JENIX

JM Counter

INDICATOR FOR LINEAR GAUGE

English Manual

VER 2.6

V26-260212

DONG SAHN JENIX CO., LTD.

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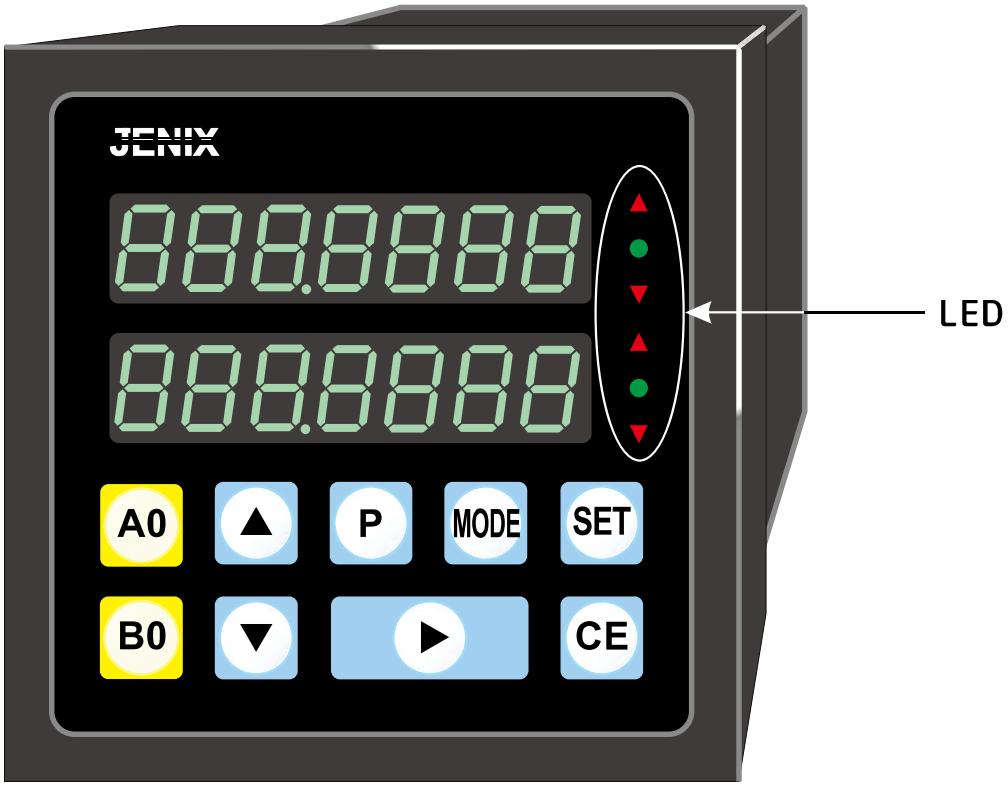
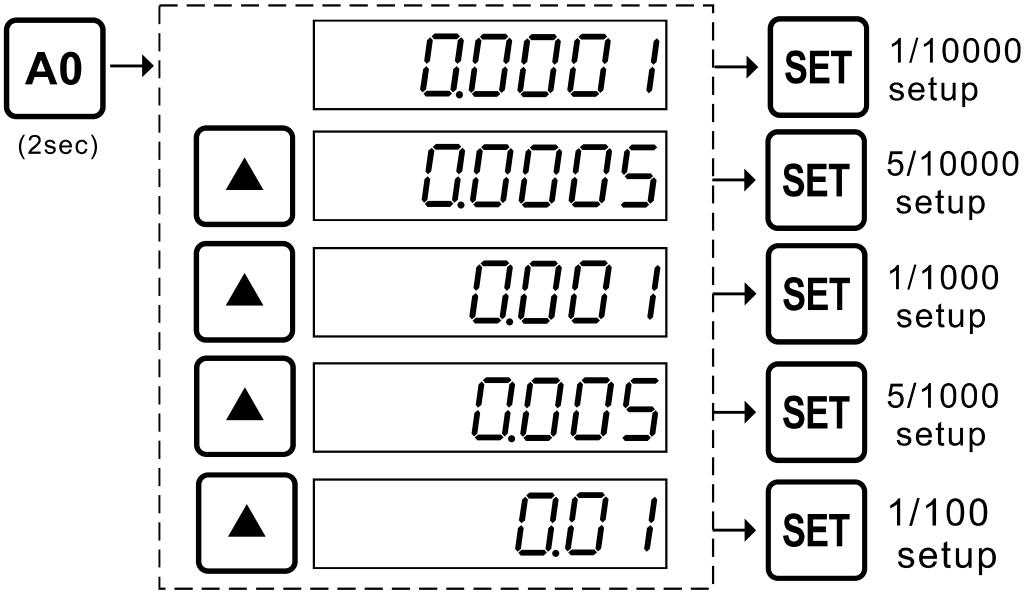


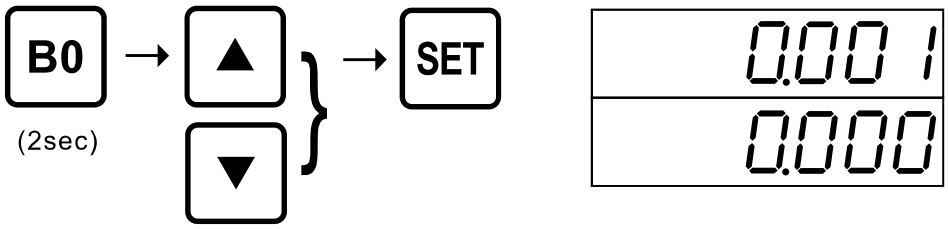
Keys	Summary
A0 B0	Reset A or B channel to zero
▲ ▼	Set up upper / lower limit or input numbers
P	Select or move the “PRESET”
▶	Renewal or move in HOLD mode
SET	Set up details or complete setup
MODE	Select Present value, Maximum value, Minimum value or P-P value measuring modes.
CE	Cancel
LED	It shows whether it is normal by comparing the displayed value with the set upper/lower limit values. ▲:Exceeded upper limit ●:Normal ▼:Below the lower limit

Function	How to input
A channel Zero Setting	A0 0.000 0.635
B channel Zero Setting	B0 0.505 0.000
A channel Resolution setup	A0 (2sec) → ▲ / ▼ → SET 0.001 0.000

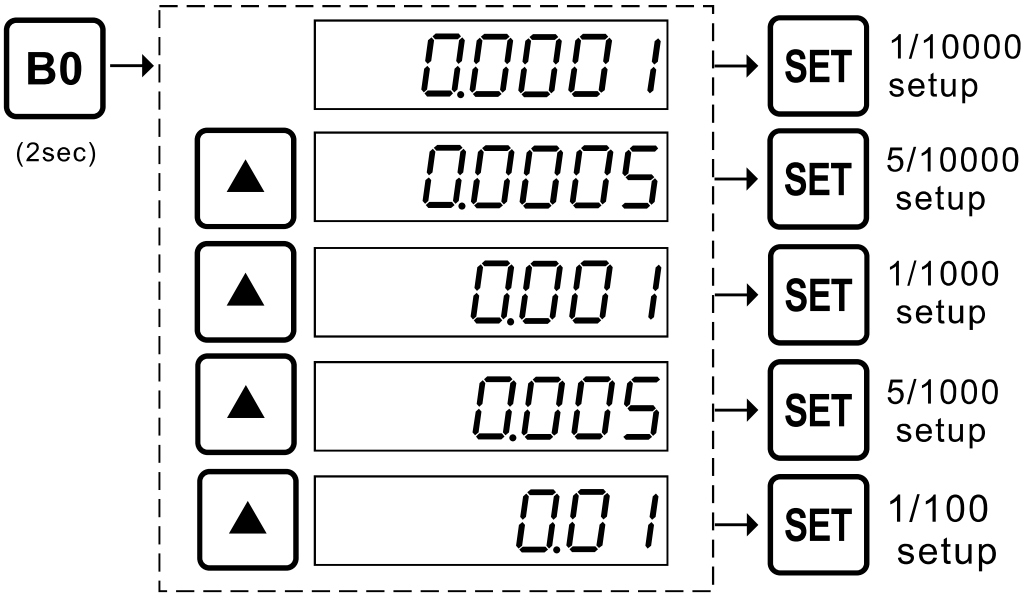
By using these keys ▲ / ▼, try changing resolutions.

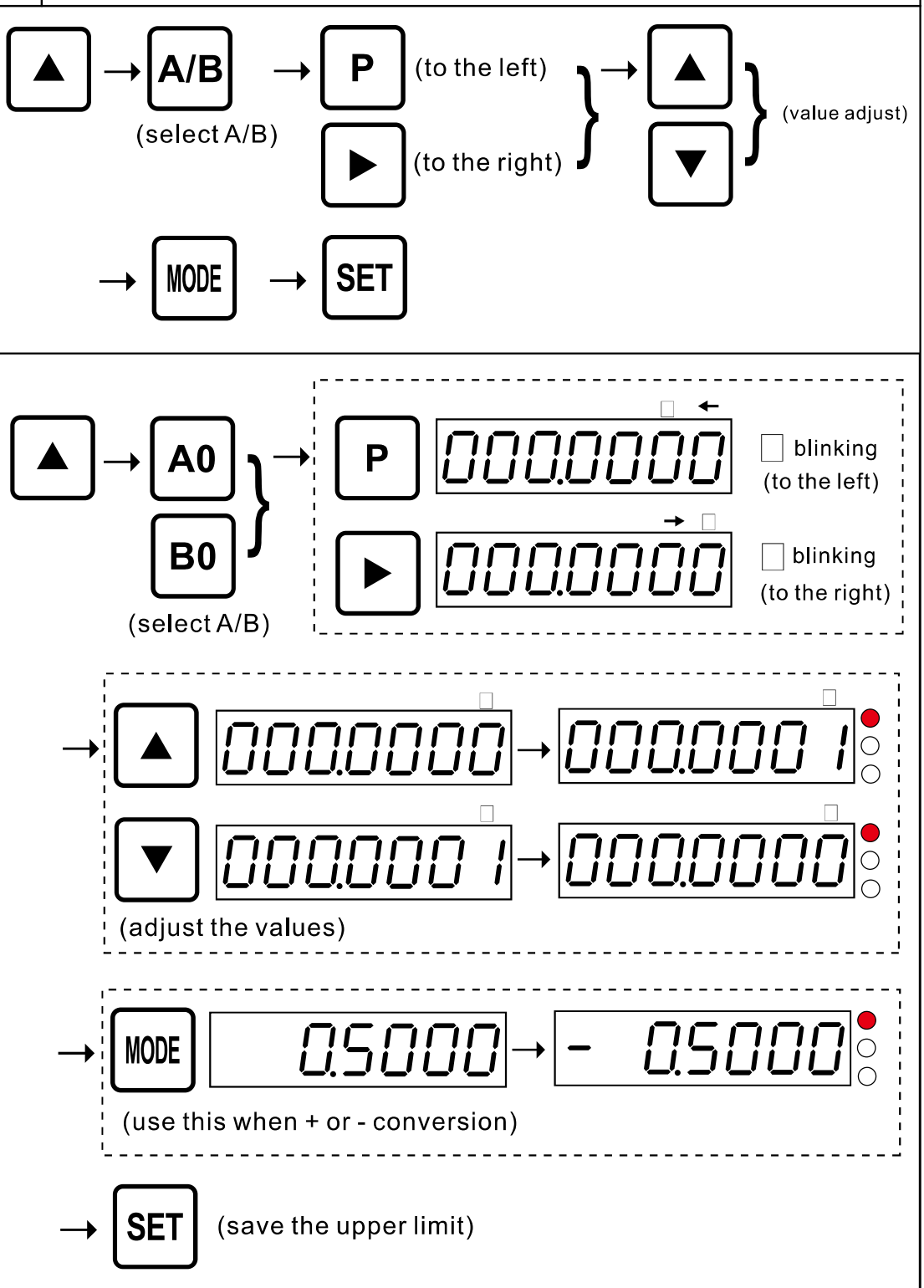
Resolution	Display
1	1
5/10	0.5
1/10	0.1
5/100	0.05
1/100	0.01
5/1000	0.005
1/1000	0.001
5/10000	0.0005
1/10000	0.0001

