

**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 Ω max.

Input impedance: Approx. 250 Ω /4-20mA, Approx. 500k Ω /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 Ω max.

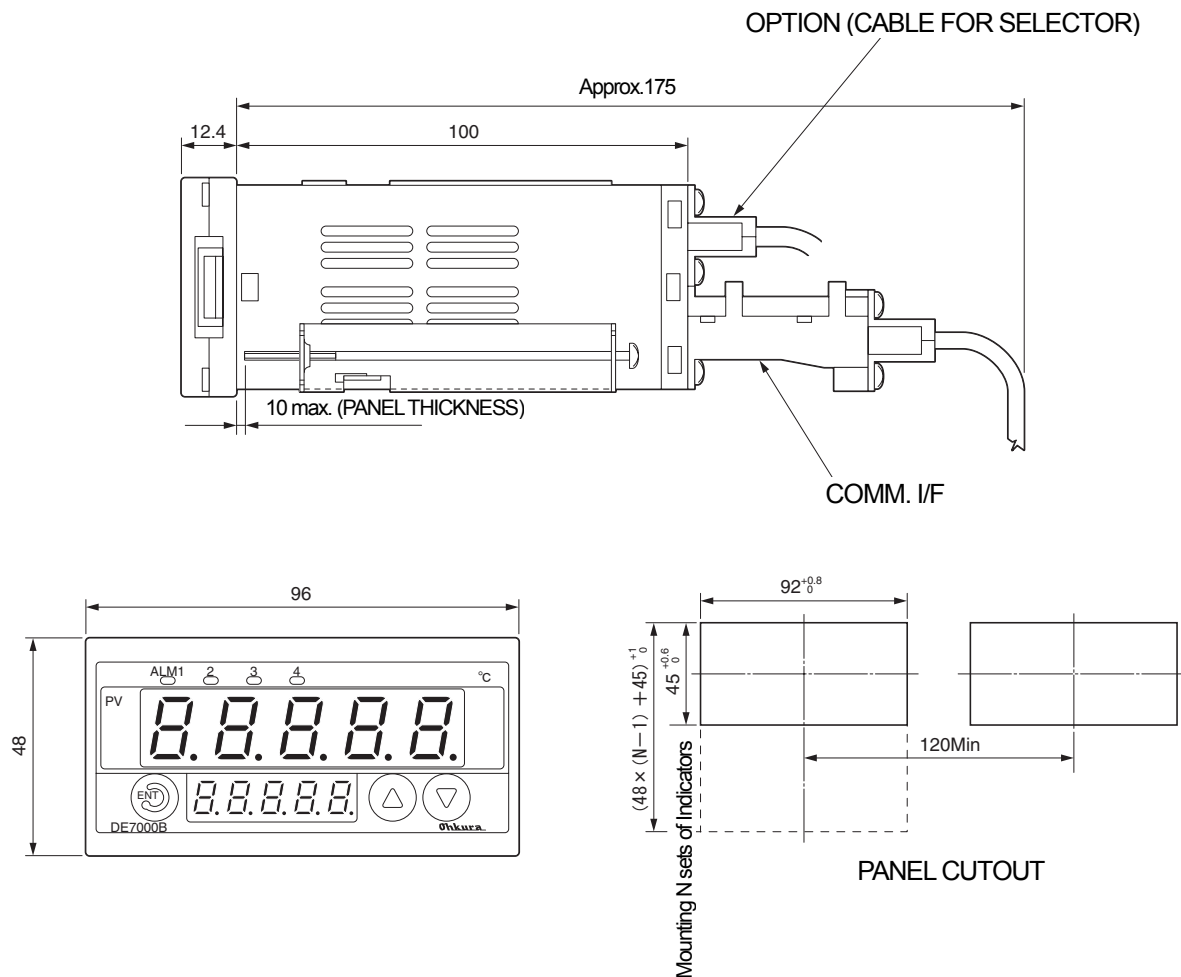
Transmitter power supply: 24VDC $\pm 0.5\text{V}$, 24mA max. isolated

ACCURACY DEFINITION

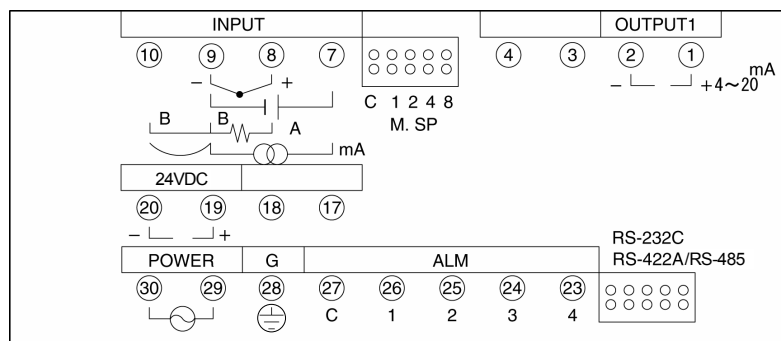
TYPE OF INPUT	RANGE CODE	ACCURACY		REMARKS	
		DE7001	DE7101	DE7001	DE7101
B	b *1			*1 0 ~ 400°C undefined	*1 0 ~ 400°C ± 4%
R	r1 *2			*3 -270 ~ -200 °C ± 4%	400 ~ 800°C ± 0.15%
R	r2 *2			*4 -270 ~ -200 °C ± 2%	*2 0 ~ 200°C ± 0.15%
S	S *2			*5 0 ~ 20K ± 1%	*3 -270 ~ -200°C ± 2%
K	k1			20 ~ 50K ± 0.5%	*4 -270 ~ -200°C ± 1%
K	k2	± (0.25% + 1 digit),	± (0.1% + 1 digit),	*6 0 ~ 300 °C ± 3%	*5 0 ~ 20K ± 0.5%
K	k3	± (0.5% + 1 digit)	± (0.15% + 1 digit)	300 ~ 800 °C ± 1.5%	20 ~ 50K ± 0.3%
E	E1	within -200 ~ 0°C	within -200 ~ 0°C		*6 0 ~ 300 °C ± 1.5%
E	E2 *3				300 ~ 800 °C ± 0.8%
E	E3 *3				
J	J1				
J	J2				
J	J3				
T	t1 *4				
T	t2				
WRe5-26	C				
N	n				
PLII	P1				
PLII	P2				
U	U				
L	L				
Au-Fe	A *5	± (0.5% + 1 digit)	± (0.2% + 1 digit)		
PR40-20	Pr *6				
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 as 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 ₅₋₂₆)	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 ₄₀₋₂₀	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 ^① 01B0 ^② ^③

