

ST6553MD-R1

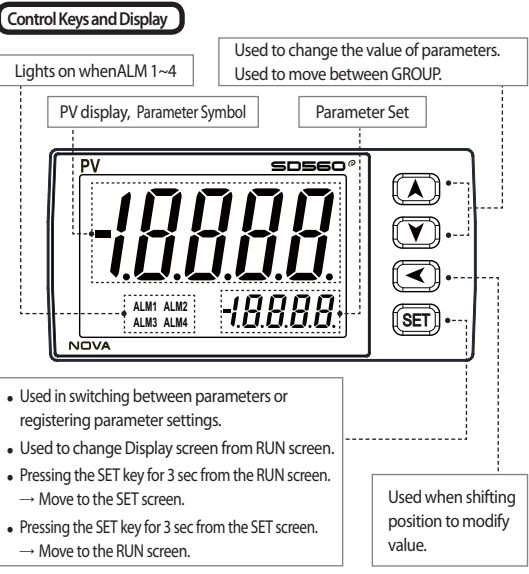
Safety Guide

The following safety symbols are used in this manual.

CAUTION If this symbol is marked on the product, the operator must investigate the explanation given in this manual to protect injury or death to personnel or damage to instrument.

CAUTION

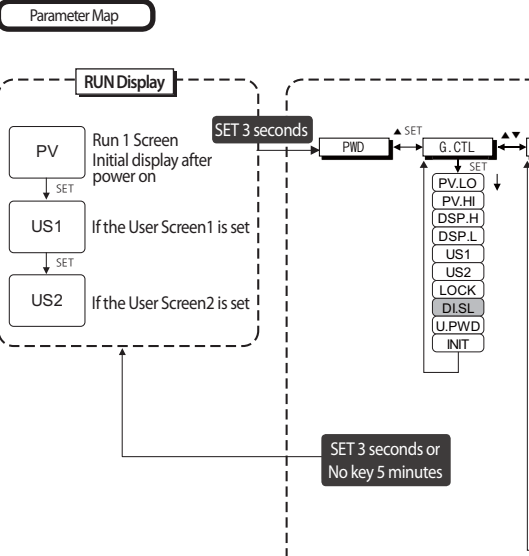
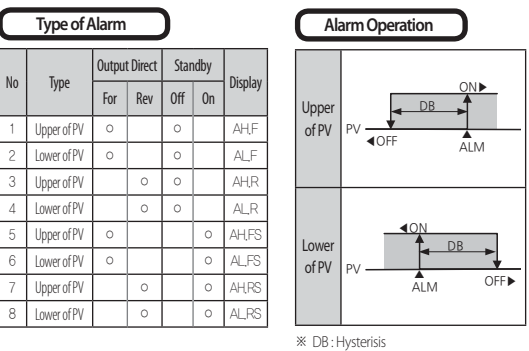
- Be sure to operate the controller installed on a panel to prevent electric shock.
- Keep the input circuit wiring as far as possible away from power and ground circuit.
- Do not mount front panel facing downward.
- To prevent electric shock, be sure to turn off and the source circuit breaker before wiring.
- The power consumptions are 100~240V AC, 50/60Hz, 10VA Max and operate without power switching in advance. (DC Power: 24V DC, 4.1VA Max)
- No work in wet hands(It caused electric shock)
- Refer the way of grounding connection, however, keep away for grounding to Gas pipe, water pipe, lightning rod etc. No magnetic disturbances are caused.
- Use the product in a place in 10~50% (close to the maximum 40℃ during installation), 20~90% RH (no condensation).



