FLUKE®
Calibration

2271A

Automated Pressure Calibrator

Programmers Manual

December 2015

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Introduction

This document defines the remote interface commands for the Fluke Calibration 2271A Automated Pressure Controller/Calibrator (the Product or Instrument). These commands may be used by a computer connected through any of the remote interface ports to set settings, read measurement data, and control the operation of the instrument. Command syntax and names follow the IEEE-488.2 and SCPI standards.

Contact Fluke Calibration

To contact Fluke Calibration, call one of the following telephone numbers:

- Technical Support USA: 1-877-355-3225
- Calibration/Repair USA: 1-877-355-3225
- Canada: 1-800-36-FLUKE (1-800-363-5853)
- Europe: +31-40-2675-200
- Japan: +81-3-6714-3114
- Singapore: +65-6799-5566
- China: +86-400-810-3435
- Brazil: +55-11-3759-7600
- Anywhere in the world: +1-425-446-6110

To see product information or download manuals and the latest manual supplements, visit Fluke Calibration's website at www.flukecal.com.

To register your product, visit http://flukecal.com/register-product.

Remote Operation Commands

The Instrument accepts commands for setting parameters, executing functions or responding with requested data. These commands are in the form of strings of ASCII- encoded characters.

Commands consist of a command header and, if necessary, parameter data. All commands must be terminated with either a carriage return (ASCII 0D hex or 13 decimal) or new line character (ASCII 0A hex or 10 decimal).

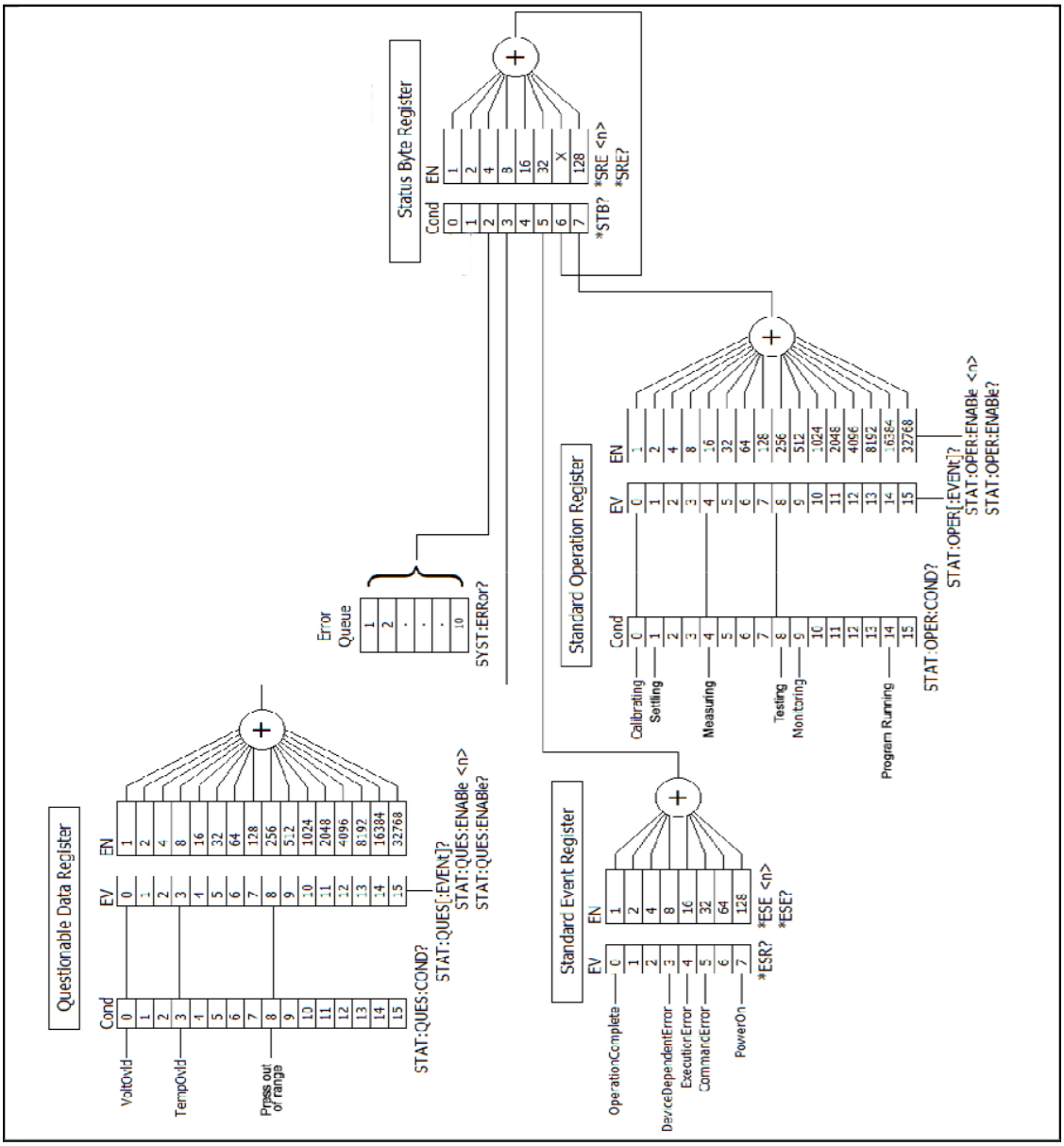
Command headers consist of one or more mnemonics separated by colons (:). Mnemonics may use letter characters, the underscore character (_), and numeric digits. Commands are not case sensitive. Mnemonics often have alternate forms. Most mnemonics have a long form that is more readable and a short form consisting of three or four characters that is more efficient.

Query commands are commands that request data in response. Query commands have a question mark (?) immediately following the command header. Responses to query commands are generated immediately and placed in the output buffer. Responses are then transmitted automatically to the PC.

Some commands require parameter data to specify values for one or more parameters. The command header is separated from the parameter data by a space (ASCII 20 hex or 32 decimal). Multiple parameters are separated by a comma (,).

System Status Diagram

Figure 1 shows the System Status Diagram.



status.png

Figure 1. System Status Diagram

List of Commands

Table 1 lists the command set for the Product in alphabetical order.

Table 1. List of Commands

Command	Comment
*CLS	Clear all status registers and the error queue.
*ESE	Set the Standard Event Status Enable register.
*ESR	Query and clear the Standard Event Status register.
*IDN	Query the instrument identification.
*OPC	Set the operation complete bit of the Standard Event Enable Register when all pending operations are completed.
*OPC?	Return “1” when all pending operations are completed.
*OPT?	Returns information on currently fitted options.
*RST	Reset operating settings to default states
*SRE	Set the Service Request Enable register.
*STB	Query the Status Byte Register.
*TST	Perform an instrument self-test and return the results.
*WAI	Force the command parser to wait until all pending operations complete.
[SOURce]:PRESsure:CLIMit	Control Limit.

Table 1. List of Commands (cont.)

Command	Comment
[SOURce]:PRESsure:SLEW	
[SOURce]:PRESsure:SLIMit	
[SOURce]:PRESsure:STATic	
[SOURce]:PRESsure:TOLerance	
[SOURce]:PRESsure[:LEVel][:IMMediate][:AMPLitude]	
CALCulate:ATMosphere	
CALCulate:LIMit:LOWer	
CALCulate:LIMit:SLEW	
CALCulate:LIMit:UPPer	
CALCulate:LIMit:VENT	
CALCulate:TARE:STATe	
CALCulate:TARE:VALue	
CALibration:MODE	
CALibration[:PRESsure]:CALibration:POINts	
CALibration[:PRESsure]:CALibration:VALue	
CALibration[:PRESsure]:DATA:POINts	
CALibration[:PRESsure]:DATA:VALue	
CALibration[:PRESsure]:DATE	
CALibration[:PRESsure]:SAVE	
CALibration[:PRESsure]:VALue	
CALibration[:PRESsure]:ZERO:AUTO	
CALibration[:PRESsure]:ZERO:INITiate	
CALibration[:PRESsure]:ZERO:RUN	
CALibration[:PRESsure]:ZERO:STOP	

Table 1. List of Commands (cont.)

Command	Comment
DISPlay:BRIGhtness	
DISPlay:ENABle	
DISPlay:LANGuage	
DISPlay:TEXT	
MEASure:ATMosphere	
MEASure:TEMPerature	
MEASure[:PRESsure]	
MEASure[:PRESsure]:SLEW	
OUTPut:SOLenoid	
OUTPut:STATe	
OUTPut[:PRESsure]:MODE	
SENSe:ATMosphere:MODule	
SENSe[:PRESsure]:MODE	
SENSe[:PRESsure]:MODule	
SENSe[:PRESsure]:MODule:NAME	
SENSe[:PRESsure]:MODule:SERial	
SENSe[:PRESsure]:MODule:UNCertainty:ADD	
SENSe[:PRESsure]:MODule:UNCertainty:RELative	
SENSe[:PRESsure]:MODule:UNCertainty:THReshold	
SENSe[:PRESsure]:MODule:UNCertainty:ZERO	
SENSe[:PRESsure]:MODule:VERSion	
SENSe[:PRESsure]:RANGe:LOWer	
SENSe[:PRESsure]:RANGe[:UPPer]	
SENSe[:PRESsure]:REFerence:MEDium	
SENSe[:PRESsure]:REFerence[:HEIGht]	
SENSe[:PRESsure]:REFerence[:HEIGht]:UNCertainty	
SENSe[:PRESsure]:RESolution	
SENSe[:PRESsure]:RESolution:AUTO	
SENSe[:PRESsure]:UNCertainty	

Table 1. List of Commands (cont.)