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

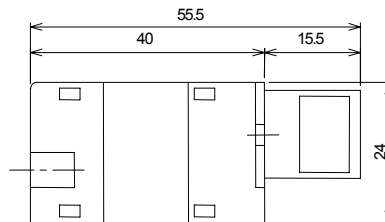
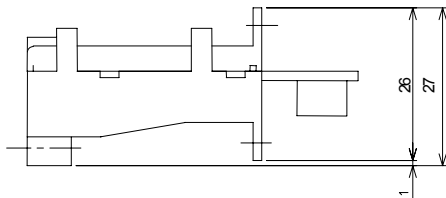
PERIPHERAL UNIT

● Communication Module

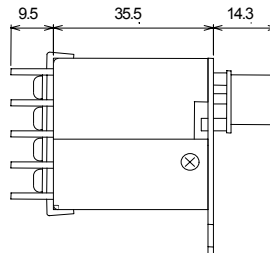
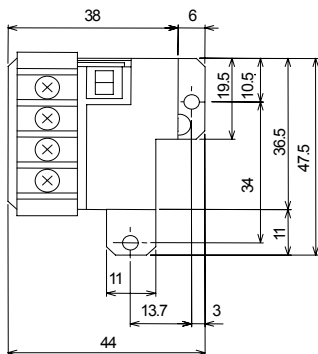
MODEL	INTERFACE	CABLE	REMARKS
ZE7101A0112	RS-232C	HMSU2255B02 Length 2m with D-sub connector (male)	-----
ZE7101B0410	RS-422A/485	WMSU0075A01 (RS-422A), WMSU0075A02 (RS-485)	Available up to 32 indicators

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

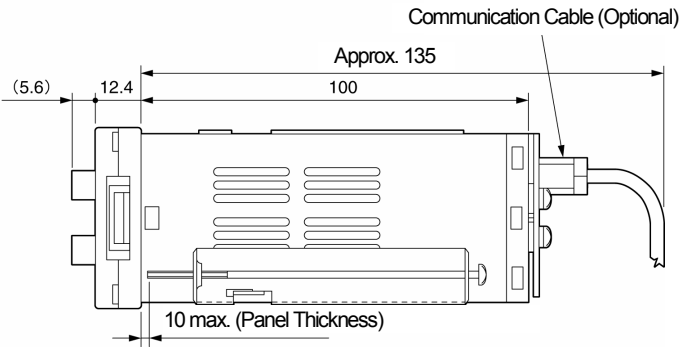
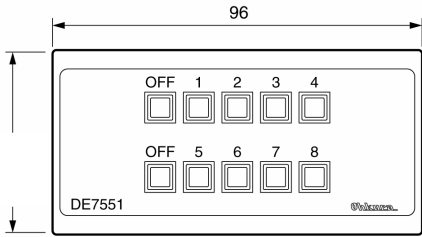
Error detector; Switch error indication

Operating temperature range; -10 ~ 55 °C

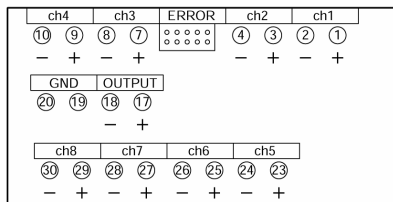
Cable; HMSU3089A0n with connector, length 0.5m, n = Nos. of selectors

Dimensions

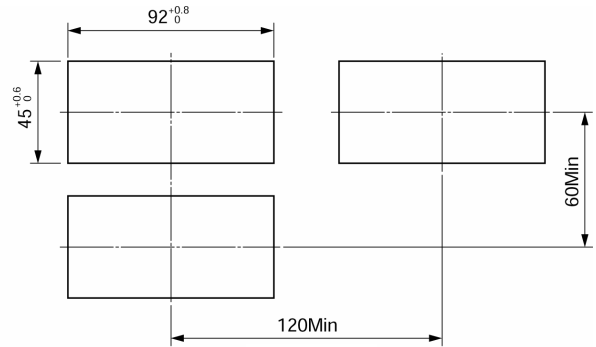
(Units: mm)



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:

