

DIGITAL PANEL METER

DISPLAY FOR 15mm MOSAIC - LPDSA SERIES



LPD04SA-15B-R
(29.9 × 59.9 × 172mm)

APPLICATION

This product is digital display for system which is most suitable for display of various data of main instrument in mounting of graphic panel and for centralized monitoring control and mosaic panel etc. along with the development of automatic measuring recently. Easy-to-see high brightness 7-segment LED, various types 1-digit to 6-digit and BCD input (data bus system) is adopted. Also installation of mosaic panel is possible. Please use this product for display of electrical quantities and physical quantities according to purpose of usage.

FEATURES

- ▶ Installation of one touch 15 mm mosaic panels is possible.
- ▶ Installation iron panel also possible.
- ▶ High quality and high reliability noise resistance design.
- ▶ Wiring simplification can be realized by adopting (wiring MAX50m)
- ▶ High brightness LED element is adopted.
- ▶ 2 types of LED: Large (character height: 15mm),
Small (character height: 10mm)
- ▶ Changeover to static lighting system is possible.

DISPLAY FOR 15mm MOSAIC - LPDSA SERIES

TYPE DESIGNATION

(1) (2) (3) (4) (5) (6)
LPD **0** **4** **SA** - **15** **B** - **R** - **6**

1) Name of the Series

Symbol	Series Name
LPD	Digital Indicator

4) Size of Number

Symbol	Size of Number (h)
10	10.16mm
15	14.22mm

2) Polarity

Symbol	Display of Polarity
0	None
1	Polarity display

5) Display color

Symbol	Display color
R	Red
G	Green
S	Orange

3) Number of Digit

Symbol	Number of digit
1	1-digit
2	2-digit
3	3-digit
4	4-digit
5	5-digit
6	6-digit

6) Size of Box

(Digit No: Treated as 1-digit, when with polarity.)

Symbol	Size of Box
None	Standard: 4-digit use (1~4-digit) 6-digit use (5-digit, 6-digit)
6	4-digit or less is used for 6-digit BOX.

Item To Specify When Purchase

1. Type name
2. Aux. power
3. Option
4. Quantity

DISPLAY FOR 15mm MOSAIC - LPDSA SERIES

COMMON STANDARD SPECIFICATIONS

ITEM	SPECIFICATION
Operation system	Data bus system
Display	LED (LED diode: Red, Green, Orange)
Display driving signal	Open collector signal (DC24V, 1mA / signal line)
Auxiliary power	DC24V, $\pm 10\%$ (refer to specification list for power consumption)
Length of signal cable	50m or less: Flat cable, twist pair line etc.
Insulation resistance	DC500V, 50M Ω or more: Between electric circuit and outer case.
Withstand voltage	AC1500V, 50/60Hz 1 min: Between electric circuit and outer case.
Operating temperature & humidity range	0 ~+55 , 30~85%RH
Storage temperature range	-20 ~+70
External color	Munsell N1.5 (Black)
Filter	With axel antireflection treatment (Red: N-030, Grey smoke: N-217)

OPTION

Specify below item according as necessary

*** One side connector with cable**

2 types: Flat cable (for insulation displacement contact use), Twist cable (for pressure bonding use)

Please specify the length as necessary by unit 0.5m.

*** Meter with name, unit sculpture can be manufactured**

PRODUCT SELL SEPARATELY

Specify below item according as necessary:

*** LPDSA - Install spring (2pcs for 1-unit meter use)**

KCC&Co. and SEIWA Electirc Co is use 15mm Mosaic Panel, Installation of one touch is possible.

*** LPDSA - Spacer (2pcs for 1-unit meter use)**

KCC&Co. is used when installation of 15mm mosaic.

*** LPDSA - 4 Install metal (Box for 4-digit: 1pcs for 1-unit meter use)**

*** LPDSA - 6 Install metal (Box for 6-digit: 1pcs for 1-unit meter use)**

This product is necessary when shock strength exceeds 294m/s^2 or mosaic tile install in half-tile slide at 15mm mosaic panel installation.