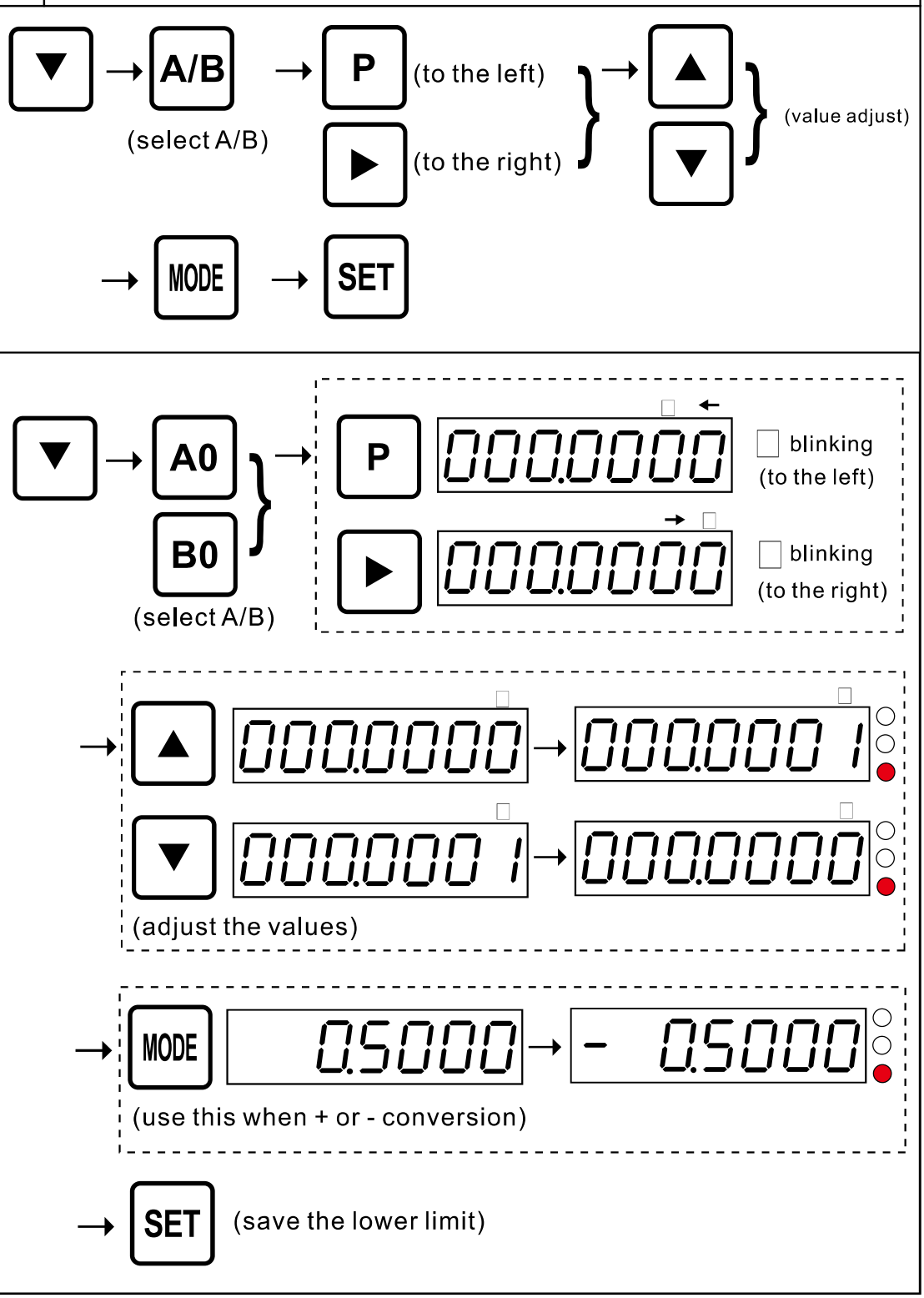


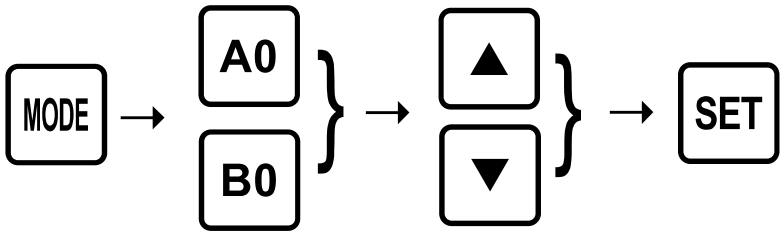
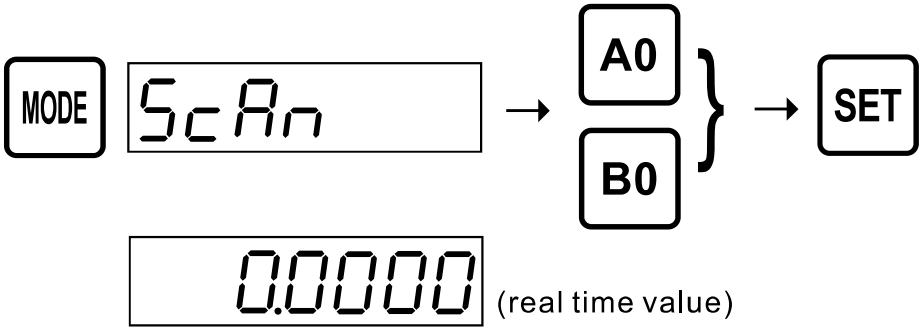
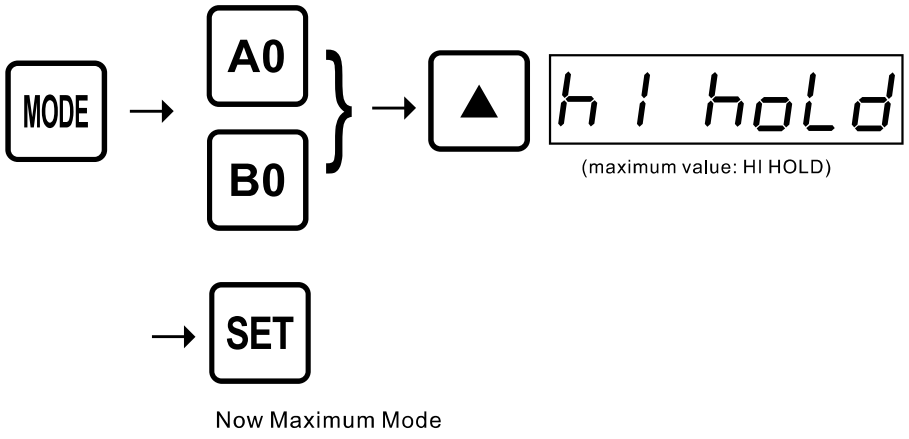
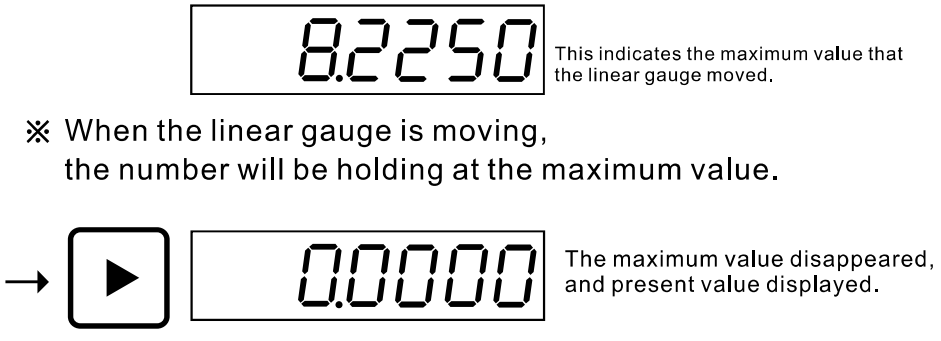
Function	How to input
B channel Resolution setup	
	By using these keys ▲ ▼ , try changing resolutions.

Resolution	Display
1	1
5/10	0.5
1/10	0.1
5/100	0.05
1/100	0.01
5/1000	0.005
1/1000	0.001
5/10000	0.0005
1/10000	0.0001

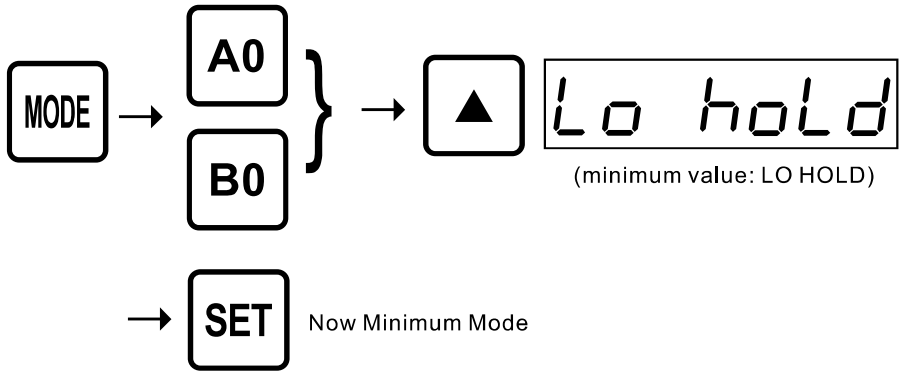


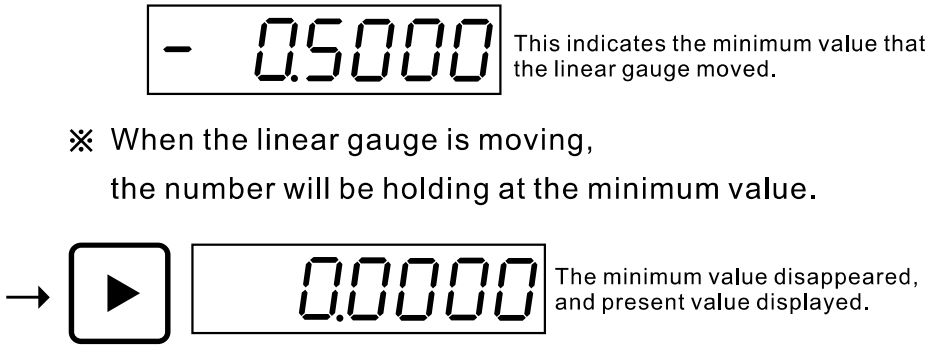
Function	How to input
Upper limit setup	

Function	How to input
Lower limit setup	

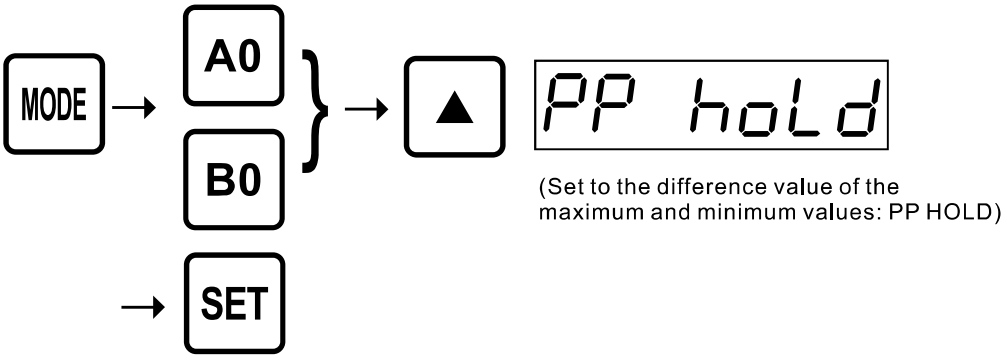
Function	How to input
Mode setup	
	1. Present value setup
	
