

AD Miniature Digital Display Unit

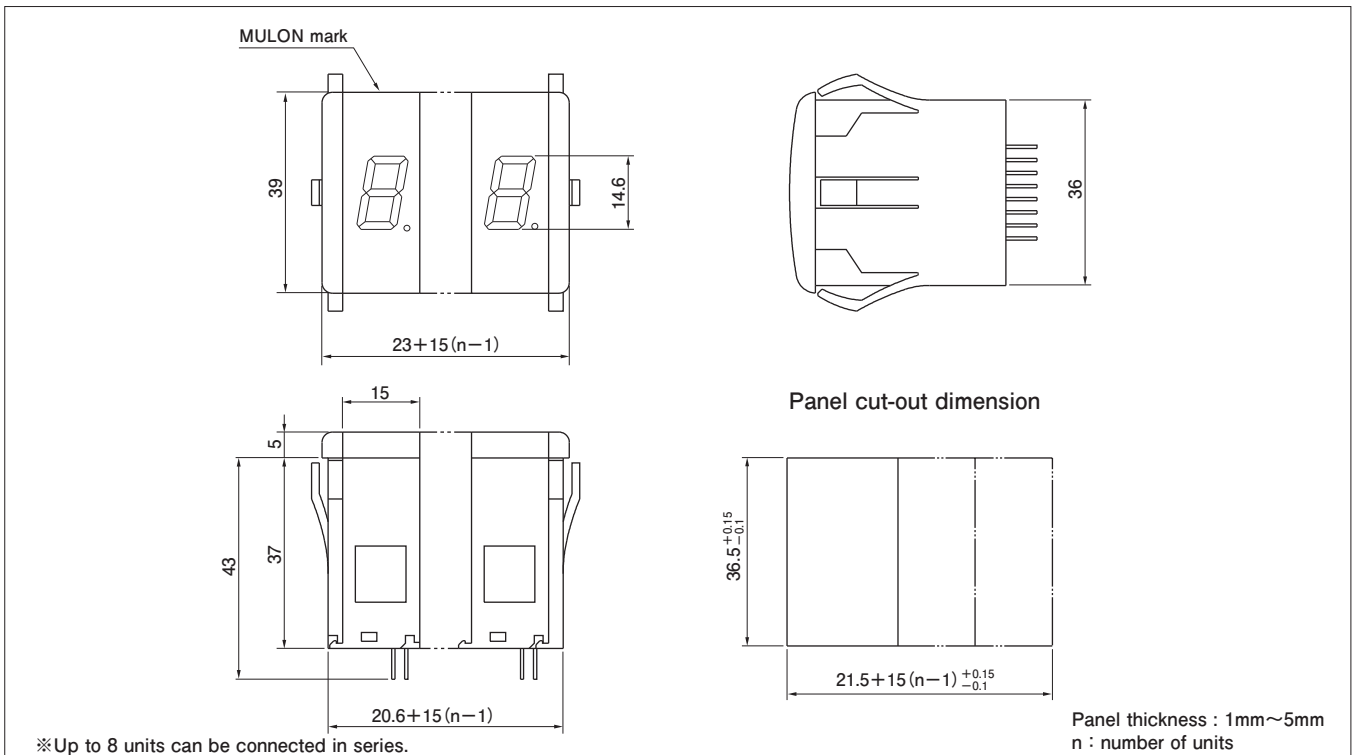
7-segment display unit with Switch function.

■FEATURES

- Depth behind panel : 37 mm
- Character height : 14.6 mm
- Numerical unit can be easily displayed by BCD codes.
- Red, Green, LED available.
- One-touch easy panel mounting with side plates.
- Terminal connection : IC pitch(2.54mm pitch) terminal for Connector.
- Display : 7-segment numerical unit, Character Unit.



DIMENSIONS / PANEL CUT-OUT



※Panel Cut Dimension should be after panel paintings.

Tolerance : ±0.4mm

UNIT TYPE

Numerical unit	Numerical unit + switch 1 circuit	Numerical unit +switch 2 circuit	Numerical unit +switch 1 circuit+Indicator	Character Unit
				SEC

※Characters are an example.

SPECIFICATIONS

Numerical Unit

●Electrical Rating

Item	Type	ADS-1	ADS-2	ADS-3
Supply voltage		DC5V±5%	DC12V±5%	DC24V±5%
Current consumption		100mA MAX (1 unit)		
Ambient Temperature		-15~50°C		
Ambient Humidity		80%RH		

●LED Rating

Rated voltage (V)	Rated current (mA)		
	2×5mm LED		
	Red	Green	Yellow
5	3	15	7
12	3	15	7
24	3	15	7

●Switch

Electric rating	DC5~24V, 1~50mA Resistive load
Rated insulation voltage	DC30V
Contact arrangement	N.O. Contact
Contact Resistance	Less than 100mΩ (Initial value) at DC5V 1mA
Mechanical Life	1,000,000 operations

●Input circuit and connection

Input Type	ADS-□AN□□□□ (with photocoupler)	ADS-□BN□□□□ (without photocoupler)	ADS-3AP1□□□□ PLC control type · Source input	ADS-3AP2□□□□ PLC control type · Sink input
LE LT BI D C B A				
DP				

※User side output circuit is an example.

SPECIFICATIONS

● Signals Truth Table

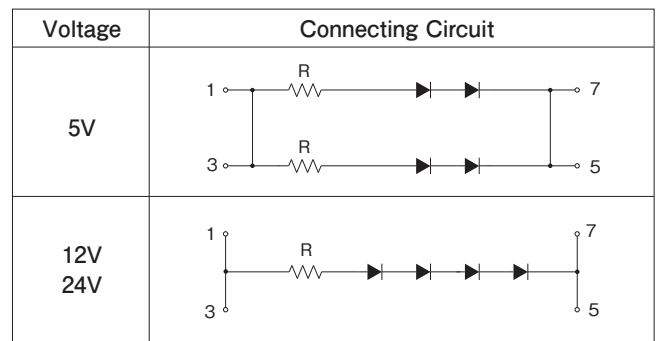
ADS-□N1□□□□				ADS-□N2□□□□				Output	ADS-3AP1□□□□ PLC control type · Source input				ADS-3AP2□□□□ PLC control type · Sink input															
Common									LE	LT	BI	DP	D	C	B	A	LE	LT	BI	DP	D	C	B	A				
D	C	B	A	LE	LT	BI	DP	D																	C	B	A	LE
X	X	X	X	X	L	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	L	X	X	X	X	X	X
X	X	X	X	X	H	L	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	H	L	X	X	X	X	X
L	L	L	L	L	H	H	X	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	X	H	H	H	H
L	L	L	H	L	H	H	X	H	H	H	L	H	H	H	X	H	H	L	H	H	H	H	X	H	H	L	H	
L	L	H	H	L	H	H	X	H	H	L	L	H	H	X	H	H	L	L	H	H	H	H	X	H	H	L	L	
L	H	L	L	L	H	H	X	H	L	H	H	L	L	X	H	L	H	L	L	H	H	H	X	H	L	H	H	
L	H	L	H	L	H	H	X	H	L	L	L	H	L	X	L	H	H	L	L	H	H	X	H	L	L	H	L	
L	H	H	H	L	H	H	X	H	L	L	L	L	H	X	L	H	H	H	L	H	H	X	H	L	L	L	L	
H	L	L	L	L	H	H	X	L	H	H	H	L	L	X	H	L	L	L	L	H	H	X	L	H	H	H	H	
H	L	L	H	L	H	H	X	L	H	H	L	L	H	X	L	H	L	H	L	H	H	X	L	H	H	L	L	
H	L	H	H	L	H	H	X	L	H	L	L	L	L	X	H	L	H	H	L	H	H	X	L	H	L	L	L	
H	H	L	L	L	H	H	X	L	L	H	H	L	L	X	H	H	L	L	L	H	H	X	L	L	H	H	H	
H	H	L	H	L	H	H	X	L	L	L	L	L	L	X	H	H	H	L	L	H	H	X	L	L	L	L	L	
H	H	H	H	L	H	H	X	L	L	L	L	L	L	X	H	H	H	H	L	H	H	X	L	L	L	L	L	
X	X	X	X	X	X	X	X	H	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	L	X	X	X	X
X	X	X	X	H	H	H	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Opended H is acceptable. Either H or L is acceptable for X. Input is sink type. Use NPN output circuit. However, only DP (decimal point) input is source input lights by applying the same voltage as Vcc.								Note: The previous statuses of A to D before LE goes H or L will be held.				Opended L is acceptable. Either H or L is acceptable for X. Use PNP output circuit.				Opended H is acceptable. Either H or L is acceptable for X. Use NPN output circuit.												