DISPLAY FOR 15mm MOSAIC - LPDSA SERIES

TERMINOLOGY AND FUNCTIONS

* BCD Input

Input signal to configure decimal 0~9 of indicator is with binary 4 bits as unit.

* Strobe Signal (for BCD input use)

Signal to read and store data in internal indicator.

Please make sure the short circuit from GND terminal when used in static lighting system.

* Latch Signal

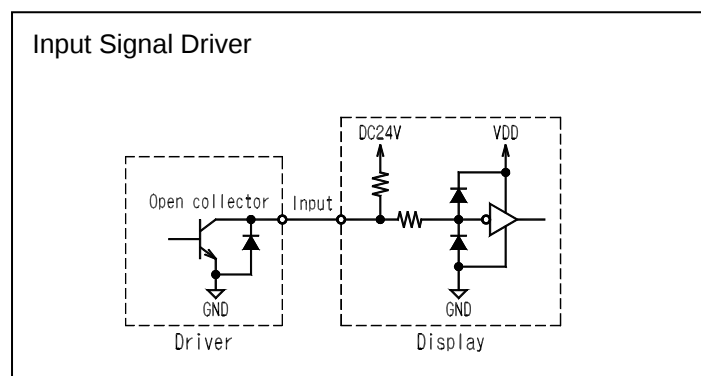
Signal to read and store data in internal indicator.

* Lamp Test

All digit "8" and " - " (priority for all lamp test) are displayed by short circuit between lamp test terminal of indicator and DC24V power GND.

* Input Signal Logic

	Logic	
	"0"	"1"
Negative logic	H	L
Signal level	DC10~24V	DC0~3V



BCD INPUT

* Data Bus System

* Changeover to Static Lighting Display is possible

DISPLAY FOR 15mm MOSAIC - LPDSA SERIES

TYPE AND OUTLINE DRAWING FOR BCD INPUT

Type						Outline Drawing
No Polarity			With Polarity			
Digit No.	No. size: 14.22mm	No. size: 10.16mm	Digit No.	No. size: 14.22mm	No. size: 10.16mm	
1	LPD01SA-15B-□	LPD01SA-10B-□	-	-	-	A-1
1	LPD01SA-15B-□-6	LPD01SA-10B-□-6	-	-	-	A-2
2	LPD02SA-15B-□	LPD02SA-10B-□	±1	LPD11SA-15B-□	LPD11SA-10B-□	A-1
2	LPD02SA-15B-□-6	LPD02SA-10B-□-6	±1	LPD11SA-15B-□-6	LPD11SA-10B-□-6	A-2
3	LPD03SA-15B□	LPD03SA-10B-□	±2	LPD12SA-15B-□	LPD12SA-10B-□	A-1
3	LPD03SA-15B□-6	LPD03SA-10B-□-6	±2	LPD12SA-15B-□-6	LPD12SA-10B-□-6	A-2
4	LPD04SA-15B-□	LPD04SA-10B-□	±3	LPD13SA-15B-□	LPD13SA-10B-□	A-1
4	LPD04SA-15B-□-6	LPD04SA-10B-□-6	±3	LPD13SA-15B-□-6	LPD13SA-10B-□-6	A-2
5	LPD05SA-15B-□	LPD05SA-10B-□	±4	LPD14SA-15B-□	LPD14SA-10B-□	A-2
6	LPD06SA-15B-□	LPD06SA-10B-□	±5	LPD15SA-15B-□	LPD15SA-10B-□	A-2

Note: Select color LED for □ (R: Red LED, G: Green LED, S: Orange LED)

