

Instruction Manual

SUNJE
Electrostatic

SIB5S-C Communication



1 RS-485 Communication

1. Pin

- TRX+ (1)
- TRX- (2)

2. Communication Spec.

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

2 Communication Protocol

Command Format			통신장비 → SIB5S-C Series											
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13
ASCII	\$	P	M	,	C	M	D	,	A	*	Checksum		CR	LF

1. Data Request			통신장비 → SIB5S-C Series											
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13
ASCII	\$	P	M	,	R	E	Q	,	A	*	Checksum		CR	LF

Byte	Information	Byte	Comment	Remarks
0	Start Code	1		
1	Product Type	1	B : Bar Type Ionizer	A: Photo, B: Bar, C: Blower
2	Model Ionizer	1	B : SIB5S-C	
1, 2	Broadcasting	2	ZB	제품군, 제품명 상관없이 응답
4, 5, 6	Command	3	[REQ] / RQT / RUN / STB	
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	Checksum	
12, 13	Carriage Return, Line Feed	2	CR, LF	

1. Data Receive			통신장비 ← SIB5S-C Series											
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13
ASCII	\$	P	M	,	A	,	Frequency				,	Duty		,
Byte	14	15	16	17	18	19	20	21	22	23	24			
ASCII	Pulse		,	A/S	,	R/S	*	Checksum		CR	LF			

Byte	Information	Byte	Comment	Remarks
0	Start Code	1		
1	Product Type	1	B : Bar Type Ionizer	A : Photo, B : Bar, C : Blower
2	Model Ionizer	1	B : SIB5S-C Series	
4	Address	1	1,2,3,4,5,6,7,8,9,A,B,C,D,E,F,G	1 ~ 16
6, 7, 8	Frequency	3	200 ~ 300	10 단위 변경
10, 11, 12	Duty	3	30.0% ~ 70.0%	300 ~ 700 (소수점 제외 전송 ex. 50.2 => 502)
14, 15	Pulse Width	2	1 ~ 10	
17	Alarm State	1	0: Normal, 1: HV, 2: Arc, 3: Tip Clean	
19	Run/Stop State	1	1: Run, 0: Stop	
20	End Code	1	*	
21, 22	Check Sum	2	Checksum	
23, 24	Carriage Return, Line Feed	2	CR, LF	

2. DATA Request			통신장비 → SIB5S-C Series											
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13
ASCII	\$	P	M	,	R	Q	T	,	A	*	Checksum		CR	LF

Byte	Information	Byte	Comment	Remarks
0	Start Code	1		
1	Product Type	1	B : Bar Type Ionizer	A: Photo, B: Bar, C: Blower
2	Model Ionizer	1	B : SIB5S-C Series	
1, 2	Broadcasting	2	ZB	제품군, 제품명 상관없이 응답
4, 5, 6	Command	3	REQ / [RQT] / RUN / STP / STB	
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	Checksum	
12, 13	Carriage Return, Line Feed	2		

2. Data Receive			통신장비 ← SIB5S-C Series											
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13
ASCII	\$	P	M	,	A	,	R	Q	T	,	Frequency			,
Byte	14	15	16	17	18	19	20	21	22	23	24	25	26	27
ASCII	Duty			,	Pulse		,	A/S	,	R/S	*	Checksum		CR
Byte	28													
ASCII	LF													

Byte	Information	Byte	Comment	Remarks
0	Start Code	1		
1	Product Type	1	B : Bar Type Ionizer	A : Photo, B : Bar, C : Blower
2	Model Ionizer	1	B : SIB5S-C Series	
4	Address	1	1,2,3,4,5,6,7,8,9,A,B,C,D,E,F,G	1 ~ 16
6, 7, 8	Command	3	REQ / [RQT] / RUN / STP / STB	
10, 11, 12	Frequency	3	200 ~ 300	10 단위 변경
14, 15, 16	Duty	3	30.0% ~ 70.0%	300 ~ 700 (소수점 제외 전송 ex. 50.2 => 502)
18, 19	Pulse Width	2	1 ~ 10	
21	Alarm State	1	0: Normal, 1: HV, 2: Arc, 3: Tip Clean	
23	Run/Stop State	1	1: Run, 0: Stop	
24	End Code	1	*	
25, 26	Check Sum	2	Checksum	
27, 28	Carriage Return, Line Feed	2	CR, LF	

3. Control [Run]			통신장비 → SIB55-C Series											
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13
ASCII	\$	P	M	,	R	U	N	,	A	*	Checksum		CR	LF

3. Control [Run] Receive				통신장비 ← SIB55-C Series										
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13
ASCII	\$	P	M	,	A	,	R	U	N	*	Checksum		CR	LF

Byte	Information	Byte	Comment	Remarks
0	Start Code	1		
1	Product Type	1	B : Bar Type Ionizer	A: Photo, B: Bar, C: Blower
2	Model Ionizer	1	B : SIB55-C Series	
4	Address	1	1,2,3,4,5,6,7,8,9,A,B,C,D,E,F,G	1 ~ 16
6, 7, 8	Command	3	REQ / RQT / RUN / STP / STB	
9	End Code	1	*	
10, 11	Check Sum	2	Checksum	
12, 13	Carriage Return, Line Feed	2	CR, LF	

