc3	number	N	EPM AC voltage W, transmission u_ac3 acquisition
iAc3	number	N	EPM AC current W, transmission i_ac3 acquisition
pAc3	number	N	EPM active power W, transmission p_ac3 acquisition
pInverterTotal	number	N	Total power of inverter, transmission p_inverter_total acquisition
pLimit	number	N	Power limit percentage, transmission p_limit acquisition
ctRatio	number	N	Current sensor ratio, transmission ct_ratio acquisition
powerFactor	number	N	Power factor of grid, transmission power_factor acquisition
facMeter	number	N	Grid frequency, transmission fac_meter acquisition
pLoad	number	N	Total load power, transmission p_load acquisition
eToaalInverter	number	N	Total generation of the inverter, transmission e_toaal_inverter acquisition
eTotalLoad	number	N	Total consumption of the load, transmission e_total_load acquisition
Code example			
Request parameters	POST /v1/api/day Connection: keep-alive Time: Wed, 28 Jun 2023 02:41:59 GMT Content-MD5: P3y0vBtI9DkzBxNo6BXInw== Content-Type: application/json Authorization:API 1300386381676644416:eSyNqUbYhu5z80vIKiFxMr3poNY= token: Date: Wed, 28 Jun 2023 02:41:59 GMT Content-Length: 111 Host: test.soliscloud.com:3333 User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17)		

	{
	"sn": "00FFC0011557002",
	"searchinfo": "u_ac1,u_ac2,e_total_buy,e_total_sell",
	"time": "2023-06-27",
	"timeZone": "8"
	}

Return parameters	{
	"success": true,
	"code": "0",
	"msg": "success",
	"data": {
	"daylightList": [ ],
	"e_total_buy": [ ],
	"u_ac1": [ ],
	"data_timestamp": [ ],
	"timeStr": [ ],
	"u_ac2": [ ],
	"daylightSwitch": 0,
	"e_total_sell": [ ]
	}
	}

3.16 Obtaining Daily Data of a Single EPM for a Month

Interface Name	Obtaining Daily Data of a Single EPM for a Month		
Interface Description	Corresponding SolisCloud Platform EPM Monthly Chart		
Request URL	https://www.soliscloud.com:13333/v1/api/epm/month		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
sn	String	Y	EPM_SN
month	String	Y	Specify to query data for a certain month, format: yyyy-MM
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Array	Y	Data identification
date	number	Y	Data, format timestamp

dateStr	String	Y	Data, format string
energy	number	N	Power generation
epmSellEnergy	number	N	Sell Energy of EPM
epmBuyEnergy	number	N	Buy Energy of EPM
Code example			

Request parameters	POST /v1/api/month
	Connection: keep-alive
	Time: Wed, 28 Jun 2023 02:41:59 GMT
	Content-MD5: P3y0vBtI9DkzBxNo6BXInw==
	Content-Type: application/json
	Authorization:API 1300386381676644416:eSyNqUbYhu5z80vIKiFxMr3poNY=
	token:
	Date: Wed, 28 Jun 2023 02:41:59 GMT
	Content-Length: 111
	Host: test.soliscloud.com:3333
	User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.18)
	{
	"sn": "00FFC0011557002",
	"month": "2023-06"
	}		

Return parameters	{ "success": true, "code": "0", "msg": "success", "data": [{ "id": "1306507149539028553", "money": 0.000, "energy": 0.000, "energyStr": "kWh", "energyPec": "1", "epmSellEnergy": 0, "epmBuyEnergy": 0, "date": 1687924800000, "dateStr": "2023-06-28", "timeZone": 8, "gridPurchasedEnergy": 0, "gridPurchasedIncome": 0.000, "gridSellEnergy": 0, "gridSellIncome": 0.000, "consumeEnergy": 0, "produceEnergy": 0, "offSetEnergy": 0,		

	"offSetIncome": 0, "errorFlag": 0 }] }

3.17 Obtaining Monthly Data of a Single EPM for a Certain Year

Interface Name	Obtaining Monthly Data of a Single EPM for a Certain Year		
Interface Description	Corresponding SolisCloud Platform EPM Annual Chart		
Request URL	https://www.soliscloud.com:13333/v1/api/epm/year		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
sn	String	Y	EPM_SN
year	String	Y	Specify to query data for a certain year, format: yyyy
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Array	Y	Data identification
date	number	Y	Data update time under UTC+8. The format is a timestamp.
dateStr	String	Y	Data, format string
energy	number	N	Power generation
epmSellEnergy	number	N	Sell Energy of EPM
epmBuyEnergy	number	N	Buy Energy of EPM
Code example			
Request parameters	POST /v1/api/year Connection: keep-alive Time: Wed, 28 Jun 2023 02:41:59 GMT Content-MD5: P3y0vBtI9DkzBxNo6BXInw== Content-Type: application/json Authorization:API 1300386381676644416:eSyNqUbYhu5z80vIKiFxMr3poNY= token: Date: Wed, 28 Jun 2023 02:41:59 GMT Content-Length: 111 Host: test.soliscloud.com:3333 User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.18)		

	{
	"sn": "00FFC0011557002",
	"year": "2023"
	}

Return parameters	{
	"success": true,
	"code": "0",
	"msg": "success",
	"data": [
	{
	"id": "1306507149551593479",
	"money": 0.000,
	"energy": 0.000,
	"energyStr": "kWh",
	"energyPec": "1",
	"epmSellEnergy": 0,
	"epmBuyEnergy": 0,
	"date": 1685592000000,
	"dateStr": "2023-06",
	"timeZone": 8,
	"gridPurchasedEnergy": 0,
	"gridPurchasedIncome": 0.000,
	"gridSellEnergy": 0,
	"gridSellIncome": 0.000,
	"consumeEnergy": 0,
	"produceEnergy": 0,
	"offSetEnergy": 0,
	"offSetIncome": 0,
	"errorFlag": 0
	}
	]
	}

3.18 Obtaining Annual Data for a Single EPM

Interface Name	Obtaining Annual Data for a Single EPM		
Interface Description	Corresponding SolisCloud Platform EPM Overall Chart		
Request URL	https://www.soliscloud.com:13333/v1/api/epm/all		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
sn	String	Y	EPM_SN
Return parameters [Body]			

Parameter Name	Data Type	Required	Description
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Array	Y	Data identification
year	number	Y	Year
energy	number	N	Power generation
epmSellEnergy	number	N	Sell Energy of EPM
epmBuyEnergy	number	N	Buy Energy of EPM
Code example			

Request parameters	POST /v1/api/epm/all
	Connection: keep-alive
	Time: Wed, 28 Jun 2023 02:46:19 GMT
	Content-MD5: TopIFbbEpLD0N0xViocHCw==
	Content-Type: application/json
	Authorization:API 1300386381676644416:6IlPSU37PZ0+0UnjQ8NE4DTLYFI=
	token:
	Date: Wed, 28 Jun 2023 02:46:19 GMT
	Content-Length: 24
	Host: test.soliscloud.com:3333
	User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17)
	{
	"sn": "00FFC0011557002"
	}		

Return parameters	{ "success": true, "code": "0", "msg": "success", "data": [{ "id": "1306507149559981588", "money": 0.000, "energy": 0.000, "energyStr": "kWh", "energyPec": "1", "epmSellEnergy": 0, "epmBuyEnergy": 0, "year": 2023, "timeZone": 8, "gridPurchasedEnergy": 0, "gridPurchasedIncome": 0.000,		

	"gridSellEnergy": 0, "gridSellIncome": 0.000, "consumeEnergy": 0, "produceEnergy": 0, "offSetEnergy": 0, "offSetIncome": 0, "errorFlag": 0 }] }

3.19 Obtain a list of meteorological instruments under the account

Interface Name	Obtain a list of meteorological instruments under the account		
Interface Description	List of meteorological instruments corresponding to SolisCloud platform		
Request URL	https://www.soliscloud.com:13333/v1/api/weatherList		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
pageNo	number	Y	Specify the number of page numbers to return. The default value is 1, representing page 1.
pageSize	number	Y	Specify the number of returns per page. The default value is 20, and the maximum value is 100.
stationId	number	N	1. Specify stationId to represent the information under this power station, which can be obtained from the list of power stations. 2. If this value is blank, it represents querying all information under the account.
nmiCode	String	N	1. Specify nmiCode to represent the information under this nmi, which can be obtained from the list of power plants. 2. If this value is blank, it represents querying the information under the account.
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Object	Y	Data identification
page	Object	Y	result list
total	Integer	Y	Total number of lists

records	Array	Y	Array of record
id	number	Y	Meteorological instrument ID
collectorSn	String	N	Collector SN
collectorId	number	N	Collector ID
name	String	N	Meteorological instrument name
weatherModel	String	N	Meteorological instrument model: 1=Jinzhou Sunshine, 2=Jinzhou Licheng
userId	number	N	Owner ID
stationId	number	N	Station ID
stationName	String	N	Name of station
state	number	N	Meteorological instrument status: 1=online, 2=offline
dataTimestamp	number	N	Data update time under UTC+8. The format is a timestamp.
totalR	number	N	Total radiation, unit W/㎡
directR	number	N	Direct radiation, unit W/㎡
scatteredR	number	N	Scattered radiation, unit W/㎡
sunshineTim	number	N	Sunlight duration, unit m
totalRday	number	N	Total radiation daily accumulation, unit MJ/㎡
directRday	number	N	Direct radiation daily accumulation, unit MJ/㎡
scatteredRday	number	N	Accumulated daily scattered radiation,unit MJ/㎡
temp	number	N	Temperature, unit taken as temperatureUnit
temperatureUnit	String	N	temperature unit
humidity	number	N	Humidity,unit %RH
windDirection	number	N	wind direction
windSpeed	number	N	Wind speed, unit m/s
airPressure	number	N	Air pressure, unit Pa
rainfall	number	N	Rainfall, unit mm
pvTemp	number	N	Component temperature, unit taken as temperatureUnit
Code example			
Request parameters	POST /v1/api/weatherList Connection: keep-alive Date: Wed, 28 Jun 2023 06:42:38 GMT Content-MD5: YyrTpXdCTJN377g1hYLcJw== Authorization: API 1300386381676644416:k+aaQOt5Tr3M4YmLpKjJUoQgum4= Content-Type: application/json;charset=UTF-8 Content-Length: 45 Host: test.soliscloud.com:3333 User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17) { "pageNo": "1",		

