PeakTech 4075 communication Protocol and Programmers guide

*. Command input is not case-sensitive.

*. Define □ to Space bar

*. Use <\r\n> (Enter and New line) at the end of every command line.

Command Summary

Command	Short Command	Purpose
*IDN?	*IDN?	Returns instrument identification
MEASURE	MEAS	Returns measure reading
READ	READ	Returns measure reading
CONFIG	CONF	Setting/Returns measure function
MMEMORY	MMEM	External memory data logger setting
MEMORY	MEM	Internal memory data logger setting
TIME	TIME	Setting/Return Real Time Clock
UNIT	UNIT	Setting temperature unit
IPADDR	IP	Setting/Return network IP address
MACADDR	MAC	Setting/Return network MAC address

Command Introduce

1. *IDN?

   Returns instrument identification, following Manufacturer, Model, Series number, Version information.

   For example:
   [INPUT] *IDN?<\r\n>
   [RETURN] <Manufacturer>,<Model>,<SN>,<Version><\r\n>

2. MEASURE
   a. Returns current measure reading.
      For example:
      [INPUT] MEAS? <\r\n>
      [RETURN] +0 VDC

b. Return appointed measure function reading.

MEASURE:

Parameter:

VOLTAGE(VOLT)<:AC>	------------------	AC/DC voltage
CURRENT(CURR)<:AC>	------------------	AC/DC A current
RESISTANCE(RES)	------------------	resistance
FREQUENCY(FREQ)	------------------	frequency
CAPACITANCE(CAP)	------------------	capacitance
DIODE(DIOD)	------------------	diode
CONTINUUM(CONT)	------------------	continuum
MCUR<:AC>	------------------	AC/DC milli ampere
MVOLT<:AC>	------------------	AC/DC milli voltage
UCUR<:AC>	------------------	AC/DC micro ampere
TCK	------------------	K-thermocouple temperature
TCJ	------------------	J-thermocouple temperature
TCR	------------------	R-thermocouple temperature
TCN	------------------	N-thermocouple temperature
TCB	------------------	B-thermocouple temperature
TCS	------------------	S-thermocouple temperature
TCT	------------------	T-thermocouple temperature
PT100(PT1H)	------------------	RTD PT100 temperature
PT500(PT5H)	------------------	RTD PT500 temperature
PT1000(PT1K)	------------------	RTD PT1000 temperature
CU50	------------------	RTD Cu50 temperature
NI120(NI1H)	------------------	RTD Ni120 temperature e

*The character string in the bracket is the short command for easy type

For example:

[INPUT] meas:volt:ac<\r\n>

[INPUT] MEAS:TCK<\r\n>

[INPUT] MEASURE:CURR<\r\n>

3. READ

   A. Read 1 measure data from instrument.

   READ? <\r\n>

   For example:

   [INPUT] READ? <\r\n>

   [RETURN] +0 VDC<\r\n>

   B. Read n measure data from instrument.

   READ:NUMBER n<\r\n>

   (n is the number of reading)

For example:
[INPUT] READ:NUMBER☐100<\r\n>
[RETURN] +0 VDC<\r\n>
……..

C. Keep read measure data from instrument.
READ:GOON<\r\n>

For example:
[INPUT] READ:GOON<\r\n>
[RETURN] +0 VDC<\r\n>
………

4. CONFIG
A. Return measure function
CONFIG? <\r\n>
For example:
[INPUT] CONF? <\r\n>
[RETURN] VDC <\r\n>

B. Setting the measure function
CONFIG:
Parameter: VOLTAGE(VOLT)<:AC>
                 CURRENT(CURR)<:AC>
                RESISTANCE(RES)
                FRESISTANCE(FRES)
                CAPACITANCE(CAP)
                DIODE(DIOD)
                CONTINUUM(CONT)
                MCURRENT(MCUR)
                TCK
                TCJ

                TCR
                TCN
                TCB
                TCS
                TCT
                PT100(PT1H)
                PT500(PT5H)
                PT1000(PT1K)
                CU50
                NI120(NI1H)

For example:
[INPUT] CONF:volt:ac<\r\n>
[INPUT] CONFIG:TCK<\r\n>
[INPUT] CONF:CURR<\r\n>

5. MMEMORY
A. External SD Card data logger setting.
MMEM:SD☐n,s<\r\n>
(n is the numbers of log data; s is the number of seconds for interval)

For example:
[INPUT] MMEM:SD☐50,2<\r\n>
[RETURN] SD Logger set OK<\r\n>

B. External USB disk data logger setting.
    MMEM:USB☐n,m<\r\n>
    (n is the numbers of log data; s is the number of seconds for interval)

    For example:
    [INPUT] MMEM:USB☐50,2<\r\n>
    [RETURN] USBdisk Logger set OK<\r\n>