Command	Comment
STATus:OPERation:CONDition	Query the Operation Status Condition Register.
STATus:OPERation:ENABle	Set the Operation Status Enable Register.
STATus:OPERation[:EVENt]	Query and clear the Operation Status Event Register.
STATus:PRESet	Set status enable registers to disabled states.
STATus:QUEStionable:CONDition	Query the Questionable Status Condition Register.
STATus:QUEStionable:ENABle	Set the Questionable Status Enable Register.
STATus:QUEStionable[:EVENt]	Query and clear the Questionable Status Event Register.
SYSTem:COMMunicate:SERial:CONTrol:RTS	
SYSTem:COMMunicate:SERial:INTerface	
SYSTem:COMMunicate:SERial[:RECeive]:BAUD	
SYSTem:COMMunicate:SERial[:RECeive]:BITS	
SYSTem:COMMunicate:SERial[:RECeive]:PACE	
SYSTem:COMMunicate:SERial[:RECeive]:PARity[:TYPE]	
SYSTem:COMMunicate:SERial[:RECeive]:SBITs	
SYSTem:COMMunicate:SERial[:TRANsmit]:BAUD	
SYSTem:COMMunicate:SERial[:TRANsmit]:BITS	
SYSTem:COMMunicate:SERial[:TRANsmit]:PACE	
SYSTem:COMMunicate:SERial[:TRANsmit]:PARity[:TYPE]	
SYSTem:COMMunicate:SERial[:TRANsmit]:SBITs	
SYSTem:COMMunicate:SOCKet:ADDRess	
SYSTem:COMMunicate:SOCKet:GATeway	
SYSTem:COMMunicate:SOCKet:INTerface	
SYSTem:COMMunicate:SOCKet:MAC	
SYSTem:COMMunicate:SOCKet:MASK	
SYSTem:COMMunicate:SOCKet:NAME	
SYSTem:COMMunicate:SOCKet:PORT	

Table 1. List of Commands (cont.)

Command	Comment
SYSTem:COMMunicate:USB:EOL	
SYSTem:COMMunicate:USB:INTerface	
SYSTem:DATE	Set the date of the system clock.
SYSTem:ERRor	Read and remove the next error in the error queue.
SYSTem:KLOCk	
SYSTem:LANGuage	
SYSTem:PRESet	
SYSTem:TIME	Set the time of the system clock.
SYSTem:VERSion	Query the SCPI version.
TEST:ELECtronic	
TEST:PNEumatic	
TEST:STOP	
TEST:TUNE	
UNIT:DEFine	
UNIT:LENGth	
UNIT:TEMPerature	
UNIT[:PRESsure]	

Alphabetical List of Serial Commands

Each command description provides the structure (long and short format), a description of the command purpose, a command example, an example of what the command returns (as applicable to query commands), and notes specific to the command. The bullet-points below apply to each group of commands:

- Numeric data, specified by the mnemonic, <num>, uses ASCII characters to represent numbers. Numbers may contain a plus or minus ('+' or '-') sign, decimal point ('.'), and exponent ('E' or 'e') with its sign. If a fractional component is received when only an integer is required, the number is rounded to the nearest integer without any resulting error message.
- Unrecognized commands or commands with incorrect syntax or invalid parameters generate error messages in the error queue.
- Upper case letters designate syntax that is required when issuing the command. Lower case letters are optional and may be omitted.
- < > indicates a required parameter.
- [ ] indicates optional parameters.
- ( ) indicates a group of parameters that must be used together.
- '|' indicates alternate parameter values.
- <n> indicates a number is required.
- <boolean> indicates a Boolean value (0 or 1) is required. The mnemonics OFF and ON are also accepted for 0 and 1, respectively.
- <unit> indicates max unit string is required (maximum 3 letters). The character string must be enclosed in quotation marks.
- <range> indicates a range value is required.
- <name> indicates an character string is required. The character string must be enclosed in quotation marks.
- <year> indicates a four digit number is required.
- <month> indicates a one or two digit number is required.
- <day> indicates a one or two digit number is required.
- <hour> indicates a one or two digit number is required.
- <minute> indicates a one or two digit number is required.
- <second> indicates a one or two digit number is required.
- <psensor> indicates a pressure sensor index
    - 1 Active pressure
    - 3 System atmospheric pressure
    - 4 Test pressure of control module
    - 5 Pressure of module in slot 1
    - 6 Supply pressure of control module
    - 7 Exhaust pressure of control module
    - 15 Pressure of module in slot 2

- <tsensor> indicates a temperature sensor number
  - 2 Sensor temperature of module in slot 1
  - 12 Sensor temperature of module in slot 2

**CLS*

Description: Clear status registers and the error queue. Status event registers are reset to 0. The registers affected are the Operation Status Event register, Questionable Status Event register, and the Event Status Register. The `*CLS` command does not affect any of the associated condition or enable registers. It may indirectly affect the Status Byte Register. The error queue is also cleared of all logged errors.

Example: `*CLS`
Related Commands:

```
*ESR? SYSTem:ERRor?
STATus:OPERation:EVENt?
STATus:QUEStionable:EVENt?
```

**ESE <n>*
**ESE?*

Description: Set the Event Status Enable mask that determines which bits of the Event Status Register are reported in the Event Status Summary bit (bit5) of the Status Byte Register. <n> is the sum of the decimal values of the bits of the Event Status Register that will be reported in the Event Status Summary bit of the Status Byte Register. The Status Byte register is updated to reflect any change in the enable registers associated with the summary bits. Event Status Enable is set to 0 at power-on. `*CLS` and `*RST` does not affect Event Status Enable.

Example: `*ESE?`
Response: `255`
Set Example: `*ESE 60`
Related Commands:

```
*ESR?
*STB?
```

**ESR?*

Description: Query the Event Status Register and clear the register. The Event Status Register reports various instrument events or changes when they occur. The return value is the sum of the decimal values of the asserted bits of the register. The register bits, their decimal values (in parentheses), and their definitions are as follows:

- Bit 0 (1): Operation Complete
- Bit 1 (2): (Not used)
- Bit 2 (4): (Not used)
- Bit 3 (8): Device Dependent Error
- Bit 4 (16): Execution Error
- Bit 5 (32): Command Error
- Bit 6 (64): (Not used)
- Bit 7 (128): Power On

Bits in the Event Status Register may affect the Event Status Summary bit (bit 5) of the Status Byte Register depending on the bits that are set in the Event Status Enable register. `*CLS` and `*RST` does not affect Event Status Enable.

Example: `*ESR?`
Response: `32`

Related Commands:

`*ESE`
`*STB?`
`*CLS`

**IDN?*

Description: Query the product identification. The response contains the name of the manufacturer, model number, serial number, firmware version. The product information cannot be changed.

Example: `*IDN?`
Response: `FLUKE,2271A,12345678,1.00`

**OPC*

Description: Set the Operation Complete bit of the Event Status Register when all pending command operations complete. All commands are sequential, so the Operation Complete bit is always set immediately when this command is received.

Example: `*OPC`

Related Commands:

`*ESR?`
`STATus:OPERation:EVENt?`
`*OPC`
`*WAI`

**OPC?*

Description: Return “1” when all pending command operations are complete. All commands are sequential, so this query always returns ‘1’ immediately.

Example: `*OPC?`
Response: `1`
Related Commands:

`*OPC`
`STATus:OPERation[:EVENt]?`

**OPT?*

Description: Query the instrument options. Currently this instrument has no options to report.

Example: `*OPT?`
Response: `0`
Related Commands:

`*IDN?`

**RST*

Description: Sets channel instrument settings to default states. The reset command performs the following actions:

- Stop all running tasks and tests
- Stop controller and enter Measure mode if not already in Vent mode

Settings and memory not affected by `*RST` include data file memory, setup file memory, language, remote interface settings, time and date, password configuration, and instrument calibration. Reset also does not directly affect status registers or the error queue, nor does it affect status enable registers.

Example: `*RST`
Related Commands:

`*CLS`

**SRE <n>*
**SRE?*

Description: Set the Service Request Enable for the Status Byte register. The Service Request Enable determines which bits of the Status Byte register are reported in the Master Summary Status bit of the Status Byte register. <n> is the sum of the decimal values of the bits of the Status Byte register that will be reported in the Master Status Summary bit.

The Status Byte register is updated to reflect any change in the enable registers associated with the summary bits. Service Request Enable is set to 0 at power-on.`*CLS` and `*RST` does not affect Event Status Enable.

Example: `*SRE?`
Response: `32`
Set Example: `*SRE 32`

Related Commands:

`*STB?`

**STB?*

Description: Query the Status Byte register. The Status Byte register reports various instrument conditions. The return value is the sum of the decimal values of the asserted bits of the register. The register bits, their decimal values (in parentheses), and their definitions are as follows:

- Bit 0 (1): (Not used)
- Bit 1 (2): (Not used)
- Bit 2 (4): Error Queue Summary
- Bit 3 (8): Questionable Status Summary
- Bit 4 (16): (Not used)
- Bit 5 (32): Event Status Summary
- Bit 6 (64): Master Status Summary
- Bit 7 (128): Operation Status Summary

Summary bits are set when any bit in the associated event register is set and the corresponding bit in the associated enable register is also set. The Questionable Status Summary bit is associated with the Questionable Status Event register and the Questionable Status Enable register. The Event Status Summary bit is associated with the Event Status Register and the Event Status Enable register. The Operation Status Summary bit is associated with the Operation Status Event register and the Operation Status Enable register. The Master Status Summary bit is set when any other bit in the Status Byte register is set while the corresponding bit in the Service Request Enable register is set. The Error Queue Summary bit is set if there are one or more errors in the error queue.

Reading the Status Byte register does not clear the register. The register always reports the associated status.`*CLS` does not clear the Status Byte register but may indirectly affect it through the associated status registers and queues.`*RST` does not affect the Status Byte register.

Example: `*STB?`
Response: `32`
Related Commands:

`*ESR? SYSTem:ERRor?`
`STATus:OPERation:EVENt?`
`STATus:QUEStionable:EVENt?`
`*SRE`

**TST?*

Description: Do a self-test and return the results.

Example: `*TST`

**WAI*

Example: `*WAI`

Description: Wait until all pending command operations complete before executing further commands. All commands are sequential, so this command has no effect. It is provided for IEEE-488.2 compliance.

Example: `*WAI`
Related Commands:

```
STATus:OPERation:EVENt?
*OPC?
```

ABORt

Description: Abort pressure control. Immediately vents pressure.

Example: `ABORt`

INSTrument:FUNCtion<n> ?

Description: Switch the system work mode

<n> indicates the work mode

1-MODE_PRESSURE

2-MODE_ANALOG

3-MODE_HART

Set Example: `INSTrument:FUNCtion 3`

Query Example: `INSTrument:FUNCtion?`

Response: `3`

[SOURce][:PRESsure]:CLIMit

Description: Control limits set an upper and lower pressure limit around the Setpoint. These limits are only used with the Static Control mode.