	"pageSize": "20", "stationId":"1306858901386142072" }

Return parameters	{
	"success": true,
	"code": "0",
	"msg": "success",
	"data": {
	"page": {
	"records": [
	{
	"id": "1306858901386142611",
	"createDate": 1687918406814,
	"stationId": "1298491919448631809",
	"stationName": "AC显示储能中试设备测试",
	"temperatureUnit": "°F",
	"collectorId": "1306858901386142611",
	"simFlowState": -4,
	"isRealtime": 0,
	"rs485ComAddr": "3039",
	"dataTime": "1630473850",
	"weatherModel": "2",
	"windSpeed": 1.2,
	"windDirection": 12,
	"pvTemp": 36.1,
	"temp": 36.0,
	"humidity": 0.2,
	"totalR": 834,
	"scatteredR": 3389,
	"directR": 3389,
	"totalRday": 5.24,
	"scatteredRday": 2.38,
	"directRday": 3.38,
	"rainfall": 0.1,
	"dewTemp": 100.09,
	"airPressure": 10.0,
	"sunshineTim": 5.83,
	"dataTimestamp": "1687918466519",
	"dataTimestampStr": "2023-06-28 12:14:26 (UTC+10:00)",
	"dataCleaningState": 2,
	"collectorSn": "FFC00115570",
	"state": 2,
	"stateExceptionFlag": 0,

	"timeZone": 10.00, "timeZoneStr": "(UTC+10:00)", "timeZoneName": "(UTC+10:00) ", "sunshineTimStr": "5h50m" }], "total": 1, "size": 20, "current": 1, "orders": [ ], "optimizeCountSql": false, "searchCount": true, "pages": 1 } } }

3.20 Obtaining Details of a Single Meteorological Instrument

Interface Name	Obtaining Details of a Single Meteorological Instrument		
Interface Description	Corresponding SolisCloud platform meteorological instrument details		
Request URL	https://www.soliscloud.com:13333/v1/api/weatherDetail		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
sn	String	N	Meteorological instrument SN
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Object	Y	Data identification
id	number	Y	Meteorological instrument ID
collectorSn	String	N	Collector SN
collectorId	number	N	Collector ID
name	String	N	Meteorological instrument name
weatherModel	String	N	Meteorological instrument model: 1=Jinzhou Sunshine, 2=Jinzhou Licheng
userId	number	N	Owner ID
stationId	number	N	Station ID
stationName	String	N	Name of station

state	number	N	Meteorological instrument status: 1=online, 2=offline
dataTimestamp	number	N	Data update time under UTC+8. The format is a timestamp.
totalR	number	N	Total radiation, unit W/㎡
directR	number	N	Direct radiation, unit W/㎡
scatteredR	number	N	Scattered radiation, unit W/㎡
sunshineTim	number	N	Sunlight duration, unit m
totalRday	number	N	Total radiation daily accumulation, unit MJ/㎡
directRday	number	N	Direct radiation daily accumulation, unit MJ/㎡
scatteredRday	number	N	Accumulated daily scattered radiation,unit MJ/㎡
temp	number	N	Temperature, unit taken as temperatureUnit
temperatureUnit	String	N	temperature unit
humidity	number	N	Humidity,unit %RH
windDirection	number	N	wind direction
windSpeed	number	N	Wind speed, unit m/s
airPressure	number	N	Air pressure, unit Pa
rainfall	number	N	Rainfall, unit mm
pvTemp	number	N	Component temperature, unit taken as temperatureUnit

Code example

Request parameters

```
POST /v1/api/weatherDetail
Connection: keep-alive
Date: Wed, 28 Jun 2023 06:42:38 GMT
Content-MD5: YyrTpXdCTJN377g1hYLcJw==
Authorization:API
1300386381676644416:k+aaQOt5Tr3M4YmLpKjJUoQgum4=
Content-Type: application/json;charset=UTF-8
Content-Length: 45
Host: test.soliscloud.com:3333
User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17)
{
  "sn": "FFC00115570"
}
```

Return parameters

```
{
  "success": true,
  "code": "0",
  "msg": "success",
  "data": {
    "collectorId": "1306858901386142611",
    "simFlowState": -4,
    "stationId": "1298491919448631809",
    "stationName": "123",
    "stationType": 0,
```

```
        "stationTypeNew": 3,
        "synchronizationType": 0,
        "gridSwitch1": 0,
        "sno": "1085AC",
        "timeZone": 10.00,
        "timeZoneStr": "UTC+10:00",
        "daylight": 0,
        "daylightSwitch": 0,
        "epmType": 1,
        "isRealtime": 0,
        "rs485ComAddr": "3039",
        "dataTime": "1630473850",
        "weatherModel": "2",
        "windSpeed": 1.2,
        "windDirection": 12,
        "pvTemp": 36.1,
        "temp": 36.0,
        "temperatureUnit": "°F",
        "humidity": 0.2,
        "totalR": 834,
        "scatteredR": 3389,
        "directR": 3389,
        "totalRday": 5.24,
        "scatteredRday": 2.39,
        "directRday": 3.39,
        "rainfall": 0.1,
        "dewTemp": 100.10,
        "airPressure": 10.0,
        "windSpeed2": 12.20,
        "windSpeed10": 14.20,
        "sunshineTim": 5.83,
        "dataTimestamp": "1687918466519",
        "dataCleaningState": 2,
        "collectorSn": "FFC00115570",
        "state": 2,
        "stateExceptionFlag": 0,
        "sunshineTimStr": "5h50m"
    }
}
```


4 PLANT INTERFACE

4.1 Obtain the list of power stations under the account

Interface Name	Obtain the list of power stations under the account

Interface Description	Corresponding SolisCloud Platform Power Station List		
请 URL	https://www.soliscloud.com:13333/v1/api/userStationList		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
pageNo	number	Y	Specify the number of page numbers to return. The default value is 1, representing page 1.
pageSize	number	Y	Specify the number of returns per page. The default value is 20, and the maximum value is 100.
nmiCode	String	N	1. Specify nmiCode to represent the information under this nmi, which can be obtained from the list of power plants. 2. If this value is blank, it represents querying all information under the account.
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Object	Y	Data identification
page	Object	Y	Paging Object
current	number	Y	Current page
pages	number	Y	Total pages
size	number	Y	Maximum number of entries per page
total	number	Y	Total number
records	array	Y	Array of record
id	number	N	Station ID
stationName	String	N	Name of station
addr	String	N	Station address
userId	number	N	Owner ID
capacity	Number	N	Installed capacity
capacityStr	String	N	Unit of Installed capacity
capacity1	Number	N	Installed capacity of plant, without carrying
fullHour	Number	N	Full power hours, power generation divided by Installed capacity
picName	String	N	Picture name
installerId	number	N	Installer Id

installer	String	N	Installer
installerMobile	String	N	Installer Mobile
installerEmail	String	N	Installer Email
sno	String	N	Plant sno
dip	Number	N	Component inclination angle
azimuth	Number	N	Component azimuth
timeZone	Number	N	Time Zone
timeZoneName	String	N	Time Zone Name
timeZoneStr	String	N	Time zone in string format
timeZoneId	number	N	Time Zone Id
daylight	Number	N	daylight saving time
createDate	number	N	Date of data creation
price	Number	N	Revenue per kWh
module	number	N	Number of components
pic1Url	String	N	Power Station Photo URL
power	Number	N	Power
powerStr	String	N	Unit of power
dayEnergy	Number	N	Daily power generation
dayEnergyStr	String	N	Unit of daily power generation
dayIncome	Number	N	Daily Income
dayIncomeUnit	String	N	Unit of daily Income
monthEnergy	Number	N	Monthly Energy
monthEnergyStr	String	N	Unit of monthly Energy
yearEnergy	Number	N	Yearly Energy
yearEnergyStr	String	N	Unit of yearly energy
allEnergy	Number	N	Total power generation
allEnergyStr	String	N	Unit of total power generation
allEnergy1	Number	N	Accumulated energy raw value
allIncome	Number	N	Total Income
allIncomeUnit	String	N	Unit of total income
synchronizationType	number	N	Grid connection type: 0=Full online, 1=Self use, 2=Off grid
stationTypeNew	number	N	Type of power station, see Appendix 2 for details
batteryTotalDischargeEnergy	Number	N	Total battery discharging energy
batteryTotalChargeEnergy	Number	N	Total battery charging energy
gridPurchasedTotalEnergy	Number	N	Total grid purchased energy
gridSellTotalEnergy	Number	N	Total grid selling energy
homeLoadTotalEnergy	Number	N	Total load consumption
oneSelf	Number	N	Self use
batteryTodayDischargeEnergy	Number	N	Daily battery discharging energy

batteryTodayChargeEnergy	Number	N	Daily battery charging energy
gridPurchasedTodayEnergy	Number	N	Daily grid purchased energy
gridSellTodayEnergy	Number	N	Daily grid selling energy
homeLoadTodayEnergy	Number	N	Daily load consumption
money	String	N	Used to calculate revenue, e.g. EUR, CNY
fisPowerTime	number	N	First power on time, format timestamp
fisGenerateTime	number	N	First generation time, format timestamp
remark1	String	N	Remark 1
remark2	String	N	Remark 2
remark3	String	N	Remark 3
state	number	N	Plant station status: 1=online, 2=offline, 3=alarm
dataTimestamp	number	N	Data update time under UTC+8. The format is a timestamp.
inverterPower	String	N	Total rated power of inverter
nmiCode	String	N	NMI Code
stationStatusVo	Object	N	Power station status object
all	number	N	Total number of power stations
normal	number	N	Number of normal power stations
offline	number	N	Number of offline power stations
fault	number	N	Number of faulty power stations
Code example			

Request parameters	POST /v1/api/userStationList
	Connection: keep-alive
	Date: Wed, 31 May 2023 09:12:23 GMT
	Content-MD5: nyUAGqC1qeRnZ4vvgxK2ow==
	Authorization: API 1300386381676565707:PqHiyhsQ8BILCrfIHshkSue5yzg=
	Content-Type: application/json;charset=UTF-8
	Content-Length: 70
	Host: www.soliscloud.com:13333
	User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17)
	{
	"pageNo": 1,
	"pageSize": 10,
	"nmiCode": ""
	}		

Return parameters	{
	"code": "0",
	"msg": "success",
	"data": {
	"stationStatusVo": {
	"all": 0,		

	"normal": 0,
	"fault": 0,
	"offline": 0,
	"building": 0,
	"mppt": 0
	},
	"page": {
	"records": [ ],
	"total": 0,
	"size": 10,
	"current": 1,
	"orders": [ ],
	"optimizeCountSql": false,
	"searchCount": true,
	"pages": 0
	},
	"mpptSwitch": 0
	}
	}

