ADT226/227 Commands set- User Version

1 Commands Instruction

(1)Each command includes two parts: **mnemonic** and **parameter**. The **mnemonic** and **parameter** are separated by a space;

For example : MEASure[:SCALar]:CH? <value>，MEASure[:SCALar]:CH? is the mnemonic，<value> is the parameter to be input，and they need to be separated by a space. If use this command for acquiring the current measured value, just input MEASure:CH? PV

(2)About the mnemonic

- the [] in mnemonic is optional, can be omitted.

For example : MEASure[:SCALar]:AELectricity? It can be:**MEASure:SCALar:AELectricity?**Or **MEASure:AELectricity?**

- the (num1:num2) in mnemonic indicates range of number, it needs to be input with the actual number.

For example : SENSe:ELECtricity:TCCHannel(1:4)? if use this command for acquiring the configuration of the first TC channel, just input: SENSe:ELECtricity:TCCHannel1?

(3)About the parameter

Each parameter in this set is marked with**<>** (do not enter angle brackets when converting to actual instructions) and separated by commas.

(4) Terminator

The SCPI command must include a command terminator, which can be one of the follows (excluding double quotation marks): "\r\n", "\r", "\n" or "\0".

1.1 IEEE488.2 common commands

No	Commands	Description	Parameter	Returned value
1	*CLS	Clear the following registers: Standard event register; Query event register; Operation event register; Status byte register; Error queue.	-	-
2	*IDN?	Instrument identification query, return 2 parts of data: a. Product serial number; b. Software version; c. Sub-module type d. Name (Note: for firmware version 26-27: Product serial number, Sub-module type , Software version, Name; for firmware version 28 and above: Product serial number, Software version, Sub-module type, Name;)	-	Product serial number, Software version, Sub-module type, Name

No	Commands	Description	Parameter	Returned value
3	*RST	Program reset	-	-

1.2Measurement commands for calibrator mode

No	Commands	Description	Parameter	Returned value
1.	CALibrator:MEASure:VALUE?	Read measured value of the channel Note: must go to Calibrator	None	voltage(EM_V) current (EM_mA) mV (EM_mV) Hz (EM_Hz) External pressure module(PM_ExtA|PM_ExtB|PM_Diff) Measure item,measured value,unit ID pulse(EM_Pulse) Measure item, measured value, Switch(EM_Switch) Measure item, status HART (EM_HART) Measure item, HART TC (TM_TC) For mV sensors: measure item, mV value, mV unit ID otherwise:

				Test item, measured temperature value, temperature unit, mV value, mV unit ID, CJC value, CJC unit RTD(TM_RTD) For Ω sensors: measure item, resistance value, resistance unit ID Otherwise: measure item, temperature value, temperature unit ID, resistance value, resistance unit ID ACM (ACDC_Volt) Measure item,pv value,pv unit ID,sv value,sv unit ID, measurement type
2.	CALibrator:MEASure:FUNCtion?	Read current measure channel item	None	Measure item
3.	CALibrator:MEASure:FUNCtion <UnquoStr>	Set current measure channel item	Parameter: Measure item Note: the measure item value is the returned measure item in the first command, such as EM_V	None
4.	CALibrator:MEASure:RANGe?	Read the range of the current measure item	None	Range information Please note:

				For HART, return HART For switch, return (0~1)
5.	CALibrator:MEASure:TCConfig?	Read TC configuration Note: available when selecting TC measure in calibrator mode	None	Auto CJC: Sensor type, temperature unit ID, resolution, CJC type Fixed CJC: Sensor type, temperature unit ID, resolution, CJC type, fixed value External CJC: Sensor type, temperature unit ID, resolution, CJC type, sensor name, wires
6.	CALibrator:MEASure:TCConfig <UnquoStr>,<Numeric>,<Numeric>[,<Numeric>[,<Numeric>]][,<UnquoStr>,<Numeric>]	Set TC configuration Note: available when selecting TC measure in calibrator mode	Parameter: 0 sensor name,such as:K 1 unit ID 2 resolution Optional parameter: 3 CJC type(0 auto 1 fixed 2 external) 4 fixed CJC value 5. sensor name (external sensor) 6. wires 2/3/4	None
7.	CALibrator:MEASure:RTDConfig?	Read RTD configuration Note: available when selecting RTD measure in calibrator mode	None	Sensor name Temperature unit ID Resolution 0->0 1->0.1 2->0.01 3->0.001 Wires 2,3,4

