

	VUV Communication Protocol	Issue date	2021.01.19
		Revision No.	Rev 1.0
		Page	1 / 2

1. Communication settings

- baudrate : 9600bps
- parity : none
- data bits : 8bit
- stop bit : 1

2. Command Format

Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13
ASCII	\$	P	C	,	C	M	D	,	A	*	Checksum	CR	LF	

3-1. Data Request [Equipment -> VUV]

Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13
ASCII	\$	Z	B	,	R	E	Q	,	A	*	Checksum	CR	LF	

Byte	Information	Byte	Comment	Remark
0	Start Code	1	\$	
1,2	ProductCode(Broadcasting)	2	ZB or U1	Response regardless of product family or product name
4,5,6	Command	3	REQ	Status information output
8	Address	1	1~16	1,2,3,4,5,6,7,8,9,A,B,C,D,E,F,G
9	End Code	1	*	
10,11	Check Sum	2		
12,13	Carriage Return, Line Feed	2	0x0D 0x0A	

Example) When the controller is set to the address 1

\$ZB,REQ,1*6F[CR][LF]

3-2. Data Receive [VUV -> Equipment]

Byte	0	1	2	3	4	5	6	7	8	9	10	11		
ASCII	\$	Z	B	,	A	,	Run Time					,		
Byte	12	13	14	15	16	17	18	19	20	21	22	23	24	25
ASCII	Arc Voltage		,	UV	,	Shutter	,	Alarm	*	Checksum	CR	LF		

Byte	Information	Byte	Comment	Remark
0	Start Code	1	\$	
1,2	ProductCode	2	U1	VUC-350 : U1
4	Address	1	1~16	1,2,3,4,5,6,7,8,9,A,B,C,D,E,F,G
6,7,8,9,10	Run Time	5	00000~99999 Hour	
12,13,14	Arc Voltage	3		
16	UV State	1	ON : 1, OFF : 0	UV ON/OFF status
18	Shutter State	1	ON : 1, OFF : 0	Shutter On/OFF status
20	Alarm State	1	Normal : 0 Abnormal : 1	"1" when an alarm occurs Abnormal status is when there is a shutter error, abnormal operation of lamp, or abnormal operation of VUV fan.
21	End Code	1	*	
22,23	Check Sum	2		
24,25	Carriage Return, Line Feed	2	0x0D 0x0A	

Example) When Driving time 0 hour, voltage 91V, UV ON, Shutter ON, Alarm Normal status

\$U1,1,00000,091,1,1,1,0*6D[CR][LF]

	VUV Communication Protocol	Issue date	2021.01.19
		Revision No.	Rev 1.0
		Page	2 / 2

4. Checksum Calculation

```

#include<stdio.h>
void main()
{
    char packet[] = "ZB,REQ,1", cksum = 0;
    int i, size = 0;
    while(packet[size] !='\0') size++;
    for(i = 0 ; i < size ; i++)
    {
        if(i == 0)
            cksum = packet[i];
        else
            cksum^= packet[i];
        //printf("packet[%d] = %c, checksum = %.2x\n", i, packet[i], cksum);
    }
    printf("Request : $ZB,REQ,1*%.2X",cksum); //Checksum character send by ASCII.
}

```