POWER CONSUMPTION

	No. size	Rise and fall at max. power supply voltage (W)					
		1	2, ±1-digit	3, ±2-digit	4, ±3-digit	5, ±4-digit	6, ±5-digit
Red LED	14.22mm	1.0	1.5	2.0	2.5	3.5	4.0
	10.16mm	1.0	1.3	1.7	2.0	2.5	3.0
Green LED	14.22mm	1.0	1.5	2.0	2.5	4.0	4.5
	10.16mm	1.0	1.5	2.0	2.5	3.5	4.0
Orange LED	14.22mm	1.0	1.5	2.0	2.5	4.0	4.5
	10.16mm	1.0	1.5	2.0	2.5	4.0	4.5

SPECIFICATION FOR BCD INPUT USE

Signal line

	1~4-digit	5-digit, 6-digit
Strobe signal	1	1
Data signal	BCD: 1~4-digit, Total:16 D/P: 1~4-digit, Total: 4	BCD: 1~6-digit, Total: 24 D/P: 1~6-digit, Total: 6
Error signal	1	1
GND	3	3

DISPLAY FOR 15mm MOSAIC - LPDSA SERIES

DISPLAY

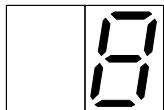
* Error Display

Error (E) is displayed in lower digit by error date. Blank display in all upper digit.

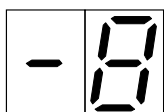
* Blank Display

Blank is displayed when A~F (hexadecimal) is input to BCD data input line (display is OFF light)

* Polarity (+ polarity will not displayed)

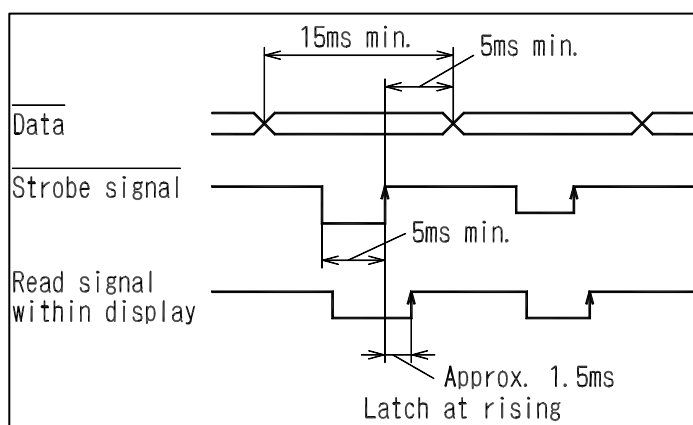


+: when input "1" to BCD data, positive polarity will not display only blank display.
(When input 4, 7, 9, also is blank display)



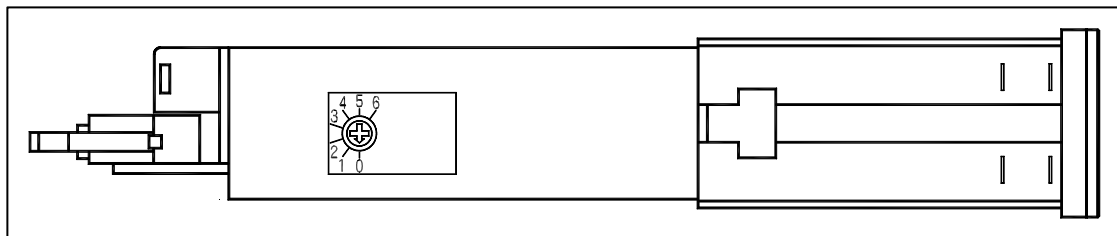
- : Display when "2" is input to BCD data.
(when 0, 3, 5, 6, 8 is input, " - " is displayed also)

DATA TRANSMISSION TIMING CHART



* Decimal point allocation (when D.P input signal is not used)

Setting switch for decimal point allocation is behind the BOX side.



* When adjusted to the digit number where decimal point is necessary, decimal point is ON.