8.	CALibrator:MEASure:RTDConfig <UnquoStr >,<Numeric>,<Numeric>,<Numeric>	Set RTD configuration Note: available when selecting RTD measure in calibrator mode	Parameter: 0"sensor name" 1 unit ID 2 resolution 0,1,2,3 3 wires 2,3,4	None
9.	CALibrator:MEASure:PULSeconfig?	Read pulse configuration Note: available when selecting pulse measure in calibrator mode	None	rising edge or not? 0|1 falling edge|rising edge
10.	CALibrator:MEASure:PULSeconfig 0|1	Set pulse configuration Note: available when selecting pulse measure in calibrator mode	Parameter: 0 falling edge 1 rising edge	None
11.	CALibrator:MEASure:PRESsure:UNIT?	Read external module unit Note: available when selecting external module measure in calibrator mode	None	Pressure unit ID
12.	CALibrator:MEASure:PRESsure:UNIT <Numeric>	Set external module unit Note: available when selecting external module measure in calibrator mode	Parameter: Pressure unit ID	None
13.	CALibrator:MEASure:PRESsure:RESolution?	Read external module resolution Note: available when selecting external module measure in calibrator mode	None	resolution
14.	CALibrator:MEASure:PRESsure:RESolution <Numeric>	Set external module resolution Note: available when selecting external module measure in calibrator mode	Parameter: resolution 4,5,6	None
15.	CALibrator:MEASure:PRESsure:PTYPe?	Read external module pressure type Note: available when selecting external module measure in calibrator mode	None	Pressure type

16.	CALibrator:MEASure:PRESsure:PTYPe G|A|D	Set external module pressure type Note: available when selecting external module measure in calibrator mode	Parameter: Pressure type G|A|D	None
17.	CALibrator:MEASure:PRESsure:ZERO	Pressure module zeroing Note: available when selecting external module measure in calibrator mode	None	None
18.	CALibrator:MEASure:PRESsure:STABle?	Read the external pressure module stability Note: available when selecting external module measure in calibrator mode	None	0|1
19.	CALibrator:MEASure:PRESsure:STABle:ENABle?	Read the status of external module stable check Note: available when selecting external module measure in calibrator mode	None	0|1
20.	CALibrator:MEASure:PRESsure:STABle:ENABle 0|1	Set the status of external module stable check Note: available when selecting external module measure in calibrator mode	0 disable 1 enable	Success or not 0|1
21.	CALibrator:MEASure:PRESsure:STABle:CONFigure?	Read the current external module stable check configuration Note: available when selecting external module measure in calibrator mode	None	Stable time, stability
22.	CALibrator:MEASure:PRESsure:STABle:CONFigure <Numeric>,<Numeric>	Set the current external module stable check configuration Note: available when selecting external module measure in calibrator mode	Parameter 0 Stable time, 1 stability	Success or not 0|1
23.	CALibrator:MEASure:PRESsure:TARE:ENABle?	Read the external module tare enable or not? Note: available when selecting external module measure in calibrator mode	None	0disable 1 enable

24.	CALibrator:MEASure:PRESsure:TARE:ENABle 0|1	Set the external module tare enable Note: available when selecting external module measure in calibrator mode	Parameter 0 disable 1 enable	0|1
25.	CALibrator:MEASure:PRESsure:TARE:CONFigure?	Read the tare value Note: available when selecting external module measure in calibrator mode		Tare value
26.	CALibrator:MEASure:PRESsure:TARE:CONFigure <Numeric>[,<Numeric>]	Set the tare value Note: available when selecting external module measure in calibrator mode	Parameter: 0 tare value Optional parameter: 1 pressure unit ID	None
27.	CALibrator:MEASure:ZERO	Current gear zero	None	None
28.	CALibrator:MEASure:CZERo	Cancel current gear zero	None	None
29.	CALibrator:MEASure:FILTer:ENABle?	Read the filter status of current gear	None	0 disable 1 enable
30.	CALibrator:MEASure:FILTer:ENABle 0|1	Enable filter of current gear	Parameter 0 disable 1 enable	None
31.	CALibrator:MEASure:FILTer?	Read the current measure filter configuration	None	0:filter type，0|1 first-order or average 1:filter coefficient or sample quantity 2:de-extreme value pairs
32.	CALibrator:MEASure:FILTer 0|1,<Numeric>[,<Numeric>]	Set the current measure filter configuration	Parameter 0:filter type，0|1 first-order or average 1:filter coefficient or sample quantity 2:de-extreme value pairs	None