Type of Input Sensor

No.	TYPE	Temp.Range(°C)	Temp.Range(°F)	Group	DISP	
1	K1	-200 ~ 1370	-300 ~ 2500	T/C	TC,K1	
2	K2	-200.0 ~ 1370.0	-300.0 ~ 1900.0		TC,K2	
3	J	-200.0 ~ 1200.0	-300.0 ~ 1900.0		TC,J	
4	E	-200.0 ~ 1000.0	-300.0 ~ 1800.0		TC,E	
5	T	-200.0 ~ 400.0	-300.0 ~ 750.0		TC,T	
6	R	0.0 ~ 1700.0	32 ~ 3100		TC,R	
7	B	0.0 ~ 1800.0	32 ~ 3300		TC,B	
8	S	0.0 ~ 1700.0	32 ~ 3100		TC,S	
9	L	-200.0 ~ 900.0	-300 ~ 1600		TC,L	
10	N	-200.0 ~ 1300.0	-300 ~ 2400		TC,N	
11	U	-200.0 ~ 400.0	-300.0 ~ 750.0	TC,U		
12	W	0 ~ 2300	32 ~ 4200	TC,W		
13	Pt100 I	0.0 ~ 1390.0	32 ~ 2500	RTD	TC,PL	
14	C	0 ~ 2320	32 ~ 4200		TC,C	
15	PTA	-200.0 ~ 850.0	-300.0 ~ 1560.0		PTA	
16	PTB	-200.0 ~ 500.0	-300.0 ~ 1000.0		PTB	
17	PTC	-50.00 ~ 150.00	-148.0 ~ 300.0		PTC	
18	PTD	-200 ~ 850	-300 ~ 1560		PTD	
19	JPTA	-200.0 ~ 500.0	-300.0 ~ 1000.0		JPTA	
20	JPTB	-50.00 ~ 150.00	-148.0 ~ 300.0		JPTB	
21	0.4 ~ 2.0V	0.400 ~ 2.000V(-10000 ~ 19999)			DCV	2V
22	1 ~ 5V	1.000 ~ 5.000V(-10000 ~ 19999)				5V
23	0 ~ 10V	0.00 ~ 10.00V(-10000 ~ 19999)		10V		
24	-10 ~ 20mV	-10.00 ~ 20.00mV(-10000 ~ 19999)		20mV		
25	0 ~ 100mV	0.0 ~ 100.0mV(-10000 ~ 19999)		100mV		

* Display range : -5% ~ +105%



Parameter Table

Symbol	Parameter	Setting Range	Unit	Initial	Remark
PV.LO	PV low Value	EU(-5.0 ~ 105.0%)	EU	EU(100.0%)	Always
PV.HI	PV high Value	EU(-5.0 ~ 105.0%)	EU	EU(0.0%)	Always
DSP.H	Display high limit	EU(-5.0 ~ 105.0%) (DSP.L (DSP.H))	EU	EU(105.0%)	Always
DSP.L	Display low limit	EU(-5.0 ~ 105.0%) (DSP.L (DSP.H))	EU	EU(-5.0%)	Always
US1	User screen	OFF, D-Register NO. (1~1299)	ABS	OFF	Always
US2	User screen	OFF, D-Register NO. (1~1299)	ABS	OFF	Always
LOCK	Key lock	OFF, ON	ABS	OFF	Always
DI.SL	DI selection	OFF, 1, 2	ABS	OFF	DI Option
UP.WD	User password	0 ~ 9999	ABS	0	Always
INIT	Parameter initialization	OFF, ON	ABS	OFF	Always

G.IN(Input group)

Symbol	Parameter	Setting Range	Unit	Initial	Remark
IN-T	Input sensor type	Refer to Type of Input Sensor	ABS	TC,K1	Always
IN-U	Input unit	℃, ℉	ABS	℃	IN-T = TC or RTD
IN.RH	Input range high	Refer to Type of Input Sensor (IN.RH) IN.RL)	EU	EU(100.0%)	Always
IN.RL	Input range low		EU	EU(0.0%)	Always
IN.DP	Input dot position	0 ~ 3	ABS	1	IN-T = DCV
IN.SH	Input scale high	-10000 ~ 19999 (IN.SH) IN.SL)	ABS	100.0	IN-T = DCV
IN.SL	Input scale low		ABS	0.0	IN-T = DCV
IN.FL	Input sensor filter	OFF, 1 ~ 120	ABS	OFF	Always
D.FL	Display filter	OFF, 1 ~ 120	ABS	OFF	Always
B.SL	Burnout select	OFF, UP, DOWN	ABS	UP	Always
R.SL	RJC select	OFF, ON	ABS	ON	IN-T = TC
AL.BS	All bias value	EUS(-100.0 ~ 100.0%)	EUS	EUS(0.0%)	Always
BS.P1	Reference bias point 1	EU(0.0 ~ 100.0%) IN.RL ≤ BS.P1 ≤ BS.P2 ≤ BS.P3 ≤ IN.RH	EU	EU(100.0%)	Always
BS.P2	Reference bias point 2		EU	EU(100.0%)	Always
BS.P3	Reference bias point 3		EU	EU(100.0%)	Always
BS0	Bias value for IN.RL point		EUS(-100.0 ~ 100.0%)	EUS	EUS(0.0%)
BS1	Bias value for BS.P1 point	EUS(-100.0 ~ 100.0%)	EUS	EUS(0.0%)	Always
BS2	Bias value for BS.P2 point	EUS(-100.0 ~ 100.0%)	EUS	EUS(0.0%)	Always
BS3	Bias value for BS.P3 point	EUS(-100.0 ~ 100.0%)	EUS	EUS(0.0%)	Always
BS4	Bias value for IN.RH point	EUS(-100.0 ~ 100.0%)	EUS	EUS(0.0%)	Always

G.ALM(Alarm group)

Symbol	Parameter	Setting Range	Unit	Initial	Remark
ALT1	Alarm 1 type	Refer to Type of Alarm	ABS	AH-F	Always
AL1	Alarm 1 set value	EU(-100.0 ~ 100.0%)	EU	EU(100.0%)	Always
A1.DB	Alarm 1 hysteresis value	EUS(0.0 ~ 100.0%)	EUS	EUS(0.5%)	Always
A1.DY	Alarm 1 delay time	0.00 ~ 99.99 mm:ss	TIME	0 sec	Always
ALT2	Alarm 2 type	Refer to Type of Alarm	ABS	AH-F	Always
AL2	Alarm 2 set value	EU(-100.0 ~ 100.0%)	EU	EU(100.0%)	Always
A2.DB	Alarm 2 hysteresis value	EUS(0.0 ~ 100.0%)	EUS	EUS(0.5%)	Always
A2.DY	Alarm 2 delay time	0.00 ~ 99.99 mm:ss	TIME	0 sec	Always
ALT3	Alarm 3 type	Refer to Type of Alarm	ABS	AH-F	Always
AL3	Alarm 3 set value	EU(-100.0 ~ 100.0%)	EU	EU(100.0%)	Always
A3.DB	Alarm 3 hysteresis value	EUS(0.0 ~ 100.0%)	EUS	EUS(0.5%)	Always
A3.DY	Alarm 3 delay time	0.00 ~ 99.99 mm:ss	TIME	0 sec	Always
ALT4	Alarm 4 type	Refer to Type of Alarm	ABS	AH-F	Always
AL4	Alarm 4 set value	EU(-100.0 ~ 100.0%)	EU	EU(100.0%)	Always
A4.DB	Alarm 4 hysteresis value	EUS(0.0 ~ 100.0%)	EUS	EUS(0.5%)	Always
A4.DY	Alarm 4 delay time	0.00 ~ 99.99 mm:ss	TIME	0 sec	Always

G.RET(Retransmission group)

Symbol	Parameter	Setting Range	Unit	Initial	Remark
RET.T	Retransmission type	LPS, PV	ABS	PV	Always
RET.H	Retransmission high limit	TC, RTD : IN.RL ~ IN.RH DCV : IN.SL ~ IN.SH	EU	IN.RH (TC,RTD) IN.SH (DCV)	Always
RET.L	Retransmission low limit	(RET.L (RET.H))	EU		Always

G.COM(Communication group)