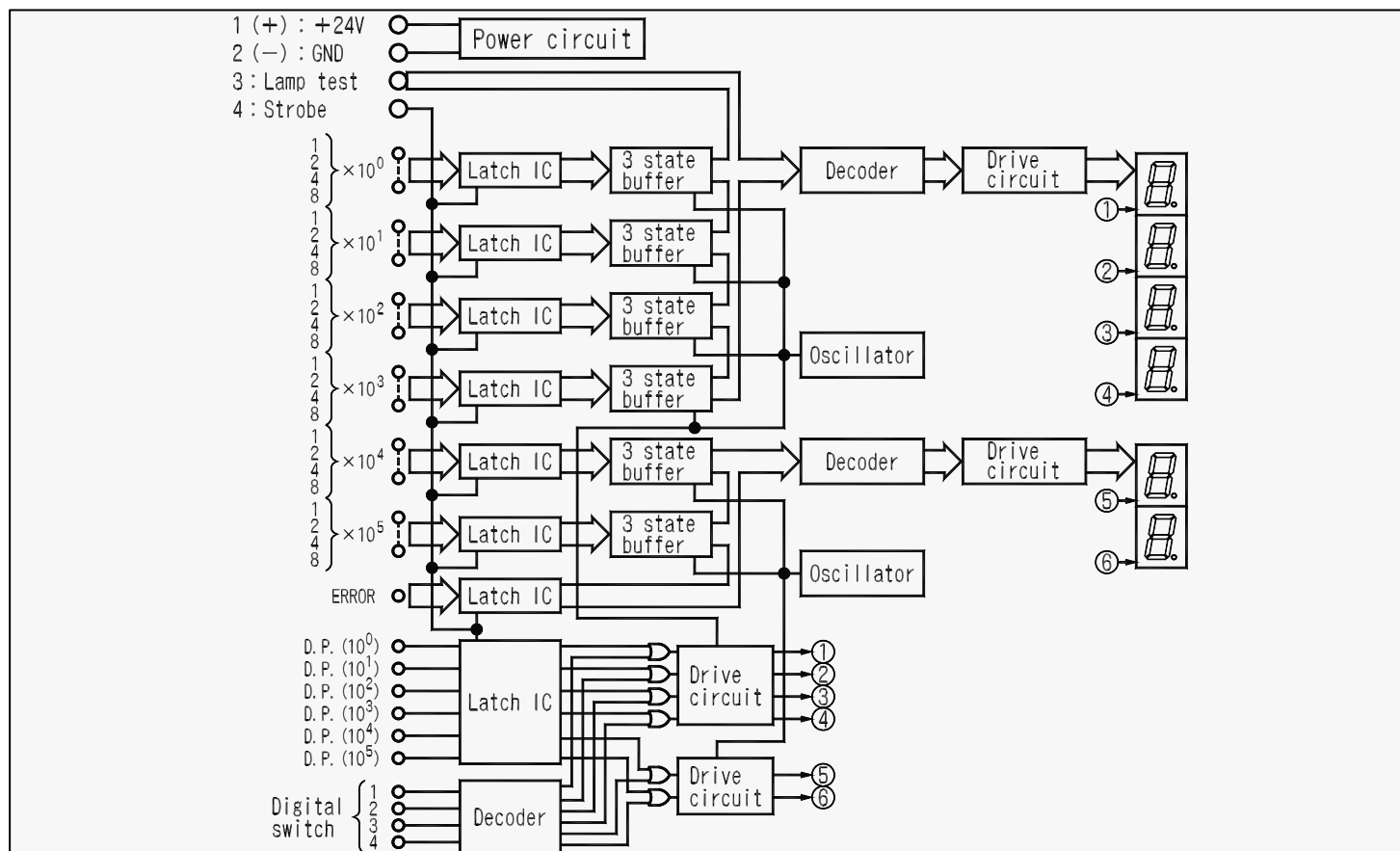
DISPLAY FOR 15mm MOSAIC - LPDSA SERIES

RELATIONSHIP BETWEEN INPUT SIGNAL AND NUMERAL DISPLAY

Truth Table							
BCD Input Code				D/P	Input		Display
8	4	2	1		LT	ADD.	0-9 Mark
0	0	0	0	0	0	1	0
0	0	0	1	0	0	1	1
0	0	1	0	0	0	1	2
0	0	1	1	0	0	1	3
0	1	0	0	0	0	1	4
0	1	0	1	0	0	1	5
0	1	1	0	0	0	1	6
0	1	1	1	0	0	1	7
1	0	0	0	0	0	1	8
1	0	0	1	0	0	1	9
1	0	1	0	0	0	1	Light: OFF
1	0	1	1	0	0	1	Light: OFF
1	1	0	0	0	0	1	Light: OFF
1	1	0	1	0	0	1	Light: OFF
1	1	1	0	0	0	1	Light: OFF
1	1	1	1	0	0	1	Light: OFF
				1	0	1	
					1		8
					0	0	Latch