	2. Maximum value setup
	
	

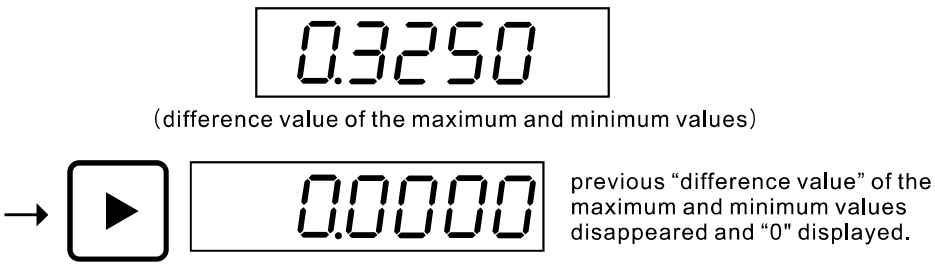
Function	How to input
	3. Minimum value setup

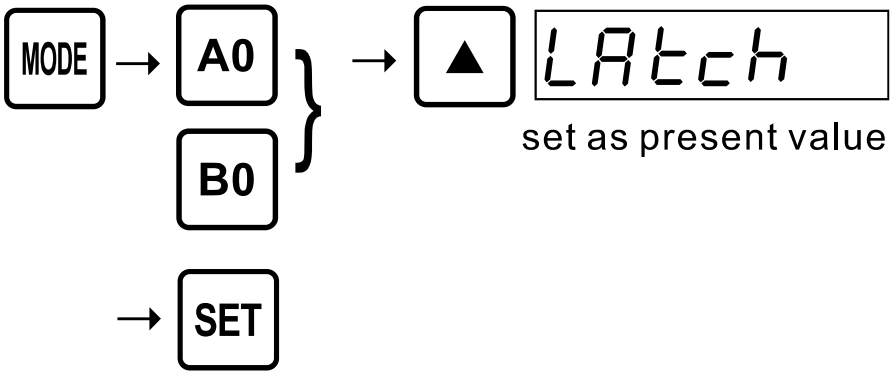
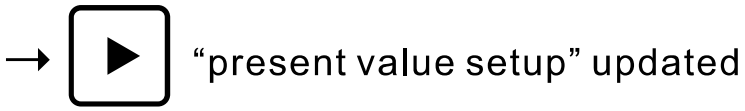


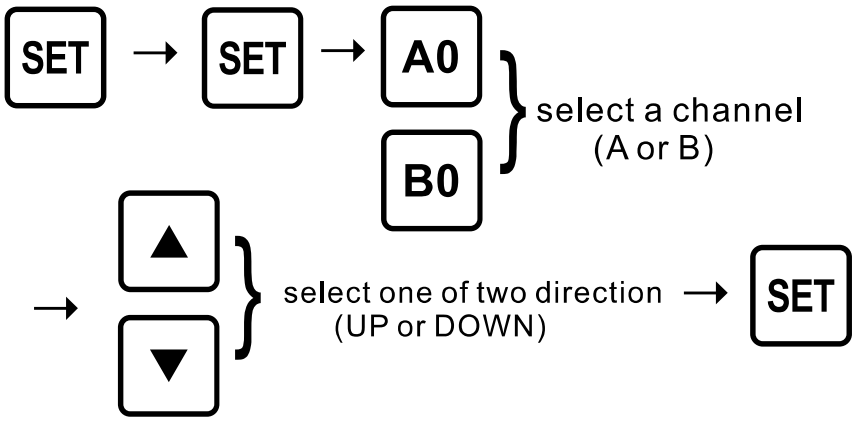
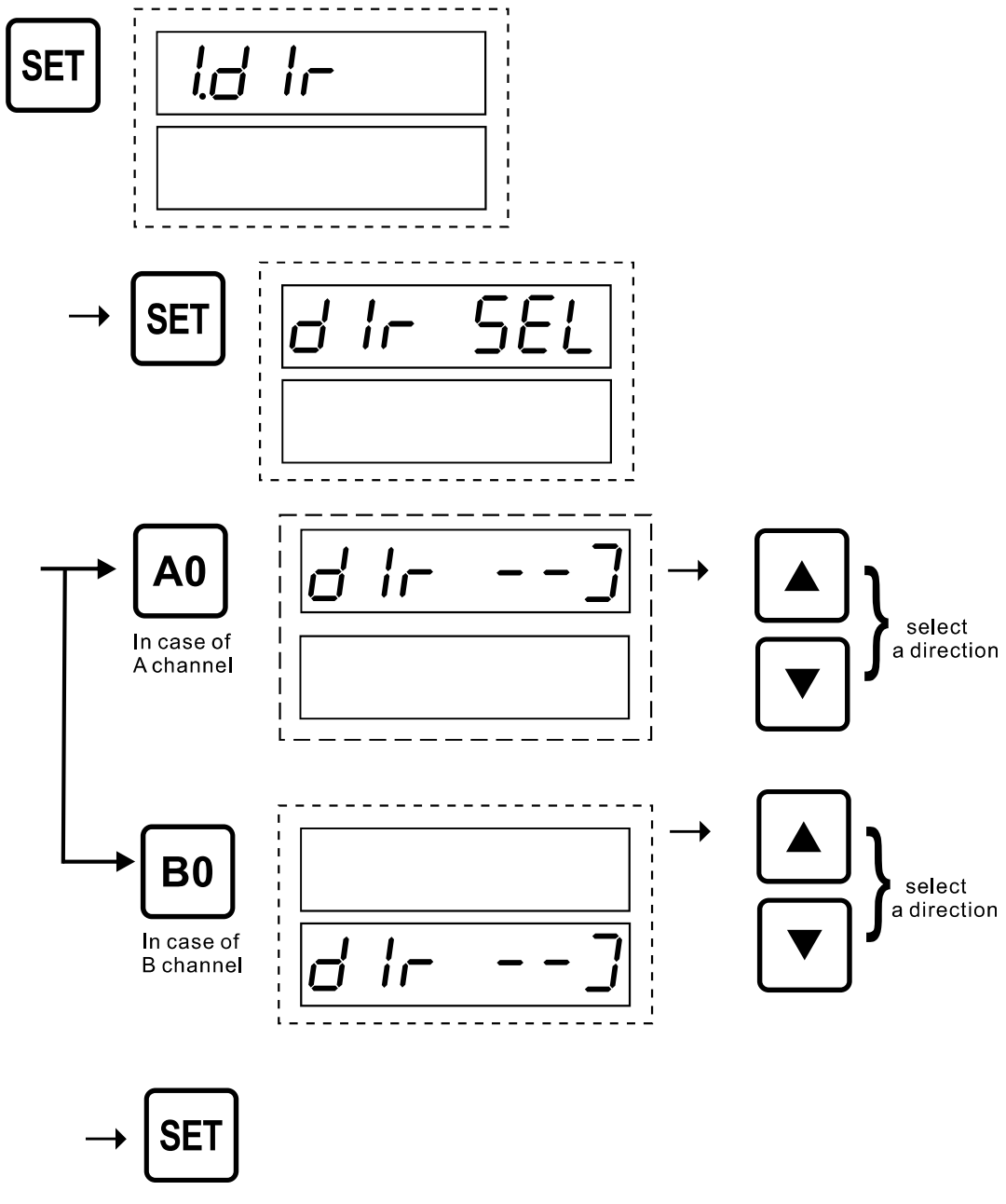