33.	CALibrator:MEASure:SCALe:ENABle?	Read the scaling enable or not on the current gear	None	0 disable 1 enable
34.	CALibrator:MEASure:SCALe:ENABle 0|1	Set the scaling enable or not on the current gear	Parameter 0 disable 1 enable	None
35.	CALibrator:MEASure:SCALe?	Read the scaling configuration on the current gear	None	0: transfer function，0|1|2 linear|square|square root 1: input lower limit 2: input upper limit 3: output lower limit 4: output upper limit 5: output unit ID 6: output range decimal digits
36.	CALibrator:MEASure:SCALe 0|1|2,<Numeric>,<Numeric>,<Numeric>,<Numeric>,< Numeric >,<Numeric>	Set the scaling configuration on the current gear	Parameter 0: transfer function，0|1|2 linear|square|square root 1: input lower limit 2: input upper limit 3: output lower limit 4: output upper limit 5: output unit ID 6: output range decimal digits	None
37.	CALibrator:MEASure:MINMax:ENABle?	Read the statistic enable or not on current gear	None	0 disable 1 enable
38.	CALibrator:MEASure:MINMax:ENABle 0|1	Set the statistic enable or not on current gear	Parameter 0 disable 1 enable	None
39.	CAlibrator:ACM:Range 0|1|2|3	Set ACMm module current range	0- auto 1-(0~3V)	None

			2-(3~30V) 3-(30~300)V	
40.	CAlibrator:ACM:Config?	Return ACM current configuration	None	Current channel type,AC/DC,AC/DC/HZ
41.	CAlibrator:ACM:Config <Boolean>,0|1|2	Set ACM configuration	1:0-AC,1-DC 2:0-AC,1-DC,2-Hz	

1.3Calibrator output commands

No	Commands	Description	Parameter	Returned value
1.	CALibrator:OUTPut:VALUE?	Read output value of the output channel	None	voltage(ES_V) current (ES_mA) mV (ES_mV) Hz (ES_Hz) Output item, output value, unit ID pulse(ES_Pulse) output item，output value TC (TS_TC) For mV sensors: Output item, mV value, mV unit ID Otherwise: Output item, CJC value, CJC unit ID, mV value, mV unit ID, origin value, origin value unit ID RTD (TS_RTD) For Ω sensors: Output item, resistance value, resistance unit ID

				Otherwise Output item, temperature value, temperature unit ID, resistance value, resistance unit ID External pressure module(PM_ExtA|PM_ExtB|PM_Diff) Measure item, measure value, unit ID
2.	CALibrator:OUTPut:Target?	Read output target value	target value	voltage(ES_V) current (ES_mA) mV (ES_mV) mV (ES_Hz) Output item, target value, unit ID Pulse(ES_Pulse) output item，output value TC (TS_TC) For mV sensors: Output item, mV value, mV unit ID Otherwise: Output item, CJC value, CJC unit ID, mV value, mV unit ID, origin value, origin value unit ID RTD (TS_RTD) For Ω sensors: Output item, resistance value,

				resistance unit ID Otherwise Output item, temperature value, temperature unit ID, resistance value, resistance unit ID External pressure module (PM_ExtA| PM_ExtB|PM_Diff) Measure item, measure value, unit ID
3.	CALibrator:OUTPut:VALUE <Numeric>	Ser output target value	target value	Note: external module is not supported
4.	CALibrator:OUTPut:FUNCtion?	Read current output channel item	None	Output item
5.	CALibrator:OUTPut:FUNCtion <UnquoStr>	Set current output channel item	Parameter: Output item Note: the output item value is the returned output item in the first command, such as ES_V	None
6.	CALibrator:OUTPut:RANGe?	Read the current output range information	None	Range
7.	CALibrator:OUTPut:TCConfig?	Read TC configuration Note: available when selecting TC output in calibrator mode	None	Auto CJC: Sensor type, temperature unit ID, resolution, CJC type Fixed CJC:

				Sensor type, temperature unit ID, resolution, CJC type, fixed value
8.	CALibrator:OUTPut:TCCOnfig <UnquoStr>,<Numeric>,<Numeric>[,<Numeric>[,<Numeric>]][,<UnquoStr>,<Numeric>]	Set TC configuration Note: available when selecting TC output in calibrator mode	Parameter: 0 sensor name, such as:K 1 unit ID 2 resolution Optional parameter: 3 CJC type(0 auto 1 fixed 2 external) 4 fixed CJC value 5. external sensor 6. wires 2/3/4	None
9.	CALibrator:OUTPut:RTDConfig?	Read RTD configuration Note: available when selecting RTD output in calibrator mode	None	Sensor name Temperature unit ID Resolution 0->0 1->0.1 2->0.01 3->0.001 wires 2,3,4
10.	CALibrator:OUTPut:RTDConfig <UnquoStr>,<Numeric>,<Numeric>,<Numeric>	Set RTD configuration Note: available when selecting RTD output in calibrator mode	Parameter: 0“sensor name” 1 unit ID 2 resolution 0,1,2,3 3 wires 2,3,4	None
11.	CALibrator:OUTPut:PULSeconfig?	Read amplitude and frequency in pulse gear Note: available when selecting pulse output in calibrator mode	None	0: amplitude 1: amplitude unit ID 2:frequency 3: frequency unit ID
12.	CALibrator:OUTPut:PULSeconfig <Numeric>,<Numeric>	Set amplitude and frequency in pulse gear Note: available when selecting pulse output	Parameter: 0 amplitude	None

		in calibrator mode	1 frequency	
13.	CALibrator:OUTPut:PRESsure:UNIT?	Read external module unit Note: available when selecting external module output in calibrator mode	None	Pressure unit ID
14.	CALibrator:OUTPut:PRESsure:UNIT <Numeric>	Set external module unit Note: available when selecting external module output in calibrator mode	Parameter: Pressure unit ID	None
15.	CALibrator:OUTPut:PRESsure:RESolution?	Read external module resolution Note: available when selecting external module output in calibrator mode	None	Resolution
16.	CALibrator:OUTPut:PRESsure:RESolution <Numeric>	Set external module resolution Note: available when selecting external module output in calibrator mode	Parameter: resolution 4,5,6	None
17.	CALibrator:OUTPut:PRESsure:PTYPe?	Read external module pressure type Note: available when selecting external module output in calibrator mode	None	Pressure type
18.	CALibrator:OUTPut:PRESsure:PTYPe G|A|D	Set external module pressure type Note: available when selecting external module output in calibrator mode	Parameter: Pressure type G|A|D	None
19.	CALibrator:OUTPut:PRESsure:ZERO	Pressure module zero Note: available when selecting external module output in calibrator mode	None	None
20.	CALibrator:OUTPut:PRESsure:STABle?	Read the current stability of the external module Note: available when selecting external module output in calibrator mode	None	0|1

