

**DE7000B****DIGITAL ALARM INDICATOR****OUTLINE**

Model DE7000B is a small alarm indicator that builds the alarm output in four points into, and measures the temperature, the voltage, and the current precisely.

**FEATURES**

- Digital 4 or 5 digits display
- Four Alarm Outputs standard
- High Accuracy of  $\pm 0.1\%$  (DE7101B)
- Full Multi-Input (Thermocouple, RTD, voltage or current)
- High-speed sampling cycle of 50ms
- Optional Transmitter power supply
- RS-232C,RS-422A (RS-485) Communication Interface
- Optional Multi-input selector

**SPECIFICATIONS**

**Input range:** Full multi-range, refer to Range table

**Display:** Dual 7 segment LED display, Process variable/ green and set point/ red  
 DE7001; 4 digits, LED  
 DE7101; 5 digits, LED

**Display update:** 100 msec

**Resolution:**

DE7001; 4 digits, 0.1°C below 1000°C, 1°C over 1000°C, 1°C with PR40-20

DE7101; 5 digits, 0.1°C, 1°C with PR40-20

**Scaling:** DE7001; -1999 to 9999, DE7101; -19999 to 19999

**Sensor correction:**  $\pm 30^\circ\text{C}$  with TC & RTD input ranges

**Alarm:** 4-set point process or high/ low rate of change

Alarm set point; 0 ~ 100% of range

Hysteresis; 0 ~ 100% adjustable within the range

ON delay timer; 0 ~ 600 sec.

**Alarm relay rating:** a-contact, 250VAC,0.5A resistive load, One side contact are common

**Memory backup:** Non-volatile RAM(Fe-RAM)

**Interface:** 300~9600 bps, ZE7101A0112 and ZE7101B0410 allow direct connection of RS-232C and RS-422A (RS-485)to the controller respectively

**Power supply:** Voltage rating at 100 to 240 VAC,50/60Hz

**Power consumption:** Approx. 3VA/100VAC, 8VA/200VAC

**Mass:** Approx.400g

**Operating temperature range:** -10 ~ 55°C without option, -10 ~ 45°C with options,

**PERFORMANCE**

**Accuracy:** DE7001;  $\pm (0.25\% + 1 \text{ digit})$ ,  
 DE7101;  $\pm (0.1\% + 1 \text{ digit})$ , refer to accuracy definition

**Reference-junction compensation error:**  $\pm 1^\circ\text{C}$

**Source impedance effects:** Approx. 0.13 $\mu\text{V}/\Omega$  at TC & mV ranges, RTD lead wire 5 $\Omega$  max.

**Input impedance:** Approx.250 $\Omega$ /4-20mA,Approx.500k $\Omega$ /Volt input

**CMRR:** 140dB min.

**NMRR:** 60dB min.

**OPTION**

**Analog retransmission:** 0 ~ 20mA or 4 ~ 20 mA selectable for process variable, alarm set point or PV rate of change,accuracy (DE7001;  $\pm 0.5\%$ ,DE7101;  $\pm 0.2\%$ ), resolution 0.05% max., load 400 $\Omega$  max.