Set Example: `SOURce:PRESsure:CLIMit 0.1`

Query Example: `SOURce:PRESsure:CLIMit?`

Response: `+1.00000000E-01`

[SOURce][:PRESsure]:SLEW <num>

Description: The maximum slew rate requested by the controller. The units are set by UNIT:PRES command. Range must be greater than zero. 10 times full scale per second will normally be unlimited.

Set Example: `SOURce:PRESsure:SLEW 0.1234`

Query Example: `SOURce:PRESsure:SLEW?`

Response: `+1.23400000E-01`

[SOURce][:PRESsure]:SLIMit

Description: Stability Limit is used only with Static Control mode. The limit defines the stability at which the measurement indicator shows Ready.

Set Example: `SOURce:PRESsure:SLIMit 0.1`

Query Example: `SOURce:PRESsure:SLIMit?`

Response: `+1.00000000E-01`

[SOURce][:PRESsure]:STATic

Description: Static Control sets the pressure slightly above the target pressure value and then turns off active pressure control.

Set Example: `SOURce:PRESsure:STATic 1`

Query Example: `SOURce:PRESsure:STATic?`

Response: `1`

[SOURce][:PRESsure]:TOLerance <num>

Description: The tolerance is used to determine the Ready flag on the front panel and the Settling bit on the remote interface. Must be a positive value. If zero the Ready flag will never be displayed.

Set Example: `SOURce:PRESsure:TOLerance 1.234`

Query Example: `SOURce:PRESsure:TOLerance?`

Response: `1+1.23400000E+00`

[SOURce][:PRESsure][:LEVel][:IMMediate][:AMPLitude] <num>

Description: Controls the setpoint of the pressure.

Set Example: `:PRESsure:LEVel:IMMediate:AMPLitude 98.76`

Query Example: `:PRESsure:LEVel:IMMediate:AMPLitude?`

Response: `+9.87600000E+01`

CALCulate:ATMosphere

Description: Manual entry of barometric value.

Set Example: `CALCulate:ATMosphere 101.325`

Query Example: `CALCulate:ATMosphere?`

Response: `+1.01325000E+02`

CALCulate:LIMit:LOWer <num>

Description: This command will set the low limt pressure based on the units set in the last UNIT:PRES command.

Set Example: `CALCULATE:LIMIT:LOWER 1.23`

Query Example: `CALCULATE:LIMIT:LOWER?`

Response: `+1.23000000E+00`

CALCulate:LIMit:UPPer <num>

Description: This command will set the high limit pressure based on the units set in the last UNIT:PRES command. The high limit must be greater than the low limit.

Set Example: `CALCULATE:LIMIT:UPPER 1.23`

Query Example: `CALCULATE:LIMIT:UPPER?`

Response: `+1.23000000E+00`

CALCulate:LIMit:VENT <num>

Description: Can be disabled by setting to a pressure greater than the high limit.

Set Example: `CALCulate:LIMit:VENT 1.23`

Query Example: `CALCulate:LIMit:VENT?`

Response: `+1.23000000E+00`

CALCulate:TARE:STATe <boolean>

Description: Set Tare to On will use the current pressure as the tare amount; setting the tared pressure to zero. Only absolute mode sensors can be tared.

Set Example: `CALCulate:TARE:STATe ON`

Query Example: `CALCulate:TARE:STATe?`

Response: `1`

CALCulate:TARE:VALue <num>

Description: If <num> is zero tare mode is turned off, otherwise tare mode is turned on. Query will return the current tare.

Set Example: `CALCulate:TARE:VALue 1.23`

Query Example: `CALCulate:TARE:VALue?`

Response: `+1.2300000E+00`

CALibration:MODE <num>

Description: 0, 1, or Calibration access code.

Note

Calibration must be enabled before any CAL:PRES:VAL commands or CAL:PRES:DATA:VAL write commands. The <code> must match the calibration access code of the instrument. If the instrument does not have a calibration access code then any non-zero integer value will work. A <code> of zero will turn off the calibration enable. Query will return 1 if calibration is enabled.

Set Example: `CALibration:MODE 1`

Query Example: `CALibration:MODE?`

Response: `1`

CALibration[:PRESsure<psensor>]: CALibration:POINts?

Description: Number of points needed to calibrate the sensor.

Set Example: `Query Only`

Query Example: `CALibration:PRESsure:DATA:CALibration:POINts?`

Response: `2`

CALibration[:PRESsure<psensor>]:DATA:CALibration:VALue<n>?

Description: Actual calibration point must be within 5% of full scale of the nominal. May be required to be closer based on calibration sequence.

Set Example: `Query Only`

Query Example: `CALibration:PRESsure:DATA:CALibration:VALue12?`

Response: `+1.23000000E+00`

CALibration[:PRESsure<psensor>]:DATA:POINts<n> <num>

Description: Number of constant that define the calibration of the sensor.

Set Example: `Query Only`

Query Example: `CALibration:PRESsure:DATA:POINts?`

Response: `12`

CALibration[:PRESsure<psensor>]:DATA:VALue <n> <num>

Description: Read or write sensor calibration constant. Calibration enable must be on to write (see CALibration:MODE).

Set Example: `CALibration:PRESsure5:DATA:VALue12  1.23`

Query Example: `CALibration:PRESsure5:DATA:VALue12?`

Response: `C0,+0.00000000E+00`

CALibration[:PRESsure<psensor>]:DATE?

Description: Last calibration date and time is set by calibrating the instrument.

Note

To set the calibration date, the pressure sensor number (5, 15) must be included in the command. CAL:PRES5:DATE is acceptable. CAL:PRES:DATE is not. The calibration date is automatically updated when an adjustment is performed. This should only be used to set the date if the unit was calibrated but not adjusted.

Set Example: `CALibration:PRESsure5:DATE`

Query Example: `CALibration:PRESsure:DATE?`

Response: `2015,3,17`

CALibration[:PRESsure<psensor>]:SAVE

Description: Store calibration

Set Example: `CALibration:PRESsure5:SAVE`

Query Example: `Command Only`

CALibration[:PRESsure<psensor>]:VALue<num>

Description: Perform calibration point by entering value from standard. Read returns last written value for point.

Set Example: `CALibration:PRESsure:VALue12  1.23`

Query Example: `CALibration:PRESsure:VALue12?`

Response: `+1.23000000E+00`

CALibration[:PRESsure]:ZERO:AUTO <boolean>

Description: Turns on or turns off auto zeroing for the instrument. Cannot be set for sensors individually.

Set Example: `CALibration:PRESsure:ZERO:AUTO ON`

Query Example: `CALibration:PRESsure:ZERO:AUTO?`
Response: `1`

CALibration[:PRESsure<psensor>]:ZERO:INITiate

Description: Puts the instrument into zeroing mode putting zero pressure on the sensor.

Set Example: `CALibration:PRESsure:ZERO:INITiate`

Query Example: `CALibration:PRESsure:ZERO:INITiate?`

Response: `<calstat>,<presstat>,<tempstat>,<refstat>`

<calstat> Set to 1 if RUN command has been received. Range: 0 (RUN command has not been received), 1 (RUN command has been received).

<presstat> Status of pressure reading. Range: 0=Stable, <0=Out of Range, >0=Unstable

<tempstat>Status of sensor temperature. Range:=Stable, <0=Out of Range, >0=Unstable

<refstat> Status of reference. In absolute mode returns the status of the vacuum reading. If vacuum sensor is not installed or not in absolute mode this will always be 0 (Stable). Range: 0=Stable, <0=Out of Range, >0=Unstable

CALibration[:PRESsure]:ZERO:RUN

Description: Sensor must be in zeroing mode (CAL:PRES:ZERO:INIT) and stable. Tells the sensor to perform zero adjustment.

Set Example: `CALibration:PRESsure:ZERO:RUN`

Query Example: `Command only, no query`

Response: `none`

CALibration[:PRESsure]:ZERO:STOP

Description: Exits zeroing mode and returns the sensor to measuring mode. No effect if sensor is not in zeroing mode.

Set Example: `CALibration:PRESsure:ZERO:STOP`

Query Example: `Command only, no query`

Response: `none`

DISPlay:BRIGhtness <num>

Description: Display brightness. 0 to 100.

Set Example: `DISPlay:BRIGhtness 100`

Query Example: `DISPlay:BRIGhtness?`

Response: `100`

DISPlay:ENABle <Boolean>

Description: Setting the Display Off will change the front panel to the screen saver, only displaying the current pressure. Setting the Display On will restore the normal display cancelling DISP:ENAB OFF

Set Example: `DISPlay:ENABle OFF`

Query Example: `DISPlay:ENABle?`

Response: `0`

DISPlay:LANGuage <language>

Description: Set display language. Command accepts language names in UTF-8 or by numeric index.

Set Example: `DISPlay:LANGuage ENGLISH`

Query Example: `DISPlay:LANGuage?`

Response: `English`

MEASure:ATMosphere?

Description: Returns current atmospheric pressure reading in the measurement units specified by UNIT:PRESsure.

Set Example: `Query only.`

Query Example: `MEASure:ATMosphere?`

Response: `+1.01325000E+02`

MEASure:TEMPerature<tsensor>?

Description: Read temperature sensor in °C.

Set Example: `Query Only`
Query Example: `MEASure:TEMPerature2?`

Response: `+2.50000000E+01`

MEASure[:PRESsure]<psensor>?

Description: Current pressure reading. The current pressure reading for different pressure sensors in the unit can be read by changing the numerical suffix (see page 9):

Set Example: `Query only`

Query Example: `MEASure:PRESsure?`

Response: `+9.80000000E+01`

MEASure[:PRESsure]:SLEW

Description: Current slew rate in pressure units per minute.

Set Example: `Query only.`

Query Example: `MEASure:PRESsure:SLEW?`

Response: `+4.23982000E+02`

MEASure:PRESsure:UNCertainty?

Description: Read calculated pressure measurement uncertainty. Units are set by UNIT:PRESSURE.