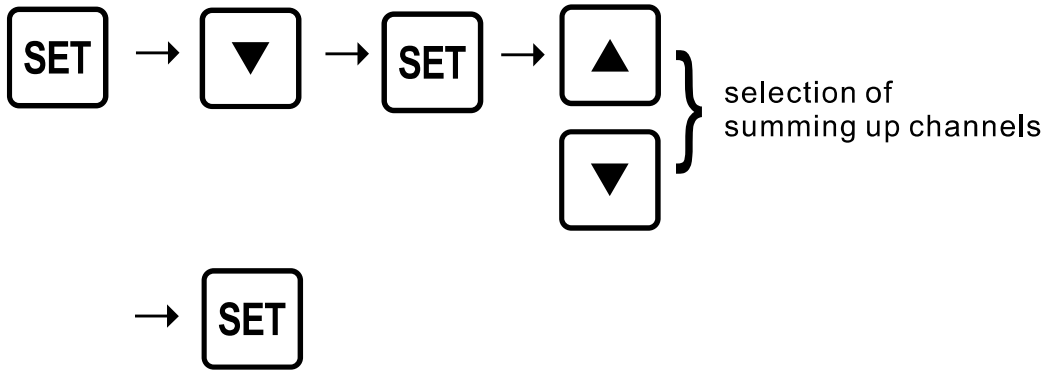
	4. P-P setup



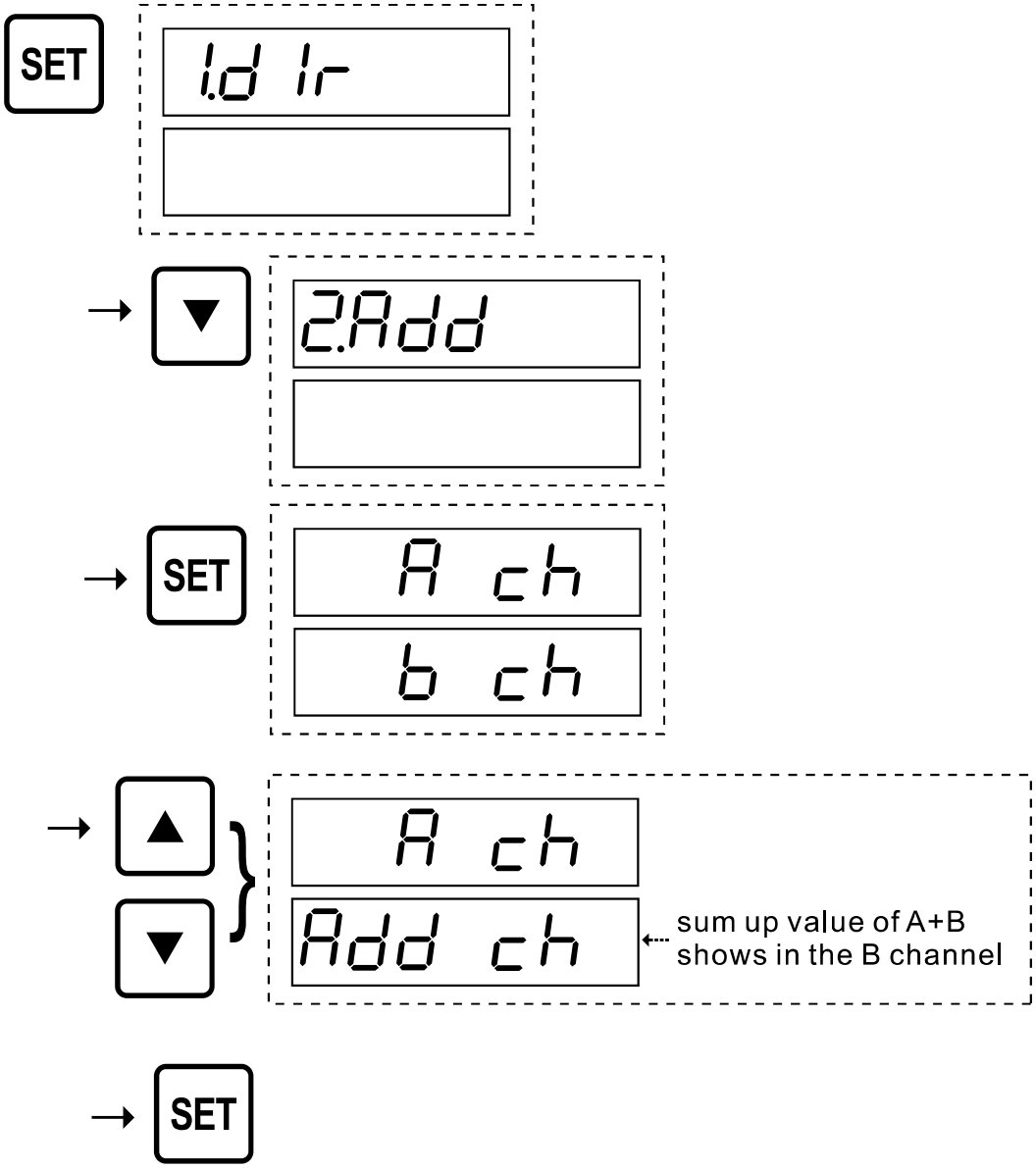


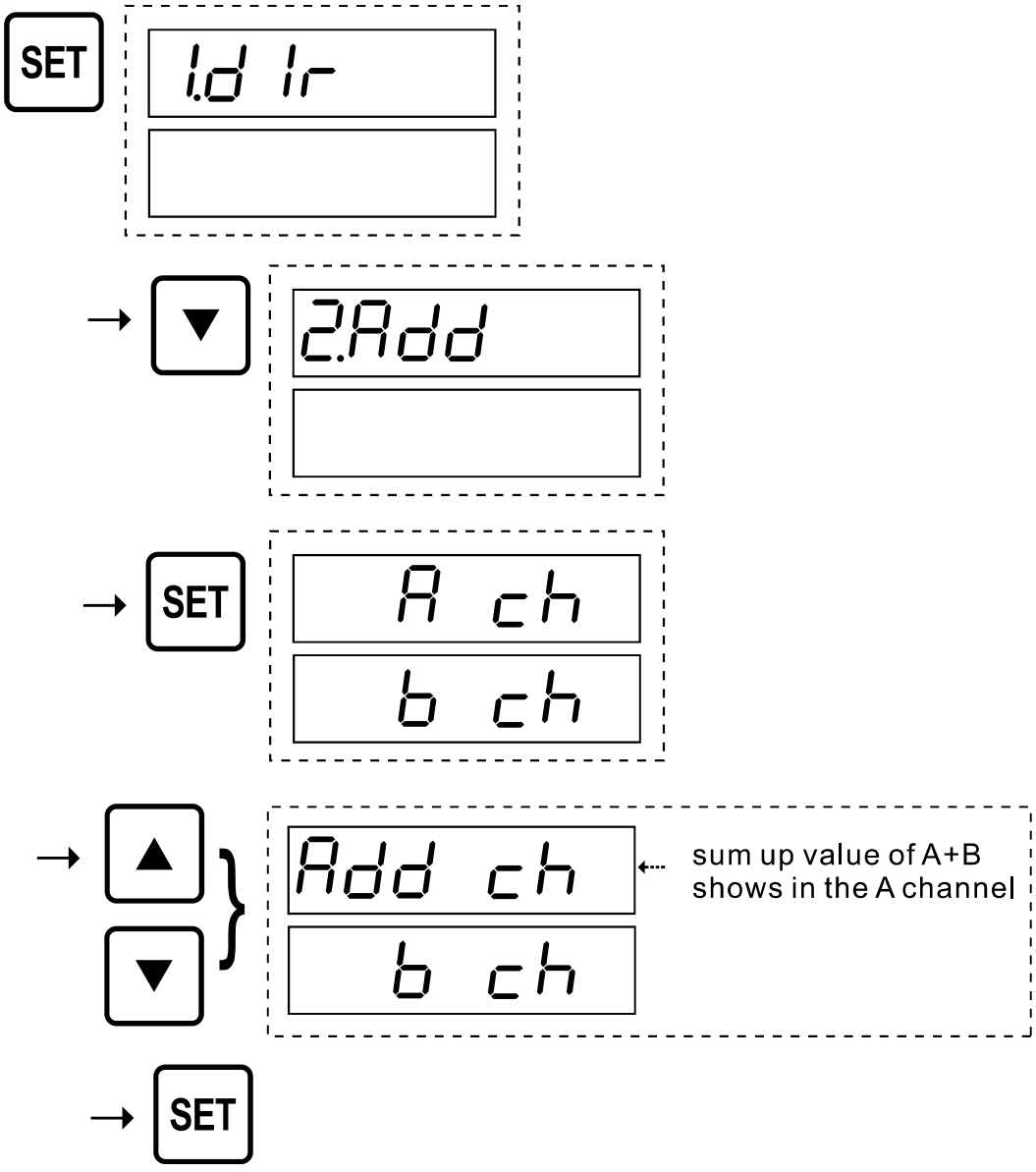
Function	How to input
	5. LATCH setup
	
	

Function	How to input
Process Direction Changing	
	

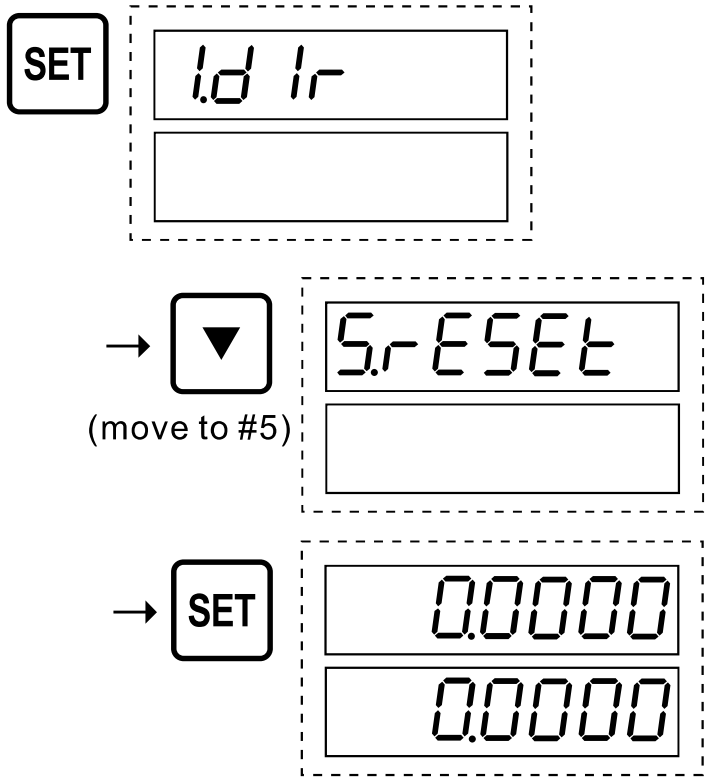
Function	How to input
Summing up function	

1. Display A+B sum up value at B channel



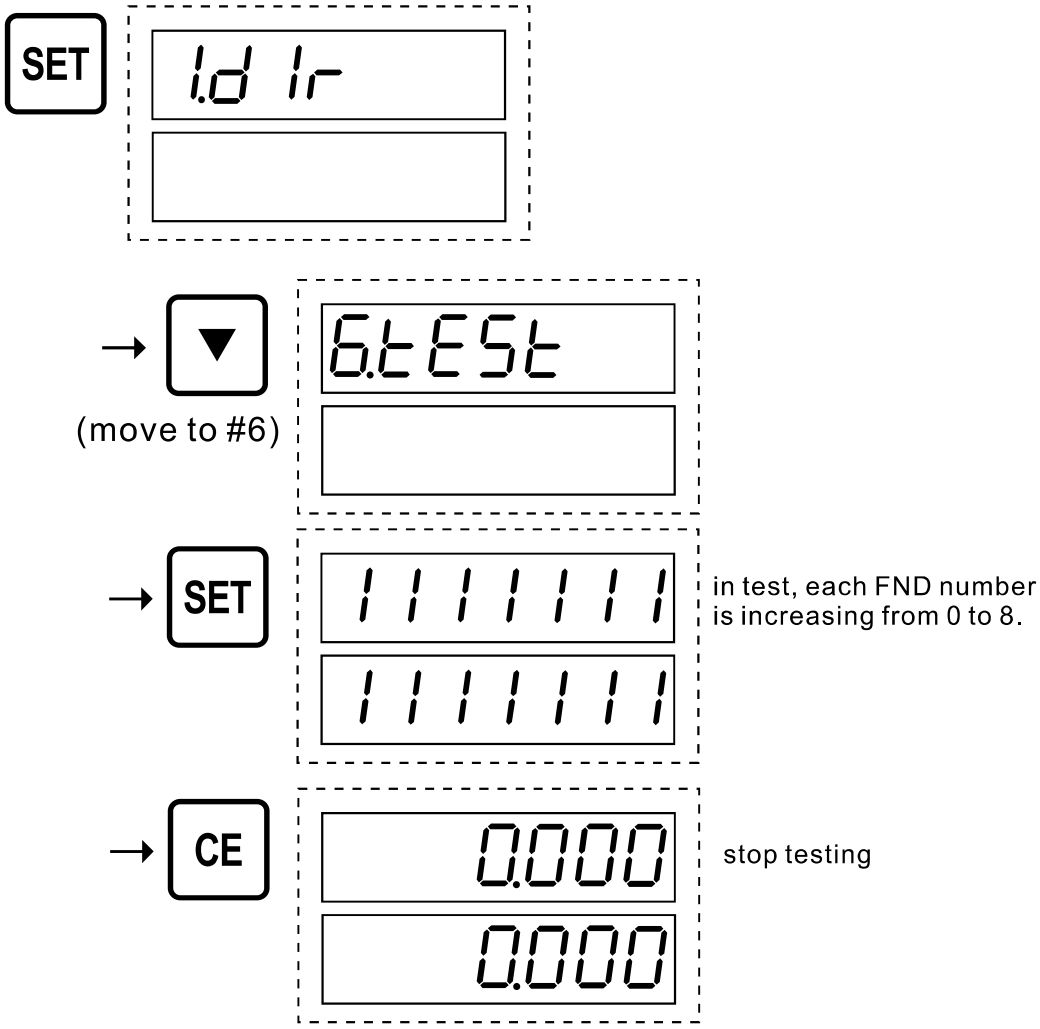
Function	How to input
	2. Display A+B sum up value at A channel 

