



# LED DIGITAL METER

Analog Input/Analog Output/Communication Version

# 220

## FEATURES

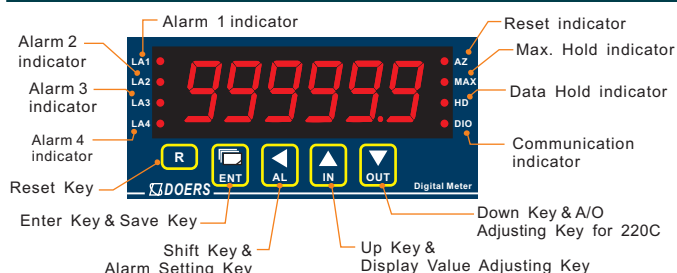
- MEASURING FOR DC CURRENT / AC , DC VOLTAGE / POTENTIOMETER / RESISTOR / RTD / LOAD CELL
- RANGE PROGRAMMABLE -19999 TO 99999 ; DECIMAL POINT SELECTABLE
- HIGH BRIGHTNESS 0.8" LED DISPLAY
- MAX. HOLD / DATA HOLD / RESET / 2 ~ 4 ALARM ( Hi or Lo ) PROGRAMMABLE / ANALOG OUTPUT ( 15 bit resolution ) / RS-485 COMMUNICATION OPTIONAL ( The above options can exist together )
- INDIVIDUAL SIMULATION ANALOG OUTPUT TO CHECK THE LOOP SIGNAL
- HIGH SAFETY WHICH THE HOUSING ARE NONFLAMMABLE PC MOULDING
- CE APPROVED

## SPECIFICATION

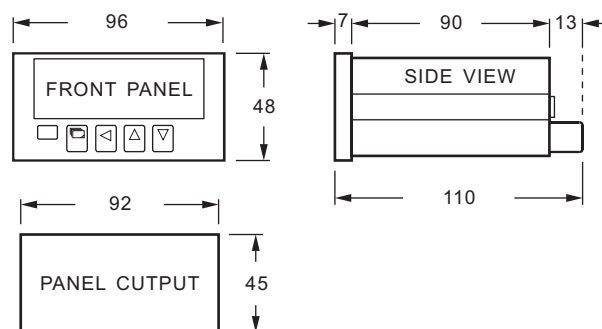
Display Screen	High brightness red LED 20.3mm ( 0.8" )
Display Range	-19999 ~ 19999 or 99999
Zero Adjustment	-19999 ~ 19999 or 99999
Sampling Time	16 cycles / sec
Over Range Indication	doFL / ioFL or -doFL / -ioFL
Polarity Indication	Automatic with "-" indication
Parameters Setting	Push buttons
Back Up Memory	EEPROM
Analog output resolution	15 bit
Output response time	≤250 msec ( 0 ~ 90% )
Output capability	Voltage output : ≤20mA Current output : ≤10V
Communication	RS-485 modbus RTU mode
Baud rate	19200 / 9600 / 4800 / 2400 bps
Alarm Action	"≥ ( Hi ) on" or "≤ ( Lo ) on"
Alarm Run Delay Time	0 ~ 99 sec
Relay Contact	AC 277V / 7A ; DC 30V / 7A or special specified
Input Impedence	Voltage : ≥2V for 20KΩ / V ≤2V for ≥20KΩ Current : ≥0.2A at 100mV ≤0.2A at 1V
Accuracy	±0.1%F.S. ±1 digit ( DC / Potentiometer / Resistor / RTD / Load Cell ) ±0.2%F.S. ±1 digit ( AC )
Power Supply	AC / DC 100 ~ 240V DC 12 / 24 / 30 ~ 90V
Power Consumption	8.5VA ( All functions output )
Surge Test	1.5kVac / 1min ( Input / Power )
Temperature Coefficient	100ppm / °C ( 0 ~ 60°C )
Operating Temperature	0 ~ 60°C
Operating Humidity	20 ~ 90% RH ( non-condensing )
Storage Temperature	-10 ~ 70°C
Storage Humidity	20 ~ 90% RH ( non-condensing )