4.2 Obtaining Details of Individual Power Stations

Interface Name	**4.2 Obtaining Details of Individual Power Stations**		
Interface Description	Corresponding SolisCloud Platform Power Station Details		
Request URL	https://www.soliscloud.com:13333/v1/api/stationDetail		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
id	number	Y	Query the detailed data of the specified Station ID or Station nmiCode, both ID and nmiCode cannot be empty at the same time
nmiCode	String	N	
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Object	Y	Data identification
id	number	Y	Station ID
stationName	number	Y	Name of station

addr	String	Y	Station address
userId	Integer	Y	Owner ID
capacity	String	N	Installed capacity
capacityStr	String	N	Unit of Installed capacity
dayEnergy	Number	N	Daily power generation
dayEnergyStr	String	N	Unit of daily power generation
monthEnergy	Number	N	Monthly power generation
monthEnergyStr	String	N	Unit of monthly power generation
yearEnergy	Number	N	Yearly power generation
yearEnergyStr	String	N	Unit of yearly power generation
allEnergy	Number	N	Total power generation
allEnergyStr	String	N	Unit of total power generation
dayInCome	Number	N	Daily Income
dayInComeUnit	String	N	Unit of daily Income
monthInCome	Number	N	Monthly Income
monthInComeUnit	String	N	Unit of monthly Income
yearInCome	Number	N	Yearly Income
yearInComeUnit	String	N	Unit of yearly Income
allInCome	Number	N	Total Income
allInComeUnit	String	N	Unit of total income
fullHour	Number	N	Full power hours, power generation divided by Installed capacity
picName	String	N	Picture name
power	Number	N	Power
powerStr	String	N	Unit of power
dip	Number	N	Component inclination angle
azimuth	Number	N	Component azimuth
price	String	N	Revenue per kWh
state	Integer	N	Plant station status: 1=online, 2=offline, 3=alarm
dataTimestamp	Integer	N	Data update time under UTC+8. The format is a timestamp.
money	String	N	Used to calculate revenue, e.g. EUR, CNY
brand	String	N	Brand
condTxtN	String	N	Night weather
condTxtD	String	N	Daytime weather
tmpMax	String	N	maximum temperature
tmpMin	String	N	Lowest temperature
tmpUnit	String	N	temperature unit
powerStationNumTree	String	N	Equivalent Tree Planting
powerStationNumTreeUnit	String	N	Unit of equivalent Tree Planting

powerStationAvoidedCo2	String	N	carbon dioxide emission reduction
powerStationAvoidedCo2Unit	String	N	Units of reducing carbon dioxide emissions
module	Integer	N	Number of components
installerEmail	String	N	Installer Email
installerMobile	Integer	N	Installer Mobile
batteryPower	Number	N	Battery power
batteryPowerStr	String	N	Unit of battery power
batteryPowerPec	Number	N	Battery power percentage
batteryDischargeEnergy	Number	N	Battery discharge energy
batteryDischargeEnergyStr	String	N	Unit of battery discharge energy
batteryChargeEnergy	Number	N	Battery charging energy
batteryChargeEnergyStr	String	N	Unit of battery charging energy
batteryPercent	Number	N	Battery SOC
psum	Number	N	Total active power of the grid
psumStr	String	N	Unit of total active power of the grid
psumPec	Number	N	Percentage of total active power of the power grid
gridPurchasedDayEnergy	Number	N	Daily energy purchased of grid
gridPurchasedDayEnergyStr	String	N	Unit of daily energy purchased of grid
gridPurchasedMonthEnergy	Number	N	Monthly energy purchased of grid
gridPurchasedMonthEnergyStr	String	N	Monthly energy purchased of grid unit
gridPurchasedYearEnergy	Number	N	Yearly energy purchased of grid
gridPurchasedYearEnergyStr	String	N	Yearly energy purchased of grid unit
gridPurchasedTotalEnergy	Number	N	Total energy purchased of grid
gridPurchasedTotalEnergyStr	String	N	Total energy purchased of grid unit
gridSellDayEnergy	Number	N	Daily energy sell of grid
gridSellDayEnergyStr	String	N	Daily energy sell of grid unit
gridSellMonthEnergy	Number	N	Monthly energy sell of grid
gridSellMonthEnergyStr	String	N	Monthly energy sell of grid unit
gridSellYearEnergy	Number	N	Yearly energy sell of grid
gridSellYearEnergyStr	String	N	Yearly energy sell of grid unit
gridSellTotalEnergy	Number	N	Total energy sell of grid
gridSellTotalEnergyStr	String	N	Total energy sell of grid unit
familyLoadPower	Number	N	Family load power
familyLoadPowerStr	String	N	Unit of family load power
familyLoadPowerPec	Number	N	Family load power percentage
homeLoadEnergy	Number	N	Daily load energy
homeLoadEnergyStr	String	N	Daily load energy unit
inverterPower	String	N	Total rated power of inverter
nmiCode	String	N	NMI Code

dip	Number	N	Component inclination angle
azimuth	Number	N	Component azimuth
timeZone	Number	N	The time zone where the device is located. Example: 8
timeZoneName	String	N	Time Zone Name
timeZoneStr	String	N	Time zone in string format
timeZoneId	Integer	N	Time Zone Id
daylight	Number	N	daylight saving time
createDate	Integer	N	Date of data creation
stationTypeNew	Integer	N	Type of power station, see Appendix 2 for details
fisPowerTime	Integer	N	First power on time, format timestamp
fisGenerateTime	Integer	N	First generation time, format timestamp
Code example			

Request parameters	POST /v1/api/stationDetail
	Connection: keep-alive
	Time: Tue, 27 Jun 2023 05:47:26 GMT
	Content-MD5: sAGxE9QzeBN88qPrz+sCZQ==
	Content-Type: application/json
	Authorization:API 1300386381676644416:SCITzMk7U3gKp05S+d7ETIvyq4g=
	token: token_cb23ed9a-ab65-4699-b942-6efbf3a6e666
	Date: Tue, 27 Jun 2023 05:47:26 GMT
	Content-Length: 30
	Host: test.soliscloud.com:3333
	User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17)
	{
	"id": "1298491919448631809",
	"nmiCode": "41028459350"
	}		

Return parameters	{
	"success": true,
	"code": "0",
	"msg": "success",
	"data": {
	"id": "1298491919448631809",
	"dataTimestamp": "1687844402978",
	"fullHour": 2.61,
	"monthCarbonDioxide": 69.92,
	"installerId": "1298497302686786165",
	"installer": "",
	"sno": "1085AC",
	"country": "15",
	"countryStr": "",		

```
"region": "423",
"regionStr": "",
"city": "11393",
"cityStr": "Forster",
"county": "11379",
"state": 1,
"dip": 30.0,
"azimuth": 0.0,
"power": 5.772,
"timeZone": 10.00,
"timeZoneName": "(UTC+10:00) ",
"timeZoneStr": "(UTC+10:00)",
"timeZoneId": "115",
"daylight": 0,
"powerStr": "kW",
"createDate": 1677119648000,
"createDateStr": "2023-02-23 12:34:08 (UTC+10:00)",
"price": 1.0000,
"capacity": 12.000,
"capacityStr": "kWp",
"capacityPercent": 0,
"capacity1": 0,
"dayEnergy": 31.300,
"dayEnergyStr": "kWh",
"monthEnergy": 839.000,
"monthEnergyStr": "kWh",
"yearEnergy": 5.603,
"yearEnergyStr": "MWh",
"allEnergy": 36.393,
"allEnergyStr": "MWh",
"allEnergy1": 36393.000,
"updateDate": 1687844137000,
"type": 0,
"synchronizationType": 0,
"epmType": 0,
"gridSwitch": 0,
"shareProcess": 1,
"dcInputType": 3,
"stationTypeNew": 0,
"gridPurchasedTotalEnergy": 0.000,
"gridSellTotalEnergy": 0.000,
"homeLoadTotalEnergy": 0.000,
"oneSelf": 0.00000,
"homeLoadTodayEnergy": 31.300,
```

```
"money": "AUD",
"condTxtD": "",
"condTxtN": "",
"condCodeD": "305",
"condCodeN": "305",
"simFlowState": -1,
"nmiCode": "41028459350",
"jxbType": 0,
"generateDays": 92,
"generateDaysContinuous": 90,
"inverterCount": 1,
"orgCode": "61BADD",
"visitorCount": 0,
"daylightSwitch": 0,
"daylightType": 1,
"fullHourStr": "h",
"capacityPec": "1",
"dipStr": "30.0°",
"azimuthStr": "0.0°",
"dateTime": "1677119648000",
"offset": 0,
"offsetStr": "kWh",
"dayInCome": 31.300,
"dayInComeUnit": "AUD",
"monthInCome": 839.000,
"monthInComeUnit": "AUD",
"yearInCome": 5.603,
"yearInComeUnit": "KAUD",
"allInCome": 36.393,
"allInCome1": 36393.000,
"allInComeUnit": "KAUD",
"powerStationNumTree": 36.39,
"powerStationNumTreeUnit": "棵",
"powerStationAvoidedCo2": 36.28,
"powerStationAvoidedCo2Unit": "t",
"powerPec": "1",
"porwerPercent": 0.4810,
"batteryPower": 0.000,
"batteryPowerStr": "kW",
"batteryPowerPec": "1",
"batteryPowerZheng": 0,
"batteryPowerFu": 0,
"batteryPercent": 0,
"familyLoadPercent": 0,
```

```
"psum": 5.772,
"psumStr": "kW",
"psumPec": "1",
"psumZheng": 5772.0,
"psumFu": 0,
"gridPurchasedTotalEnergyStr": "kWh",
"gridSellTotalEnergyStr": "kWh",
"gridPurchasedEnergy": 0.000,
"gridPurchasedEnergyStr": "kWh",
"gridSellEnergy": 0.000,
"gridSellEnergyStr": "kWh",
"gridPurchasedDayEnergy": 0.000,
"gridPurchasedDayEnergyStr": "kWh",
"gridSellDayEnergy": 0.000,
"gridSellDayEnergyStr": "kWh",
"gridPurchasedMonthEnergy": 0.000,
"gridPurchasedMonthEnergyStr": "kWh",
"gridSellMonthEnergy": 0,
"gridSellMonthEnergyStr": "kWh",
"gridPurchasedYearEnergy": 0.000,
"gridPurchasedYearEnergyStr": "kWh",
"gridSellYearEnergy": 0.000,
"gridSellYearEnergyStr": "kWh",
"batteryDischargeEnergy": 0.000,
"batteryDischargeEnergyStr": "kWh",
"batteryChargeEnergy": 0.000,
"batteryChargeEnergyStr": "kWh",
"batteryDischargeMonthEnergy": 0.000,
"batteryDischargeMonthEnergyStr": "kWh",
"batteryChargeMonthEnergy": 0.000,
"batteryChargeMonthEnergyStr": "kWh",
"batteryDischargeYearEnergy": 0.000,
"batteryDischargeYearEnergyStr": "kWh",
"batteryChargeYearEnergy": 0.000,
"batteryChargeYearEnergyStr": "kWh",
"batteryDischargeTotalEnergy": 0.000,
"batteryDischargeTotalEnergyStr": "kWh",
"batteryChargeTotalEnergy": 0.000,
"batteryChargeTotalEnergyStr": "kWh",
"familyLoadPower": 0.000,
"familyLoadPowerStr": "kW",
"familyLoadPowerPec": "1",
"homeGridTodayEnergy": 31.300,
"homeGridTodayEnergyStr": "kWh",
```