Symbol	Parameter	Setting Range	Unit	Initial	Remark
COMP	Communication protocol	PCC0, PCC1, MBS.A, MBS.R, P.OMR, P.MIT, P.LG, P.YKO, P.KEN, P.SIE	ABS	PCC1	Option
BAUD	Baud rate	9600, 19.2K, 38.4K, 57.6K, 115.2K	ABS	38.4K	Option
PRTY	Parity	NONE, EVEN, ODD	ABS	NONE	Option
S.BIT	Stop bit	1, 2	ABS	1	Option
D.LEN	Data length	7, 8	ABS	8	Option and COMP = PCC0, PCC1
ADDR	Address	1 ~ 99 (Max 31 can connect)	ABS	1	Option
RPTM	Response time	0 ~ 10 (x10ms)	ABS	0	Option

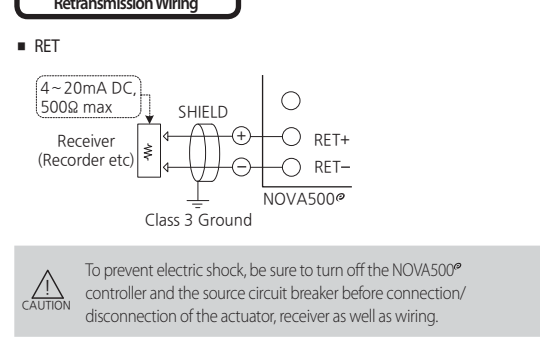
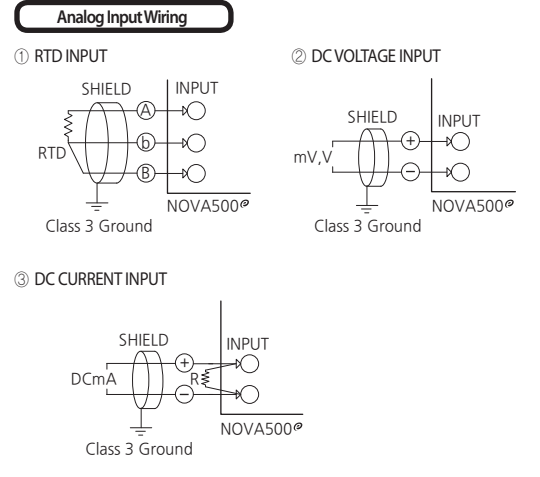
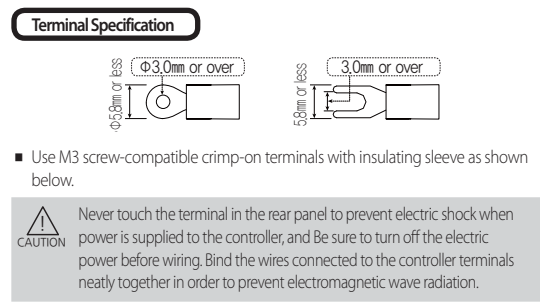
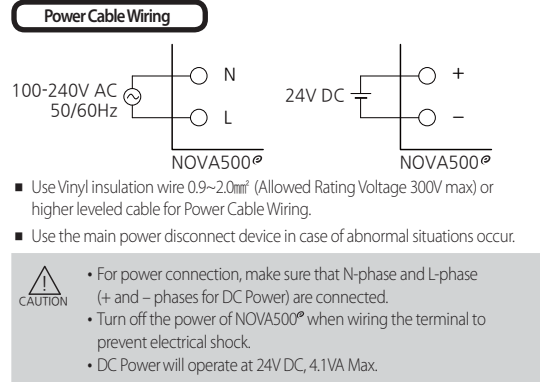
* For the communication settings to apply, turn off and on device

G.PLC(PLC group)

