

Instruction Manual

SUNJE
Electrostatic

SXN-05T Communication

Eng

1 RS-485 Communication

1. Pin

- 24 Pin : RS-485(+)
- 25 Pin : RS-485(-)

2. Communication Spec.

- Baud : 9600
- Parity Bit : None
- Data Bit : 8
- Stop Bit : 1

2 Communication Protocol

Command Format		PC/PLC → SXN-05T Series												
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13
Code	\$	P	M	,	C	M	D	,	A	*	Checksum	CR	LF	

1. Data Request		PC/PLC → SXN-05T Series												
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13
Code	\$	P	M	,	R	E	Q	,	A	*	Checksum	CR	LF	

Byte	Information	Byte	Comment	Remarks
0	Start Code	1		
1	Product Type	1	Photo Type Ionizer	A : Photo
2	Ionizer Model	1	E : SXN-05T, F : SXN-052T, G : SXN-054T	
1, 2	Broadcasting	2	ZB	Response with all model
4, 5, 6	Command	3	REQ : Request, RUN : Run, STP : Stop	
8	Address	1	Photo : 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	Check Sum	
12, 13	Carriage Return, Line Feed	2		

1. SXN-05T

1.1 Data Receive		PC/PLC → SXN-05T												
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13
ASCII	\$	P	M	,	A	,	H/C	,	H/O	,	H/A	,	Head	
Byte	14	15	16	17	18	19	20	21	22	23	24	25	26	27
ASCII	Run Time				I/S	,	R/S	,	P/W	,	A/S	,	R/S	*
Byte	28	29	30	31										
ASCII	Checksum		CR	LF										

Byte	Information	Byte	Comment	Remarks
0	Start Code	1		
1	Product Type	1	Photo Type Ionizer	A : Photo
2	Ionizer Model	1	E : SXN-05T, F : SXN-052T, G : SXN-054T	
4	Address	1	Photo : 1 ~ 16	1,2,3,4,5,6,7,8,9,A,B,C,D,E,F,G
6	Head Connect	1	Normal : 1, Abnormal : 0	0: Head Not Con, 1: Head Con
8	Head Over Time	1	Normal : 0, Abnormal : 1	Abnormal when over time
10	Head Fail	1	Normal : 0, H/V Abnormal : 1, Over Current : 2, Comm Out : 3	Abnormal when head fails
12 ~ 16	Head Run Time	5	00000 ~ 99999 Hour	
18	Controller Interlock State	1	Normal : 1, Abnormal : 0	0: Interlock Off, 1: Interlock On
20	Controller Remote State	1		0: Remote Off, 1: Remote On
22	Controller Power State	1	Normal : 1, Abnormal : 0	0: Power Off, 1: Power On
24	Controller Alarm State	1	Normal : 0, H/V Abnormal : 1, Out Current : 2, Comm Over : 3	Abnormal if 1 or more head fail
26	Controller Run/Stop State	1	Run : 1, Stop : 0	
27	End Code	1		
28, 29	Check Sum	2	Check Sum	
30, 31	Carriage Return, Line Feed	2		

2. SXN-052T

1.2 Data Receive			PC/PLC ← SXN-052T												
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13	
ASCII	\$	P	M	,	A	,	H/C	,	H/O	,	H/A	,	Head		
Byte	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
ASCII	Run Time(1)			,	H/C	,	H/O	,	H/A	,	Head Run Time(2)				
Byte	28	29	30	31	32	33	34	35	36	37	38	39	40	41	
ASCII		,	I/S	,	R/S	,	P/W	,	A/S	,	R/S	*	Checksum		
Byte	42	43													
ASCII	CR	LF													

Byte	Information	Byte	Comment	Remarks
0	Start Code	1		
1	Product Type	1	Photo Type Ionizer	A : Photo
2	Ionizer Model	1	E : SXN-05T, F : SXN-052T, G : SXN-054T	
4	Address	1	Photo : 1 ~ 16	1,2,3,4,5,6,7,8,9,A,B,C,D,E,F,G
6	Head1 Connect	1	Normal : 1, Abnormal : 0	0: Head Not Con, 1: Head Con
8	Head1 Over Time	1	Normal : 0, Abnormal : 1	Abnormal when over time
10	Head1 Fail	1	Normal : 0, H/V Abnormal : 1, Over Current : 2, Comm Out : 3	Head Fail 시 Abnormal
12 ~ 16	Head1 Run Time	5	00000 ~ 99999 Hour	
18	Head2 Connect	1	Normal : 1, Abnormal : 0	0: Head Not Con, 1: Head Con
20	Head2 Over Time	1	Normal : 0, Abnormal : 1	Abnormal when over time
22	Head2 Fail	1	Normal : 0, H/V Abnormal : 1, Over Current : 2, Comm Out : 3	Abnormal when head fails
24 ~ 28	Head2 Run Time	5	00000 ~ 99999 Hour	
30	Controller Interlock State	1	Normal : 1, Abnormal : 0	0: Interlock Off, 1: Interlock On
32	Controller Remote State	1		0: Remote Off, 1: Remote On
34	Controller Power State	1	Normal : 1, Abnormal : 0	0: Power Off, 1: Power On
36	Controller Alarm State	1	Normal : 0, H/V Abnormal : 1, Over Current : 2, Comm Out : 3	Abnormal if 1 or more head fail
38	Controller Run/Stop State	1	Run : 1, Stop : 0	
39	End Code	1		
40, 41	Check Sum	2	Check Sum	
42, 43	Carriage Return, Line Feed	2		