	"homeGridMonthEnergy": 0.000, "homeGridMonthEnergyStr": "kWh", "homeGridYearEnergy": 0.000, "homeGridYearEnergyStr": "kWh", "homeGridTotalEnergy": 0, "homeGridTotalEnergyStr": "kWh", "backupTodayEnergy": 0.000, "backupTodayEnergyStr": "kWh", "backupMonthEnergy": 0.000, "backupMonthEnergyStr": "kWh", "backupYearEnergy": 0.000, "backupYearEnergyStr": "kWh", "backupTotalEnergy": 0, "backupTotalEnergyStr": "kWh", "totalLoadPower": 0.000, "totalLoadPowerStr": "kW", "bypassLoadPower": 0.000, "bypassLoadPowerStr": "kW", "homeLoadEnergy": 31.300, "homeLoadEnergyStr": "kWh", "homeLoadTodayEnergyStr": "kWh", "homeLoadMonthEnergy": 0.000, "homeLoadYearEnergy": 0.000, "picUrl": "https://solis-test.oss-eu-central-1.aliyuncs.com/STATION_default_user.png?Expires=1687915551&OSSAccessKeyId=LTAI5tDfhhsnNuC3fr5HU1rK&Signature=5JAsyO8hbCzqfr1TJ2lvPkMhU%2Bw%3D", "weather": "", "sr": "06:19", "ss": "18:26", "tmpMax": "82.0", "tmpMin": "30.0", "tmpUnit": "°F", "hum": "77", "weatherUpdateDate": "1687828212000", "weatherUpdateDateStr": "2023-06-27 11:10:12 (UTC+10:00)", "pcpn": "80.0", "pres": "1011", "windSpd": "9.1", "windDir": "SE", "weatherType": 0, "windSpeed": 0, "windDirection": 0,

```
"humidity": 0,
"temp": 0,
"rainfall": 0,
"airPressure": 0,
"contribution": 0,
"screenMap": 0,
"screenGuideState": 0,
"storedInverterType": 0,
"powerGridAgent": "SAPN",
"countryShortName": "AU",
"inverterPower": 8.000,
"bypassAcOnoffSet": 0,
"priceMap": {
    "sell": "1.0000",
    "buy": "0"
},
"sysGridPriceList": [
    {
        "id": "6406",
        "createDate": 1677119648000,
        "updateDate": 1677119648000,
        "deleteFlag": 0,
        "unit": "AUD",
        "type": 0,
        "source": 0,
        "sellBuy": 0,
        "refId": "1298491919448631809",
        "price": 1.0000
    },
    {
        "id": "6412",
        "createDate": 1677208349000,
        "updateDate": 1677208349000,
        "deleteFlag": 0,
        "unit": "AUD",
        "type": 0,
        "source": 0,
        "sellBuy": 1,
        "refId": "1298491919448631809",
        "price": 0.0000
    }
],
"generatorPower": 0,
"generatorPowerStr": "kW",
```

```
            "generatorPowerPec": "1",
            "generatorTodayEnergy": 0.000,
            "generatorTodayEnergyStr": "kW",
            "generatorTodayEnergyPec": "1",
            "generatorTotalEnergy": 0,
            "generatorTotalEnergyStr": "kWh",
            "generatorTotalEnergyPec": "1",
            "weatherCount": 0,
            "inverterPowerStr": "kW",
            "homeLoadMonthEnergyStr": "kWh",
            "homeLoadYearEnergyStr": "kWh",
            "homeLoadTotalEnergyStr": "kWh",
            "gridMonthEnergy": 0.000,
            "monthEnergy1": 0,
            "dayEnergy1": 0,
            "yearEnergy1": 0,
            "power1": 0
        }
}
```


4.3 Obtaining Details of Multiple Power Stations

Interface Name	Obtaining Details of Multiple Power Stations		
Interface Description	Batch access to power station details on the corresponding SolisCloud platform.		
Request URL	https://www.soliscloud.com:13333/v1/api/stationDetailList		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
pageNo	String	N	Specify the number of page numbers to return. The default value is 1, representing page 1.
pageSize	Integereger	Y	Specify the number of returns per page. The default value is 20, and the maximum value is 100.
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	array	Y	Data identification

id	Integereger	Y	Station ID
stationName	String	N	Name of station
addr	String	N	Station address
userId	Integereger	N	Owner ID
capacity	String	N	Installed capacity
capacityStr	String	N	Unit of Installed capacity
dayEnergy	Number	N	Daily power generation
dayEnergyStr	String	N	Unit of daily power generation
monthEnergy	Number	N	Monthly power generation
monthEnergyStr	String	N	Unit of monthly power generation
yearEnergy	Number	N	Yearly power generation
yearEnergyStr	String	N	Unit of yearly power generation
allEnergy	Number	N	Total power generation
allEnergyStr	String	N	Unit of total power generation
fullHour	Number	N	Full power hours, power generation divided by Installed capacity
picName	String	N	Picture name
power	Number	N	Power
powerStr	String	N	Unit of power
dip	Number	N	Component inclination angle
azimuth	String	N	Component azimuth
price	Number	N	Revenue per kWh
state	String	N	Plant station status: 1=online, 2=offline, 3=alarm
dataTimestamp	Number	N	Data update time under UTC+8. The format is a timestamp.
money	String	N	Used to calculate revenue, e.g. EUR, CNY
brand	String	N	Brand
condTxtN	String	N	Night weather
condTxtD	Integer	N	Daytime weather
tmpMax	Integereger	N	maximum temperature
tmpMin	String	N	Lowest temperature
tmpUnit	String	N	temperature unit
powerStationNumTree	String	N	Equivalent Tree Planting
powerStationNumTreeUnit	String	N	Unit of equivalent Tree Planting
powerStationAvoidedCo2	String	N	carbon dioxide emission reduction
powerStationAvoidedCo2Unit	String	N	Units of reducing carbon dioxide emissions
module	String	N	Number of components
installerEmail	String	N	Installer Email
installerMobile	String	N	Installer Mobile
batteryPower	String	N	Battery power

batteryPowerStr	String	N	Unit of battery power
batteryPowerPec	String	N	Battery power percentage
batteryDischargeEnergy	String	N	Battery discharge energy
batteryDischargeEnergyStr	Integereger	N	Unit of battery discharge energy
batteryChargeEnergy	Integereger	N	Battery charging energy
batteryChargeEnergyStr	String	N	Unit of battery charging energy
batteryPercent	Integereger	N	Battery SOC
psum	Number	N	Total active power of the grid
psumStr	String	N	Unit of total active power of the grid
psumPec	Number	N	Percentage of total active power of the power grid
gridPurchasedDayEnergy	Number	N	Daily energy purchased of grid
gridPurchasedDayEnergyStr	String	N	Unit of daily energy purchased of grid
gridPurchasedMonthEnergy	Number	N	Monthly energy purchased of grid
gridPurchasedMonthEnergyStr	String	N	Monthly energy purchased of grid unit
gridPurchasedYearEnergy	Number	N	Yearly energy purchased of grid
gridPurchasedYearEnergyStr	Number	N	Yearly energy purchased of grid unit
gridPurchasedTotalEnergy	String	N	Total energy purchased of grid
gridPurchasedTotalEnergyStr	Number	N	Total energy purchased of grid unit
gridSellDayEnergy	Number	N	Daily energy sell of grid
gridSellDayEnergyStr	String	N	Daily energy sell of grid unit
gridSellMonthEnergy	Number	N	Monthly energy sell of grid
gridSellMonthEnergyStr	String	N	Monthly energy sell of grid unit
gridSellYearEnergy	Number	N	Yearly energy sell of grid
gridSellYearEnergyStr	String	N	Yearly energy sell of grid unit
gridSellTotalEnergy	Number	N	Total energy sell of grid
gridSellTotalEnergyStr	String	N	Total energy sell of grid unit
familyLoadPower	Number	N	Family load power
familyLoadPowerStr	String	N	Unit of family load power
familyLoadPowerPec	Number	N	Family load power percentage
homeLoadEnergy	String	N	Daily load energy
homeLoadEnergyStr	Number	N	Daily load energy unit
inverterPower	String	N	Total rated power of inverter
nmiCode	Number	N	NMI Code
dip	Integereger	N	Component inclination angle
azimuth	String	N	Component azimuth
timeZone	Integereger	N	The time zone where the device is located. Example: 8
timeZoneName	String	N	Time Zone Name
timeZoneStr	Integereger	N	Time zone in string format
timeZoneId	String	N	Time Zone Id

daylight	Integereger	N	daylight saving time
createDate	String	N	Date of data creation
stationTypeNew	Number	N	Type of power station, see Appendix 2 for details
fisPowerTime	Number	N	First power on time, format timestamp
fisGenerateTime	Number	N	First generation time, format timestamp

Code example

Request parameters

```
POST /v1/api/inverterDetailList
Connection: keep-alive
Time: Tue, 27 Jun 2023 05:47:26 GMT
Content-MD5: sAGxE9QzeBN88qPrz+sCZQ==
Content-Type: application/json
Authorization: API 1300386381676644416:SCITzMk7U3gKp05S+d7ETIvyq4g=
token: token_cb23ed9a-ab65-4699-b942-6efbf3a6e666
Date: Tue, 27 Jun 2023 05:47:26 GMT
Content-Length: 30
Host: test.soliscloud.com:3333
User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17)

{
    "id": "1298491919448631809",
    "nmiCode": "41028459350"
}
```