Set Example: `Query only.`

Query Example: `MEASure:PRESsure:UNCertainty?`

Response: `+1.12000000E-03`

OUTPut:SOLenoid<n> <boolean>

Description: Sets state of external 24 V drivers. <n> is 1 to 4.

Set Example: `OUTPut:SOLenoid2 ON`

Query Example: `OUTPut:SOLenoid2?`

Response: `1`

OUTPut:STATe <Boolean>

Description: 1 or ON will enter Control mode, 0 or OFF will enter Measure mode.

Set Example: `OUTPut:PRESsure:STATe ON`

Query Example: `OUTPut:PRESsure:STATe?`

Response: `1`

OUTPut[:PRESsure]:MODE <modename>

Description: Sets the mode of the instrument.

Set Example: `OUTPut:PRESsure:MODE MEASURE`

Query Example: `OUTPut:PRESsure:MODE?`

Response: `MEASURE`

<modename>

MEASure	Measuring pressure but not changing.
CONTrol	Actively controlling pressure to setpoint.
VENT	Controlling pressure to atmosphere and venting.

SENSe:ATMosphere:MODule <n>

Description: Select Barometer module. Module must be capable of measuring the reference port pressure. The value MANUAL uses the value set by CALC:ATM.

Set Example: `SENSe:ATMosphere:MODule 2`

Query Example: `SENSe:ATMosphere:MODule?`

Response: `2`

SENSe[:PRESsure]:MODE ABSolute | GAUGe

Description: Sets the instrument pressure mode to ABSOLUTE or GAUGE

Set Example: `SENSe:PRESsure:MODE GAUGE`

Query Example: `SENSe:PRESsure:MODE?`

Response: `GAUGE`

SENSe[:PRESsure]:MODule<n>

Description: Select module slot for pressure reading. The value AUTO does automatic selection and the value FAST does fast automatic selection.

Set Example: `SENSe:PRESsure:MODule 2`

Query Example: `SENSe:PRESsure:MODule?`

Response: `2`

SENSe[:PRESsure]:MODule<n>:NAME

Description: Read model number of module in slot <n>.

Set Example: `Query only.`

Query Example: `SENSe:PRESsure:MODule2:NAME?`

Response: `PM200-A100K`

SENSe[:PRESsure]:MODule<n>:SERial

Description: Read serial number of module in slot <n>.

Set Example: `Query only.`

Query Example: `SENSe:PRESsure:MODule1:SERial?`

Response: `123456`

SENSe[:PRESsure]:MODule<n>:UNCertainty:ADD<boolean>

Description: Set uncertainty combination method of module in slot <n>. ON or 1 will set the method to additive. OFF or 0 will set the method to greater of.

Set Example: `SENSe:PRESsure:MODule2:UNCertainty:ADD ON`

Query Example: `SENSe:PRESsure:MODule2:UNCertainty:ADD?`

Response: `1`

SENSe[:PRESsure]:MODule<n>:UNCertainty:RELative <n>

Description: Set relative uncertainty of module in slot <n>. Relative uncertainty has units of % of reading.

Set Example: `SENSe:PRESsure:MODule1:UNCertainty:RELative 0.01`

Query Example: `SENSe:PRESsure:MODule1:UNCertainty:RELative?`

Response: `+1.00000000E-02`

SENSe[:PRESsure]:MODule<n>:UNCertainty:THReshold <n>

Description: Set threshold uncertainty of module in slot <n>. Threshold uncertainty is in current pressure units.

Set Example: `SENSe:PRESsure:MODule:UNCertainty:THReshold 0.02`

Query Example: `SENSe:PRESsure:MODule:UNCertainty:THReshold?`

Response: `+2.00000000E-02`

SENSe[:PRESsure]:MODule<n>:UNCertainty:ZERO <n>

Description: Set zero stability of module in slot <n>. Zero stability is in current pressure units.

Set Example: `SENSe:PRESsure:MODule2:UNCertainty:ZERO 0.03`

Query Example: `SENSe:PRESsure:MODule2:UNCertainty:ZERO?`

Response: `+3.00000000E-02`

SENSe[:PRESsure]:MODule<n>:VERSion

Description: Read firmware version of module in slot <n>.

Set Example: `Query only.`

Query Example: `SENSe:PRESsure:MODule1:VERSion?`

Response: `1.00`

SENSe[:PRESsure]:RANGe:LOWer?

Description: Sensor lowest calibrated pressure of current range.

Set Example: `Query Only`

Query Example: `SENSe:PRESsure:RANGe:LOWer?`

Response: `-1.23400000E+01`

SENSe[:PRESsure]:RANGe[:UPPer] <n>

Description: Sensor highest calibrated pressure of current range. Setting a value attempts to switch to the lowest range that is greater than the value given.

Set Example: `SENSe:PRESsure:RANGe:UPPer 234`

Query Example: `SENSe:PRESsure:RANGe:UPPer?`

Response: `+1.23400000E+03`

SENSe[:PRESsure]:REFerence:MEDium <med>

Description: Sets the pressure medium used to calculate head correction.

Set Example: `SENSe:PRESsure:REFerence:MEDium AIR`

Query Example: `SENSe:PRESsure:REFerence:MEDium?`

Response: `AIR`

<med>

AIR Gas medium is dry air.

N2 Gas medium is nitrogen.

SENSe[:PRESsure]:REFerence[:HEIGht] <num>

Description: Height difference between standard and Device Under Test (DUT). Positive values signify the DUT is below the standard. Negative values signify the DUT is above the standard. Units are set by UNIT:LENGTH.

Set Example: `SENSe:PRESsure:REFerence:HEIGht 1.234`

Query Example: `SENSe:PRESsure:REFerence:HEIGht?`

Response: `1.234`

SENSe[:PRESsure]:REFerence[:HEIGht]:UNCertainty <n>

Description: Uncertainty in the measurement of head height. Units are set by UNIT:LENGTH.

Set Example: `SENSe:PRESsure:REFerence:HEIGht:UNCertainty 0.1`

Query Example: `SENSe:PRESsure:REFerence:HEIGht:UNCertainty?`

Response: `+1.00000000E-01`

SENSe[:PRESsure]:RESolution <num>

Description: Resolution of front panel pressure display. 0.1 is one decimal, 0.01 is two decimals… Numbers 1 or greater set to zero decimals.

Set Example: `SENSe:PRESsure:RESolution 0.01`

Query Example: `SENSe:PRESsure:RESolution?`

Response: `+1.00000000E-02`

SENSe[:PRESsure]:RESolution:AUTO

Description: Returns front display to default resolution.

Set Example: `SENSe:PRESsure[:RESolution]:AUTO ONCE`

Query Example: `Set command only, no query`

Response: `N/A`

STATus:OPERation:CONDition?

Description: Query the Operation Status Condition register. The Operation Status Condition register reflects various states of operation. The return value is the sum of the decimal values of the asserted bits of the register. The defined bits, their decimal values (in parentheses), and their meanings are as follows:

- Bit 0 (1): A calibration operation is in progress.
- Bit 1 (2) Pressure is still slewing.
- Bit 2 (4) Range switching is in progress.
- Bit 4 (16): A measurement is in progress.
- Bit 8 (256): An automated test is in progress.
- Bit 9 (512): Monitor is active.
- Bit 14 (16384) A user-defined program is running.

*RST resets the measurement system and returns it to the idle state, and the

Operation Status Condition register is updated to reflect the new state

Set Example: `Query only.`

Query Example: `STAT:OPER:COND?`

Response: `16`

STATus:OPERation:ENABle <num>

Description: Set the Operation Status Enable register. The Operation Status Enable register determines which bits of the Operation Status Event register are reported in the Operation Status Summary bit of the Status Byte register. <n> is the sum of the decimal values of the bits of the Operation Status Event register that will be reported in the Status Byte register.

The Status Byte register is updated to reflect any change in the enable registers associated with the summary bits. Operation Status Enable is set to 0 at power-on. *CLS does not affect Operation Status Enable. *RST does not affect Operation Status Enable.

Set Example: `STAT:OPER:ENAB 1024`

Query Example: `STAT:OPER:ENAB?`

Response: `1024`

STATus:OPERation[:EVENt] <num>

Description: Query and clear the Operation Status Event register. The return value is the sum of the decimal values of the asserted bits of the register. See STATUS:OPERATION:CONDITION register for definition of bits.

An asserted bit of the Operation Status Event register will assert the Operation Status Summary bit (Bit 7) of the Status Byte register if the corresponding bit of the Operation Status Enable register is set. *CLS clears all the bits in the Operation Status Event register. *RST does not directly affect the Operation Status Event register.

Set Example: `Query only`

Query Example: `STAT:OPER?`

Response: `16`

STATus:PRESet <num>

Description: Set status enable registers to disabled states. The Alarm Status Enable, Questionable Status Enable, and Operation Status Enable registers are all set to 0. The Status Byte register is updated to reflect any changes in the enable registers associated with the summary bits. The Event Status Enable and Service Request Enable registers are not affected.

Set Example: `STAT:PRES`

Query Example: `Command only, no Query`

STATus:QUEStionable:CONDition

Description: Query the Questionable Status Condition register. The Questionable Status Condition register reports out-of-range or failed measurements. The return value is the sum of the decimal values of the asserted bits of the register. The defined bits, their decimal values (in parentheses), and their meanings are as follows:

- Bit 0 (1): A voltage reading is out-of-range.
- Bit 3 (8): A temperature reading is out-of-range.
- Bit 8 (256): A pressure reading is out-of-range.

*RST clears the measurement system and the Questionable Status Condition register is updated with the bits cleared.

Set Example: `Query Only`

Query Example: `STAT:QUES:COND?`

Response: `256`

STATus:QUEStionable:ENABle <num>

Description: Set the Questionable Status Enable register. The Questionable Status Enable register determines which bits of the Questionable Status Event register are reported in the Questionable Status Summary bit of the Status Byte register. <n> is the sum of the decimal values of the bits of the Questionable Status Event register that will be reported in the Status Byte register.

The Status Byte register is updated to reflect any change in the enable registers associated with the summary bits. Questionable Status Enable is set to 0 at power-on. *CLS does not affect Questionable Status Enable. *RST does not affect Questionable Status Enable.