21.	CALibrator:OUTPut:PRESsure:STABle:ENABle?	Read the status of external module stable check Note: available when selecting external module output in calibrator mode	None	0|1
22.	CALibrator:OUTPut:PRESsure:STABle:ENABle 0|1	Set the status of external module stable check Note: available when selecting external module output in calibrator mode	Parameter 0 disable1 enable	Success or not 0|1
23.	CALibrator:OUTPut:PRESsure:STABle:CONFigure?	Read the external module stable check configuration Note: available when selecting external module output in calibrator mode	None	Stable time, stability
24.	CALibrator:OUTPut:PRESsure:STABle:CONFigure <Numeric>,<Numeric>	Set the external module stable check configuration Note: available when selecting external module output in calibrator mode	Parameter 0 stable time 1 stability	Success or not 0|1
25.	CALibrator:OUTPut:PRESsure:TARE:ENABle?	Read the module tare enable or not? Note: available when selecting external module output in calibrator mode	None	0 disable 1 enable
26.	CALibrator:OUTPut:PRESsure:TARE:ENABle 0|1	Set the module tare enable or not? Note: available when selecting external module output in calibrator mode	Parameter 0 disable 1 enable	0|1
27.	CALibrator:OUTPut:PRESsure:TARE:CONFigure?	Read tare value Note: available when selecting external module output in calibrator mode		0: tare value 1: unit ID
28.	CALibrator:OUTPut:PRESsure:TARE:CONFigur	Set tare value	Parameter:	None

	e <Numeric>[,<Numeric>]	Note: available when selecting external module output in calibrator mode	0 tare value Optional parameter: 1 pressure unit ID	

1.4 Non- calibrator commands

No	Commands	Description	Parameter	Returned value
1.	MEASure:VALUE? EM|TMS|ACM|EXTA|EXTB|EXTDIFF	Read the measured value of the modules	None	0: measure type EM-mA EM-mV EM-V EM-Pulse EM-Hz EM-HART 1: measured value 2: unit EM-Switch 1:Open/Closed TMS-RTD 1: measured value 2: unit 3: origin value 4: unit TMS-TC 1: measured value 2: unit 3: origin value 4: unit 5: CJC 6: unit ACM-AC 1: voltage value 2: unit:3. Frequency 4: unit ACM-DC

				1: voltage value 2: unit ACM-HZ 1: frequency 2: unit 3: voltage 4: unit EXTA EXTB EXTDIFF 1: measured value 2: unit
2.	OUTPut:VALUE? ES|TMS	Read the output value of the modules	None	0:Output， 1:Set value 2:Unit ID
3.	OUTPut:FUNCtion? ES|TMS	Read the output channel item of the modules	None	Output item
4.	MEASure:CHANnel:VALUE? <QuoteStr>	Read measured value of the specific channel. If it is not the current channel of the module, no value will be returned	Parameter:FunctionType,separated by commas	Measurement type，Measured value correlation，separated by semicolon
5.	MEASure:CHANnel:Ranges? <QuoteStr>	Read the range of the specific channel. If it is not the current channel of the module, no value will be returned	Parameter:FunctionType,separated by commas	FunctionType,lower limit，upper limit, unit ID，separated by semicolon

1.5 System Commands

No	Commands	Description	Parameter	Returned value
1.	SYSTem:ERRor[:NEXT]?	Read command execution error information	None	Error message on stack top
2.	SYSTem:LOCK?	Query lock screen state	None	0 Non-lock screen 1 Lock screen

3.	SYSTem:LOCK <Boolean>|ON|OFF	Set lock screen state	0|OFF Non-lock screen 1|ON Lock screen	None
4.	SYSTem:VERSion? [\"APPLication\"|\"BT:FIRMware\"|\"EM:FIRMware\"|\"EM:HARDware\"|\"ES:FIRMware\"|\"ES:HARDware\" |\"TMS:FIRMware\"|\"TMS:HARDware\" |\"ACM:FIRMware\"|\"ACM:HARDware\"]	Read device version	Optional parameter: "APPLication"Main program version， "BT:FIRMware"Bluetooth version，" "EM:FIRMware" Control board firmware version ，"EM:HARDware" Control board hardware version ， "ES:FIRMware" :Control board firmware version "ES:HARDware" :Control board hardware version "TMS:FIRMware": Control board firmware version "TMS:HARDware" :Control board hardware version ， "ACM:FIRMware" Control board firmware version ，"ACM:HARDware" Control board hardware version ，	Without parametersreturn to the main program version by default. With parameters,returns the version of the corresponding parameters
5.	SYSTem:DATE?	Read system date	None	Date (yyyy,MM,dd)