Return parameters

```
{
    "success": true,
    "code": "0",
    "msg": "success",
    "data": {
        "id": "1298491919448631809",
        "dataTimestamp": "1687844402978",
        "fullHour": 2.61,
        "monthCarbonDioxide": 69.92,
        "installerId": "1298497302686786165",
        "installer": "",
        "sno": "1085AC",
        "country": "15",
        "countryStr": "",
        "region": "423",
        "regionStr": "",
        "city": "11393",
        "cityStr": "Forster",
        "county": "11379",
        "state": 1,
        "dip": 30.0,
```

```
"azimuth": 0.0,
"power": 5.772,
"timeZone": 10.00,
"timeZoneName": "(UTC+10:00) ",
"timeZoneStr": "(UTC+10:00)",
"timeZoneId": "115",
"daylight": 0,
"powerStr": "kW",
"createDate": 1677119648000,
"createDateStr": "2023-02-23 12:34:08 (UTC+10:00)",
"price": 1.0000,
"capacity": 12.000,
"capacityStr": "kWp",
"capacityPercent": 0,
"capacity1": 0,
"dayEnergy": 31.300,
"dayEnergyStr": "kWh",
"monthEnergy": 839.000,
"monthEnergyStr": "kWh",
"yearEnergy": 5.603,
"yearEnergyStr": "MWh",
"allEnergy": 36.393,
"allEnergyStr": "MWh",
"allEnergy1": 36393.000,
"updateDate": 1687844137000,
"type": 0,
"synchronizationType": 0,
"epmType": 0,
"gridSwitch": 0,
"shareProcess": 1,
"dcInputType": 3,
"stationTypeNew": 0,
"gridPurchasedTotalEnergy": 0.000,
"gridSellTotalEnergy": 0.000,
"homeLoadTotalEnergy": 0.000,
"oneSelf": 0.00000,
"homeLoadTodayEnergy": 31.300,
"money": "AUD",
"condTxtD": "小雨",
"condTxtN": "小雨",
"condCodeD": "305",
"condCodeN": "305",
"simFlowState": -1,
"nmiCode": "41028459350",
```

```
"jxbType": 0,
"generateDays": 92,
"generateDaysContinuous": 90,
"inverterCount": 1,
"orgCode": "61BADD",
"visitorCount": 0,
"daylightSwitch": 0,
"daylightType": 1,
"fullHourStr": "h",
"capacityPec": "1",
"dipStr": "30.0°",
"azimuthStr": "0.0°",
"dateTime": "1677119648000",
"offset": 0,
"offsetStr": "kWh",
"dayInCome": 31.300,
"dayInComeUnit": "AUD",
"monthInCome": 839.000,
"monthInComeUnit": "AUD",
"yearInCome": 5.603,
"yearInComeUnit": "KAUD",
"allInCome": 36.393,
"allInCome1": 36393.000,
"allInComeUnit": "KAUD",
"powerStationNumTree": 36.39,
"powerStationNumTreeUnit": "棵",
"powerStationAvoidedCo2": 36.28,
"powerStationAvoidedCo2Unit": "t",
"powerPec": "1",
"porwerPercent": 0.4810,
"batteryPower": 0.000,
"batteryPowerStr": "kW",
"batteryPowerPec": "1",
"batteryPowerZheng": 0,
"batteryPowerFu": 0,
"batteryPercent": 0,
"familyLoadPercent": 0,
"psum": 5.772,
"psumStr": "kW",
"psumPec": "1",
"psumZheng": 5772.0,
"psumFu": 0,
"gridPurchasedTotalEnergyStr": "kWh",
"gridSellTotalEnergyStr": "kWh",
```

"gridPurchasedEnergy": 0.000,
"gridPurchasedEnergyStr": "kWh",
"gridSellEnergy": 0.000,
"gridSellEnergyStr": "kWh",
"gridPurchasedDayEnergy": 0.000,
"gridPurchasedDayEnergyStr": "kWh",
"gridSellDayEnergy": 0.000,
"gridSellDayEnergyStr": "kWh",
"gridPurchasedMonthEnergy": 0.000,
"gridPurchasedMonthEnergyStr": "kWh",
"gridSellMonthEnergy": 0,
"gridSellMonthEnergyStr": "kWh",
"gridPurchasedYearEnergy": 0.000,
"gridPurchasedYearEnergyStr": "kWh",
"gridSellYearEnergy": 0.000,
"gridSellYearEnergyStr": "kWh",
"batteryDischargeEnergy": 0.000,
"batteryDischargeEnergyStr": "kWh",
"batteryChargeEnergy": 0.000,
"batteryChargeEnergyStr": "kWh",
"batteryDischargeMonthEnergy": 0.000,
"batteryDischargeMonthEnergyStr": "kWh",
"batteryChargeMonthEnergy": 0.000,
"batteryChargeMonthEnergyStr": "kWh",
"batteryDischargeYearEnergy": 0.000,
"batteryDischargeYearEnergyStr": "kWh",
"batteryChargeYearEnergy": 0.000,
"batteryChargeYearEnergyStr": "kWh",
"batteryDischargeTotalEnergy": 0.000,
"batteryDischargeTotalEnergyStr": "kWh",
"batteryChargeTotalEnergy": 0.000,
"batteryChargeTotalEnergyStr": "kWh",
"familyLoadPower": 0.000,
"familyLoadPowerStr": "kW",
"familyLoadPowerPec": "1",
"homeGridTodayEnergy": 31.300,
"homeGridTodayEnergyStr": "kWh",
"homeGridMonthEnergy": 0.000,
"homeGridMonthEnergyStr": "kWh",
"homeGridYearEnergy": 0.000,
"homeGridYearEnergyStr": "kWh",
"homeGridTotalEnergy": 0,
"homeGridTotalEnergyStr": "kWh",
"backupTodayEnergy": 0.000,

"backupTodayEnergyStr": "kWh",
"backupMonthEnergy": 0.000,
"backupMonthEnergyStr": "kWh",
"backupYearEnergy": 0.000,
"backupYearEnergyStr": "kWh",
"backupTotalEnergy": 0,
"backupTotalEnergyStr": "kWh",
"totalLoadPower": 0.000,
"totalLoadPowerStr": "kW",
"bypassLoadPower": 0.000,
"bypassLoadPowerStr": "kW",
"homeLoadEnergy": 31.300,
"homeLoadEnergyStr": "kWh",
"homeLoadTodayEnergyStr": "kWh",
"homeLoadMonthEnergy": 0.000,
"homeLoadYearEnergy": 0.000,
"picUrl":
"https://solis-test.oss-eu-central-1.aliyuncs.com/STATION_default_user.png?Expires=1687915551&OSSAccessKeyId=LTAI5tDfhhsnNuC3fr5HU1rK&Signature=5JAsyO8hbCzqfr1TJ2lvPkMhU%2Bw%3D",
"weather": "18:26 30.0 - 82.0 Aquatic Drive Rain",
"sr": "06:19",
"ss": "18:26",
"tmpMax": "82.0",
"tmpMin": "30.0",
"tmpUnit": "°F",
"hum": "77",
"weatherUpdateDate": "1687828212000",
"weatherUpdateDateStr": "2023-06-27 11:10:12 (UTC+10:00)",
"pcpn": "80.0",
"pres": "1011",
"windSpd": "9.1",
"windDir": "SE",
"weatherType": 0,
"windSpeed": 0,
"windDirection": 0,
"humidity": 0,
"temp": 0,
"rainfall": 0,
"airPressure": 0,
"contribution": 0,
"screenMap": 0,
"screenGuideState": 0,
"storedInverterType": 0,

```
"powerGridAgent": "SAPN",
"countryShortName": "AU",
"inverterPower": 8.000,
"bypassAcOnoffSet": 0,
"priceMap": {
    "sell": "1.0000",
    "buy": "0"
},
"sysGridPriceList": [
    {
        "id": "6406",
        "createDate": 1677119648000,
        "updateDate": 1677119648000,
        "deleteFlag": 0,
        "unit": "AUD",
        "type": 0,
        "source": 0,
        "sellBuy": 0,
        "refId": "1298491919448631809",
        "price": 1.0000
    },
    {
        "id": "6412",
        "createDate": 1677208349000,
        "updateDate": 1677208349000,
        "deleteFlag": 0,
        "unit": "AUD",
        "type": 0,
        "source": 0,
        "sellBuy": 1,
        "refId": "1298491919448631809",
        "price": 0.0000
    }
],
"generatorPower": 0,
"generatorPowerStr": "kW",
"generatorPowerPec": "1",
"generatorTodayEnergy": 0.000,
"generatorTodayEnergyStr": "kW",
"generatorTodayEnergyPec": "1",
"generatorTotalEnergy": 0,
"generatorTotalEnergyStr": "kWh",
"generatorTotalEnergyPec": "1",
"weatherCount": 0,
```

	"inverterPowerStr": "kW", "homeLoadMonthEnergyStr": "kWh", "homeLoadYearEnergyStr": "kWh", "homeLoadTotalEnergyStr": "kWh", "gridMonthEnergy": 0.000, "monthEnergy1": 0, "dayEnergy1": 0, "yearEnergy1": 0, "power1": 0 } }

4.4 Obtaining real-time data of multiple power stations on a certain day

Interface Name	Obtaining real-time data of multiple power stations on a certain day		
Interface Description	Obtain daily power generation of power stations in batches on the corresponding SolisCloud platform.		
Request URL	https://www.soliscloud.com:13333/v1/api/stationDayEnergyList		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
pageNo	String	N	Specify the number of page numbers to return. The default value is 1, representing page 1.
pageSize	Integereger	Y	Specify the number of returns per page. The default value is 20, and the maximum value is 100.
time	String	Y	Specify to query data for a certain day, format: yyyy-MM-dd
stationIds	String	N	Station Id
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	array	Y	Data identification
page	Object	Y	result list
total	Integer	Y	Total number of lists
records	Array	Y	Array of record
id	Long	Y	Station ID
energy	Number	N	Power generation
energyStr	String	N	Unit of power generation
date	number	Y	Data update time under UTC+8. The format is a timestamp.. The format is a timestamp.

dateStr	String	Y	Data, format string
money	String	N	Income
moneyStr	String	N	Unit of income
batteryDischargeEnergy	Number	N	Battery discharge energy
batteryChargeEnergy	Number	N	Battery charging energy
gridPurchasedEnergy	Number	N	Grid purchased energy
gridSellEnergy	Number	N	Grid sell energy