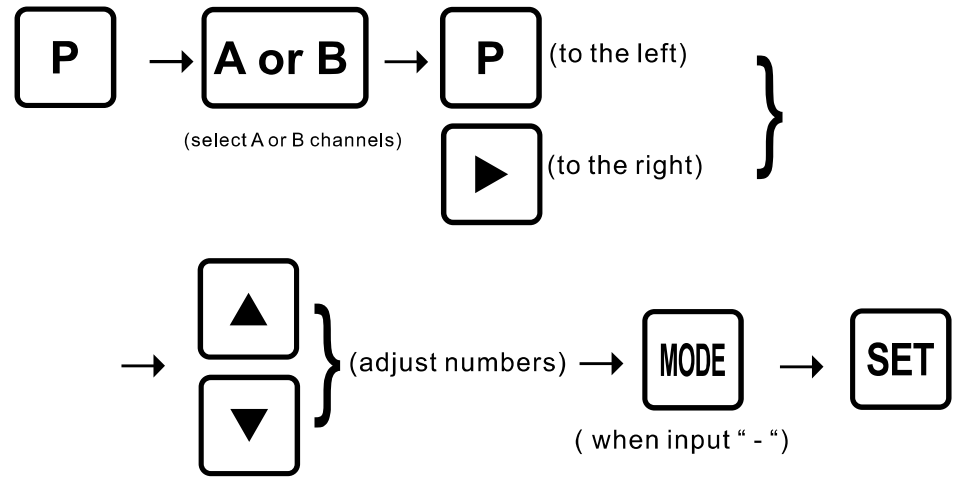
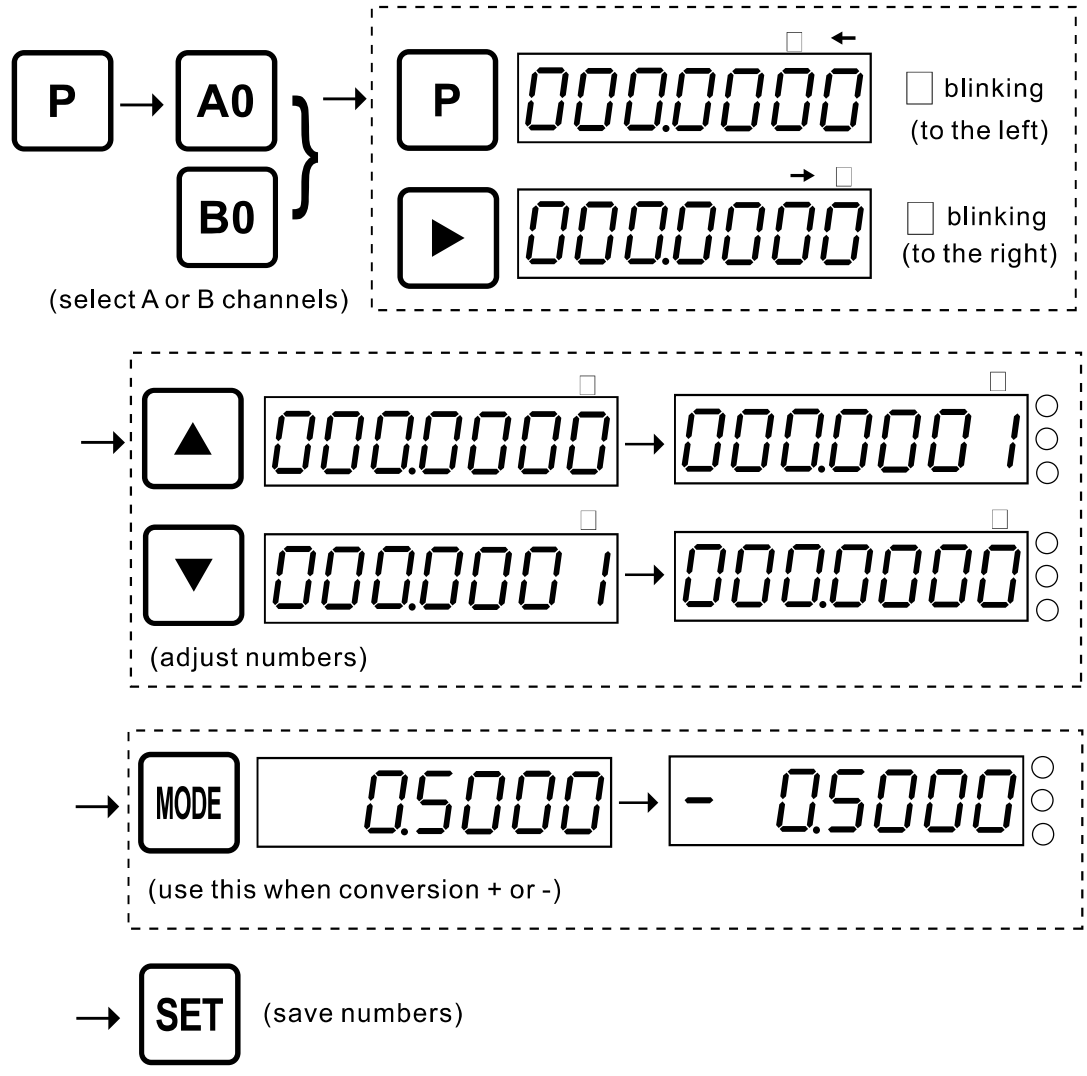
Function	How to input
Program Reset (Initialization)	SET → ▼ → SET (move to #5) • Please be careful. All of memorized data will be deleted.

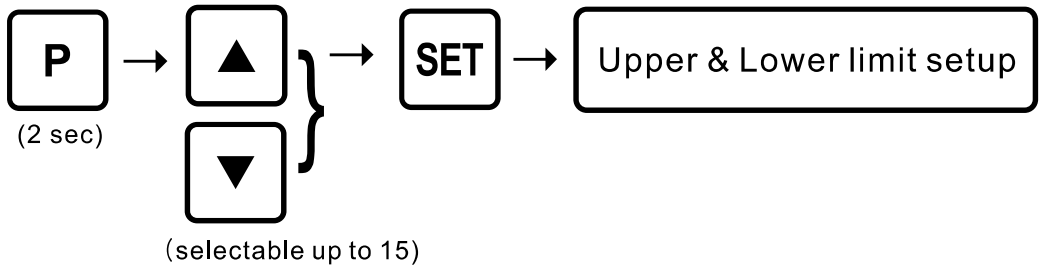


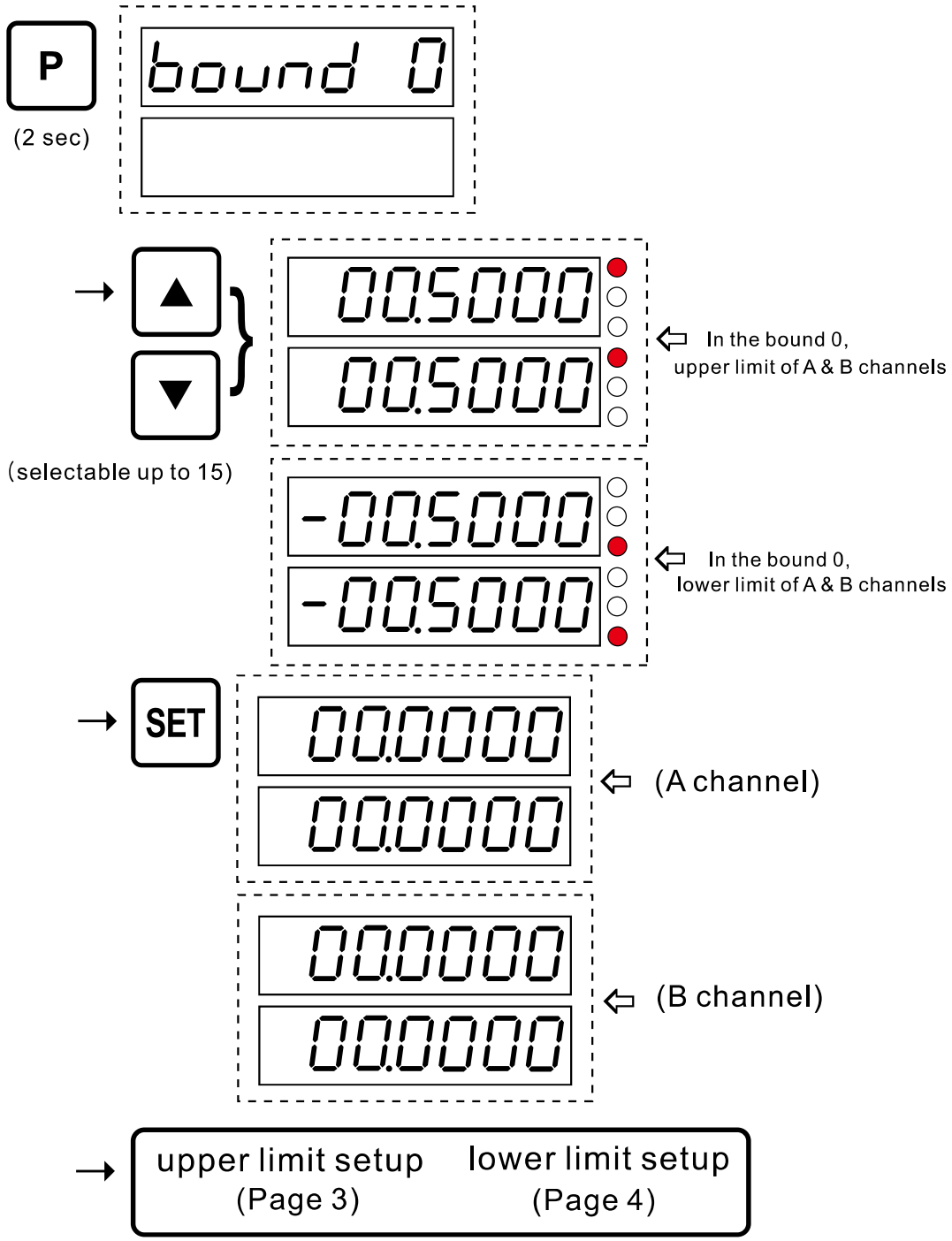
※ Resolution will be set to 5/10000

Function	How to input
FND (7-segment) testing	SET → ▼ (move to #6) → SET → CE • Checking defectiveness of FND