6.	SYSTem:DATE <Numeric>,<Numeric>,<Numeric>	Set system date	Year、Month、Date	None
7.	SYSTem:TIME?	Read system time	None	Time（HH,mm,ss）
8.	SYSTem:TIME <Numeric>,<Numeric>,<Numeric>	Set system time	Hour、Minute、Second	None
9.	SYSTem:TIME:FORMat?	Read system time format	None	Two parameters separated by comma . Is it a 24-hour clock? Current time zone
10.	SYSTem:TIME:FORMat <Boolean>,<Numeric>	Read system time format	Two parameters separated by comma , Is it a 24-hour clock Timezone UTC value	None
11.	SYSTem:TBEEp?	Query key tone state	None	0 OFF 1 ON
12.	SYSTem:TBEEp <Boolean>|ON|OFF	Set key tone state	0|OFF 1|ON	None
13.	SYSTem:PBEEp?	Query the state of the prompt tone	None	0 OFF 1 ON
14.	SYSTem:PBEEp <Boolean>|ON|OFF	Set the state of the prompt tone	0|OFF 1|ON	None
15.	SYSTem:ORBEep?	Query alarm tone state of out range	None	0 OFF 1 ON
16.	SYSTem:ORBEep <Boolean>|ON|OFF	Set alarm tone state of out range	0|OFF 1|ON	None
17.	SYSTem:STBEep?	Query stable prompt tone state	None	0 OFF 1 ON

18.	SYSTem:STBEep <Boolean>|ON|OFF	Set stable prompt tone state	0|OFF 1|ON	None
19.	SYSTem:VOLume?	Read volume percentage	None	Volume percentage
20.	SYSTem:VOLume <Numeric>	Set system volume	Volume percentage	None
21.	SYSTem:LANGuage?	Read current language type	None	Current
22.	SYSTem:LANGuage <UnquoStr>[,<Boolean>]	Set current lanauage	Parameter:language name zh-CN, Optional parameter: whether to restart the device, the default restart	None
23.	SYSTem:LANGuage:CONFig?	Read the list of currently supported languages	None	Language list
24.	SYSTem:LANGuage:CONFig <QuoteStr>	Set the list of currently supported languages	Language list（separated by commas）	None
25.	SYSTem:BLUEtooth:STATe?	Read Bluetooth state	None	0 OFF 1 ON
26.	SYSTem:BLUEtooth:STATe <Boolean>|ON|OFF	Set Bluetooth state	0|OFF 1|ON	None
27.	SYSTem:BLUEtooth:NAMe	Read Bluetooth name	None	Bluetooth name
28.	SYSTem:BLUEtooth:NAMe <UnquoStr>	Set Bluetooth name	Name（Without quotes）	None
29.	SYSTem:BRIGhtness? Percentage|Value	Read screen brightness	Percentage or value	Screen brightness
30.	SYSTem:BRIGhtness Percentage|Value,<Numeric>	Set screen brightness Brightness value range: Value:200-4096 Percentage :0-100	Parameter 1: Percentage or value Parameter 2: Brightness value	None

		When the brightness value is greater than 4096 or 100, it is automatically set to the maximum brightness. When the brightness value is less than 0 or 200, it is automatically set to the minimum brightness.		
31.	SYSTem:BATTery:ONLIne?	Read if the battery is online	None	1 :Battery online 0 : Battery offline
32.	SYSTem:BATTery:STATus?	Read current battery state	None	0: Battery communication is abnormal 1: Battery communication is normal
33.	SYSTem:BATTery:CAPacity?	Read current battery level	None	Current battery level , total battery power （Unit :mAh）
34.	SYSTem:BATTery:Backlight?	Check whether the backlight is on （backlight time is not equal to never）	None	0: auto backlight offclose 1: auto backlight off open
35.	SYSTem:BATTery:Backlight 0|1	Open/off backlight，default 30s	0 close，1 open	None
36.	SYSTem:BATTery:BLOFf?	Query auto backlight off time	None	Return auto backlight off option， Represented time: 0-never, 1-30s, 2-1mins, 3-5mins, 4-15mins, 5-30mins.