3. SXN-054T

1.3 Data Receive		PC/PLC → SXN-054T												
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13
ASCII	\$	P	M	,	A	,	H/C	,	H/O	,	H/A	,	Head	
Byte	14	15	16	17	18	19	20	21	22	23	24	25	26	27
ASCII	Run Time(1)			,	H/C	,	H/O	,	H/A	,	Head Run Time(2)			
Byte	28	29	30	31	32	33	34	35	36	37	38	39	40	41
ASCII		,	H/C	,	H/O	,	H/A	,	Head Run Time(3)				,	
Byte	42	43	44	45	46	47	48	49	50	51	52	53	54	55
ASCII	H/C	,	H/O	,	H/A	,	Head Run Time(4)				,	I/S	,	
Byte	56	57	58	59	60	61	62	63	64	65	66	67		
ASCII	R/S	,	P/W	,	A/S	,	R/S	*	Checksum	RC	LF			

Byte	Information	Byte	Comment	Remarks
0	Start Code	1		
1	Product Type	1	Photo Type Ionizer	A : Photo
2	Ionizer Model	1	E : SXN-05T, F : SXN-052T, G : SXN-054T	
4	Address	1	Photo : 1 ~ 16	1,2,3,4,5,6,7,8,9,A,B,C,D,E,F,G
6	Head1 Connect	1	Normal : 1, Abnormal : 0	0: Head Not Con, 1: Head Con
8	Head1 Over Time	1	Normal : 0, Abnormal : 1	Abnormal when over time
10	Head1 Fail	1	Normal : 0, H/V Abnormal : 1, Out Current : 2, Comm Over : 3	Abnormal when head fails
12 ~ 16	Head1 Run Time	5	00000 ~ 99999 Hour	
18	Head2 Connect	1	Normal : 1, Abnormal : 0	0: Head Not Con, 1: Head Con
20	Head2 Over Time	1	Normal : 0, Abnormal : 1	Abnormal when over time
22	Head2 Fail	1	Normal : 0, H/V Abnormal : 1, Out Current : 2, Comm Over : 3	Abnormal when head fails
24 ~ 28	Head2 Run Time	5	00000 ~ 99999 Hour	
30	Head3 Connect	1	Normal : 1, Abnormal : 0	0: Head Not Con, 1: Head Con
32	Head3 Over Time	1	Normal : 0, Abnormal : 1	Abnormal when over time
34	Head3 Fail	1	Normal : 0, H/V Abnormal : 1, Out Current : 2, Comm Over : 3	Abnormal when head fails
36 ~ 40	Head3 Run Time	5	00000 ~ 99999 Hour	
42	Head4 Connect	1	Normal : 1, Abnormal : 0	0: Head Not Con, 1: Head Con
44	Head4 Over Time	1	Normal : 0, Abnormal : 1	Abnormal when over time
46	Head4 Fail	1	Normal : 0, H/V Abnormal : 1, Out Current : 2, Comm Over : 3	Abnormal when head fails
48 ~ 52	Head4 Run Time	5	00000 ~ 99999 Hour	
54	Controller Interlock State	1	Normal : 1, Abnormal : 0	0: Interlock Off, 1: Interlock On
56	Controller Remote State	1		0: Remote Off, 1: Remote On
58	Controller Power State	1	Normal : 1, Abnormal : 0	0: Power Off, 1: Power On
60	Controller Alarm State	1	Normal : 0, H/V Abnormal : 1, Out Current : 2, Comm Over : 3	Abnormal if 1 or more head fail
62	Controller Run/Stop State	1	Run : 1, Stop : 0	
63	End Code	1		
64, 65	Check Sum	2	Check Sum	
66, 67	Carriage Return, Line Feed	2		

2. Control [Run]		PC/PLC → SXN-05T Series												
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13
Code	\$	P	M	,	R	U	N	,	A	*	Checksum	CR	LF	

2. No Receive	PC/PLC → SXN-05T Series
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3. Control [Stop]		PC/PLC → SXN-05T Series												
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13
Code	\$	P	M	,	S	T	P	,	A	*	Checksum	CR	LF	

3. No Receive	PC/PLC → SXN-05T Series
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Checksum Calculation
\$ ~ * Calculation
#include<stdio.h>
void main()
{
char packet[] = "AG,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 : AG,REQ,1*% 2X", cksum); //Checksum character send by ASCII.
}

※ The checksum check is an exclusive-or operation of all data after the \$ character and before the * character.

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