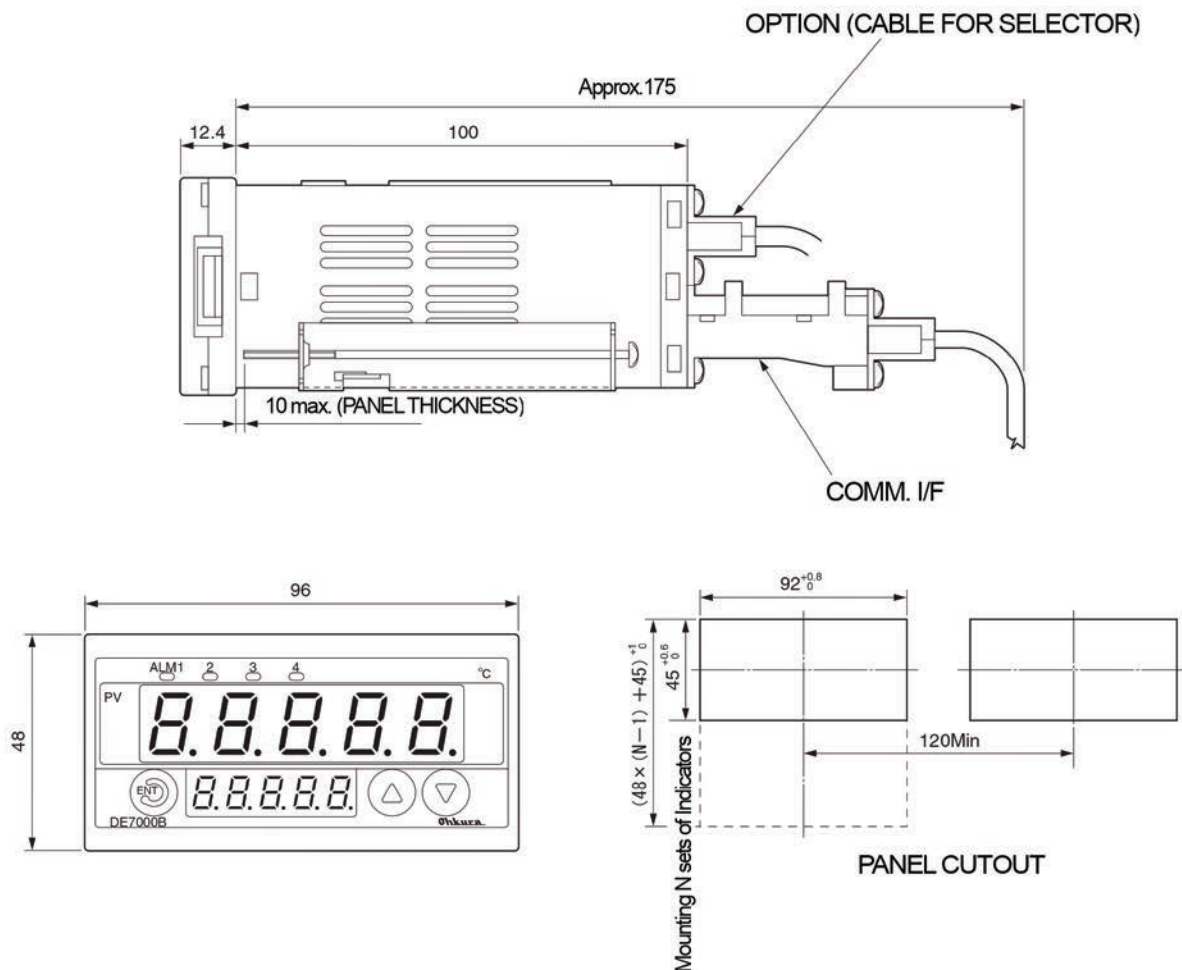
**Transmitter power supply:** 24VDC  $\pm 0.5\text{V}$ , 24mA max. isolated

## ACCURACY DEFINITION

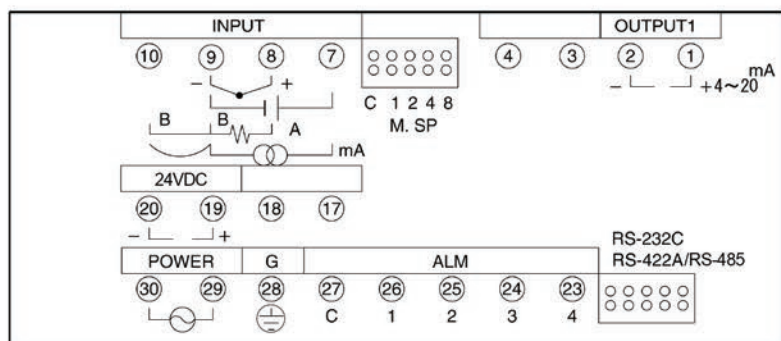
TYPE OF INPUT	RANGE CODE	ACCURACY		REMARKS		
		DE7001	DE7101	DE7001	DE7101	
B	b *1			*1 0 ~ 400°C undefined	*1 0 ~ 400°C ± 4%	
R	r1 *2			*3 -270 ~ -200 °C ± 4%	400 ~ 800°C ± 0.15%	
R	r2 *2			*4 -270 ~ -200 °C ± 2%	*2 0 ~ 200°C ± 0.15%	
S	S *2			*5 0 ~ 20K ± 1%	*3 -270 ~ -200°C ± 2%	
K	k1			20 ~ 50K ± 0.5%	*4 -270 ~ -200°C ± 1%	
K	k2	± (0.25% + 1 digit), ± (0.5% + 1 digit) within -200 ~ 0°C	± (0.1% + 1 digit), ± (0.15% + 1 digit) within -200 ~ 0°C	*6 0 ~ 300 °C ± 3%	*5 0 ~ 20K ± 0.5%	
K	k3			300 ~ 800 °C ± 1.5%	*5 20 ~ 50K ± 0.3%	
E	E1				*6 0 ~ 300 °C ± 1.5%	
E	E2 *3					
E	E3 *3					
J	J1					
J	J2					
J	J3					
T	t1 *4					
T	t2 *4					
WRe5-26	C					
N	n					
PLII	P1					
PLII	P2					
U	U					
L	L					
Au-Fe PR40-20	A *5 Pr *6	± (0.5% + 1 digit)	± (0.2% + 1 digit)			
Pt100 JPt100	Pt0 JPt0	± (0.25% + 1 digit)	± (0.1% + 1 digit)			
	Pt1 JPt1					
	Pt2 JPt2					
	Pt3 JPt3					
	Pt4 JPt4	± (0.25% + 1 digit)	± (0.15% + 1 digit)			

## DIMENSIONS

(UNIT: mm)



## TERMINAL CONFIGURATION



Some terminals do not function according to the model.

