

TC0520

PROTOCOL OF SERIAL INTERFACE



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The command of Digital Output is list below:

command	Function	Remarks
A(ASC 41H)	Send encoded data	Return encoded 64 byte
B(ASC 42H)	Backlight ON/OFF	Return 32 bytes
C(ASC 43H)	°C°F button	Return 32 bytes
E(ASC 45H)	REC button	No return byte
H(ASC 48H)	HOLD button	Return 32 bytes
K(ASC 4BH)	Ask for model No.	Return 32 bytes
M(ASC 4DH)	MAX/MIN button	Return 32 bytes
N(ASC 4EH)	Exit MAX/MIN mode	Return 32 bytes
P(ASC 50H)	Load recorded data	
m	MEM function	No return byte

Note:you have to send 7 byte to meter, for example, if you want to send A comand, the format will be 0x02 0x41 0x00 0x00 0x00 0x00 0x03

Command B :

Equivalent to one pushing on the backlight button. Return 32 bytes Only first 7 bytes is useful, it returns the command you send, 0x02 0x42 0x4F 0x4B 0x00 0x00 0x03 , 0x4F 0x4B means OK

Command C :

Equivalent to one pushing on the C/F button. Return 32 bytes Only first 7 bytes is useful, it returns the command you send, 0x02 0x43 0x4F 0x4B 0x00 0x00 0x03 , 0x4F 0x4B means OK

Command K :

Return 32 bytes. For example, when sends command "K" to meter, it will return 32 bytes, first byte is 0x02, last byte is 0x03, 24th=0x35, 24th=0x32, 26th=0x30;

Command M :

Equivalent to one pushing on the MAX/MIN button. Return 32 bytes Only first 7 bytes is useful, it returns the command you send, 0x02 0x4D 0x4F 0x4B 0x00 0x00 0x03 , 0x4F 0x4B means OK

Command N :

Equivalent to one pushing and hold the MAX/MIN button for two seconds to exit MAX/MIN mode.

Return 32 bytes Only first 7 bytes is useful, it returns the command you send, 0x02 0x4E 0x4F 0x4B 0x00 0x00 0x03 , 0x4F 0x4B means OK

Command E :

Equivalent to one pushing on the REC button and no message is returned.

Command P :

Instead of returning all memory, it only return recorded data .

Command A : (Return 64 Byte)

1st BYTE

The first byte is the start byte , it value is 02.

2nd BYTE

bat_status
 3->3 cells
 2->2 cells
 1->1 cells
 0->empty

3rd BYTE

bit 0 1 -> display T1-T2
 bit 1 1-> recall mode
 bit 2 1->Table T1 displays the decimal point this time
 bit3: 1->Table T2 displays the decimal point this time
 bit4: 1->Table T3 displays the decimal point this time
 bit5: 1->Table T4 displays the decimal point this time
 bit6: 1->Table T1-T2 displays the decimal point this time
 bit7: 1->C 0->F

4th BYTE

bit 0 1 -> alarm
 bit 1 1-> reading exceed high alarm
 bit 2 1-> reading below low alarm
 bit3: 1->recording
 bit4: 1->memory is full
 bit5: 1->HOLD mode
 bit6: 1->MAX/MIN mode
 bit7: 1

5th BYTE

bit 0 1 -> MAX
 bit 1 1-> MIN
 bit 2 1-> AVG
 bit3: 1->MAX/MIN/AVG flash
 bit4: 1->
 bit5: 1->
 bit6: 1->
 bit7: 1

6th BYTE

0->K type
 1->J type
 2->E type
 3->T type

7th BYTE

bit 0 -> 1->T1_OL
 bit 1 -> 1->T2_OL
 bit 2 -> 1->T3_OL
 bit 3 -> 1->T4_OL
 bit 4 -> 1->T1_unplug
 bit 5 -> 1->T1_unplug
 bit 6 -> 1->T1_unplug
 bit 7 -> 1->T1_unplug

For example: 10th and 11th byte are 0x01 0x02 then T1 will be 0x0102 that is 258 in decimal , then divided by 10 , that is 25.8 degree

10th BYTE and **11th BYTE**: channel 1 Reading
12th BYTE and **13th BYTE**: channel 2 Reading
14th BYTE and **15th BYTE**: channel 3 Reading
16th BYTE and **17th BYTE**: channel 4 Reading
18th BYTE and **19th BYTE**: T1-T2

39~61 (38~60)lcd segment

62 N/A

63rd checksum BYTE(Not included start byte 02 , end byte 03)

64th BYTE

The last byte is the end byte , it value is 03, first and last byte are used to check frame error.