# MOVING COIL TYPE ALARMING INDICATOR

### DATA SHEET

PAK

The moving coil type alarming indicator is designed to receive various input signals such as FC series signals. DC voltage or current, and signals from themocouples or resistance bulbs.

### FEATURES

- 1. Direct connection of input signals.
- 2. High input impedance (1M $\Omega$  for 1 to 5V DC input). No circuit adjusting resistor is required for thermocouple input.
- 3. Compact and lightweight.

## SPECIFICATIONS

Input signal:

- FC series signal
  - A; 1 to 5V DC B; 4 to 20mA DC
- DC current
- D; 0 to 100µA ..... 200mA DC DC voltage
- E; 0 to 10mV ..... 5V DC Thermocouple
  - F; 0 to 10mV DC or more (with reference junction compensator) (Upper limit overshoot burnout cir-
  - cuit is available on request) G; 10mV DC span or more (with reference junction compensator)
    - (Upper limit overshoot burnout circuit is available on request)
- Resistance bulb
  - H; JPt100Ω
  - 50°C span or more, 3-wire type W; Pt100 $\Omega$
  - 50°C span or more, 3-wire type
- Ring tube (resistance span 14 $\Omega$ )
- Slide resistant (resistance span  $100\Omega$ ) J; 3-wire type
- K; 2-wire type (with adjusting resistor) Opening angle transmitter (resistance span 100 $\Omega$ )
  - L; 3-wire type (zero point and span adjustable)



#### Input resistance and allowable input signal source resistance:

Input signal		Input resistance	Allowable input signal source resistance
Voltage	1 to 5V	1MΩ	$2k\Omega$ or less
	Others	40k $\Omega$ to 1M $\Omega$	100 $\Omega$ or less
Current	4 to 20mA	5Ω	
	Others	1 to 100Ω	
Thermocouple		40 to 600k $\Omega$	$100\Omega~or~less$ $50\Omega~or~less$ when burnout circuit
Resistance			$6\Omega$ or less per wire

Allowance:	±1.0% of full scale				
Scale length:	100mm				
Response time:	Within 3 sec (time required for stabilizing the indicator pointer within $\pm 1.5\%$ after applying input corresponding to 2/3 (approx.) of full scale)				
Power supply:	100V ± 10% AC, 50/60Hz				
	*200V ± 10% AC, 50/60Hz, or				
	*24V <sup>+15%</sup> AC, 50/60Hz				
Power consumption:					
	Approx. 4.5VA max.				
Ambient temperature:					
	-10 to +50°C				
Ambient humidity:					
	30 to 90%RH				
Enclosure:	Steel case				
External dimensions ( $H \times W \times D$ ):					
	48 × 144 × 275mm				
Mass{weight}:	Approx. 2kg				
Finish color:	Munsell 7.5BG 3.2/0.8 or equivalent				

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- Alarm device:
- Upper limit (H or A), lower limit (L or B) Upper and lower limits (K or C with one common contact)
- H, L, K; Excitation alarm
- A, B, C; Non-excitation alarm
- Setting accuracy; ±1.0%
- Contact; ON alarm (OFF alarm is available on request)
- Contact capacity; 100V AC 0.3A/24V DC 0.2A (resistance load)
- Alarm indicator lamp (available on request); Alarm signal displayed with LED mounted on indicator panel

### CODE SYMBOLS

1 2 3 4 5 6 7 8	9 10	
PAK 2-	Ш	Description
		Input signal
A	$\uparrow$	1 to 5V DC
B	†-†	4 to 20mA DC
D	<u>+-</u> +-+	0 to 100μA200mA DC
E	††††	0 to 10mV5V DC
F	$\dagger$	0 to 10mV DC or more
		(with reference junction compensator)
G	†-	10mV DC span or more
		(with reference junction compensator)
H	$\uparrow \uparrow \uparrow$	Resistance bulb JPt100 $\Omega$
		50°C span or more, 3-wire type
M	$\uparrow$	Resistance bulb Pt100 $\Omega$
		50°C span or more, 3-wire type
J	TTT	Ring tube, slide resistant, 3-wire type
K		Ring tube, slide resistant, 2-wire type
		(with circuit adjusting resistor)
L		Opening angle indicator (resistance
		100 $\Omega$ , zero point and span adjustable)
* Z		Other inputs
		Alarm device
H		Upper limit
L		Lower limit Excitation alarm
K	<u>+-</u> +	Upper and (ON alarm)
		lower limits
* A		Upper limit
* B		Lower limit
* C		Upper and (ON alarm)
		lower limits
		Power supply
* 1	++++	24V AC 50/60Hz
3	┿┅┿╍	100V AC 50/60Hz
* 5	<u>+</u>	200V AC 50/60Hz
		Application
0		For general use
3		For connection zener barrier:
		Specify "3" only when zener barrier
		(PWZB3 or PMZB4) is to be connected
		and thermocouple or resistance bulb
		is used as input source.
		Mounting method
	1	Horizontal mounting
*	2	Vertical mounting
		Alarm indicator lamp
		None
	× 1	Provided
	° [] [	I TONIGEO

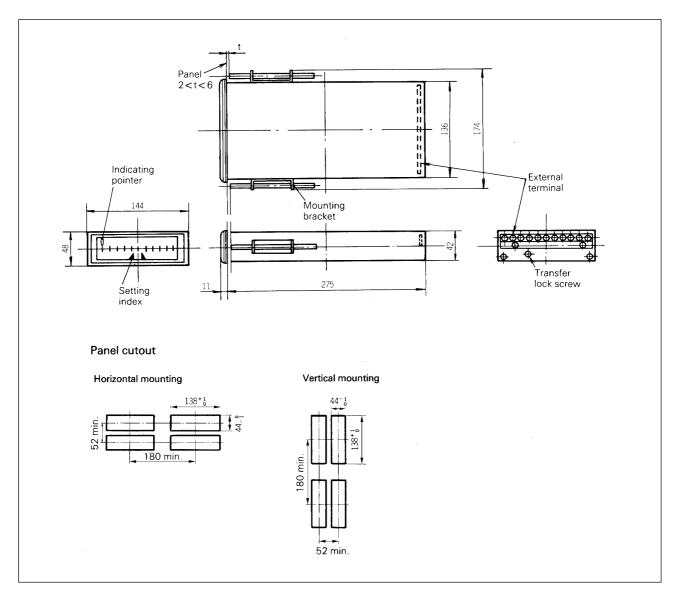
Notes: Symbols of resistance bulbs are as follows. JPt100 Previous JIS standard Pt100 New JIS standard Scope of delivery : Indicator and mounting bracket Mounting method:

Panel flush mounting Standard;

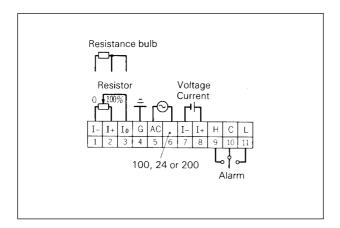
- S
  - Horizontal mounting on vertical panel Non-standard;

Tilted mounting, vertical mounting Specify  $\angle \alpha$  for tilted mounting

# OUTLINE DIAGRAM (Unit : mm)



# **CONNECTION DIAGRAMS**



# ORDERING INFORMATION

- 1. Product name
- 2. Code symbols
- 3. Input
- 4. Scale
- Alarm device and alarm indicator lamp (whether required or not)
- 6. Power supply
- 7. Application
- 8. Other necessary information

▲ Caution on Safety
Asterisked (\*) items; Non-standard
\*Before using this product, be sure to read its instruction manual in advance.

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