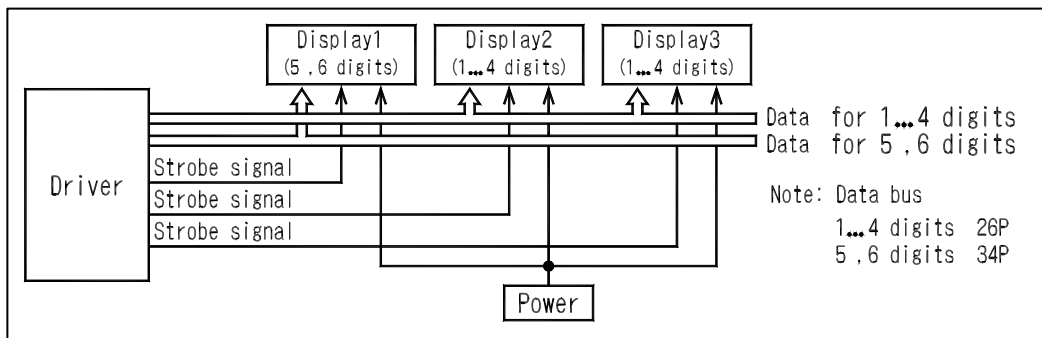
* Changeover strobe terminal from latch system to static system can be used with GND terminal by short circuit.

BLOCK DIAGRAM



DISPLAY FOR 15mm MOSAIC - LPDSA SERIES

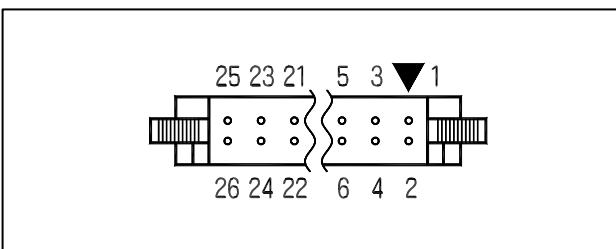
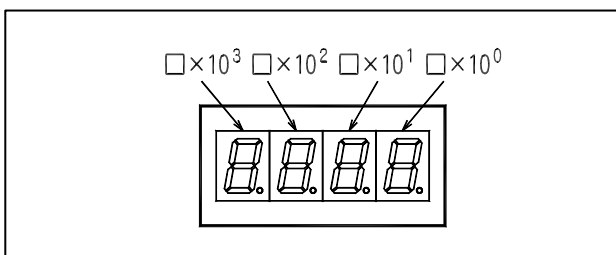
BUS COMPOSITION AT LATCH SYSTEM



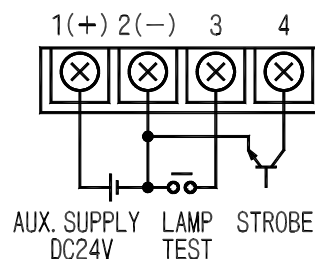
CONNECTOR AND TERMINAL CONFIGURATION

- * 1~4-digit
- * Manufacturer: Hirose
- * Type: HIF3B-26PA-2.54DS
- * Compatible socket: HIF3BA-26D-2.54R (for ribbon cable, flat cable crimping use)
HIF3BA-26D-2.54C (for solderless use)