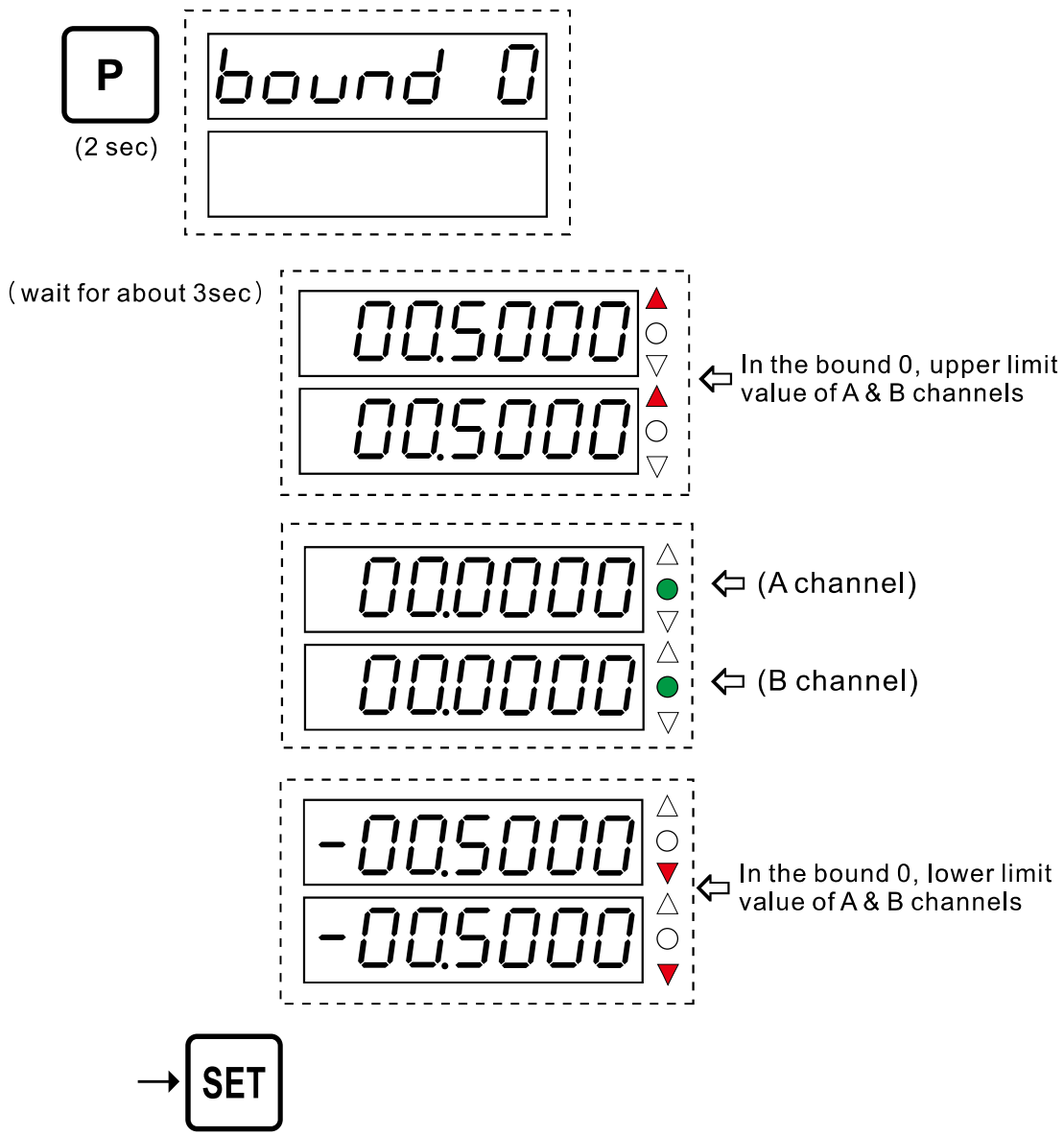


Function	How to input
PRESET	
	

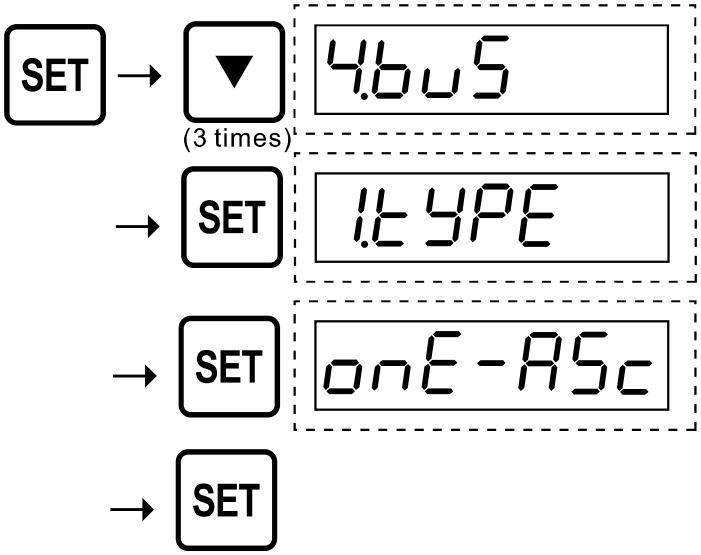
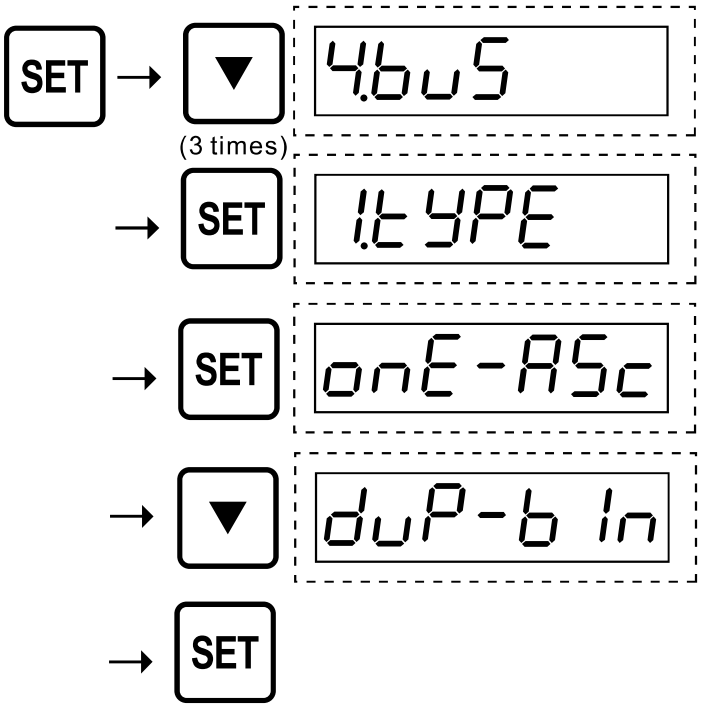
Function	How to input
Multi-limit setup (In case of more than 1)	



※ By repeating above procedure, up to 16 (bound 0 ~ 15) can input.

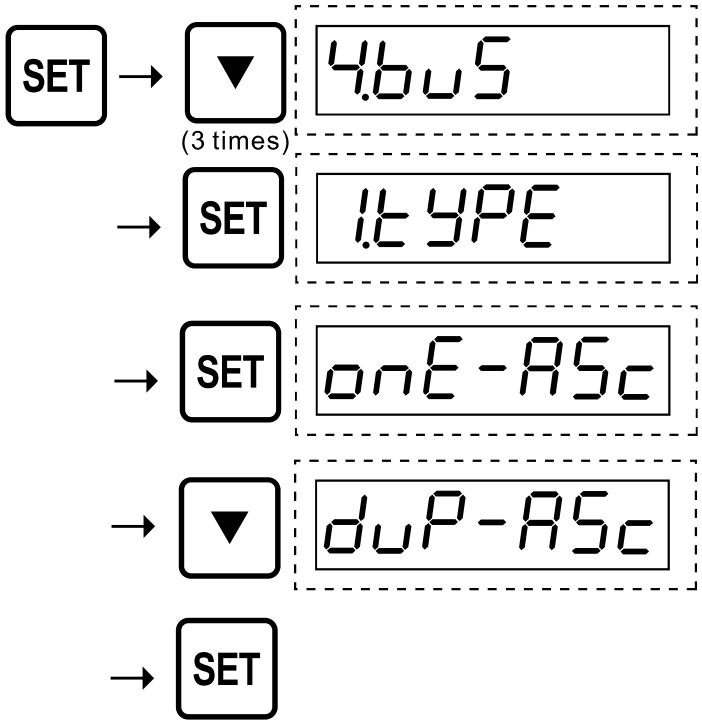
Function	How to input
Confirm saved Multi-limit value	

※ To see saved bound number(0~15),
move to a number by using the ▲ ▼ keys and wait for 3 seconds.
Bound No., Upper limit value and Lower limit value are orderly displayed.

Function	How to input
RS232/485 One-way setup	
RS232/485 Two-way setup (ASCII)	

⚠ Notice: To change communication option, the power should be off and on again.

⚠ Notice: To change communication option, the power should be off and on again.

Function	How to input
RS 485 Two-way setup (MODBUS)	

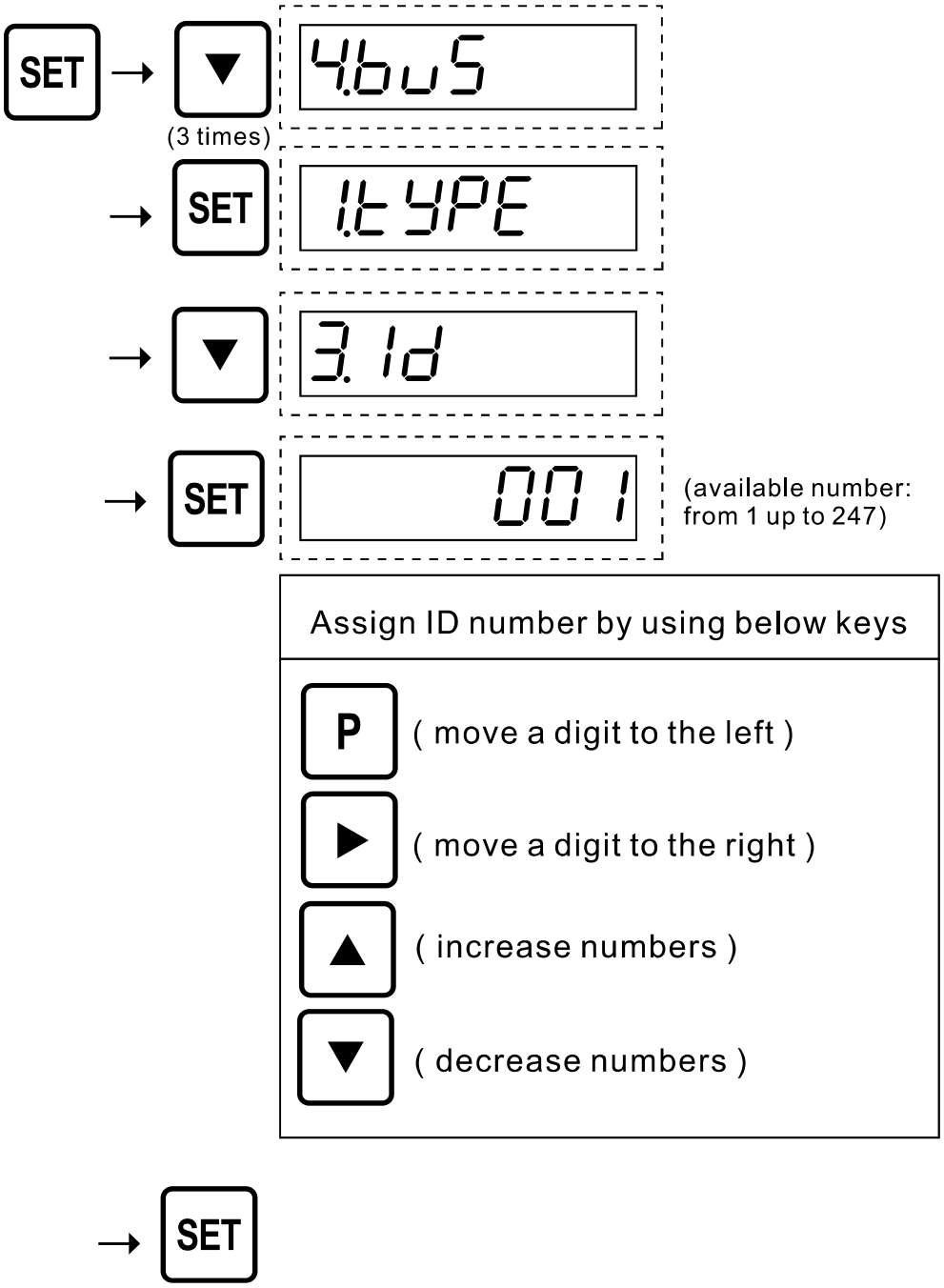
Notice:

To change communication option, the power should be off and on again.

※ Ref:

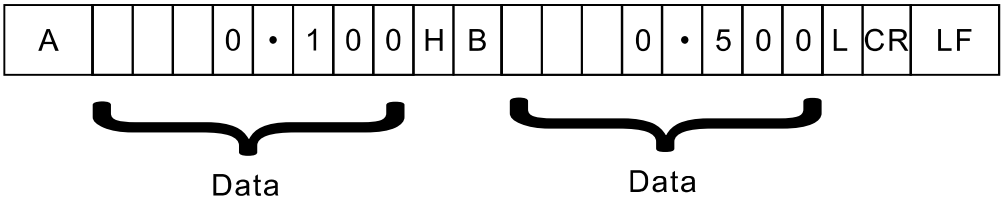
1) Modbus is recommendable for the interface with PLC.

2)To control multiple pieces with parallel connection, MODBUS should be used. The MODBUS is optional.

Function	How to input
RS- 485 – MODBUS-id	

Notice:

To change communication option, the power should be off and on again.

Function	How to input
RS-232/485 transmission format - one way	Output method - DATA BIT: 8BiT - PARITY BIT: NO - STOP BIT: 1BiT Transmission method: ASCII Transmission format Ex) Output "A=0.100, B=0.500"  ※ Result: H (High), N (Normal-OK), L (Low)
※ Only "One to One" control is possible.	

Function	How to input
RS-232 / 485 two-way format - ASCII	**Output method** - DATA BIT : 8BiT - PARITY BIT : NO - STOP BIT : 1BiT **Transmission method : ASCII** **Data transmission format:** Data | Result | CR | LF ※ output "Result" only when reading each channel value **Communication Command Format: [command] [CR] [LF]**

Command		Function
@	ADDR	Read present address
@	A	Read A channel value
@	B	Read B channel value
@	HIA	Read upper limit value of A channel
@	HIB	Read upper limit value of B channel
@	LOA	Read lower limit value of A channel
@	LOB	Read lower limit value of B channel
@	PRA	Read preset value of A channel
@	PRB	Read preset value of B channel
*	ADDR number	Set up address value (0~15)
*	HIA number	Set up upper limit value of A channel
*	HIB number	Set up upper limit value of B channel
*	LOA number	Set up lower limit value of A channel
*	LOB number	Set up lower limit value of B channel
*	PRA number	Set up preset value of A channel
*	PRB number	Set up preset value of B channel
*	ZEROA	Set up present value of A channel to "0"
*	ZEROB	Set up present value of B channel to "0"
*	NEXT	Renewal to present value
*	PPA	Switch to PP mode of A channel
*	PPB	Switch to PP mode of B channel
*	MAXA	Switch to Hi mode of A channel
*	MAXB	Switch to Hi mode of B channel
*	MINA	Switch to LOW mode of A channel
*	MINB	Switch to LOW mode of B channel
*	LATA	Switch to LATCH mode of A channel
*	LATB	Switch to LATCH mode of B channel
*	SCANA	Switch to SCAN mode of A channel
*	SCANB	Switch to SCAN mode of B channel
*	S	Save present setup value

※ Only "One to One" control is possible.