Set Example: `STAT:QUES:ENAB 256`

Query Example: `STAT:QUES:ENAB?`

Response: `256`

STATus:QUEStionable[:EVENt] ?

Description: Query and clear the Questionable Status Event register. The return value is the sum of the decimal values of the asserted bits of the register. See STATUS:QUESTIONABLE:CONDITION for defined bits.

An asserted bit of the Questionable Status Event register will assert the Questionable Status Summary bit (Bit 3) of the Status Byte register if the corresponding bit of the Questionable Status Enable register is set. `*CLS` clears all the bits in the Questionable Status Event register. `*RST` does not directly affect the Questionable Status Event register.

Set Example: `Query Only`

Query Example: `STAT:QUES?`

Response: `256`

SYSTem:COMMunicate:SERial:CONTrol:RTS ON | IBFull

Description: RTS Control ON will set RTS to always on. IBFULL disables RTS when the receive buffer is full.

Set Example: `SYSTem:COMMunicate:SERial:CONTrol:RTS ON`

Query Example: `SYSTem:COMMunicate:SERial:CONTrol:RTS?`

Response: `ON`

SYSTem:COMMunicate:SERial:INTerface <boolean>

Description: Set the Interface type for the serial port. 1 or ON will select computer (no echo). 0 or OFF will select terminal (echo).

Set Example: `SYSTem:COMMunicate:SERial:INTerface ON`

Query Example: `SYSTem:COMMunicate:SERial:INTerface?`

Response: `1`

SYSTem:COMMunicate:SERial[:RECeive]:BAUD <n>

Description: Set the serial port baud rate. <baud> is the baud rate number in bits per second. Allowed values are 1200, 2400, 4800, 9600, 19200, 38400, 57600, and 115200. The default is 9600.

Set Example: `SYST:COMM:SER:BAUD 9600`

Query Example: `SYST:COMM:SER:REC:BAUD?`

Response: `9600`

SYSTem:COMMunicate:SERial[:RECeive]:BITS 7 | 8

Description: Set the number of data bits for the serial port to 7 or 8.

Set Example: `SYSTem:COMMunicate:SERial:RECeive:BITS 8`

Query Example: `SYSTem:COMMunicate:SERial:RECeive:BITS?`

Response: `8`

SYSTem:COMMunicate:SERial[:RECeive]:PACE XON | NONE

Description: Enable XON/XOFF protocol for serial interface.

Set Example: `SYSTem:COMMunicate:SERial:RECeive:PACE XON`

Query Example: `SYSTem:COMMunicate:SERial:RECeive:PACE?`

Response: `XON`

SYSTem:COMMunicate:SERial[:RECeive]:PARity[:TYPE] NONE | IGNore | ODD | EVEN

Description: Sets parity for serial interface.

Set Example: `SYSTem:COMMunicate:SERial:RECeive:PARity EVEN`

Query Example: `SYSTem:COMMunicate:SERial:RECeive:PARity?`

Response: `EVEN`

SYSTem:COMMunicate:SERial[:RECeive]:SBITs 1 | 2

Description: Set number of stop bits for serial port.

Set Example: `SYSTem:COMMunicate:SERial:RECeive:SBITs 1`

Query Example: `SYSTem:COMMunicate:SERial:RECeive:SBITs?`

Response: `1`

SYSTem:COMMunicate:SERial:TRANsmit:BAUD

Description: The 2271A does not support different settings for transmit and receive on the serial port. This command is equivalent to the SYSTem:COMMunicate:SERial:RECeive corresponding command.

SYSTem:COMMunicate:SERial:TRANsmit:BITS

Description: The 2271A does not support different settings for transmit and receive on the serial port. This command is equivalent to the SYSTem:COMMunicate:SERial:RECeive corresponding command.

SYSTem:COMMunicate:SERial:TRANsmit:PACE

Description: The 2271A does not support different settings for transmit and receive on the serial port. This command is equivalent to the SYSTem:COMMunicate:SERial:RECeive corresponding command.

SYSTem:COMMunicate:SERial:TRANsmit:PARity[:TYPE]

Description: The 2271A does not support different settings for transmit and receive on the serial port. This command is equivalent to the SYSTem:COMMunicate:SERial:RECeive corresponding command.

SYSTem:COMMunicate:SERial:TRANsmit:SBITs

Description: The 2271A does not support different settings for transmit and receive on the serial port. This command is equivalent to the SYSTem:COMMunicate:SERial:RECeive corresponding command.

SYSTem:COMMunicate:SOCKet:ADDRess <ipaddress>

Description: Set the IP address of the ethernet interface. Setting the address has no effect if DHCP is on.

Set Example: `SYSTem:COMMunicate:SOCKet:ADDRess 192.168.0.102`

Query Example: `SYSTem:COMMunicate:SOCKet:ADDRess?`

Response: `192.168.0.102`

SYSTem:COMMunicate:SOCKet:GATeway <ipaddress>

Description: Set the gateway address for the ethernet port.

Set Example: `SYSTem:COMMunicate:SOCKet:GATEway 192.168.0.1`

Query Example: `SYSTem:COMMunicate:SOCKet:GATEway?`

Response: `192.168.0.1`

SYSTem:COMMunicate:SOCKet:INTerface <boolean>

Description: Set the Interface type for the ethernet port. 1 or ON selects computer (no echo). 0 or OFF will select terminal (echo).

Set Example: `SYSTem:COMMunicate:SOCKet:INTerface ON`

Query Example: `SYSTem:COMMunicate:SOCKet:INTerface?`

Response: `1`

SYSTem:COMMunicate:SOCKet:MAC ?

Description: Query the LAN MAC address

Set Example: `Query Only`

Query Example: `SYST:COMM:SOCK:MAC?`

Response: `"00:80:40:01:ff:fb"`

SYSTem:COMMunicate:SOCKet:MASK <ipmask>

Description: Set the ethernet ip mask.

Set Example: `SYSTem:COMMunicate:SOCKet:MASK 255.255.255.0`

Query Example: `SYSTem:COMMunicate:SOCKet:MASK?`

Response: `255.255.255.0`

SYSTem:COMMunicate:SOCKet:NAME <name>

Description: Set the ethernet interface host name.

Set Example: `SYSTem:COMMunicate:SOCKet:NAME PRESS1`

Query Example: `SYSTem:COMMunicate:SOCKet:NAME?`

Response: `PRESS1`

SYSTem:COMMunicate:SOCKet:PORT <n>

Description: Set the port number.

Set Example: `SYSTem:COMMunicate:SOCKet:PORT 3490`

Query Example: `SYSTem:COMMunicate:SOCKet:PORT?`

Response: `3490`

SYSTem:COMMunicate:USB:EOL CRLF | CR | LF

Description: Set the end of line characters for the USB emulated serial port.

Set Example: `SYSTem:COMMunicate:USB:EOL CRLF`

Query Example: `SYSTem:COMMunicate:USB:EOL?`

Response: `CRLF`

SYSTem:COMMunicate:USB:INTerface <boolean>

Description: Set the Interface type for the serial port. 1 or ON selects computer (no echo). 0 or OFF will select terminal (echo).

Set Example: `SYSTem:COMMunicate:USB:INTerface ON`

Query Example: `SYSTem:COMMunicate:USB:INTerface?`

Response: `ON`

SYSTem:DATE <year>,<month>,<day>

Description: Set the clock date. <year> is the present four-digit year. <month> is the present month number, from 1 to 12. <day> is the present day within the month, from 1 to 31. `*RST` does not affect the clock date.

Set Example: `SYST:DATE 2015,05,07`

Query Example: `SYST:DATE`

Response: `2015,05,07`

SYSTem:ERRor ?

Description: Read and remove the first error in the error queue. The response is an error number followed by a brief description in quotes, with the two parts separated by a comma. The earliest error logged is returned and removed from the error queue. If the error queue is empty, the response is 0,“No Error”. If the error queue contains at least one error, the Error Queue Summary Bit (bit 2) of the Status Byte Register will be set.

If the error queue was overfilled, the most recent error in the error queue will be replaced by the error -350,“Queue overflow”. The error queue can hold up to 10 errors. An error is logged in the error queue if a received command cannot be executed for any reason. Errors are categorized as one of the following types: command error, execution error, device-specific error, or query error.

Command errors report syntax errors or unrecognized commands. An error of this type will cause the Command Error Bit (bit 5) of the Standard Event Status Register to be set.

Execution errors report failures to execute recognized commands. The form of the command is not acceptable, parameters are incorrect or invalid, or the command is not valid in the present state of the instrument or its settings. An error of this type will cause the Execution Error Bit (bit 4) of the Standard Event Register to be set.

Device-specific errors report problems indirectly caused by commands or that are due to abnormal operation of the instrument. An error of this type will cause the Device Dependent Error Bit (bit 3) of the Standard Event Status Register to be set.

Query errors report communication bus errors during transmission of a response to a query command. An error of this type will cause the Query Error Bit (bit 2) of the Standard Event Status Register to be set.

Error bits in the Standard Event Status Register affect the Event Summary Bit (bit 5) of the Status Byte Register if the corresponding bits in the Event Status Enable register are set. Possible error responses can be found in the Users Manual.

No response is available for query, or a response was not transmitted before a new command was received. `*CLS` clears the error queue. `*RST` does not clear the error queue.

Set Example: `Query Only`

Query Example: `SYST:ERR?`

Response: `0,"No error"`

SYSTem:KLOCk <boolean>

Description: Lock or unlock the front panel keys. <boolean> can be 0 (unlocked), OFF, 1 (locked), or ON. The default is 0. *RST unlocks the front panels keys.

Set Example: `SYST:KLOC OFF`

Query Example: `SYST:KLOC?`

Response: `0`

SYSTem:LANGuage <name>

Description: Set Interface Protocol to Protocols available include SCPI (default), PACE6000, DPI515, DPI510, Ruska6000, CPC8000, CPC6000, CPC3000, PCS400, PPC4, PPC3, PPC2P, PPC2, PPC1.

Set Example: `:SYSTem:LANGuage PPC3`

Query Example: `:SYSTem:LANGuage?`

Response: `PPC3`

SYSTem:PRESet

Description: Stop all automated tests and return to Measure mode.