Character Unit

● LED Rating

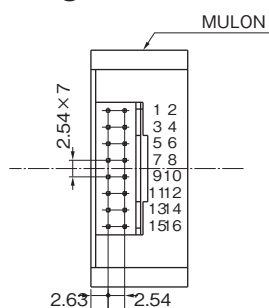
Voltage	Mono-Color					
	5V		12V		24V	
LED Color	Red	Green	Red	Green	Red	Green
Current(mA)	10	13	5	6	5	6

● Connecting Circuit

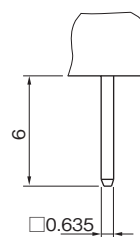


TERMINALS

● Terminals Arrangement



● Terminal shape



Tolerance : ±0.4mm

TERMINALS FUNCTION TABLE

●Terminals Function Table

No.	Numerical Unit												Character Unit	
	ADS-□N1□□□□ ADS-□N2□□□□				ADS-3AP1□□□□ PLC control type · Source input				ADS-3AP2□□□□ PLC control type · Sink input				Functions	AD-0□□□
	Display	Switch 1 circuit LED	Switch 1 circuit Non-LED	Switch 2 circuit	Display	Switch 1 circuit LED	Switch 1 circuit Non-LED	Switch 2 circuit	Display	Switch 1 circuit LED	Switch 1 circuit Non-LED	Switch 2 circuit		Mono-Color
1	—	LED Anode	—	COM1	—	LED Anode	—	COM1	—	LED Anode	—	COM1	Depending on the model, switch or LED is connected.	Common Anode
2	—	LED Cathode	—	NO1	—	LED Cathode	—	NO1	—	LED Cathode	—	NO1	Depending on the model, switch or LED is connected.	—
3	Vcc	Vcc	Vcc	Vcc	Vcc	Vcc	Vcc	Vcc	Vcc	Vcc	Vcc	Vcc	+ Power input	Common Anode
4	LE	LE	LE	LE	LE	LE	LE	LE	LE	LE	LE	LE	The previous display is held.	—
5	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	GND	— Power input	Common Cathode
6	LT	LT	LT	LT	LT	LT	LT	LT	LT	LT	LT	LT	All segment except the decimal point lights.	—
7	D	D	D	D	D	D	D	D	D	D	D	D	BCD data input	Common Cathode
8	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	All segment except the decimal point lights OFF.	—
9	C	C	C	C	C	C	C	C	C	C	C	C	BCD data input	—
10	—	—	—	—	—	—	—	—	—	—	—	—	Open	—
11	B	B	B	B	B	B	B	B	B	B	B	B	BCD data input	—
12	—	—	—	—	COM GND	COM GND	COM GND	COM GND	COM Vcc	COM Vcc	COM Vcc	COM Vcc	Common GND or common Vcc for the input signal.	—
13	A	A	A	A	A	A	A	A	A	A	A	A	BCD data input	—
14	DP (※)	DP (※)	DP (※)	DP (※)	DP	DP	DP	DP	DP	DP	DP	DP	The decimal point lights.	—
15	—	COM	COM	COM2	—	COM	COM	COM2	—	COM	COM	COM2	Depending on the model, switch or LED is connected.	—
16	—	NO	NO	NO2	—	NO	NO	NO2	—	NO	NO	NO2	Depending on the model, switch or LED is connected.	—

(※) is source input lights by applying the same voltage as Vcc.
— is no connection.

ORDERING CODE

Character Unit



※Side plates to be orderd separately.

AD - 0 □ □ □

●DISPLAY
0 Character Unit

●LED COLOR
R Red
G Green

●LEGEND PLATE
A Attached

●SUPPLY VOLTAGE
1 5V
2 12V
3 24V

●SIDE PLATES

※A pair of side plate (Right/Left) is necessary for mounting on panel.



AD - 1440 - □

●COLOR
K Black
H Gray

ORDERING CODE

Numerical Unit (with circuit)

BCD Numerical unit



※Side plates to be ordered separately.

AD S - [] N [] [] [] [] []

●DISPLAY
S BCD Numerical unit

●Supply voltage
Photocoupler

1A	5V with Photocoupler
1B	5V without Photocoupler
2A	12V with Photocoupler
2B	12V without Photocoupler
3A	24V with Photocoupler

●INPUT LOGIC ※1)

1	Positive
2	Negative

※1) Input is sink type except DP (decimal point) input.

●2×5mmLED COLOR

X	Non-LED
4	Red
5	Green
6	Yellow

●BUTTON COLOR

X	Without Button
K	Black
H	Gray

●CONTACT

0	Display
1	1 circuit
2	2 circuit

●LED COLOR

R	Red
G	Green

PLC Control Type



※Side plates to be ordered separately.

AD S - 3A P [] [] [] [] [] []

●DISPLAY
S Numerical unit

●Supply voltage
3A 24V with Photocoupler

●INPUT

1	Source input
2	Sink input

●2×5mmLED COLOR

X	Non-LED
4	Red
5	Green
6	Yellow

●BUTTON COLOR

X	Without Button
K	Black
H	Gray

●CONTACT

0	Display
1	1 circuit
2	2 circuit

●LED COLOR

R	Red
G	Green

※Only the following combination can be specified.
(Please specify other than X for [].)

- ADS-□□□□0XX
- ADS-□□□□1□X
- ADS-□□□□1□□
- ADS-□□□□2□X