## RANGE TABLE

GROUP	CODE	INPUT	DE7001	DE7101
TC/mV	b	B	0.0 ~ 1820.0°C	0.0 ~ 1820.0°C
	r1	R	0.0 ~ 1760.0°C	0.0 ~ 1760.0°C
	r2	R	0.0 ~ 1200.0°C	0.0 ~ 1200.0°C
	S	S	0.0 ~ 1760.0°C	0.0 ~ 1760.0°C
	k1	K	-200 ~ 1370.0°C	-200.0 ~ 1370.0°C
	k2	K	0.0 ~ 600.0°C	0.0 ~ 600.0°C
	k3	K	-200 ~ 300.0°C	-200.0 ~ 300.0°C
	E1	E	-200 ~ 700.0°C	-200.0 ~ 700.0°C
	E2	E	-270 ~ 300.0°C	-270.0 ~ 300.0°C
	E3	E	-270 ~ 150.0°C	-270.0 ~ 150.0°C
	J1	J	-200 ~ 900.0°C	-200.0 ~ 900.0°C
	J2	J	-200 ~ 400.0°C	-200.0 ~ 400.0°C
	J3	J	-100.0 ~ 200.0°C	-100.0 ~ 200.0°C
	t1	T	-270 ~ 400.0°C	-270.0 ~ 400.0°C
	t2	T	-200 ~ 200.0°C	-200.0 ~ 200.0°C
	C	C(WRe <sub>5-26</sub> )	0.0 ~ 2320.0°C	0.0 ~ 2320.0°C
	A	Au-Fe	0.0 ~ 300.0°C	0.0 ~ 300.0°C
	N	N	0.0 ~ 1300.0°C	0.0 ~ 1300.0°C
	Pr	PR <sub>40-20</sub>	0 ~ 1880.0°C	0 ~ 1880.0°C
	P1	PLII	0.0 ~ 1390.0°C	0.0 ~ 1390.0°C
P2	PLII	0.0 ~ 600.0°C	0.0 ~ 600.0°C	
U	U	-200 ~ 400.0°C	-200.0 ~ 400.0°C	
L	L	-200 ~ 900.0°C	-200.0 ~ 900.0°C	
	10	± 10mV	* ± 100.0	* ± 100.00
	20	0 ~ 20mV	* 0.0 ~ 100.0	* 0.00 ~ 100.00
	50	0 ~ 50mV	* 0.0 ~ 100.0	* 0.00 ~ 100.00
	1-5	1 ~ 5V	* 0.0 ~ 100.0	* 0.00 ~ 100.00
	0-5	0 ~ 5V	* 0.0 ~ 100.0	* 0.00 ~ 100.00
	0-10	0 ~ 10V	* 0.0 ~ 100.0	* 0.00 ~ 100.00
	mA	4 ~ 20mA	* 0.0 ~ 100.0	* 0.00 ~ 100.00
RTD	Pt0		-200 ~ 850.0°C	-200.0 ~ 850.0°C
	Pt1		-200 ~ 400.0°C	-200.0 ~ 400.0°C
	Pt2	Pt100	-200 ~ 300.0°C	-200.0 ~ 300.0°C
	Pt3		-200 ~ 200.0°C	-200.0 ~ 200.0°C
	Pt4		-100.0 ~ 100.0°C	-100.00 ~ 100.00°C
	JPt0		-200 ~ 650.0°C	-200.0 ~ 650.0°C
	JPt1	JPt100	-200 ~ 400.0°C	-200.0 ~ 400.0°C
	JPt2		-200 ~ 300.0°C	-200.0 ~ 300.0°C
	JPt3		-200 ~ 200.0°C	-200.0 ~ 200.0°C
	JPt4		-100.0 ~ 100.0°C	-100.00 ~ 100.00°C

\*Shipping scaling

## MODEL CODE NUMBER

DE7 <sup>①</sup>  01B0 <sup>②</sup>  <sup>③</sup>

- ① Model
  - 0 : 4 digit display
  - 1 : 5 digit display
- ② Option
  - 0 : None
  - 1 : Analog Retransmission
  - 2 : Transmitter power supply
  - 3 : Analog Retransmission + Transmitter power supply
- ③ Special
  - 0 : None
  - Z : Special