Set Example: `SYSTem:PRESet`

Query Example: `Command only. No query.`

Response: `n/a`

SYSTem:TIME <hour>,<minute>,<second>

Description: Set the clock time. <hour> is the present hour of the day, from 0 to 23. <minute> is the present minute, from 0 to 59. <second> is the present second, from 0 to 59. `*RST` does not affect the clock time.

Set Example: `SYST:TIME 9,33,00`

Query Example: `SYST:TIME?`

Response: `9, 33, 00`

SYSTem:VERSion

Description: Query the SCPI version. The return value is '1999.0'

Set Example: `Query Only`

Query Example: `SYST:VERS?`

Response: `1999.0`

TEST:PNEumatic

Description: Start Pneumatic Self-Test

Set Example: `TEST:PNE`

Query Example: `TEST:PNE?`

Response: `0`

TEST:STOP

Description: Abort Pneumatic Self-Test

Set Example: `TEST:STOP`

Query Example: `Command, no query version`

Response: `n/a`

TEST:TUNE

Description: Start Controller tune.

Set Example: `TEST:TUNE`

Query Example: `Command only. No query.`

Response: `n/a`

UNIT:DEFine<n> <name>,<n>

Description: Define one of four user units. <n> is 1 to 4. Pressure in kPa is multiplied by <n> to give displayed pressure.

Set Example: `UNIT:DEFine2 ksi,0.00068948`

Query Example: `UNIT:DEFine2?`

Response: `ksi,+6.89480000E-04`

UNIT:LENGth{MM | IN}

Description: Set length units to mm or in.

Set Example: `UNIT:LENGth mm`

Query Example: `UNIT:LENGth?`

Response: `mm`

UNIT:TEMPerature CEL

Description: Set temperature units to Celsius. No other temperature units are supported.

Set Example: `UNIT:TEMPerature CEL`

Query Example: `UNIT:TEMPerature?`

Response: `CEL`

UNIT[:PRESsure] {KPA | BAR | PSI | KGF/CM2 | MMHG0C | CMHG0C | INHG0C | INHG60F | INH2O4C | CMH2O4C | INH2O20C | INH2O25C | FT | M | KNOT | KM/HR | MPA | PA} ATM | MBAR | HPA | MMH2O | INH2O60F | MTORR | TORR

Description: Set the pressure unit. User-defined units may also be selected.

Set Example: `UNIT: PRES BAR`

Query Example: `UNIT: PRES?`

Response: `BAR`

SCPI Commands for EM300

#	Command	Response	Comment
1	EMM:MODE<1|2|3>		MODE_DCV,MODE_DCI,MODE_SWITCH
2	EMM:MODE?	1 or 2 or 3	MODE_DCV,MODE_DCI,MODE_SWITCH
3	EMM:VERSion?		EMM firmware version
4	EMM:SN?		EMM serial number
5	MEASure:VAL?	1.00E-03	Triggers a new milliamp or voltage measurement and return the reading.
6	LOOP:STATe <0|1 >		Enable/disable loop power.
7	LOOP:STATe?	0 or 1	Read loop power status.
8	HART:POLL:STATe <0|1| >		Start/abort HART bus polling.
9	HART:POLL:STATe?	0,1 or 2	Returns 1 when bus polling is in progress, return 2 when the bus polling is completed, otherwise returns 0.
10	HART:RESistor:STATe <0|1 >		Enable/disable 250 Ω HART resistor.
11	HART:RESistor:STATe?	0 or 1	Returns 250 Ω HART resistor setting.
12	HART:WRITe:STATe <0|1 >		Enable/disable write function.
13	HART:WRITe:STATe?	0 or 1	Returns 1 when write function is enabled.
14	HART:UNIT:SYNC:STATe <0|1| >		Enable/disable pressure unit synchronization between UUT and mainframe
15	HART:UNIT:SYNC:STATe?	0 or 1	Returns state of pressure unit synchronization.
16	HART:CONNect:STATe?	0 or 1	Returns 1 when link is active, otherwise returns 0.
17	HART:DATA:PV?	1.00E+00	Return PV_VALUE.
18	HART:DATA:PV:UNIT <0 .. 255>		Set PV_UNIT.
19	HART:DATA:PV:UNIT?	0 .. 255	Returns code of PV_UNIT.
20	HART:DATA:SV?	1.00E+00	Returns SV_VALUE.
21	HART:DATA:SV:UNIT?	0 .. 255	Returns code of SV_UNIT.
22	HART:DATA:TV?	1.00E+00	Returns TV_VALUE.
23	HART:DATA:TV:UNIT?	0 .. 255	Returns code of TV_UNIT.
24	HART:DATA:QV?	1.00E+00	Returns QV_VALUE.
25	HART:DATA:QV:UNIT?	0 .. 255	Returns code of QV_UNIT.
26	HART:DATA:TAG <string>		Set Tag
27	HART:DATA:TAG?	"abcdefg"	Read Tag
28	HART:DATA:RANGe:UNIT?	0 .. 255	Read unit code of LRV and URV

#	Command	Response	Comment
29	HART:DATA:RANGe:LOW <lrv>		Set LRV
30	HART:DATA:RANGe:LOW?	1.00E+00	Read LRV
31	HART:DATA:RANGe:HIGH <urv>		Set URV
32	HART:DATA:RANGe:HIGH?	1.00E+00	Read URV
33	HART:DATA:TL:UNIT?	0 .. 255	Read unit code of test limit
34	HART:DATA:TL:LOW?	1.00E+00	Read LTL
35	HART:DATA:TL:HIGH?	1.00E+00	Read UTL
36	HART:TRIM:DAL:STATe <0|1 >		Enable/disable 4 mA fixed current mode
37	HART:TRIM:DAL:STATe?	0 or 1	Read 4 mA fixed current mode
38	HART:TRIM:DAL <measured milliamp>		Trim 4 mA with real milliamp value
39	HART:TRIM:DAH:STATe <0|1 >		Enable/disable 20 mA fixed current mode
40	HART:TRIM:DAH:STATe?	0 or 1	Read 20 mA fixed current mode
41	HART:TRIM:DAH <measured milliamp>		Trim 20 mA with real milliamp value
42	HART:TRIM:RANGe:LOW		Set LRV with PV
43	HART:TRIM:RANGe:HIGH		Set URV with PV
44	HART:TRIM:ZERO		Set PV to zero
45	HART:DIAgnostic 1		Diagnostic the transmitter
46	HART:DATA:MESSage?	abcd	Read the message
47	HART:DATA:MESSage <string>		Write the message
48	HART:DATA:DESCiption?	abcd	Read the description
49	HART:DATA:DESCiption <string>		Read the description(Only support the hart version is 6.0 or greater.
50	HART:POLL:ADDRess?	0~63	Read the poll address
51	HART:POLL:ADDRess <value>		Write the poll address(0~63)
52	EMM:RESolution 1|2|3		Set the EMM resolution
53	EMM:RESolution?	0.1 or 0.01 or 0.001	Return the EMM resolution .

Emulation Commands Sets

See the original equipment documentation for further information. Some commands may have limited functionality due to limitation of the Product.

CPC8000, CPC6000, CPC3000, APC600

Supported Commands:

Ref	Command	Data	Function/Response	CPC8000	CPC6000	CPC3000	APC600
1	?	See “Output Format” text	Returns data in the current output format.	X	X	X	X
3	Address	{1 to 31}	Sets the GPIB Address.	X	X	X	X
4	Address?	<sp>{value}<cr><lf>	Returns the GPIB Address within 1 to 31.	X	X	X	X
5	A?	<sp>{value}<cr><lf>	Returns the A channel pressure reading.		X	X	X
6	AR?	<sp>{value}<cr><lf>	Returns the A channel rate in units/sec.		X	X	X
7	ARS?	<sp>{YES or NO}<cr><lf>	Returns the A channel rate stable flag.		X	X	X
8	AS?	<sp>{YES or NO}<cr><lf>	Returns the A channel stable flag.		X	X	X
9	Autozero	none	Re-zero all ranges that can measure the vented pressure. These adjustments are not password protected and are not saved through power cycles. This command takes approximately 60 seconds.	X	X		X
12	Autozero?	S,T,X,X	Returns autozero data where S represents state (responses can be 0 = complete, 1 = local autozero, or 2 = remote autozero), T represents the estimated remaining time to complete in seconds, and X is a (0) character since this data location is not used at this time.	X	X		X
13	Autozeroabort	none	Aborts autozero.	X	X		X
14	Baro?	<sp>{value}<cr><lf>	Returns reading from barometric sensor.	X	X	X	X
21	Cerr	none	Clears the error queue.	X	X		X
22	Chan	{A or B}	Sets the active channel on the instrument.		X		X

Ref	Command	Data	Function/Response	CPC8000	CPC6000	CPC3000	APC600
23	Chan?	<sp>{A or B}<cr><lf>	Returns which channel is active.		X		X
27	Control	none	Instrument placed in Control mode.	X	X	X	X
28	Control?	<sp>{YES or NO}<cr><lf>	Returns YES if active channel is in Control mode; NO if otherwise.	X	X	X	X
41	Error?	<sp>{string}<cr><lf>	Returns a description of an error.	X	X	X	X
42	Errorno?	<sp>{string}<cr><lf>	Returns CPC6000 error code and text (comma delimited).	X	X	X	X
51	Height	{value}	Sets the head pressure height in inches.	X	X		X
52	Height?	<sp>{value}<cr><lf>	Returns the head pressure height in inches.	X	X		X
54	ID?	<sp>MENSOR,600, {ssssss},{v.vv}<cr><lf>	Returns the instrument identity where {ssssss} is the serial number and {v.vv} is always "1.00".	X		X	X
57	Keylock	{Yes or No}	YES to lock, or NO to unlock the on-screen keys.	X	X	X	X
58	Keylock?	<sp>{Yes or No}<cr><lf>	Returns current keylock status as YES or NO.	X	X	X	X
61	Listrange?	<sp>PRI,{td},{min},{max},{td},{min},{max};SEC,{td},{min},{max},{td},{min},{max}<cr><lf>	Returns the minimum and maximum ranges of the primary, secondary, tertiary and Barometer.	X	X	X	X
66	LowerLimit	Value inside primary transducer range on turndown #1 in current units.	Sets the lower control limit for the active channel.	X	X	X	X
67	LowerLimit?	<sp>{value}<cr><lf>	Returns the lower control limit for the active channel.	X	X	X	X
70	Measure	none	Instrument placed in Measure mode.	X	X	X	X
71	Measure?	<sp>{Yes or No}<cr><lf>	Returns YES if active channel is in Measure mode; NO if otherwise.	X	X	X	X
72	Mode	{standby, measure,control, vent}	Sets the operation mode of the active channel.	X	X	X	X