37.	SYSTem:BATTery:BLOFf 0|1|2|3|4|5	Set auto backlight off time	Auto backlight off option 0|1|2|3|4|5 Represented time: 0-never, 1-30s, 2-1mins, 3-5mins, 4-15mins, 5-30mins.	None
38.	SYSTem:BATTery:ASLeep?	Query the auto-sleep time after turning off the backlight	None	Return auto-sleep option serial number:: Serial number represented time: 0-never, 1-1mins, 2-5mins, 3-15mins, 4-30mins
39.	SYSTem:BATTery:ASLeep 0|1|2|3|4	Set the automatic sleep time after turning off the backlight	Auto-sleep option: 0|1|2|3|4 represented time: 0-never, 1-1mins, 2-5mins, 3-15mins, 4-30mins	None
40.	SYSTem:BATTery:POTime?	Query the automatic sleep time after turning off the backlight	None	Return auto power- off option serial number: Serial number represented time: 0-never,

				1-5mins, 2-15mins, 3-30mins, 4-1h, 5-2h
41.	SYSTem:BATTery:POTime 0|1|2|3|4|5	Set the automatic shutdown time after device sleep	Auto power- off option serial number: Serial number represented time: 0-never, 1-5mins, 2-15mins, 3-30mins, 4-1h, 5-2h	None

1.6 Data management commands

No	Commands	Description	Parameter	Returned value
1.	DATamanager:COUNt? LEAKtest|SNAPshot|DATAlogger|PSVTest|AIRTightness	The count of read data	Parameter1: LEAKtest: SNAPshot: DATAlogger PSVTest: AIRTightness:	Number of data
2.	DATamanager:INFo? LEAKtest|SNAPshot|DATAlogger|PSVTest|AIRTightness,<Numeric>,<Numeric>	Read data related information	Parameter 1:LEAKtest SNAPshot DATAlogger PSVTest AIRTightness Parameter 2:start，initial position	Information

			Parameter 3:count ， read length	
3.	DATamanager:DEL LEAKtest|SNAPshot|DAtAlogger|PSVTest|AIRTightness,<UnquoStr>	Delete test result	Parameter 1:LEAKtest SNAPshot DATAlogger: PSVTest AIRTightness: Parameter 2: Perform delate operation file GUID (Without quotes)	0|1，0 Failed，1 Successed
4.	DATamanager:DEL:ALL LEAKtest|SNAPshot|DATAlogger|PSVTest|AIRTighness	Delete all test results	Parameter 1:LEAKtest SNAPshot DATAlogger PSVTest AIRTightness	0|1，0 Failed，1 Successed
5.	DATamanager:LENGth? LEAKtest|SNAPshot|DATAlogger|PSVTest|AIRTighness,DATA|IMAGe,<UnquoStr>	Read data length	DATA|IMAGe data file or picture file file name	Return data length
6.	DATamanager:DATa? LEAKtest|SNAPshot|DATAlogger|PSVTest|AIRTighness,DATA|IMAGe,<UnquoStr>,<Numeric>,<Numeric>	Read the data at the specified position	DATA|IMAGe data file or picture file，initial position，read the length of data	Return data in string format

1.7 HART Commands

No	Commands	Description	Parameter	Returned value
1.	HART:SUPPLYMODE?	Query the power supply mode	None	0:IPIR(Internal resistance)； 1:EPER(External resistance)
2.	HART:SUPPLYMODE IPIR|EPER|0|1	Set the power supply mode	0 or IPIR:Internal resistance； 1 or EPER:External resistance;	None
3.	HART:ONLDEVice:CONNected?	HART Device connected ot not	None	1.Connected 0.Not Connected
4.	HART:ONLDEVice:INFO? [<UnquoStr>]	Search Hart devices\ infomation	None or<Parameter name > Parameter name list: Tag Manufacturer Devicetype Deviceid writeprotect date message descriptor finalassemble preambles universalrev hardwarerev softwarerev devicerev	Return all device information whEn there are no parameter; Return the corresponding device parameter values when set parameters .