Code example

Request parameters

```
POST /v1/api/ stationDayEnergyList
Connection: keep-alive
Date: Wed, 28 Jun 2023 02:22:45 GMT
Content-MD5: 318kyhw+nm7ATa90m1KxyA==
Authorization: API 1300386381676644416:82vsMEy/KAz4p3PhzHhSYnFJQgs=
Content-Type: application/json;charset=UTF-8
Content-Length: 49
Host: test.soliscloud.com:3333
User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17)
{
    "pageNo": "1",
    "pageSize": "10",
    "time": "2023-5-26",
    "nmiCode": "41028459350"
}
```

Return parameters

```
{
    "success": true,
    "code": "0",
    "msg": "success",
    "data": {
        "records": [
            {
                "id": "1298491919448631809",
                "money": 761.000,
                "moneyStr": "AUD",
                "moneyPec": "1",
                "energy": 761.000,
                "energyStr": "kWh",
                "energyPec": "1",
                "fullHour": 63.42,
                "date": 1687881600000,
                "dateStr": "2023-06-28",
                "timeZone": 8,
                "batteryDischargeEnergy": 0,
                "batteryChargeEnergy": 0,
```

```
                "gridPurchasedEnergy": 0,
                "gridPurchasedIncome": 0.000,
                "gridSellEnergy": 0,
                "gridSellIncome": 0.000,
                "homeLoadEnergy": 761.000,
                "oneSelf": 761.000,
                "consumeEnergy": 761.000,
                "produceEnergy": 761.000,
                "consumePec": 0.00,
                "producePec": 0.00,
                "offSetEnergy": 0.000,
                "offSetIncome": 0.000,
                "totalR": 5.243000,
                "directR": 3.389000,
                "errorFlag": 0
            }
        ],
        "total": 1,
        "size": 100,
        "current": 1,
        "orders": [                         ],
        "optimizeCountSql": true,
        "searchCount": true,
        "pages": 1
    }
}
```


4.5 Obtaining Daily Data of Multiple Power Stations for a Month

Interface Name	Obtaining Daily Data of Multiple Power Stations for a Month		
Interface Description	Corresponding monthly chart of SolisCloud platform power station		
Request URL	https://www.soliscloud.com:13333/v1/api/stationMonthEnergyList		
Interface frequency limit	10 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
pageNo	number	Y	Specify the number of page numbers to return. The default value is 1, representing page 1.
pageSize	number	Y	Specify the number of returns per page. The default value is 20, and the maximum value is 100.
stationIds	String	N	Station Id
nmiCode	String	N	NMI Code
Return parameters [Body]			

Parameter Name	Data Type	Required	Description
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Object	Y	Data identification
page	Object	Y	result list
total	Integer	Y	Total number of lists
records	Array	Y	Array of record
id	number	Y	Station ID
energy	number	Y	Power generation
date	number	Y	Data update time under UTC+8. The format is a timestamp.. The format is a timestamp.
dateStr	String	Y	Data, format string
money	number	N	Income
moneyStr	number	N	Unit of income
batteryDischargeEnergy	number	N	Battery discharge energy
batteryChargeEnergy	number	N	Battery charging energy
gridPurchasedEnergy	number	N	Grid purchased energy
gridSellEnergy	number	N	Grid sell energy
Code example			

Request parameters	POST /v1/api/stationMonthEnergyList
	Connection: keep-alive
	Date: Wed, 28 Jun 2023 02:27:57 GMT
	Content-MD5: +6vavbBiUMIXHUP4LvAhMg==
	Authorization:API 1300386381676644416:OjjngNHie/KHBWwAV6mPMti/fFg=
	Content-Type: application/json;charset=UTF-8
	Content-Length: 72
	Host: test.soliscloud.com:3333
	User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17)
	{
	"pageNo": "1",
	"pageSize": "100",
	"time": "2023-06",
	"nmiCode": "41028459350"
	}		

Return parameters	{
	"success": true,
	"code": "0",
	"msg": "success",
	"data": {		

```
            "records": [
                {
                    "id": "1298491919448631809",
                    "money": 6556.000,
                    "moneyStr": "KAUD",
                    "moneyPec": "0.001",
                    "energy": 6556.000,
                    "energyStr": "MWh",
                    "energyPec": "0.001",
                    "fullHour": 546.33,
                    "date": 1685548800000,
                    "dateStr": "2023-06-01",
                    "timeZone": 8,
                    "batteryDischargeEnergy": 0,
                    "batteryChargeEnergy": 0,
                    "gridPurchasedEnergy": 0,
                    "gridPurchasedIncome": 0.000,
                    "gridSellEnergy": 0,
                    "gridSellIncome": 0.000,
                    "homeLoadEnergy": 0,
                    "oneSelf": 6556.000,
                    "consumeEnergy": 6556.000,
                    "produceEnergy": 6556.000,
                    "consumePec": 0.00,
                    "producePec": 0.00,
                    "offSetEnergy": 0.000,
                    "offSetIncome": 0.000,
                    "totalR": 5.243000,
                    "directR": 3.389000,
                    "errorFlag": 0
                }
            ],
            "total": 1,
            "size": 100,
            "current": 1,
            "orders": [                                ],
            "optimizeCountSql": true,
            "searchCount": true,
            "pages": 1
        }
}
```


4.6 Obtaining Annual Data from Multiple Power Stations

Interface Name	Obtaining Annual Data from Multiple Power Stations

Interface Description	Corresponding SolisCloud Platform Power Station Annual Chart		
Request URL	https://www.soliscloud.com:13333/v1/api/stationYearEnergyList		
Interface frequency limit	10 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
pageNo	number	Y	Specify the number of page numbers to return. The default value is 1, representing page 1.
pageSize	number	Y	Specify the number of returns per page. The default value is 20, and the maximum value is 100.
stationIds	String	N	Station Id
nmiCode	String	N	NMI Code
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Object	Y	Data identification
page	Object	Y	result list
total	Integer	Y	Total number of lists
records	Array	Y	Array of record
id	number	Y	Station ID
energy	number	Y	Power generation
year	number	Y	Year
money	number	N	Income
moneyStr	number	N	Unit of income
batteryDischargeEnergy	number	N	Battery discharge energy
batteryChargeEnergy	number	N	Battery charging energy
gridPurchasedEnergy	number	N	Grid purchased energy
gridSellEnergy	number	N	Grid sell energy
Code example			
Request parameters	POST /v1/api/stationYearEnergyList Connection: keep-alive Date: Wed, 28 Jun 2023 02:27:57 GMT Content-MD5: +6vavbBiUMIXHUP4LvAhMg== Authorization:API 1300386381676644416:OjjngNHie/KHBWwAV6mPMti/fFg= Content-Type: application/json;charset=UTF-8 Content-Length: 72 Host: test.soliscloud.com:3333		

	User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17)
	{
	"pageNo": "1",
	"pageSize": "10",
	"time": "2023",
	"nmiCode": "41028459350"
	}

Return parameters	{
	"success": true,
	"code": "0",
	"msg": "success",
	"data": {
	"records": [
	{
	"id": "1298491919448631809",
	"money": 98623.000,
	"moneyStr": "KAUD",
	"moneyPec": "0.001",
	"energy": 98623.000,
	"energyStr": "MWh",
	"energyPec": "0.001",
	"fullHour": 8218.58,
	"year": 2023,
	"timeZone": 8,
	"batteryDischargeEnergy": 0,
	"batteryChargeEnergy": 0,
	"gridPurchasedEnergy": 0,
	"gridPurchasedIncome": 0.000,
	"gridSellEnergy": 0,
	"gridSellIncome": 0.000,
	"homeLoadEnergy": 0,
	"oneSelf": 98623.000,
	"consumeEnergy": 98623.000,
	"produceEnergy": 98623.000,
	"consumePec": 0.00,
	"producePec": 0.00,
	"offSetEnergy": 0.000,
	"offSetIncome": 0.000,
	"totalR": 5.243000,
	"directR": 3.389000,
	"errorFlag": 0
	}
	],
	"total": 1,

	"size": 10, "current": 1, "orders": [ ], "optimizeCountSql": true, "searchCount": true, "pages": 1 } }

4.7 Obtain real-time data of a single power station on a certain day

Interface Name	Obtain real-time data of a single power station on a certain day		
Interface Description	Daily chart of corresponding SolisCloud platform power station details		
Request URL	https://www.soliscloud.com:13333/v1/api/stationDay		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
id	Integer	N	Query the information of the specified power station ID or power station NMI , both cannot be empty at the same time.
money	String	Y	Used to calculate revenue, e.g. EUR, CNY
time	String	Y	Specify to query data for a certain day, format: yyyy-MM-dd
timeZone	Integer	Y	The time zone where the device is located. Example: 8
nmiCode	String	N	NMI Code
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Array	Y	Data identification
power	Number	N	Power
powerStr	String	N	Unit of power
time	Long	N	
Code example			
Request parameters	POST /v1/api/stationDay Connection: keep-alive Date: Tue, 27 Jun 2023 06:49:36 GMT Content-MD5: gvXLKbqHkJRwkiPCceCtSA== Authorization: API		

	1300386381676644416:N02s7Zy+RIW63m2hyniy/xq6n2c=
	Content-Type: application/json;charset=UTF-8
	Content-Length: 101
	Host: test.soliscloud.com:3333
	User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17)
	{
	"id": "1298491919448631809",
	"money": "CNY",
	"time": "2023-05-26",
	"timeZone": "8",
	"nmiCode": "41028459350"
	}

Return parameters	{ "success": true, "code": "0", "msg": "success", "data": [{ "familyLoadPower": 0.00000, "bypassLoadPower": 0.00000, "batteryPower": 0.00000, "batteryPowerZheng": 0.00000, "batteryPowerFu": 0, "psum": 77.00000, "psumZheng": 77.00000, "psumFu": 0, "oneSelf": 0.00000, "consumeEnergy": 0.00000, "produceEnergy": 77.00000, "time": 1685057100000, "timeStr": "07:25:00", "money": 0, "moneyStr": "CNY", "moneyPec": "1", "power": 77.000, "powerStr": "kW", "powerPec": "0.001", "timeZone": 8 }, { "familyLoadPower": 0.00000, "bypassLoadPower": 0.00000, "batteryPower": 0.00000, "batteryPowerZheng": 0.00000,

```
            "batteryPowerFu": 0,
            "psum": 78.00000,
            "psumZheng": 78.00000,
            "psumFu": 0,
            "oneSelf": 0.00000,
            "consumeEnergy": 0.00000,
            "produceEnergy": 78.00000,
            "time": 1685057400000,
            "timeStr": "07:30:00",
            "money": 0,
            "moneyStr": "CNY",
            "moneyPec": "1",
            "power": 78.000,
            "powerStr": "kW",
            "powerPec": "0.001",
            "timeZone": 8
        },
        {
            "familyLoadPower": 0.00000,
            "bypassLoadPower": 0.00000,
            "batteryPower": 0.00000,
            "batteryPowerZheng": 0.00000,
            "batteryPowerFu": 0,
            "psum": 79.00000,
            "psumZheng": 79.00000,
            "psumFu": 0,
            "oneSelf": 0.00000,
            "consumeEnergy": 0.00000,
            "produceEnergy": 79.00000,
            "time": 1685057700000,
            "timeStr": "07:35:00",
            "money": 0,
            "moneyStr": "CNY",
            "moneyPec": "1",
            "power": 79.000,
            "powerStr": "kW",
            "powerPec": "0.001",
            "timeZone": 8
        },...}
```