4. Control [Stop]			통신장비 → SIB55-C Series											
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13
ASCII	\$	P	M	,	S	T	P	,	A	*	Checksum		CR	LF

4. Control [Stop] Receive				통신장비 — SIB55-C Series											
Byte	0	1	2	3	4	5	6	7	8	9	10	11	12	13	
ASCII	\$	P	M	,	A	,	S	T	P	*	Checksum		CR	LF	

Byte	Information	Byte	Comment	Remarks
0	Start Code	1		
1	Product Type	1	B : Bar Type Ionizer	A: Photo, B: Bar, C: Blower
2	Model Ionizer	1	B : SIB55-C Series	
4	Address	1	1,2,3,4,5,6,7,8,9,A,B,C,D,E,F,G	1 ~ 16
6, 7, 8	Command	3	REQ / RQT / RUN / [STP] / STB	
9	End Code	1	*	
10, 11	Check Sum	2	Checksum	
12, 13	Carriage Return, Line Feed	2	CR, LF	

5. Control [STB]			통신장비 → SIB55-C Series										
Byte	0	1	2	3	4	5	6	7	8	9	10	11	
ASCII	\$	P	M	,	S	T	B	,	A	,	F	,	
Byte	12	13	14	15	16	17	18	19					
ASCII	Value			*	Checksum	CR	LF						

Byte	Information	Byte	Comment	Remarks
0	Start Code	1		
1	Product Type	1	B : Bar Type Ionizer	A: Photo, B: Bar, C: Blower
2	Model Ionizer	1	B : SIB55-C Series	
4, 5, 6	Command	3	REQ / RQT / RUN / STP / [STB]	
8	Address	1	1,2,3,4,5,6,7,8,9,A,B,C,D,E,F,G	1 ~ 16
10	Set Function	1	F, D, P	
12, 13, 14	Set Value	3	0 ~ 999	
15	End Code	1	*	
16, 17	Check Sum	2	Checksum	
18, 19	Carriage Return, Line Feed	2	CR, LF	

5. Control [STB] Receive				통신장비 ← SIB55-C Series									
Byte	0	1	2	3	4	5	6	7	8	9	10	11	
ASCII	\$	P	M	,	A	,	S	T	B	,	F	,	
Byte	12	13	14	15	16	17	18	19					
ASCII	Value			*	Checksum	CR	LF						

Byte	Information	Byte	Comment	Remarks
0	Start Code	1		
1	Product Type	1	B : Bar Type Ionizer	A: Photo, B: Bar, C: Blower
2	Model Ionizer	1	B : SIB55-C Series	
4	Address	1	1,2,3,4,5,6,7,8,9,A,B,C,D,E,F,G	1 ~ 16
6, 7, 8	Command	3	REQ / RQT / RUN / STP / [STB]	
10	Set Function	1	F, D, P	
12, 13, 14	Set Value	3	0 ~ 999	
15	End Code	1	*	
16, 17	Check Sum	2	Checksum	
18, 19	Carriage Return, Line Feed	2	CR, LF	

Set Function	Set Value
F	Frequency (200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300)
D	Duty (300 ~ 700) ex) 50.0 → 500 (1단위 변경 가능)
P	Pulse Width (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
R	RUN (1: On, 0: Off)

< 예시 > SIB55-C Series의 상태 요청													
Data Request		통신장비 → SIB55-C Series											
ASCII	\$	B	B	,	R	E	Q	,	1	*	7	7	CR LF

Data Receive			통신장비 ← SIB55-C Series											
ASCII	\$	B	B	,	1	,	2	6	0	,	5	0	0	,
ASCII	0	9	,	0	,	0	*	3	9	CR	LF			

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

※ Checksum 검사는 \$표시 이후부터 *표시 전까지의 모든 데이터를 Exclusive-or 연산한 것입니다.

SUNJE Electrostatics

www.sunstat.com

┃ (주) 선재하이테크 본사
부산광역시 기장군 일광면 청광길 8
T) 051-720-7500 F) 051-720-7501

┃ Sunje Japan Co., Ltd.
Dai 7 Matsuya Bldg 10F 1005 2-23, Honmachi-bashi,
Chuo-ku, Osaka, Japan
T) +81-6-6949-5001 F) +81-6-6949-5011

┃ 영업본부
경기도 오산시 내삼미동 795
T) 031-203-9034 F) 031-202-9034

┃ Sunje (SHANGHAI) Trading Co., Ltd.
Block C, 4F, No.482, Hongxu Road, Minhang District,
Shanghai, China
T) +86-21-5433-9761 F) +86-21-5433-9762

고객센터 070-7714-9033
영업상담 031-203-9034

┃ Sunje Technology Co., Ltd.
2F, No.6, Lane.102, Sinhe Rd, Sinfong Township,
Hsinchu County, Taiwan 30472
T) +886-3-568-7891 F) +886-3-568-7950