Appendix 1: SCPI unit Id list

Unit Id	Unit
2000	Text unit
32767	Blank unit
1211	mA
1212	µA
1209	A
1240	V
1241	mV
1281	Ω
1284	kΩ
1283	MΩ
1000	K
1001	℃
1002	℉
1003	°R

999	°Re
1005	°
1342	%
1133	kPa
1130	Pa
1131	GPa
1132	MPa
1134	mPa
1135	µPa
1136	hPa
1137	bar
1138	mbar
1139	torr
1140	atm
1141	psi

1142	psia
1143	psig
1144	gf/cm^2
1145	kgf/cm^2
1147	inH2O@4°C
1148	inH2O@68°F
1150	mmH2O@4°C
1151	mmH2O@20°C
1153	ftH2O@4°C
1154	ftH2O@68°F
1156	inHg@0°C
1158	mmHg@0°C
2001	mtorr
2002	lb/ft^2
2003	tsi
2004	psf

2005	inH2O@60°F
2006	ftH2O@60°F
2007	cmH2O@4°C
2008	mH2O@4°C
2009	cmHg@0°C
2010	mHg@0°C
2011	kgf/m^2

Appendix 2: Error Definition

No	Error code	Description of error	Explanation
1	0	No error	No error
		Command error	
2	120	Commandparameter error	Command parameter error
3	-108	Parameter not allowed	Too many parameters，or command without parameters have parameters
4	-109	Missing parameter	Lack parameter
5	-110	Command header error	Command header error
6	-114	Header suffix out of range	Command suffix out of range
7	-123	Numeric overflow	Numeric overflow，the absolute value of the index of the number is greater than 43
8	-151	Invalid string data	Invalid string data，eg.quotation mark missmatch
9	-171	Invalid expression	Invalid expression eg.bracket mismatch
		Execution error	
10	-200	Execution error	Execution error
11	-221	Settings conflict	Settings conflict
12	-222	Data out of range	The parameter value exceeds the valid range of the command
13	-223	Too much data	Too much data to handle
14	-224	Illegal parameter value	Illegal parameter value
15	-230	Data corrupt or stale	Invalid data，or data is being read, no valid data yet
16	-240	Hardware error	Hardware error
17	-256	File name not found	File name not found
18	-282	Illegal program name	Illegal program name

No	Error code	Description of error	Explanation
19	220	Measure error	Measure error
20	221	Failed to set meaure function	Failed to set meaure function
21	222	Failed to read measure value	Failed to read measure value
22	223		
23	224		
24	240	Control error	Control error
25	241		
26	242		
27	243		
28	260	Calibration error	Calibration error
29	261	Calibration secured	The device is in calibration protection state and unable to perform calibration
30	262	Invalid calibration secure code	Invalid calibration secure code
31	263	Missing calibration value	This error occurs when the calibration value is set without setting the calibration point during current/voltage calibration
32	264	Missing calibration data	This error occurs when calibration points are set continuously without calibration values set
33	265	Failed to set calibration function	Failed to set calibration function
34	266	Calibration data is not enough	When saving the calibration data, this error occurs if the calibration data does not reach 3 points
35	271	Setion_name_not_found	Section name not found
36	272	Key_name_not_found	Keyname not found
37	291	Update secured	The device is in update protection state and cannot be update
38	292	Invalid update secure code	Invalid update secure code
39	293	Not found the service pack	Not found the update pack
40	294	The service pack unavailable	The update pack unavailable

No	Error code	Description of error	Explanation
41	295	AppUpdate not found	AppUpdate.exe not found
		Equipment error	
42	-310	System error	System error
43	-311	Memory error	Memory error
44	-350	Queue overflow	Error queue overflow
45	-360	Communication error	Communication error
46	301	Internal module is not connected	Internal module is not connected
47	302	External module is not connected	External module is not connected
48	303	Supply module is not connected	Positive pressure module is not connected
49	304	Vacuum module is not connected	Negative pressure module is not connected
50	361	Open WLAN Failed	Open WIFI failed
51	362	Set WLAN address mode failed	Set WIFI address mode failed
52	363	Set WLAN address failed	Set WIFI address failed
53	364	Communication port to WIFI module is not open	Communication port to WIFI module is not open
54	365	WLANisnotconnected	WIFI is not connected