4.8 Obtain daily data of a single power station for a certain month

Interface Name	Obtain daily data of a single power station for a certain month
Interface Description	Monthly chart of corresponding SolisCloud platform power station details

Request URL	https://www.soliscloud.com:13333/v1/api/stationMonth		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
id	Integer	N	Query the information of the specified power station ID or power station NMI , both cannot be empty at the same time.
money	String	Y	Used to calculate revenue, e.g. EUR, CNY
month	String	Y	format: yyyy-MM
timeZone	Integer	Y	The time zone where the device is located. Example: 8
nmiCode	String	N	NMI Code
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Array	Y	Data identification
energy	Number	N	Power generation
energyStr	String	N	Unit of power generation
date	number	Y	Data update time under UTC+8. The format is a timestamp.. The format is a timestamp.
dateStr	String	Y	Data, format string
money	Number	N	Income
moneyStr	String	N	Unit of income
batteryDischargeEnergy	Number	N	Battery discharge energy
batteryChargeEnergy	Number	N	Battery charging energy
gridPurchasedEnergy	Number	N	Grid purchased energy
gridSellEnergy	Number	N	Grid sell energy
Code example			
Request parameters	POST /v1/api/stationMonth Connection: keep-alive Date: Tue, 27 Jun 2023 10:36:58 GMT Content-MD5: hZtPtB6r9W7eGqoUm7yTpA== Authorization:API 1300386381676644416:4+Ci/BiGu+QAnaHn7zAIlQJZl6M= Content-Type: application/json;charset=UTF-8 Content-Length: 84 Host: test.soliscloud.com:3333		

	User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17)
	{
	"id": "1298491919448631809",
	"money": "CNY",
	"month": "2023-06",
	"nmiCode": "41028459350"
	}

Return parameters	{ "success": true, "code": "0", "msg": "success", "data": [{ "id": "1308652875882403403", "money": 0.000, "moneyStr": "CNY", "moneyPec": "1", "energy": 0.000, "energyStr": "kWh", "energyPec": "1", "fullHour": 0.00, "date": 1685592000000, "dateStr": "2023-06-01", "timeZone": 8, "batteryDischargeEnergy": 0.00000, "batteryChargeEnergy": 0.00000, "gridPurchasedEnergy": 0.00000, "gridPurchasedIncome": 0.000, "gridSellEnergy": 0.00000, "gridSellIncome": 0.000, "homeLoadEnergy": 0.00000, "consumeEnergy": 0, "produceEnergy": 0, "offSetEnergy": 0.000, "offSetIncome": 0.000, "errorFlag": 0 }, ... { "id": "1308652875882408134", "money": 44.900, "moneyStr": "CNY", "moneyPec": "1", "energy": 44.900,

	"energyStr": "kWh", "energyPec": "1", "fullHour": 3.74, "date": 1687838400000, "dateStr": "2023-06-30", "timeZone": 8, "batteryDischargeEnergy": 0, "batteryChargeEnergy": 0, "gridPurchasedEnergy": 0, "gridPurchasedIncome": 0.000, "gridSellEnergy": 0, "gridSellIncome": 0.000, "homeLoadEnergy": 44.900, "consumeEnergy": 0, "produceEnergy": 0, "offSetEnergy": 0.000, "offSetIncome": 0.000, "totalR": 0, "directR": 0, "errorFlag": 0 }] }

4.9 Obtaining Monthly Data of a Single Power Plant for a Certain Year

Interface Name	**4.9 Obtaining Monthly Data of a Single Power Plant for a Certain Year**		
Interface Description	Annual chart of corresponding SolisCloud platform power station details		
Request URL	https://www.soliscloud.com:13333/v1/api/stationYear		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
id	Integer	N	Query the information of the specified power station ID or power station NMI , both cannot be empty at the same time.
money	String	Y	Used to calculate revenue, e.g. EUR, CNY
year	String	Y	format: yyyy
timeZone	Integer	Y	The time zone where the device is located. Example: 8
nmiCode	String	N	NMI Code
Return parameters [Body]			
Parameter Name	**Data**	**Required**	**Description**

	Type		
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Array	Y	Data identification
energy	Number	N	Power generation
energyStr	String	N	Unit of power generation
date	number	Y	Data update time under UTC+8. The format is a timestamp.. The format is a timestamp.
dateStr	String	Y	Data, format string
money	Number	N	Income
moneyStr	String	N	Unit of income
batteryDischargeEnergy	Number	N	Battery discharge energy
batteryChargeEnergy	Number	N	Battery charging energy
gridPurchasedEnergy	Number	N	Grid purchased energy
gridSellEnergy	Number	N	Grid sell energy
Code example			

Request parameters	POST /v1/api/stationYear
	Connection: keep-alive
	Date: Tue, 27 Jun 2023 10:57:37 GMT
	Content-MD5: NXfNhwGdQe+6lxtZ4WKk/w==
	Authorization:API 1300386381676644416:gSbrx4TdYOW0ljdk8Y9fFvI41xM=
	Content-Type: application/json;charset=UTF-8
	Content-Length: 80
	Host: test.soliscloud.com:3333
	User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17)
	{
	"id": "1298491919448631809",
	"money": "CNY",
	"year": "2023",
	"nmiCode": "41028459350"
	}		

Return parameters	{ "success": true, "code": "0", "msg": "success", "data": [{ "id": "1308652876059249630", "money": 755.000,		

```
                "moneyStr": "CNY",
                "moneyPec": "1",
                "energy": 755.000,
                "energyStr": "MWh",
                "energyPec": "0.001",
                "fullHour": 62.92,
                "date": 1675224000000,
                "dateStr": "2023-02-01",
                "timeZone": 8,
                "batteryDischargeEnergy": 0.00000,
                "batteryChargeEnergy": 0.00000,
                "gridPurchasedEnergy": 0.00000,
                "gridPurchasedIncome": 0.000,
                "gridSellEnergy": 0.00000,
                "gridSellIncome": 0.000,
                "homeLoadEnergy": 0.00000,
                "consumeEnergy": 0,
                "produceEnergy": 0,
                "offSetEnergy": 0.000,
                "offSetIncome": 0.000,
                "errorFlag": 0
            },
......
            {
                "id": "1308652876059257166",
                "money": 852.000,
                "moneyStr": "CNY",
                "moneyPec": "1",
                "energy": 852.000,
                "energyStr": "MWh",
                "energyPec": "0.001",
                "fullHour": 71.00,
                "date": 1685592000000,
                "dateStr": "2023-06-01",
                "timeZone": 8,
                "batteryDischargeEnergy": 0,
                "batteryChargeEnergy": 0,
                "gridPurchasedEnergy": 0,
                "gridPurchasedIncome": 0.000,
                "gridSellEnergy": 0,
                "gridSellIncome": 0.000,
                "homeLoadEnergy": 0,
                "consumeEnergy": 0,
                "produceEnergy": 0,
```

	"offSetEnergy": 0.000, "offSetIncome": 0.000, "totalR": 0, "directR": 0, "errorFlag": 0 }] }

4.10 Obtaining Annual Data of a Power Plant

Interface Name	Obtaining Annual Data of a Power Plant		
Interface Description	Cumulative Chart of Power Station Details Corresponding to SolisCloud Platform.		
Request URL	https://www.soliscloud.com:13333/v1/api/stationAll		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
id	Integer	N	Query the information of the specified power station ID or power station NMI , both cannot be empty at the same time.
money	String	Y	Used to calculate revenue, e.g. EUR, CNY
timeZone	Integer	Y	The time zone where the device is located. Example: 8
nmiCode	String	N	NMI Code
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Array	Y	Data identification
energy	Number	N	Power generation
energyStr	String	N	Unit of power generation
date	number	Y	Data update time under UTC+8. The format is a timestamp.. The format is a timestamp.
dateStr	String	Y	Data, format string
money	Number	N	Income
moneyStr	String	N	Unit of income
batteryDischargeEnergy	Number	N	Battery discharge energy
batteryChargeEnergy	Number	N	Battery charging energy

gridPurchasedEnergy	Number	N	Grid purchased energy
gridSellEnergy	Number	N	Grid sell energy
Code example			

Request parameters	POST /v1/api/stationAll
	Connection: keep-alive
	Date: Tue, 27 Jun 2023 11:00:40 GMT
	Content-MD5: QEQONshrvlmBcpig9shdPg==
	Authorization:API 1300386381676644416:/q0JL/CZU8jwSRL03QbTA9DfYgU=
	Content-Type: application/json;charset=UTF-8
	Content-Length: 66
	Host: test.soliscloud.com:3333
	User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17)
	{
	"id": "1298491919448631809",
	"money": "CNY",
	"nmiCode": "41028459350"
	}		

Return parameters	{ "success": true, "code": "0", "msg": "success", "data": [{ "id": "1308652876792594370", "money": 5616.000, "moneyStr": "", "moneyPec": "1", "energy": 5616.000, "energyStr": "MWh", "energyPec": "0.001", "fullHour": 468.00, "year": 2023, "timeZone": 8, "batteryDischargeEnergy": 0, "batteryChargeEnergy": 0, "gridPurchasedEnergy": 0, "gridPurchasedIncome": 0.000, "gridSellEnergy": 0, "gridSellIncome": 0.000, "homeLoadEnergy": 0, "oneSelf": 5616.000, "consumeEnergy": 0, "produceEnergy": 0,		

	"offSetEnergy": 0.000, "offSetIncome": 0.000, "totalR": 0, "directR": 0, "errorFlag": 0 }] }