C. External memory data logger start.
    MMEM:START<\r\n>

    For example:
    [INPUT] MMEM:START<\r\n>
    [RETURN] Logger Strart<\r\n>

D. External memory data logger stop.
    MMEM:STOP<\r\n>

    For example:
    [INPUT] MMEM:STOP<\r\n>

    [RETURN] Logger Stop<\r\n>

6. MEMORY
    A. Internal memory data logger setting.
        MEM:INTERNAL☐n,s<\r\n>
        (n is the numbers of log data; s is the number of seconds for interval)

        For example:
        [INPUT] MEM:INTERNAL☐50,2<\r\n>
        [RETURN] INT Logger set OK<\r\n>

    B. Internal memory data logger start.
        MEM:START<\r\n>

        For example:
        [INPUT] MEM:START<\r\n>
        [RETURN] Logger Strart<\r\n>

    C. Internal memory data logger stop.
        MEM:STOP<\r\n>

        For example:
        [INPUT] MEM:STOP<\r\n>
        [RETURN] Logger Stop<\r\n>

7. TIME
   A. Return RTC(real time clock) time.
      TIME?<\r\n>

      For example:
      [INPUT] TIME?<\r\n>
      [RETURN] Time□is□2012-1-31□00:00<\r\n>

   B. Setting RTC time.
      TIME:SET□YYYY-MM-DD-HH-MM<\r\n>
      YYYY is year; MM is month; DD is day; HH is hour; MM is minute.

      For example:
      [INPUT] TIME:SET 2012-01-31-00-00<\r\n>

8. UNIT
   A. Return temperature unit.
      UNIT?<\r\n>

      For example:
      [INPUT] UNIT?<\r\n>
      [RETURN] TEMP□UNIT=CEL<\r\n>

   B. Setting temperature unit
      UNIT:
      Parameters: C
                  F

      For example:
      [INPUT] UNIT:C<\r\n>
      [RETURN] TEMP□UNIT□CEL□set<\r\n>

9. IPADDR
   A. Return IP address.
      IP? <\r\n>
      IPADDR? <\r\n>

      For example:
      [INPUT] IP? <\r\n>
      [RETURN] IP□is□192.168.1.25<\r\n>

   B. Setting IP address.
      IP:SET□XXX.XXX.XXX.XXX<\r\n>
      IPADDR:SET□XXX.XXX.XXX.XXX<\r\n>

      For example:
      [INPUT] IP:SET□192.168.1.25<\r\n>
      [RETURN] OK□IP□set<\r\n>

10. MACADDR
    A. Return MAC address.
       MAC? <\r\n>
       MACADDR? <\r\n>

       For example:
       [INPUT] MAC? <\r\n>
       [RETURN] MAC□is□01.02.03.04.05.0A<\r\n>
    B. Setting MAC address.
       MAC:SET□XX.XX.XX.XX.XX.XX<\r\n>
       MACADDR:SET□XX.XX.XX.XX.XX.XX<\r\n>

       For example:
       [INPUT] MAC:SET□01. 02. 03.04.05.0A<\r\n>
       [RETURN] OK□MAC□set<\r\n>

Communication Protocol:

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UNIT	UNIT	Setting temperature unit
IPADDR	IP	Setting/Return network IP address
MACADDR	MAC	Setting/Return network MAC address

Command Introduce

1. *IDN?

   Returns instrument identification, following Manufacturer, Model, Series number, Version information.

   For example:
   [INPUT] *IDN?<\r\n>
   [RETURN] <Manufacturer>,<Model>,<SN>,<Version><\r\n>

2. MEASURE
   a. Returns current measure reading.
      For example:
      [INPUT] MEAS? <\r\n>
      [RETURN] +0 VDC

b. Return appointed measure function reading.
   MEASURE:

Parameter:		
VOLTAGE(VOLT)<:AC>	------------------	AC/DC voltage
CURRENT(CURR)<:AC>	------------------	AC/DC A current
RESISTANCE(RES)	------------------	resistance
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PT100(PT1H)	------------------	RTD PT100 temperature
PT500(PT5H)	------------------	RTD PT500 temperature
PT1000(PT1K)	------------------	RTD PT1000 temperature
CU50	------------------	RTD Cu50 temperature
NI120(NI1H)	------------------	RTD Ni120 temperature e

   *The character string in the bracket is the short command for easy type

   For example:
   [INPUT] meas:volt:ac<\r\n>
   [INPUT] MEAS:TCK<\r\n>
   [INPUT] MEASURE:CURR<\r\n>

3. READ
   A. Read 1 measure data from instrument.
      READ? <\r\n>

      For example:
      [INPUT] READ? <\r\n>
      [RETURN] +0 VDC<\r\n>

   B. Read n measure data from instrument.
      READ:NUMBER n<\r\n>
      (n is the number of reading)

      For example:
      [INPUT] READ:NUMBER□100<\r\n>
      [RETURN] +0 VDC<\r\n>
      ……..