Function	How to input

RS- 485 two-way format

① Transmission method: MODBUS RTU

② Transmission format: Compliance with MODBUS standards

③ Communication format:

Parity None

Stop bits 1

FUNC	
Read Input register	04
Read Holding register	03
Write Single Register	06
Write Multi Register	16

Address	FUNC	R/W	Explication	Contents		
30001	04	R	CH-A number L	32Bit Integer type (binary code)		
30002	04	R	CH-A number H			
30003	04	R	CH-B number L			
30004	04	R	CH-B number H			
30005	04	R	Model name	C2		
30006	04	R	Hardware version	1		
30007	04	R	Software version	1		
30008	04	R	Reserved			
30009	04	R	FLAG	BIT	Contents	Behavior
				[1:0]	CH-A discriminant	0: LOW
				[3:2]	CH-B discriminant	1:NORMAL
						2:HIGH
40010	03/06/16	R/W	CTR	[0]	ZERO A	A/B CH ZERO setup
				[1]	ZERO B	
				[7]	NEXT	present value renewal
40011	03/06/16	R/W	ADD	BIT	Contents	Behavior
				[1:0]	ADD mode	0 : CH-A / CH-B
						1:ADD / CH-B
						2:CH-A / ADD
			MODE_A	[4:2]	HOLD mode	0:SCAN mode
						1 : MAX mode
						2 : MIN mode
			MODE_B	[7:5]		3 : P-P mode
						4 : LATCH mode
40012	03/06/16	R/W	UART ID	available 1~247		
40013	03/06/16	R/W	address asignment	available 0~15		

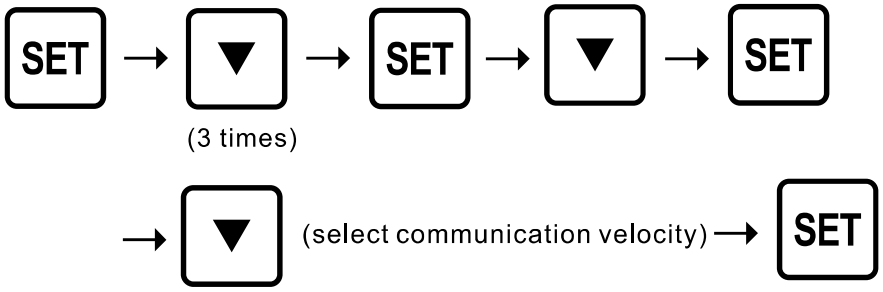
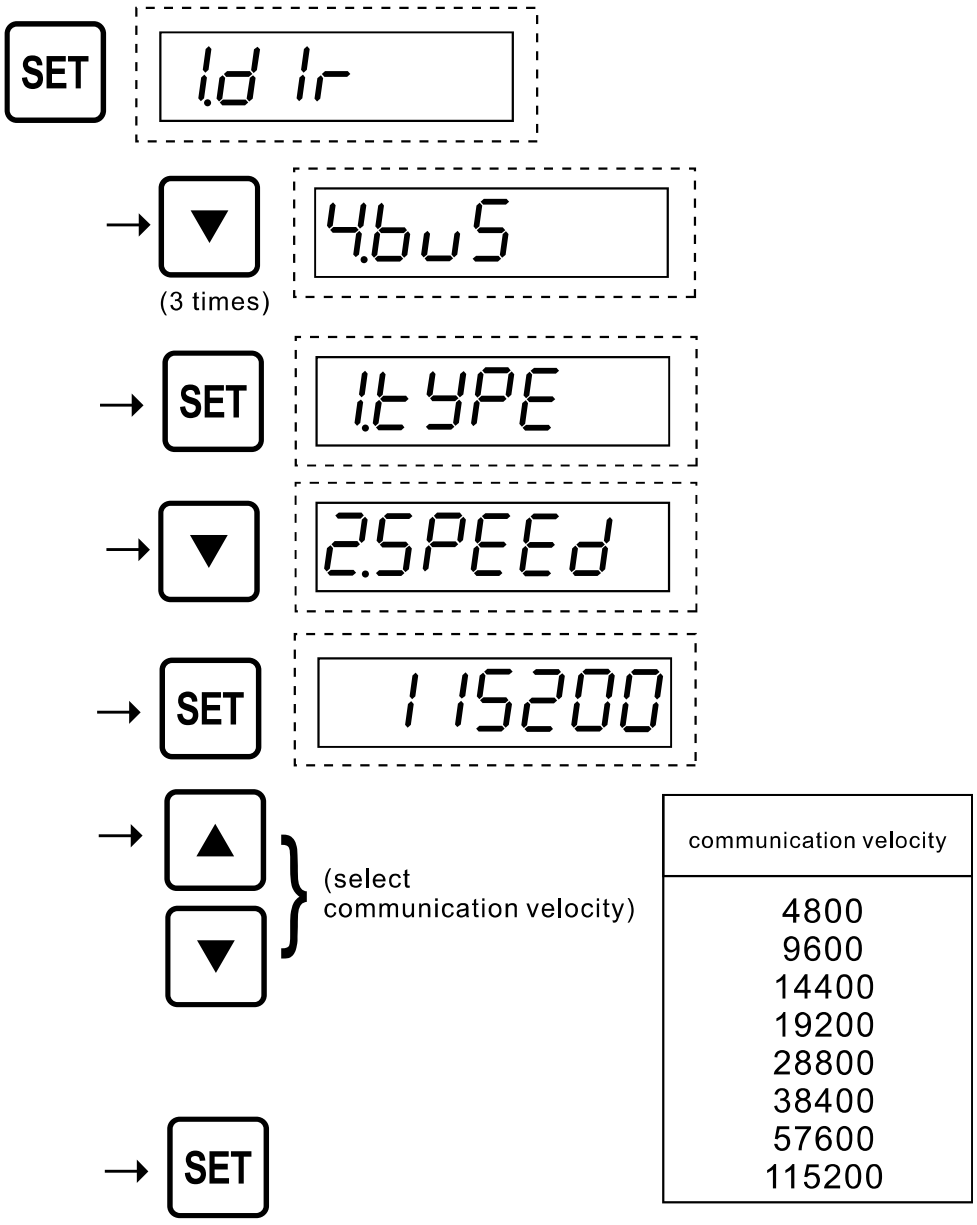
Function	How to input

Address	FUNC	R/W	Explication	Contents		
				BIT	Contents	Behavior
40014	03/06/16	R/W	SCALE A	[4:0]	Resolution change	1:1mm
						2:0.5mm
						3:0.1mm
						4:0.05mm
40015	03/06/16	R/W	SCALE B			5:0.01mm
						6:0.005mm
						7:0.001mm
						8:0.0005mm
						9:0.0001mm
				[7]	Direction change	
40016	03/06/16	R/W	SAVE	[0]	Save	1:Save
40017	03/06/16	R/W	Preset L	CH-A address 0		
40018			Preset H			
40019			Upper limit L			
40020			Upper limit H			
40021			Lower limit L			
40022			Lower limit H			
...		...	...			
40107	03/06/16	R/W	Preset L	CH-A address 15		
40108			Preset H			
40109			Upper limit L			
40110			Upper limit H			
40111			Lower limit L			
40112			Lower limit H			
40113	03/06/16	R/W	Preset L	CH-B address 0		
40114			Preset H			
40115			Upper limit L			
40116			Upper limit H			
40117			Lower limit L			
40118			Lower limit H			
...		...	...			
40203	03/06/16	R/W	Preset L	CH-B address 15		
40204			Preset H			
40205			Upper limit L			
40206			Upper limit H			
40207			Lower limit L			
40208			Lower limit H			

※ Ref:

1) To control multiple pieces with parallel connection, MODBUS should be used.

2) MODBUS is highly recommended for interface with PLC.

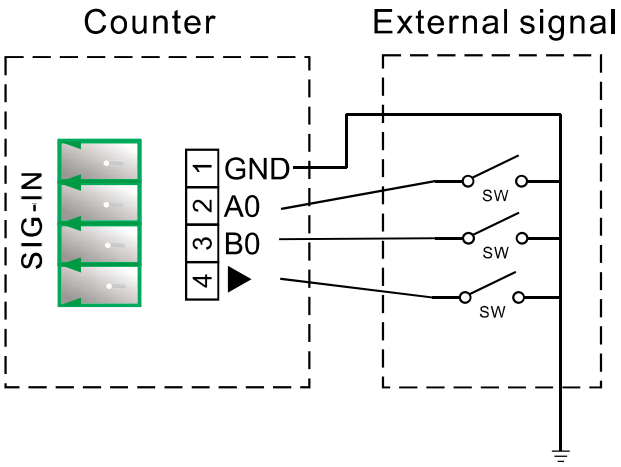
Function	How to input
Communication Velocity Setup	
	

communication velocity
4800
9600
14400
19200
28800
38400
57600
115200

Notice:

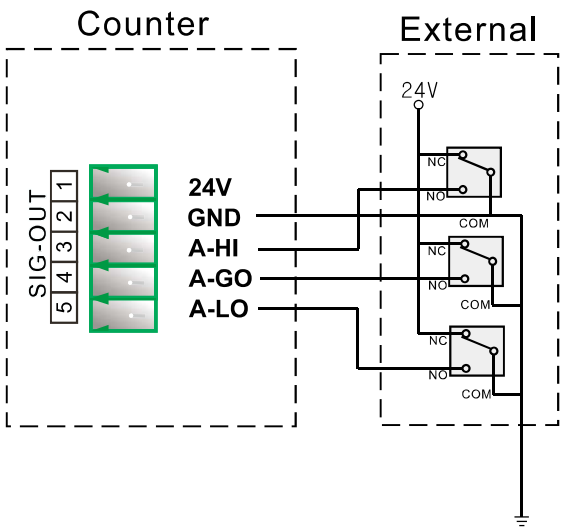
To change communication option, the power should be off and on again.