Ref	Command	Data	Function/Response	CPC8000	CPC6000	CPC3000	APC600
73	Mode?	<sp>{string}<cr><lf>	Returns the operation mode of the active channel.	X	X	X	X
76	Outform	{1 to 7}	Sets the output format.	X	X	X	X
77	Outform?	<sp>{X}<cr><lf>	Returns the current output format.	X	X	X	X
84	Ptype	{Absolute or Gauge or A or G}	Sets the instrument pressure type – non-native type only works if the optional barometric sensor is installed.	X	X	X	X
85	Ptype?	<sp>{Absolute or Gauge}<cr><lf>	Returns “Absolute” or “Gauge” for the pressure type.	X	X	X	X
86	RangeMax?	<sp>{value}<cr><lf>	Returns the maximum range of the active transducer and turndown in the current units.	X	X	X	X
87	RangeMin?	<sp>{value}<cr><lf>	Returns the minimum range of the active transducer and turndown in the current units.	X	X	X	X
88	Rate?	<sp>{value}<cr><lf>	Returns the rate reading of the instrument in current units/second.	X	X	X	X
94	Resolution	{4 to 7}	Sets the number of significant digits.	X	X	X	X
95	Resolution?	<sp>{value}<cr><lf>	Returns the number of significant digits.	X	X	X	X
106	Sensor	C, X	Sets the active sensor where C = Primary, Secondary or tertiary (or 1/2/3) and X is the turndown.	X	X	X	X
107	Sensor?	<sp>{C,X}<cr><lf>	Returns the active sensor as above.	X	X	X	X

Ref	Command	Data	Function/Response	CPC8000	CPC6000	CPC3000	APC600
110	Setpt	{A value inside the upper/lower limits, and inside the range of the active transducer and turndown}	Sets the control setpoint for the active channel.	X	X	X	X
111	Setpt?	<sp>{value}<cr><lf>	Returns the control setpoint of the active channel in current units.	X	X	X	X
120	Stable?	<sp>{Yes or No}<cr><lf>	Returns YES if instrument is stable or NO.	X	X	X	X
136	Units	{units code, or output format text from Measurement Units Table (immediately following this table)	Sets the instrument engineering units.	X	X	X	X
137	Units?	<sp>{string}<cr><lf>	Returns the instrument units in a text string.	X	X	X	X
139	UpperLimit	{Value inside primary transducer range}	Sets the upper control limit for the active channel.	X	X	X	X
140	UpperLimit?	<sp>{value}<cr><lf>	Returns the upper control limit for the active channel.	X	X	X	X
141	Vent	none	Instrument placed in Vent mode.	X	X	X	X
142	Vent?	<sp>{Yes or No}<cr><lf>	Returns YES if active channel is in Vent mode, No if otherwise.	X	X	X	X
146	Zero	{desired pressure or ?}	Sets active sensor and turndown's zero to entered pressure, or ? to clear previous value. (See "Caldisable" command above ref# 19)	X	X	X	X
147	Zero?	<sp>{value}<cr><lf>	Returns zero offset value for active sensor and turn-down.	X	X	X	X

DPI510

Supported Commands:

Command	Function	Notes
C0	Go to MEASURE mode.	
C1	Go to CONTROL mode.	
D0	Sends current pressure in response (format N0 or N1)	
D2	Sends front panel pressure in response (format N0 or N1)	Same as D0 for emulation
D1	Sends current set-point in response (format N0 or N1)	
Fxx	Function 00,10,01,11	Implemented as a dummy command. Performs no actual operation
I0	Disable Interrupts	Implemented as a dummy command. Performs no actual operation
I1 - I7	Interrupt on specific events	Implemented as a dummy command. Performs no actual operation
J0 to J2	Set Pre-programmed rate.	All 3 rates are fixed at Current sensor FS/min
M	Unlock keyboard	
N0 to N4	Set response format	
O1	Zero	
P<value>	Set pressure Set-point	
R0	Unlock keyboard	
R1 to R2	Lock keyboard	
S0 to S3	Set pre-programmed units	S0, S1 and S2 are always kPa. Does not select active range. This command only locks the front interface
T0	Turn off Tare mode	
T1	Turn on tare mode to value set to B (B must be set first)	
U1 to U23	Set S4 units (if S4 is selected this will change current units immediately)	Must set S3 for U command to take affect. Refer to the DPI-510 manual for available units. Selected unit will not affect the front panel unit indication.
V<value>	Set slew rate	
W<value>	Set In Limit wait time	Implemented as a dummy command. Performs no actual operation
/0 to /11	Set set-point as fraction of P value	Implemented as a dummy command. Performs no actual operation
*0 to *11	Set pre-programmed set-point	Implemented as a dummy command. Performs no actual operation
@0	Disable error reporting	
@1	Enable error reporting	

PCS400

Supported commands:

Command	Function	Notes
_PCS4 CTRL <Value>	Sets control value. Will take effect immediately if instrument is in control mode.	
_PCS4 CTRL?	Returns the current control point in current engineering units.	
_PCS4 CTRLMAX <value>	Sets maximum control value.	
_PCS4 CTRLMAX?	Returns current maximum control pressure.	
_PCS4 CTRLMIN <value>	Sets minimum control value.	
_PCS4 CTRLMIN?	Returns current minimum control pressure.	
_PCS4 ERR?	Returns the error number and description.	
_PCS4 FUNC CTRL <value <unitno> >	Instrument placed in control mode at the given target and unit.	
_PCS4 FUNC F1	Toggles between absolute and gauge modes if an internal barometric sensor is installed.	
_PCS4 FUNC MEAS <unitno>	Instrument placed in measure mode. Optionally change pressure units.	
_PCS4 FUNC STBY <unitno>	Instrument placed in standby mode. Optionally change pressure units	
_PCS4 FUNC VENT <unitno>	Instrument vent in <unitno> units. Optionally change pressure units	
_PCS4 ID?	Returns instrument ID.	Ver indicated in reply will be fixed at "1.00"
_PCS4 READING?	Returns active sensor pressure reading, with preceding 'E' if there is an error	
_PCS4 STAT?	Returns mode and stability status, comma delimited.	Mode can be VENT, MEAS,CTRL Stability status can be STABLE or UNSTABLE
_PCS4 UNIT <Unitno>	Sets the instrument to specified engineering unit number. Refer to the PCS400 manual for available units.Selected unit will not affect the front panel unit indication.	
_PCS4 UNIT?	Returns the current engineering unit number, unit text and type of transducer (A, G, D)	
_PCS4 XDUCER?	Returns the number of the currently active transducer, sn, min, max ranges: " Mensor,PBT,sensor#,sn,min,max".	

PPC1, PPC2, PPC2+, PPC3 and PPC4

Supported Commands:

Command	Function	PPC4	PPC3	PPC2+	PPC2	PPC1
*IDN?	Replies "FLUKE,PPC4,systemSn, HiSensorSn, LoSensorSn,Ver1.0.0.0,1.00,1.00" Example: "FLUKE,PPC4,123,100951,63041,Ver1.0.0.0,1.00,1.00"	X				
*IDN?	Replies "DH INSTRUMENTS INC, PPC3, systemSn, HiSensorSn, LoSensorSn,Ver1.00-efg" Example: "DH INSTRUMENTS INC, PPC3,123,100951,63041,Ver1.00-efg"		X			
*IDN?	Replies "DH INSTRUMENTS INC, PPC2+ HiRange/LoRange, systemSn-HiSensorSn-LoSensorSn,Ver1.00-efg" Example: "DH INSTRUMENTS INC, PPC2+ A1000/G0015, 123-100951-63041, Ver1.00-efg"			X		
AUTOZERO	Enable / disable autozero feature	X	X	X	X	X
DRV	Set or read extern valve port status bitfield for all 8 drivers	X	X	X	X	X
DRVn	Set or read extern valve port status for the specific driver (1 to 8)	X	X	X	X	X
ERR	Get last error	X	X	X	X	X
HEAD	Set or read head height	X	X	X	X	X
HS	Set or read hold limit pressure	X	X	X	X	X
HS%	Set or read hold limit in %FS	X	X	X	X	X
LOCAL	Go to local mode	X	X	X	X	X
MODE	Set or read control mode	X	X	X	X	X
MMODE	Set or read measurement reference	X	X	X	X	
MSGFMT	Set or get GPIB488 command mode. '0' for standard mode; '1' for enhanced mode. Defaults to '0' (standard mode) on power up	X	X	X		
PR	Get control ready status, pressure when next measurement is ready	X	X	X	X	X
PRR	Get control ready status and pressure, rate, barometer, status and uncertainty when next measurement is ready	X	X	X	X	X
PS	Set control target and start controlling	X	X	X	X	X
QPRR	Get control ready status and pressure, rate, barometer, status and uncertainty of previous measurement	X	X	X	X	X
RANGE	Set or get current active sensor range FS	X	X	X	X	X
RES	Set or get res in %FS	X	X	X	X	X