   C. Keep read measure data from instrument.
      READ:GOON<\r\n>

      For example:
      [INPUT] READ:GOON<\r\n>
      [RETURN] +0 VDC<\r\n>
      ………

4. CONFIG
   A. Return measure function
      CONFIG? <\r\n>
      For example:
      [INPUT] CONF? <\r\n>
      [RETURN] VDC <\r\n>

   B. Setting the measure function
      CONFIG:
      Parameter: VOLTAGE(VOLT)<:AC>
                       CURRENT(CURR)<:AC>
                      RESISTANCE(RES)
                      FRESISTANCE(FRES)
                      CAPACITANCE(CAP)
                      DIODE(DIOD)
                      CONTINUUM(CONT)
                      MCURRENT(MCUR)
                      TCK
                      TCJ

TCR
TCN
TCB
TCS
TCT
PT100(PT1H)
PT500(PT5H)
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CU50
NI120(NI1H)

For example:
[INPUT] CONF:volt:ac<\r\n>
[INPUT] CONFIG:TCK<\r\n>
[INPUT] CONF:CURR<\r\n>

5. MMEMORY
   A. External SD Card data logger setting.
      MMEM:SD☐n,s<\r\n>
      (n is the numbers of log data; s is the number of seconds for interval)

      For example:
      [INPUT] MMEM:SD☐50,2<\r\n>
      [RETURN] SD Logger set OK<\r\n>

   B. External USB disk data logger setting.
      MMEM:USB☐n,m<\r\n>
      (n is the numbers of log data; s is the number of seconds for interval)

      For example:
      [INPUT] MMEM:USB☐50,2<\r\n>
      [RETURN] USBdisk Logger set OK<\r\n>

   C. External memory data logger start.
      MMEM:START<\r\n>

      For example:
      [INPUT] MMEM:START<\r\n>
      [RETURN] Logger Strart<\r\n>

   D. External memory data logger stop.
      MMEM:STOP<\r\n>

      For example:
      [INPUT] MMEM:STOP<\r\n>

[RETURN] Logger Stop<\r\n>

6. MEMORY
    A. Internal memory data logger setting.
        MEM:INTERNAL□n,s<\r\n>
        (n is the numbers of log data; s is the number of seconds for interval)

        For example:
        [INPUT] MEM:INTERNAL□50,2<\r\n>
        [RETURN] INT Logger set OK<\r\n>

    B. Internal memory data logger start.
        MEM:START<\r\n>

        For example:
        [INPUT] MEM:START<\r\n>
        [RETURN] Logger Strart<\r\n>

    C. Internal memory data logger stop.
        MEM:STOP<\r\n>

        For example:
        [INPUT] MEM:STOP<\r\n>
        [RETURN] Logger Stop<\r\n>

7. TIME
    A. Return RTC(real time clock) time.
        TIME?<\r\n>

        For example:
        [INPUT] TIME?<\r\n>
        [RETURN] Time□is□2012-1-31□00 : 00<\r\n>

    B.   Setting RTC time.
        TIME:SET□YYYY-MM-DD-HH-MM<\r\n>
        YYYY is year; MM is month; DD is day; HH is hour; MM is minute.

        For example:
        [INPUT] TIME:SET 2012-01-31-00-00<\r\n>

8. UNIT
    A. Return temperature unit.
        UNIT?<\r\n>

        For example:

[INPUT] UNIT?<\r\n>
[RETURN] TEMP□UNIT=CEL<\r\n>

B. Setting temperature unit
UNIT:
Parameters: C
            F

For example:
[INPUT] UNIT:C<\r\n>
[RETURN] TEMP□UNIT□CEL□set<\r\n>

9. IPADDR
   A. Return IP address.
     IP? <\r\n>
     IPADDR? <\r\n>

     For example:
     [INPUT] IP? <\r\n>
     [RETURN] IP□is□192.168.1.25<\r\n>

   B. Setting IP address.
     IP:SET□XXX.XXX.XXX.XXX<\r\n>
     IPADDR:SET□XXX.XXX.XXX.XXX<\r\n>

     For example:
     [INPUT] IP:SET□192.168.1.25<\r\n>
     [RETURN] OK□IP□set<\r\n>

10. MACADDR
   A. Return MAC address.
     MAC? <\r\n>
     MACADDR? <\r\n>

     For example:
     [INPUT] MAC? <\r\n>
     [RETURN] MAC□is□01.02.03.04.05.0A<\r\n>
   B. Setting MAC address.
     MAC:SET□XX.XX.XX.XX.XX.XX<\r\n>
     MACADDR:SET□XX.XX.XX.XX.XX.XX<\r\n>

     For example:
     [INPUT] MAC:SET□01. 02. 03.04.05.0A<\r\n>
     [RETURN] OK□MAC□set<\r\n>