4.11 Newly added power station information

Interface Name	Newly added power station information		
Interface Description	Corresponding to the newly added power station on the SolisCloud platform.		
Request URL	https://www.soliscloud.com:13333/v1/api/addStation		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
inverterSn	String	N	Fill in one inverter SN or collector SN to bind
collectorSn	String	N	
stationName	String	Y	Name of station
userId	Integer	N	Default owner's account
mobile	String	N	Owners' mobile phones
capacity	String	Y	Installed capacity, Unit: kWp
latitude	String	N	latitude
Integeritude	String	N	Integeritude
dip	Number	N	Component inclination angle
azimuth	Number	N	Component azimuth
money	String	Y	Currency type, used to calculate revenue, e.g. EUR, CNY
addr	String	Y	Detailed address of the power station
gdAreaCode	String	N	Retrieve address code through Google Map API
countryStr	Integer	N	Country name
regionStr	Integer	N	Region name
cityStr	Integer	N	City name
price	Integer	Y	Revenue per kWh
offset	Number	N	Time zone offset
module	String	N	Number of components
installerEmail	String	N	Installer Email
installerMobile	String	N	Installer Mobile
nmiCode	Number	N	NMI Code

Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	Integer	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Integer	Y	Data identification
stationId	Integer	Y	Station Id
Code example			
Request parameters	POST /v1/api/addStation Connection: keep-alive Content-Type: application/json Date: Tue, 27 Jun 2023 06:45:14 GMT Content-MD5: TgcpDReudwzrqpKQhQxshw== Authorization:API 1300386381676644416:Gssn7wg9PuyniGZ5KHf1L3DCC5M= Content-Length: 545 Host: test.soliscloud.com:3333 User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17) { "stationName": "autotest22", "userId": "", "mobile": "18957465251", "capacity": "10", "picName": "", "longitude": "120.01144", "latitude": "30.320861", "dip": "45", "azimuth": "", "addr": "", "money": "CNY", "gdAreaCode": "330110", "country": 1, "region": 862, "city": 863, "countryStr": "", "regionStr": "", "cityStr": "", "countyStr": "", "price": "", "offset": "", "module": "", "installerEmail ": "", "installerMobile": "",			

	"nmiCode": "", "language": "1" }

Return parameters	{
	"success": true,
	"code": "0",
	"msg": "success",
	"data": {
	"id": 123456
	}
	}

4.12 Modifying Power Station Information

Interface Name	Modifying Power Station Information		
Interface Description	Corresponding modification of power station information on SolisCloud platform		
Request URL	https://www.soliscloud.com:13333/v1/api/stationUpdate		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
id	number	N	Station ID
stationName	String	Y	Name of station
mobile	String	N	Owners' mobile phones
capacity	String	Y	Installed capacity, Unit: kWp
latitude	String	N	latitude
longitude	String	N	Integeritude
dip	Number	N	Component inclination angle
azimuth	Number	N	Component azimuth
money	String	N	Currency type, used to calculate revenue, e.g. EUR, CNY
price	Number	Y	Revenue per kWh
addr	String	Y	Detailed address of the power station
gdAreaCode	Integereger	N	Retrieve address code through Google Map API
country	Integereger	N	Country name
region	Integereger	N	Region name
city	Integereger	N	City name
module	number	N	Number of components
installerEmail	String	N	Installer Email
installerMobile	number	N	Installer Mobile
nmiCode	String	N	NMI Code

Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	Integer	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Integer	Y	Data identification

Code example

Request parameters

```
POST /v1/api/stationUpdate
Connection: keep-alive
Content-Type: application/json
Date: Tue, 27 Jun 2023 11:39:26 GMT
Content-MD5: /xODsrSeC4vzAQJYwy3wxQ==
Authorization: API 1300386381676644416:qsdQn7j7OsAzm+5g0NViL2Nf2W0=
Content-Length: 474
Host: test.soliscloud.com:3333
User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17)
{
   "id": "1298491919448632027",
   "stationName": "autotest",
   "addr": "hangzhouzhejiang",
   "mobile": "18957465251",
   "capacity": 20,
   "longitude": "120.01144",
   "latitude": "30.320861",
   "dip": "",
   "azimuth": "",
   "price": "",
   "gdAreaCode": "330110",
   "country": 1,
   "region": 862,
   "city": 863,
  "countryStr": "China",
    "regionStr": "Zhejiang",
 "cityStr": "Hangzhou",
  "countyStr": "Binjiang District",
   "module": "",
   "installerEmail ": "",
   "installerMobile": "",
   "nmiCode": "",
   "language": "1"
}
```

Return parameters

```
{
   "success": true,
   "code": "0",
```

	"msg": "success", "data": null }

4.13 Binding a new collector to the power station

Interface Name	Binding a new collector to the power station		
Interface Description	Corresponding SolisCloud platform power station binding collector.		
Request URL	https://www.soliscloud.com:13333/v1/api/addStationBindCollector		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
sn	String	N	Collector SN. Fill in the new power station and bind it. When there are multiple, please separate them with commas.
stationName	String	Y	Name of station
userId	Number	N	Default owner's account
capacity	String	Y	Installed capacity, Unit: kWp
picName	String	N	Picture name
latitude	String	N	Latitude
longitude	String	N	Longitude
dip	Number	N	Component inclination angle
azimuth	Number	N	Component azimuth
money	String	N	Currency type, used to calculate revenue, e.g. EUR, CNY
addr	String	N	Detailed address of the power station
高德地图：			
gdAreaCode	Integereger	N	Retrieve address code through Google Map API
country	Integereger	N	Country name
region	Integereger	N	Region name
city	Integereger	N	City name
price	Number	N	Revenue per kWh
offset	Number	N	Time zone offset
type	Integereger	N	Type of power station, see Appendix 2 for details
synchronizationType	Integereger	N	Grid connection type: 0=Full online, 1=Self use, 2=Off grid
installTime	String	N	Installation time of power station
module	Integereger	N	Number of components
installerEmail	String	N	Installer Email
installerMobile	Integereger	N	Installer Mobile

nmiCode	String	N	NMI Code
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	Integer	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Integer	Y	Data identification
Code example			
Request parameters	POST /v1/api/ addStationBindCollector Connection: keep-alive Content-Type: application/json Date: Wed, 28 Jun 2023 00:32:31 GMT Content-MD5: lcVMJKs5Nsqq7lDfQBrFEA== Authorization: API 1300386381676644416:l31S6aoTlhIi9yGc9VZesYPnV88= Content-Length: 555 Host: test.soliscloud.com:3333 User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17) { "sn": "FFC00115565", "stationName": "autotest22", "userId": "", "capacity": 20, "picName": "", "addr": "zhejiang hangzhouaa", "longitude": "120.01144", "latitude": "30.320861", "dip": "", "azimuth": "", "money": "", "gdAreaCode": "330110", "country": 1, "region": 862, "city": 863, "countryStr": "", "regionStr": "", "cityStr": "", "price": "0.5", "offset": "", "type": "", "contribution": "", "synchronizationType": "", "installTime": "",		

	"module": "", "installerEmail ": "", "installerMobile": "", "nmiCode": "80023601742", "mobile": "18957465251" }

Return parameters	{
	"success": true,
	"code": "0",
	"msg": "success",
	"data": "1298491919448634915"
	}

4.14 Power station unbinding collector

Interface Name	Power station unbinding collector		
Interface Description	Corresponding SolisCloud platform power station unbinding collector		
Request URL	https://www.soliscloud.com:13333/v1/api/delCollector		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
sn	String	N	Collector SN
deleteInvert	Integereger	Y	1=delete all inverters together. 0=Do not delete. Default not to delete
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	Integer	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Integer	Y	Data identification
Code example			

Request parameters	POST /v1/api/delCollector
	Connection: keep-alive
	Content-Type: application/json
	Date: Wed, 28 Jun 2023 01:08:55 GMT
	Content-MD5: 98i7tIiBFoRK45MOzLIBKw==
	Authorization: API 1300386381676644416:2mxDrDd+y3032bL3g6MYX8Utcxc=
	Content-Length: 39
	Host: test.soliscloud.com:3333
	User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17){
	{
	"sn": "FFC00115564",		

	"deleteInvert": "0"
	}
	or
	{
	"sn": "FFC00115569",
	"deleteInvert": "1"
	}

Return parameters	{
	"success": true,
	"code": "0",
	"msg": "success",
	"data": null
	}

4.15 Power plant binding inverter

Interface Name	4.15 Power plant binding inverter		
Interface Description	-		
Request URL	https://www.soliscloud.com:13333/v1/api/addDevice		
Interface frequency limit	2 times/sec		
Request parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
id	Integer	N	Choose between power station ID and nmiCode
sn	String	Y	Use commas to separate multiple inverter SNs
nmiCode	String	N	NMI Code
Return parameters [Body]			
Parameter Name	**Data Type**	**Required**	**Description**
code	String	Y	0 represents success, while others represent failure. The failure code is detailed in Appendix 1.
msg	String	Y	Description of code values
data	Array	Y	Data identification
Code example			
Request parameters	POST /v1/api/addDevice Connection: keep-alive Content-Type: application/json Date: Tue, 27 Jun 2023 11:13:56 GMT Content-MD5: K+B2qWZo6EmGpxL+p3A8rA== Authorization:API 1300386381676644416:Nm6WNyb1BoV8nsdihYbaOMp77rY= Content-Length: 60 Host: test.soliscloud.com:3333 User-Agent: Apache-HttpClient/4.5.13 (Java/11.0.17)		

	{
	"id": "1298491919448631809",
	"sn": "FFC00115566",
	"nmiCode": "41028459350"
	}

Return parameters	{
	"success": true,
	"code": "0",
	"msg": "success",
	"data": null
	}

APPENDIX 1. ERROR CODES

Return value	Description
R0000	No authority
B0001	Has been bound to other users
I0003	Please enter SN
B0049	The collector no exists or has no permissions and cannot be viewed
I0000	The necessary parameters are empty
B0011	The user does not exist
I0012	Incorrect account or password, please re-enter

APPENDIX 2. TYPE OF POWER PLANT

Return value	Description
0	Grid type
1	Energy storage
2	AC Couple
3	EPM (grid+meter)
4	Built-in meter (grid+meter)
5	External meter (display meter)
6	S5 offline and parallel energy storage
7	S5 grid and parallel energy storage
8	Grid+AC Couple
9	Off grid energy storage
10	S6 grid and parallel energy storage
11	S6 offline and parallel energy storage

APPENDIX 3. TYPES OF INVERTER METERS

Return value	Description
1	Grid type
2	Grid and load side meter
3	Grid connected and grid side electricity meter
4	Energy storage and load side meter
5	Energy storage and grid side meter
6	reserve
7	Off grid energy storage
8	Grid connected energy storage dual meter
1001	AC Couple (without CT)
1002	AC Couple (with CT)