Function	How to input
Input / Output Circuit	1.Input Circuit • Input Items - OFF voltage: OPEN - ON voltage: Short

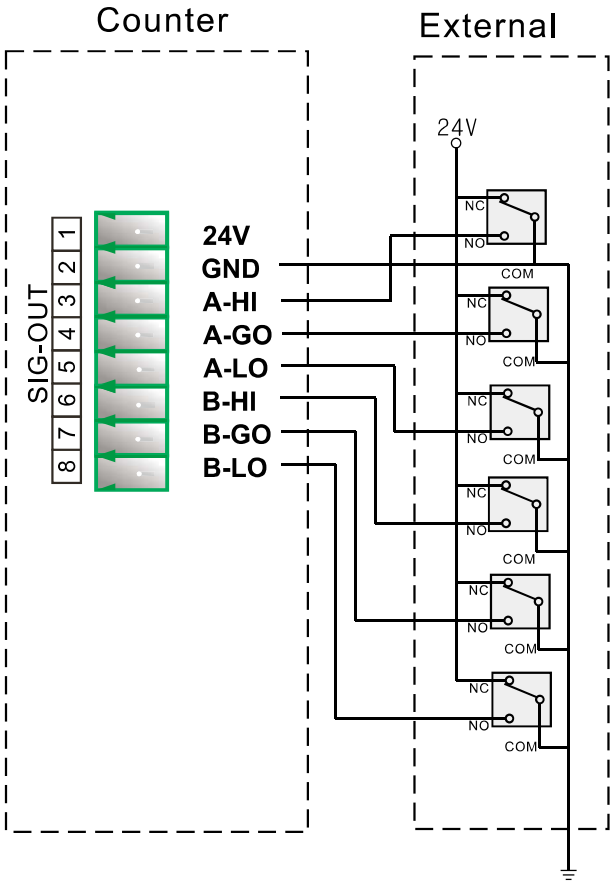


2.Output Circuit

JMA-C1



JMA-C2

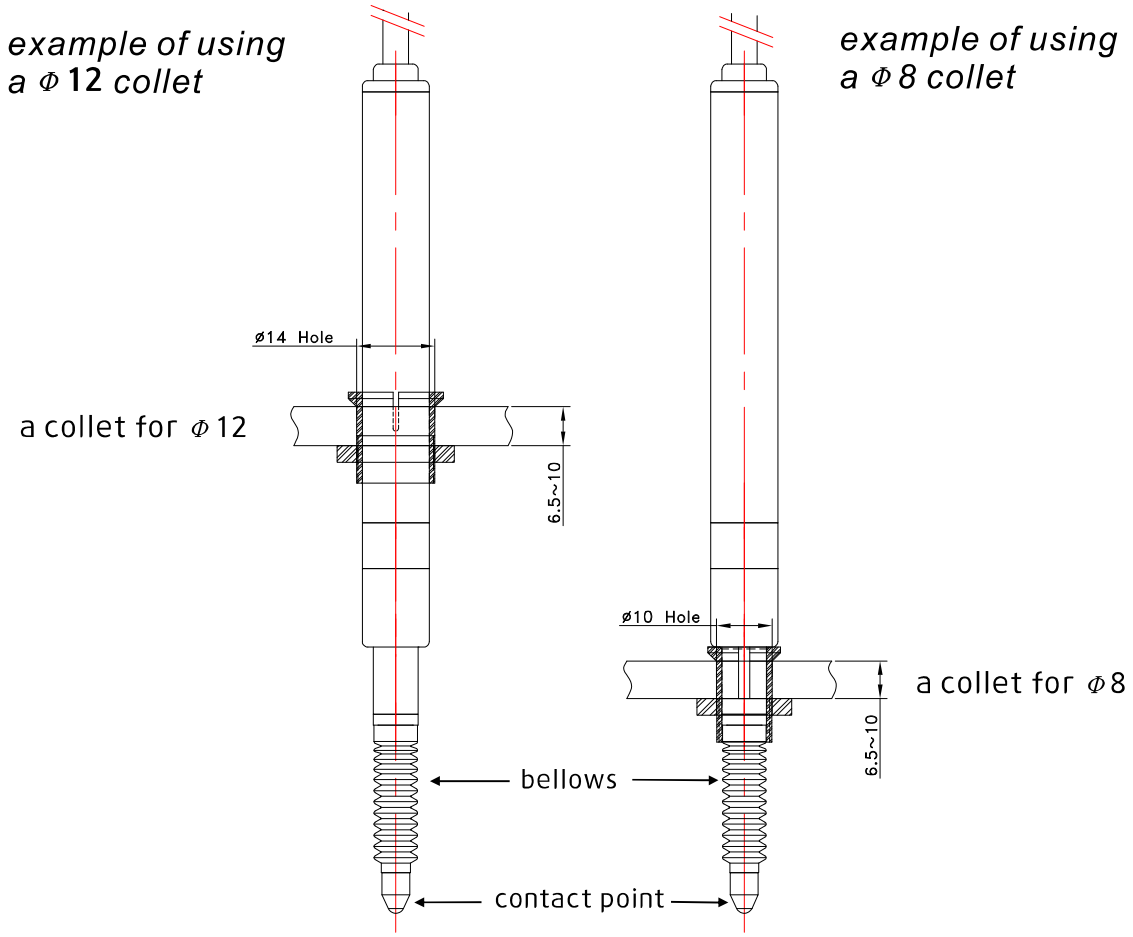


Notice:

24V is Output terminal.
Do not connect(input) voltage.

▣ Mounting a linear gauge (JMA-13(B)L)

Notice: Assembling with excessive force during installation can damage the gauge.



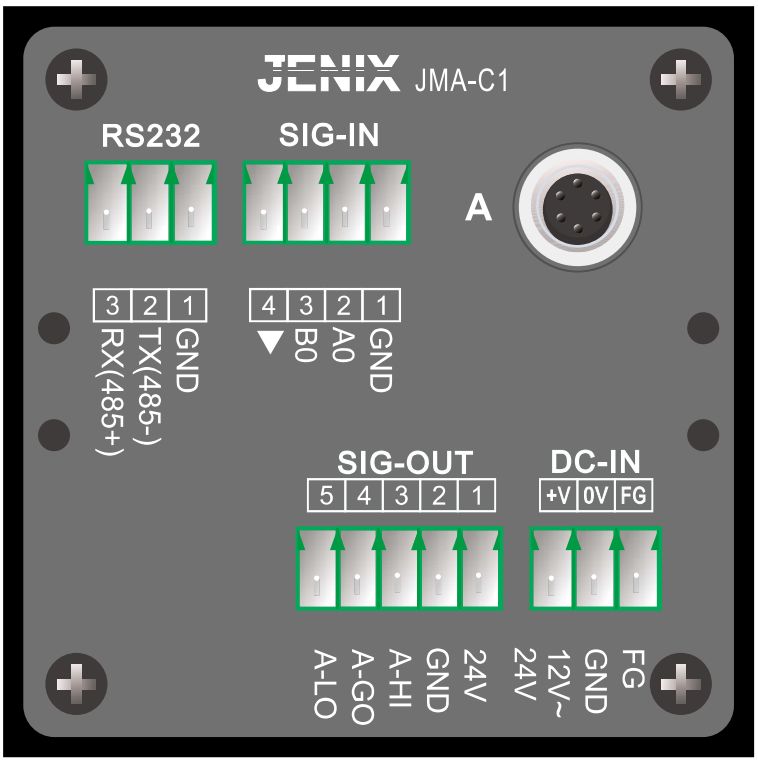
※ If the contact point is to be removed, be sure to lift the bellows up, hold the exposed shaft, and turn the contact point to separate them.

Notice:

1. If + - of the power is changed, indicator will be damaged.
2. The radius of curvature of the cable must be installed at least 30mm, (over30mm) when wiring the cable of the linear gauge.

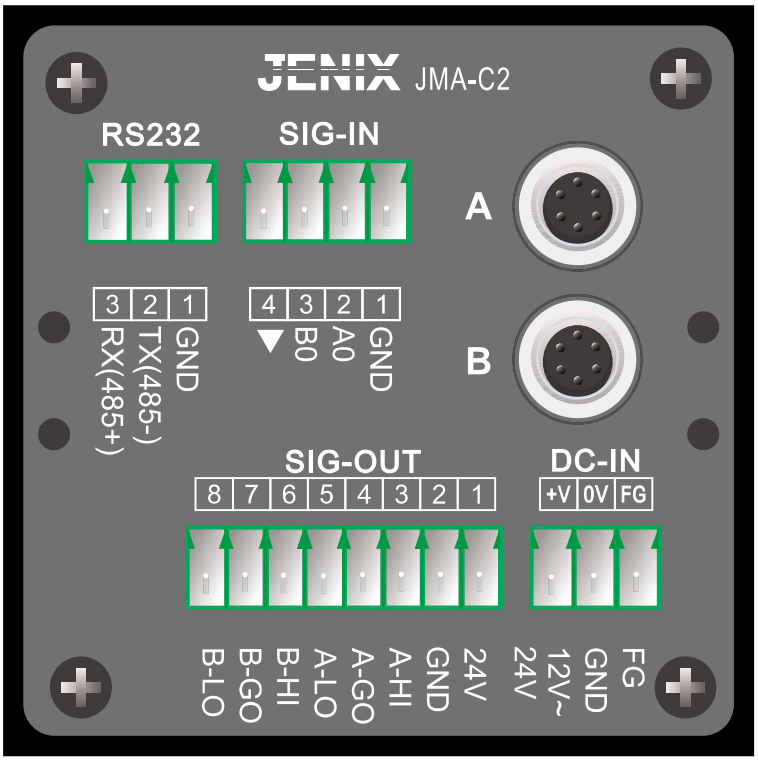
19.Pin Assignment (Φ8-6PIN)		
Pin No.	Color	Signal
1	Red	+ (5V)
2	Yellow	DATA -
3	White	DATA +
4	Green	CLK -
5	Blue	CLK +
6	Black	- (0V)

JMA-C1



Title	PIN	Explication			
RS-232/485	1 : GND	RS-232		RS-485	
	2 : TX	JMA-C2	D-SUB 9PIN	JMA-C2	D-SUB 9PIN
	3 : RX	1 GND 2 TX 3 RX	2 TX 3 RX 5 GND	1 GND 2 485+ 3 485-	2 485+ 3 485- 5 GND
※for IBM PC Standard					
SIG-IN	1 : GND	GND			
	2 : A0	Display A channel as “0".			
	3 : B0	Display B channel as “0".			
	4 : ▶	In the Holding mode, renew present value.			
SIG-OUT	1 : 24V	Voltage +12V ~ +24V			
	2 : GND	GND			
	3 : A-HI	A channel upper limit signal output			
	4 : A-GO	A channel normal signal output			
	5 : A-LO	A channel lower limit signal output			
DC-IN	+V	Input voltage +12V ~ +24V			
	0V	GND			
	FG	FG (shield)			

JMA-C2



Title	PIN	Explication			
RS-232/485	1 : GND	RS-232		RS-485	
	2 : TX	JMA-C2	D-SUB 9PIN	JMA-C2	D-SUB 9PIN
	3 : RX	1 GND 2 TX 3 RX	2 TX 3 RX 5 GND	1 GND 2 485+ 3 485-	2 485+ 3 485- 5 GND
※for IBM PC Standard					
SIG-IN	1 : GND	GND			
	2 : A0	Display A channel as “0".			
	3 : B0	Display B channel as “0".			
	4 : ▶	In the Holding mode, renew present value.			
SIG-OUT	1 : 24V	Voltage +12V ~ +24V			
	2 : GND	GND			
	3 : A-HI	A channel upper limit signal output			
	4 : A-GO	A channel normal signal output			
	5 : A-LO	A channel lower limit signal output			
	6 : B-HI	B channel upper limit signal output			
	7 : B-GO	B channel normal signal output			
	8 : B-LO	B channel lower limit signal output			
DC-IN	+V	Input voltage +12V ~ +24V			
	0V	GND			
	FG	FG (shield)			

CERTIFICATE OF WARRANTY

SERVICE

- We, Dong Sahn JENIX Co., Ltd. suggest a limited warranty against various defects describes below for two years from the date of purchasing, according to the regulation for the preservation of consumer's right.
- Please contact the sales agent or service center as defects were found.
- Please put down your purchasing date and the others below blanks.

Product	Linear Gauge	Model	JMA series
Date of Purchase		Serial number	
Agent		Amount	

GUIDANCE FOR THE COMPENSATION OF CONSUMER'S DAMAGE

KINDS of DAMAGES			DETAILS	
			Within the warranty period	After the warranty period
Damage happened in normal operation, or functional defect	Functional or mechanical defects happened in normal operation		Gratuitous Exchange	
	Defects happened during shipping or installing		"	
	Repairable	Recurrence of a trouble	"	
		Recurrence of same trouble for over 4 times continuously	"	
	No repairable	In case of stop producing of parts, or other reason	—	Exchange for new model as compensation
Functional defect which caused from mishandling or misuse conducted on purpose by users.	Defect caused from careless handling or repairing and remodeling.		Charged	Charged
	Defect caused from repairing by non authorized personnel.		"	"
	Defect from applying non-allowable Voltage (use only AC 220V)		"	"
	Defect or broken from dropping down when moving it another place, after installation.		"	"
Others	The cause of trouble is not from product itself but from exterior factor.		"	"
● In the case that the cause is from the natural calamity. ● When life span of consumable parts is almost done or over.			Charged	

Please be informed this certificate is not reissued.

Dong Sahn Jenix Co.,Ltd.

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