No. Terminal	Description	No. Terminal	Description
1	GND	2	1×10^0
3	2×10^0	4	4×10^0
5	8×10^0	6	1×10^1
7	2×10^1	8	4×10^1
9	8×10^1	10	1×10^2
11	2×10^2	12	4×10^2
13	8×10^2	14	1×10^3
15	2×10^3	16	4×10^3
17	8×10^3	18	D.P.(10^0)
19	D.P.(10^1)	20	D.P.(10^2)
21	D.P.(10^3)	22	ERROR
23	GND	24	GND
25	NC	26	NC



Terminal assembly: 4-terminal (M3 screw)



No. terminal:

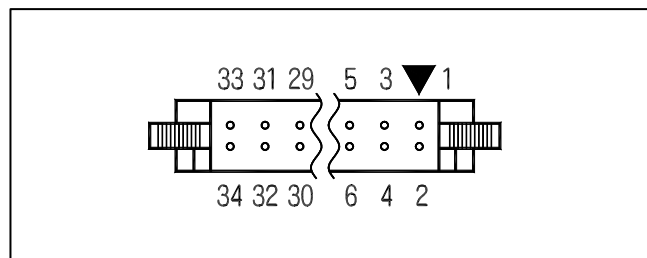
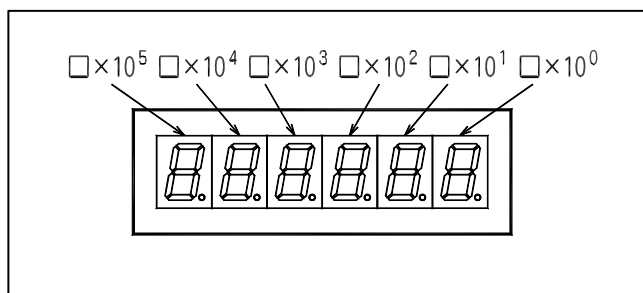
- 1(+): +24V power
- 2 (-): GND
- 3 : Lamp Test
- 4 : Strobe

DISPLAY FOR 15mm MOSAIC - LPDSA SERIES

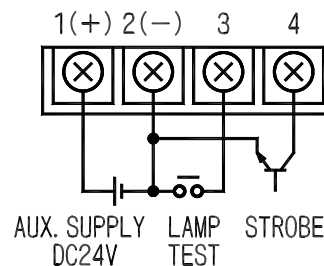
CONNECTOR AND TERMINAL CONFIGURATION

- * 5-digit, 6-digit
- * Manufacturer: Hirose
- * Type: HIF3B-34D-2.54DR
- * Compatible socket: HIF3BA-34D-2.54R (for ribbon cable, flat cable crimping use)
HIF3BA-34D-2.54C (for solderless use)

No. Terminal	Description	No. Terminal	Description
1	GND	2	1×10^0
3	2×10^0	4	4×10^0
5	8×10^0	6	1×10^1
7	2×10^1	8	4×10^1
9	8×10^1	10	1×10^2
11	2×10^2	12	4×10^2
13	8×10^2	14	1×10^3
15	2×10^3	16	4×10^3
17	8×10^3	18	1×10^4
19	2×10^4	20	4×10^4
21	8×10^4	22	1×10^5
23	2×10^5	24	4×10^5
25	8×10^5	26	D.P.(10^0)
27	D.P.(10^1)	28	D.P.(10^2)
29	D.P.(10^3)	30	D.P.(10^4)
31	D.P.(10^5)	32	ERROR
33	GND	34	GND



Terminal assembly: 4-terminal (M3 screw)