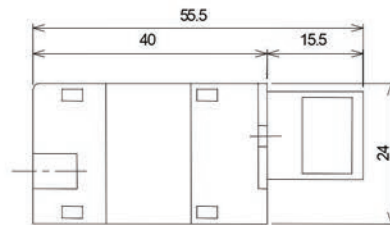
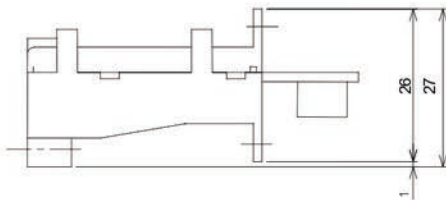
## PERIPHERAL UNIT

### ● Communication Module

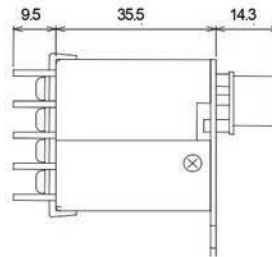
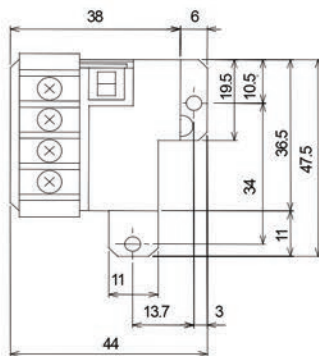
MODEL	INTERFACE	CABLE	REMARKS
ZE7101A0112	RS-232C	HMSU2255B02 Length 2m with D-sub connector (male)	-----
ZE7101B0410	RS-422A/485	WMSU0075A01 (RS-422A), WMSU0075A02 (RS-485)	Available up to 32 indicators

### Dimensions

RS-232C Module  
(Units : mm)



RS-422A/RS-485 Module  
(Units : mm)



●Input Selector

Model; DE7551B

Input; TC,V, mV or mA

Number of inputs; 8 max.

Output; 1

Switching; Non-shorting

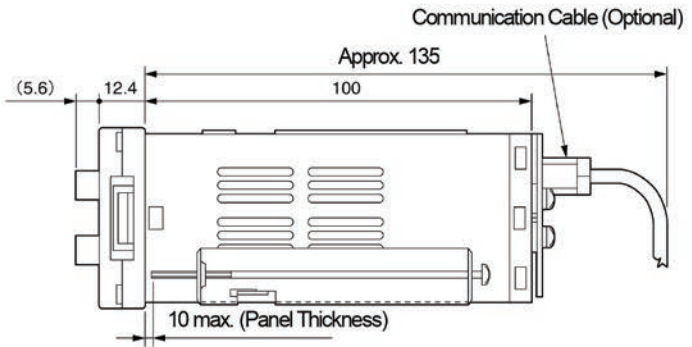
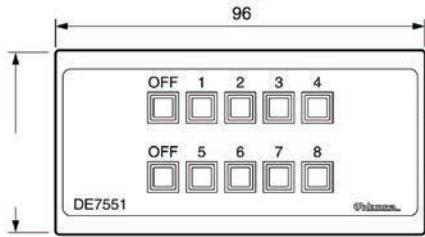
Error detector; Switch error indication

Operating temperature range; -10 ~ 55 °C

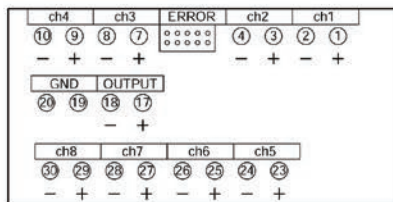
Cable; HMSU3089A0n with connector, length 0.5m, n = Nos. of selectors

Dimensions

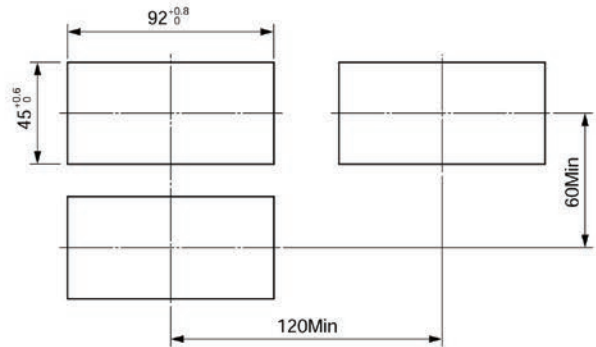
(Units: mm)



Terminal Configuration



PANEL CUTOUT



●External Resistor

Model; HMSU3081A02

Resistance; 250Ω ± 0.1%

**CAUTION**

Do not install this device before consulting instruction manual

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Specifications are subject to change without notice.

For further information, a quotation or a demonstration please contact to:



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