Command	Function	PPC4	PPC3	PPC2+	PPC2	PPC1
REMOTE	Local lockout	X	X	X	X	X
RPT	Discover external sensors (dummy command)	X	X	X		
RPT1	Get the IH sensor range	X	X	X		
RPT2	Get the IL sensor range	X	X	X		
RS	Set fixed rate and enable control mode to execute rate request (PG Autofloat use only. Not a std PPC4 cmd)	X	X	X	X	X
SS	Set or read stability limit pressure	X	X	X	X	X
SS%	Set or read stability limit in %FS	X	X	X	X	X
SN	Read system serial number	X	X	X	X	X
TP	Get current control target	X	X	X	X	X
UL	Get current max pressure limit	X	X	X	X	X
UNIT	Set or get current pressure unit; Defaults to "kPa" on power up	X	X	X	X	X
VAC	Set or get vacuum reference port status	X	X	X	X	X
VENT	Set or get vent status	X	X	X	X	X
VER	Reply "FLUKE PPC4 us HiRange/LoRange Ver1.0.0.0" Example: "FLUKE PPC4 us A700K/G200K Ver1.0.0.0"	X				
VER	Reply “DH INSTRUMENTS, INC PPC3 us HiRange/LoRange Ver1.00 ” Example: “DH INSTRUMENTS, INC PPC3 us A700K/G100K Ver1.00 ”		X			
VER	Reply “DH INSTRUMENTS, INC PPC2+ us HiRange/LoRange Ver1.00 ” Example: “DH INSTRUMENTS, INC PPC2+ us A700K/G100K Ver1.00 ”			X		
VER	Reply "DH Instruments PPC2-Range Ver 1.00 " Example: "DH Instruments PPC2-A0300 Ver 1.00 "				X	
VER	Reply "DH Instruments PPC1 Ver 1.00 " Example: "DH Instruments PPC1 Ver 1.00 "					X

Pace6000

Supported Commands:

Command	Function	Notes
*CLS	Clear all status registers and the error queue	
*ESE	Set the Product Standard Event Status Enable register	
*ESE?	Query the Standard Event Status Enable register	
*ESR?	Query and clear the Product Standard Event Status register	
*IDN?	Reply "Druck,PACE,1234,01.00.00"	
*SRE	Set the Product Service Request Enable register	
*STB?	Query the Product Status Byte Register	
:GTL	Takes the instrument out of local lockout	
:LLO	Local Lockout	
:LOC	Puts the instrument into local mode	
:REM	Puts the instrument into remote	
:CAL[:PRES]:ZERO:AUTO <*state*>	Starts or aborts (*value* = 1 or 0) a zero process Gets zero status 1 or 0 (zeroing or not zeroing)	
:INST:CAT	Gets a list of range names for the controller ("3.50barg","BAROMETER","4.50bara")	PMMs 1MPa and greater in Mpa PMMs <100Kpa in mbar All others in bar
:INST:CAT:ALL	Same as :INST:CAL	
:INST:[LIM][x]	Gets the range name, upper and lower limits for test,supply, vac and Barometer (*x*=slot 1/2/3/4 to select the test, supply, exhaust or barometric pressure sensors.) ex: " "3.50barg", 3675.0, -1100.0"	Use same range names as INST:CAT? query
:INST:SENS[*x*]:FULL?	Gets the full-scale value of the selected sensor (*x*=1|2|3|4 for the test, supply, exhaust and barometric pressure sensors.)	
:INST:SN?	Gets the instrument serial number	
:OUTP:LOG[x][:LEV] <state>	Gets or sets relay external driver (x=1|2|3|4 select the driver#) value = 1 or 0 to select the ON / OFF state.	

Command	Function	Notes
:SENS[:PRES]?	Reads the sensor which has been selected by the RANGE command	
:SENS[:PRES]:INL?	Gets the pressure and 0/1 if out/in ready limits ex: "990.0527344, 1"	
:SENS[:PRES]:SLEW?	Gets the slew rate of the input pressure	
:SENS[:PRES]:BAR?	Gets the barometric pressure value	
:SENS[:PRES]:RANG <*range*>	Gets or sets range name to use Ex: :SENS:RANG "3.50barg"	List from the INST:CAT? Response should be used to determine the proper range name to use for <range>
:SENS[:PRES]:RES <*res*>	Gets or sets resolution from 4 to 7	
:SENS[:PRES]:CORR:HEAD <*gas*>, <*height*>	Gets or sets head medium (AIR or NITRogen) and height in meters	
:SENS[:PRES]:CORR:HEAD:STAT <*state*>	Gets or sets head state 0/1 for disabled or enabled	Replies '0' if head height is '0' else '1' <state> arg is ignored
:SOUR[:PRES]:COMP[*x*]	Gets the supply or vacuum pressures (x=1 or 2)	
:SOUR[:PRES]:INL <*percent*>	Gets or sets the in limit (ready) setting as a %FS	
:SOUR[:PRES][:LEV][:IMM][:AMPL] <*setpoint*>	Gets or sets the setpoint	
:SOUR[:PRES][:LEV][:IMM][:AMPL]: VENT <*state*>	Starts or aborts (state = 1 or 0) a vent process Gets vent status 2 if vent complete; 1 if venting; 0 if not vented or venting	
:SOUR[:PRES]:RANG <*rangename*>	Gets or sets active range. Ex: SOUR:RANG "2bara" or SOUR:RANGE? "2bara"	Same as SENS:RANG command
:SOUR[:PRES]:SLEW <*rate*>	Gets or set max rate used (units/sec) when value rate is selected	
:STAT:OPER:COND?	Gets the condition register of the Product status system	
:STAT:OPER:ENAB <*register*>	Gets or sets the Product condition enable mask register of the status system	

Command	Function	Note
:STAT:OPER:EVEN?	Gets the Product event register of the status system	
:SYST:ERR?	Gets next error from the error queue	
:SYST:DATE <*d,m,y*>	Gets or sets the date settings in year, month, and day	
:SYST:TIME <*h,m,s*>	Gets or sets the time in hours,minuites, seconds	
:SYST:COMM:SER:BAUD <*baud*>	Gets or sets RS232 interface baud rate	
:SYST:COMM:SER:TYPE:PAR <*parity*>	Gets or sets RS232 interface parity (ODD|EVEN|NONE)	
:SYST:COMM:GPIB:SELF:ADDR <*addr*>	Gets or sets GPIB address (1-31)	
:SYST:VERS?	Get the SCPI version number	
:UNIT[:PRES] <*unit*>	Get or set the pressure unit	Valid units are specific to the PACE6000. Refer to the PACE manual for available units.
:UNIT[:PRES]:DEF[*x*] <*coef*>,<*text*>	Get or set the user defined units (x=1|2|3|4)	

DPI515

Supported Commands:

Command	Function	Notes
*CLS	Clear all status registers and the error queue	
*ESE	Set the Product Standard Event Status Enable register	
*ESE?	Query the Standard Event Status Enable register	
*ESR?	Query and clear the Product Standard Event Status register	
*IDN?	Reply "Druck,DPI515C,*serialNbr*,01.00.00"	
*RST	Reset operating settings to default states	
*SRE	Set the instrument Service Request Enable register	
*SRE?	Query the instrument Service Request Enable register	
*STB?	Query the instrument Status Byte Register	
:GTL	Takes the instrument out of local lockout	
:LLO	Local Lockout	
:LOC	Puts the instrument into local mode	
:REM	Puts the instrument into remote	
:CAL[:PRES]:ZERO:AUTO <*state*>	Starts or aborts (*value* = 1 or 0) a zero process Gets zero status 1 or 0 (zeroing or not zeroing)	
:CAL[:PRES]:ZERO:AUTO:VAL <*ref*>	Gets or sets the abs mode zero *ref*erence value	abs mode only
:CAL[:PRES]:ZERO:TIME:STAT <state>	0/1 disables and enables timed gauge zero	
:INST:CAT?	Gets a list of range names for the controller ("3.50barg","BAROMETER","4.50bara")	
:INST:[LIM][*x*]	Gets the range name, upper and lower limits for test,supply, vac and Barometer (*x*=1/2/3/4) ex: " "3.50barg", 3675.0, - 1100.0"	Use same range names as INST:CAT query PCM supply & vac limits used
:INST:SN?	Gets the instrument serial number	
:OUTP:LOG[*x*][.LEV] <*state*>	Gets or Sets digital output external driver levels (x=1|2|3) ON / OFF state	

Command	Function	Notes
:SENS[:PRES]?	Reads the sensor which has been selected by the RANGE command	
:SENS[:PRES]:BAR	Gets the barometric pressure value	
:SENS[:PRES]:CORR:HEAD <*gas*>, <*height*>	Gets or sets head medium (AIR or NITRogen) and height in cm	
:SENS[:PRES]:CORR:HEAD:STAT <*state*>	Gets or sets head state 0/1 for disabled or enabled	Replies '0' if head height is '0' else '1' <state> arg is ignored as height must ne set to enable
:SENS[:PRES]:RANG <*range*>	Gets or sets range name to use Ex: :SENS:RANG "3.50barg"	List from the INST:CAT? Response should be used to determine the proper range name to use
:SOUR[:PRES]:INL <*percent*>	Gets or sets the in limit (ready) setting as a %FS	
:SOUR[:PRES][:LEV][:IMM][:AMPL] <*setpoint*>	Gets or sets the setpoint	
:SOUR[:PRES][:LEV][:IMM][:AMPL] :VENT <*state*>	Starts or aborts (state = 1 or 0) a vent process Gets vent status 2 if vent complete; 1 if venting; 0 if not vented or venting	
:SOUR[:PRES]:RANG <*rangename*>	Gets or sets active range. Ex: SOUR:RANG "2bara" or SOUR:RANGE? "2bara"	Same as SENS:RANG command
:SOUR[:PRES]:RANG:AUTO <*state*>	Gets or sets the auto-range state Enable/Disable (1/0)	
:SOUR[:PRES]:SLEW <*rate*>	Gets or set max rate used (units/sec) when value rate is selected	
:STAT:OPER:ENAB <*register*>	Gets or sets the condition enable mask register of the status system	
:STAT:OPER:EVEN?	Gets the event register of the status system	
:STAT:OPER:PRES:COND?	Gets the pressure condition register of the status system	

Command	Function	Notes
:STAT:OPER:PRES:ENAB <*register*>	Gets or sets the pressure condition enable mask register of the status system	
:STAT:OPER:PRES:EVEN?	Gets the pressure event register of the status system	
:SYST:ERR?	Gets next error from the error queue	
:SYST:VERS?	Get the SCPI version number	
:UNIT[:PRES] <*unit*>	Get or set the pressure unit	Valid units are specific to PACE the DPI515 (see PACE the DPI515 manual)
:UNIT[:PRES]:DEF[*x*] <*coef*>,<*text*>	Get or set the user defined units (x=1|2)	