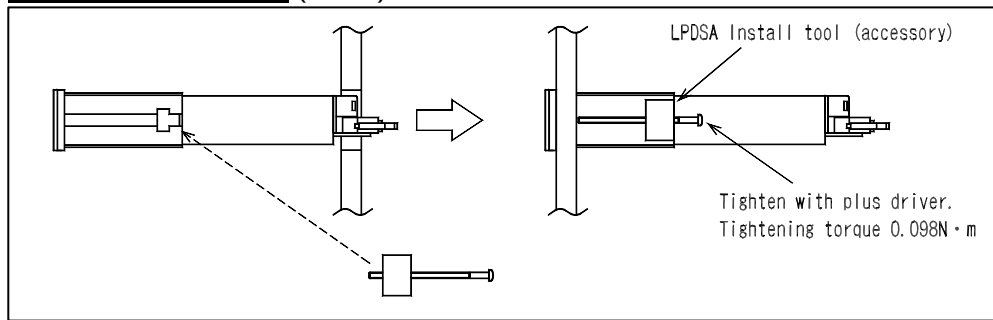
No. terminal:

- 1(+): +24V power
- 2 (-): GND
- 3 : Lamp Test
- 4 : Strobe

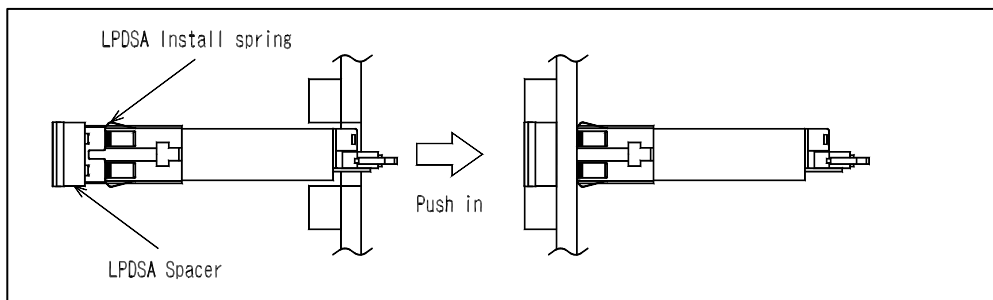
DISPLAY FOR 15mm MOSAIC - LPDSA SERIES

INSTALLATION

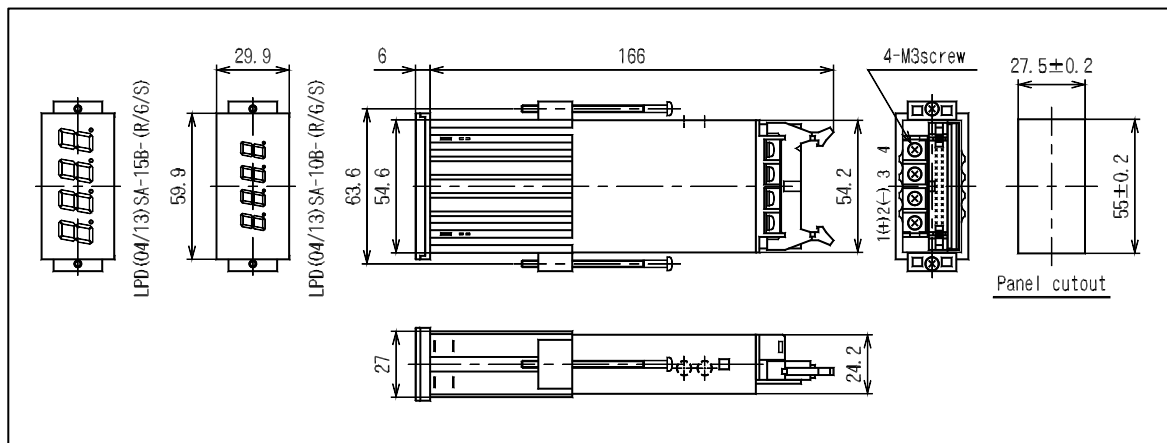
* Tighten Screw Type (Panel)



* Installation One Touch Type (Mosaic Panel)



* A-1 Type



* A-2 Type