Symbol	Parameter	Setting Range	Unit	Initial	Remark
SW.TM	Send delay time	0~50	ABS	10	COMP = PLC
RW.TM	Receive delay time	500~1000	ABS	1000	COMP = PLC
MU.NO	Max number of connections	1~31	ABS	1	COMP = PLC
R.TYP	Register type	0~3	ABS	0	COMP = PLC
S.ADR	Start address	0~FFFF	ABS	03E8	COMP = PLC
MAPS	Data map select	MAS.M, LOC.M	ABS	MAS.M	COMP = PLC
RO.01	Read address 01	OFF, 0~200	ABS	151	COMP = PLC
⋮	⋮	⋮	⋮	⋮	⋮
RO.13	Read address 13	OFF, 0~200	ABS	OFF	COMP = PLC
RW.01	Write address 01	OFF, 0~150	ABS	1	COMP = PLC
⋮	⋮	⋮	⋮	⋮	⋮
RW.15	Write address 15	OFF, 0~150	ABS	OFF	COMP = PLC

G.NPL(Now PLC Read group)

Symbol	Parameter	Setting Range	Unit	Initial	Remark
N.SWT	Now send delay time	Reading area	ABS	0	COMP = PLC
N.RWT	Now receive delay time	Reading area	ABS	0	COMP = PLC
N.RTY	Now register type	Reading area	ABS	0	COMP = PLC
N.SAD	Now start address	Reading area	ABS	0	COMP = PLC
N.O01	Now read address 01	Reading area	ABS	OFF	COMP = PLC
⋮	⋮	⋮	⋮	⋮	⋮
N.O13	Now read address 13	Reading area	ABS	OFF	COMP = PLC
N.W01	Now write address 01	Reading area	ABS	OFF	COMP = PLC
⋮	⋮	⋮	⋮	⋮	⋮
N.W15	Now write address 15	Reading area	ABS	OFF	COMP = PLC

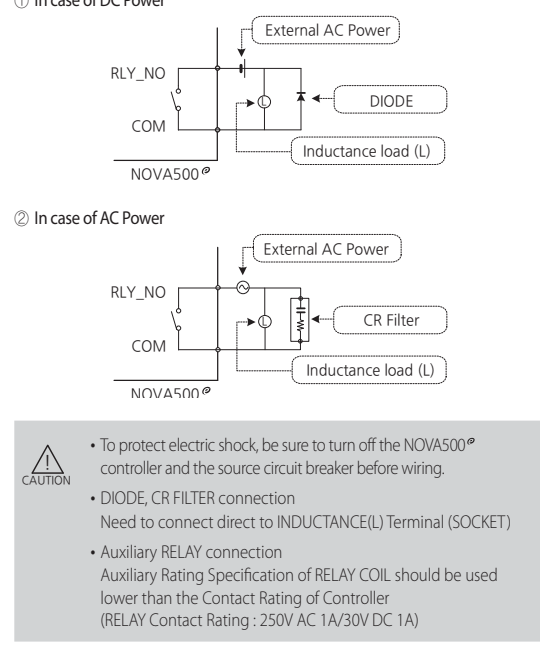


External Contact Output Wiring

- When using an auxiliary relay or inductance load (L) such as solenoid, be sure to insert a CR filter(for AC) or diode (for DC) in parallel as a surge-suppressor circuit to reject sparks, preventing malfunction or damage.

Recommended CR FILTER

- ▶ Seong Hoo Electronics : BSE104R120 25V (0.1μ+120Ω)
- ▶ HANA PARTS CO. : HN2EAC
- ▶ Songmi Electric Co.,Ltd. : CR UNIT 953, 955 etc
- ▶ Jiwo Electric Co.,Ltd. : SKV, SKVB etc
- ▶ Shinyoung Communications Co.,Ltd. : CR-CFS, CR-U etc



Display Error and Correction

Display ERROR	ERROR Contents	Correction
ESYS	EEPROM, DATA Loss	Ask repair
ERJC	RJC SENSOR Failure	Ask repair
Flash Decimal point of Parameter	Communication Failure	Comm Cable CHECK
S.OPN	SENSOR Open	SENSOR CHECK

