

# SETPOINT COMPARATOR

## AM-215A



### ■ DC Voltage Measurement

Model	Range	Display Adjustable	Input Impedance	Max. Allowed Input
AM-215A-11	±99.99mV	Offset ±9999 Full scale ±9999	100MΩ or more	±50V
AM-215A-12	±999.9mV			
AM-215A-13	±9.999V		Approx. 1MΩ	
AM-215A-1V	1 to 5V			

Accuracy : ±(0.03% of rdg. +2 digit) (23°C ±5°C)

### ■ DC Current Measurement

Model	Range	Display Adjustable	Input Impedance	Max. Allowed Input
AM-215A-2A	4-20mA	Offset ±9999 Full scale ±9999	Approx. 50Ω	±50mA

Accuracy : ±(0.1% of rdg. +2 digit) (23°C ±5°C)

\* This accuracy is for (FSC - OFS) / (FIN - OIN) ≤ 1  
\*1 : 1V [(FIN - OIN) × 2], 2A : [(FIN - OIN) × 5]

### ■ Specifications

Measurement function : Select either DC voltage or DC current (single range)  
 Input circuit : Single ended  
 Operation type : Sigma-Delta conversion  
 Sampling speed : Max. 25 per second  
 Display : Red 7-segment LED display (character height : approx. 8mm)  
 Polarity display : A minus sign is displayed if the operation result is negative.  
 Out-of-range warning : "oL" or "-oL" is displayed with respect to the input signal when the value is outside the display range.  
 Max. display : ±9999 (full 4 digits)  
 Decimal point : Can be set at any position using the front-panel flat switches.  
 Zero display : Leading zero suppress  
 Backup : Settings are held in EEPROM (guaranteed for 100,000 writes)  
 Operating temperature and humidity ranges : 0 to 50°C, 35 to 85% RH (no condensation)  
 Storage temperature and humidity ranges : -20 to 70°C, 60% or less RH (no condensation)  
 Supply voltage : DC 24V ±20%  
 Consumed power : Approx. 2.2W  
 External dimensions : 48(W) × 24(H) × 87.8(D)  
 Weight : Approx. 100g  
 Withstand voltage : DC 500V for 1 minute across power terminals/input terminals and each output terminal.  
 DC 500V for 1 minute across input terminals/each output terminal.  
 AC 1500V for 1 minute across case/power terminals, input terminals, and each output terminal.  
 Insulating resistance : 100MΩ or more with DC 500V across the terminals listed above.  
 Standard accessories : Operation manual, unit seal  
 Conformity standard : EN61326+A1, +A2  
 E247481

### ■ Features

- AL1 and AL2 set-point
- Bright LED 8mm (Red)
- 1 to 5V, 4 to 20mA Measurement
- Power Supply DC24V ±20% (isolated)
- Offset +/-9999 adjustable
- Fullscale +/-9999 adjustable

### ● External control unit

Digital zero : Digital zero is turned ON when the DZ terminal and COM terminal are shorted or at the same potential.

### ● External power supply unit

Rating : DC 24V ±5%  
 Max. load : 25mA

### ● Comparator unit

Control method : Microcomputer computation  
 Setting range : -9999 to +9999  
 Comparator operation : Depends on sampling speed  
 Comparator conditions :

Comparator condition	Check result display		Output		
	AL1	AL2	OUT1	OUT2	OUT3
Measurement value > HI limit value	OFF	ON	OFF	OFF	ON
LO limit value ≤ Measurement value ≤ HI limit value	OFF	OFF	OFF	ON	OFF
LO limit value > Measurement value	ON	OFF	ON	OFF	OFF

Comparator condition	Check result display		Output		
	AL1	AL2	OUT1	OUT2	OUT3
Measurement value > HH limit value	ON	ON	OFF	ON	ON
Measurement value > HI limit value	ON	OFF	OFF	ON	OFF
HI limit value ≥ Measurement value	OFF	OFF	ON	OFF	OFF

Comparator condition	Check result display		Output		
	AL1	AL2	OUT1	OUT2	OUT3
Measurement value ≥ LO limit value	OFF	OFF	OFF	OFF	ON
LO limit value > Measurement value	OFF	ON	OFF	ON	OFF
LL limit value > Measurement value	ON	ON	ON	ON	OFF

Setting condition : HI / GO / LO mode HI limit value > LO limit value  
 HH / HI / GO mode HH limit value > HI limit value  
 GO / LO / LL mode LO limit value > LL limit value  
 Hysterisis : For each comparator all limit value can be set as 1 to 999 digits.

### ● Relay output unit

Output ratings : DC 24V, 1A (resistance load)

### ● Photocoupler output unit

Output ratings : MAX. 30V 50mA  
 Output saturation voltage : 1.2V max. at 50mA

### ● Optional unit

Analog output unit (can not be installed together with RS-485)

Output function: 4 to 20mA (AM-215A-XX-6X) or 0 to 10V (AM-215A-XX-7X)

### Output specifications:

Mode	Load Resistance	Accuracy	Ripple
4 to 20mA	0 to 250Ω	±(0.5% of FS)	25mVp-p max.
0 to 10V	10kΩ min.		50mVp-p max.