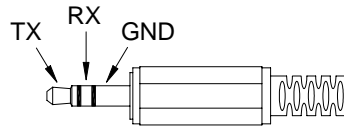


<b>B/N</b>	<b>CONRAD MODEL NO</b>	<b>CENTER MODEL NO</b>	<b>PROTOCOL VERSION</b>
100356	VOLTCRAFT 300K	CENTER 300	300-303Rs232Protocol
100357	VOLTCRAFT 302KJ/KJ202	CENTER 303	300-303Rs232Protocol
120585	VOLTCRAFT K204	CENTER 304	304-309Rs232Protocol
100567	VOLTCRAFT K204	CENTER 309	304-309Rs232Protocol
100359	VOLTCRAFT K202	CENTER 306	305-306Rs232Protocol

## 305-306Rs232Protocol

### 4.13 Digital Output:

The Digital Output is a 9600bps N 81 serial interface.  
 The RX is a 5V normal high input port.  
 The TX is a 5V normal high output port.



The command of Digital Output is list below:

RS232 command	Function	Remarks
K(ASC 4BH)	Ask for model No.	Return 4 bytes
A(ASC 41H)	Inquire all encoded data	Return encoded 10 byte
H(ASC 48H)	Hold button	
M(ASC 4DH)	MAX/MIN button	
N(ASC 4EH)	Exit MAX/MIN mode	
T(ASC 52H)	TIME button	
C(ASC 43H)	C/F button	
U(ASC 55H)	Dump all memory of thermometer	return 32768 bytes
P(ASC 50H)	Load recorded data	

- **Command K:**  
Return 4 bytes. For example, when sending command "K" to the meter, it will return "3","0","6", ASCII(13) .
- **Command U:**  
Return 32768 bytes .
- **Command P:**  
Instead of returning all 32768 bytes, it only return recorded data .
- **Command H:**  
Equivalent to one pushing on the HOLD button and no message is returned.
- **Command M:**  
Equivalent to one pushing on the MAX/MIN button and no message is returned.
- **Command N:**  
Equivalent to one pushing and hold the MAX/MIN button for two seconds to exit MAX/MIN mode.
- **Command T:**  
Equivalent to one pushing on the TIME button and no message is returned.
- **Command C:**  
Equivalent to one pushing on the °C/°F button and no message is returned.
- **Command A:**

#### **1<sup>nd</sup> BYTE:**

The first byte is the start byte , it value is 2.

#### **2<sup>nd</sup> BYTE:**

bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
C/F	Low Bat	Hold		TIME	MAX/MIN		REC

**bit 0:** 1→recording mode, 0→not recording

**bit 2 bit 1**

0	0	→normal mode
0	1	→MAXIMUM mode
1	0	→MINIMUM mode
1	1	→calculate MAX/MIN in background mode .

**bit3:** 1->Indicates the LCD is displaying time.

**bit4:** no use  
**bit5:** 1→ HOLD, 0→not HOLD  
**bit6:** 1→LOW BATTERY , 0→BATTERY NORMAL  
**bit7:** 1→°C 0→°F

**3<sup>th</sup> BYTE:**

bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
Auto Power Off	memory full	resolution	sign	OL	resolution	sign	OL

**bit0:** 1→T1 is OL, 0→not OL  
**bit1:** 1→T1 value is minus, 0→T1 value is plus.  
**bit2:** 1→4<sup>th</sup> byte and 5<sup>th</sup> byte represent #### , 0→4<sup>th</sup> byte and 5<sup>th</sup> byte represent ###.#  
**bit3:** 1→T2 is OL, 0→not OL  
**bit4:** 1→T2 value is minus, 0→T2 value is plus.  
**bit5:** 1→8<sup>th</sup> byte and 9<sup>th</sup> byte represent #### , 0→8<sup>th</sup> byte and 9<sup>th</sup> byte represent ###.#  
**bit6:** 1→Memory is full. 0→Memory is not full.  
**bit7:** 1→Auto power off enabled. 0→Auto power off disabled.

**4<sup>th</sup> BYTE:** first two BCD code of T1 value.

**5<sup>th</sup> BYTE:** last two BCD code of T1 value

**6<sup>th</sup> BYTE:**

If bit3 of 2<sup>nd</sup> BYTE =0 : first two BCD code of T1-T2 value.

If bit3 of 2<sup>nd</sup> BYTE =1 : two BCD code of month.

**7<sup>th</sup> BYTE:**

If bit3 of 2<sup>nd</sup> BYTE =0 : last two BCD code of T1-T2 value.

If bit3 of 2<sup>nd</sup> BYTE =1 : two BCD code of day.

**8<sup>th</sup> BYTE:**

If bit3 of 2<sup>nd</sup> BYTE =0 : first two BCD code of T2 value.

If bit3 of 2<sup>nd</sup> BYTE =1 : two BCD code of hour.

**9<sup>th</sup> BYTE:**

If bit3 of 2<sup>nd</sup> BYTE =0 : last two BCD code of T2 value.

If bit3 of 2<sup>nd</sup> BYTE =1 : two BCD code of minute.

**10<sup>th</sup> BYTE:** end byte, it value is 3, 1<sup>nd</sup> and 10<sup>th</sup> are used to check frame error.