## FRONT PANEL & KEY FUNCTIONS



## DIMENSION ( mm )



## MODEL SELECTIONS

ITEMS	CODE	SPECIFICATIONS
① MODEL	220	Digital Meter (DIN 96x48mm)
① OUTPUT	A	None (Not required)
	B	4 ~ 20mADC
	C	RS-485 Communication
	F	4 ~ 20mADC With M/A function
	S	To be specified
② INPUT RANGE	-00 ?	0 ~ 20 μA ( See Table 1 )
	-60	To be specified
③ ALARM FUNCTION	0	Not required ( 220A )
	2	2-SPDT , Relay output
	4	4-SPST-NO , Relay output
	5	To be specified
④ POWER SUPPLY	- A	AC 100 ~ 240V
	- B	DC24V
	- C	To be specified
⑤ DISPLAY	A	4.5 Digital ( -19999~19999 )
	B	5 Digital ( -19999~99999 )

# INPUT RANGE SELECTION

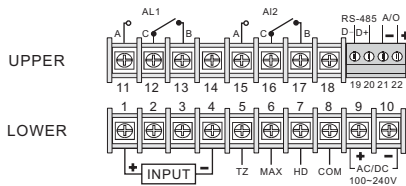
Table 1

CODE	Current	CODE	Voltage	CODE	Potentiometer	CODE	Resistor	CODE	RTD (PT-100)	CODE	Load Cell
00	0 ~ 20 $\mu$ A	10	0 ~ 50mV	20	500 $\Omega$ ~ 5K $\Omega$	30	0 ~ 10 $\Omega$	40	-50 ~ 50 $^{\circ}$ C	50	1mV / V EX.5V
01	0 ~ 200 $\mu$ A	11	0 ~ 5V	21	5K $\Omega$ ~ 10K $\Omega$	31	0 ~ 100 $\Omega$	41	-100 ~ 100 $^{\circ}$ C	51	2mV / V EX.5V
02	0 ~ 2mA	12	1 ~ 5V	22	10K $\Omega$ ~ 100K $\Omega$	32	0 ~ 1K $\Omega$	42	-200 ~ 200 $^{\circ}$ C	52	3mV / V EX.5V
03	0 ~ 20mA	13	0 ~ 10V	23	100K $\Omega$ ~ 1000K $\Omega$	33	0 ~ 10K $\Omega$	43	0 ~ 300 $^{\circ}$ C	53	1mV / V EX.10V
04	0 ~ 200mA	14	0 ~ 36V	24	1000K $\Omega$ ~ 1M $\Omega$	34	0 ~ 100K $\Omega$	44	0 ~ 400 $^{\circ}$ C	54	2mV / V EX.10V
05	4 ~ 20mA (without Excitation)	15	0 ~ 300V	25	Specified	35	Specified	45	0 ~ 500 $^{\circ}$ C	55	3mV / V EX.10V
		16	0 ~ 600V					46	0 ~ 600 $^{\circ}$ C	56	Specified
06	4 ~ 20mA (DC 24V Excitation)	17	Specified					47	Specified		
07	Specified										

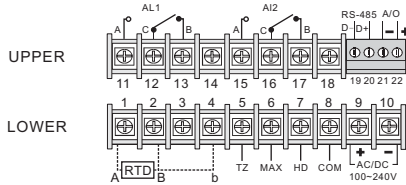
## WIRING CONNECTIONS

### 2 ALARMS OUTPUT

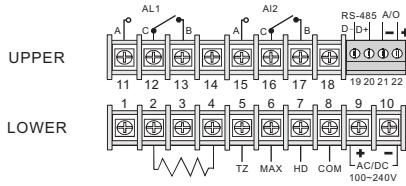
- Voltage , current ( AC / DC )



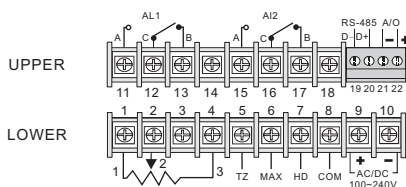
- Temperature ( RTD )



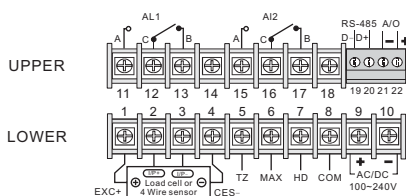
- 2 Wire Resistor



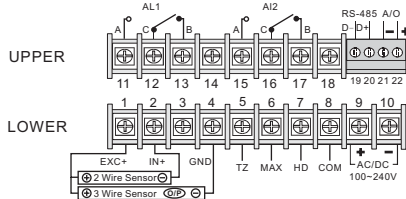
- 3 Wire Retentiometer



- 4 Sensor or load cell

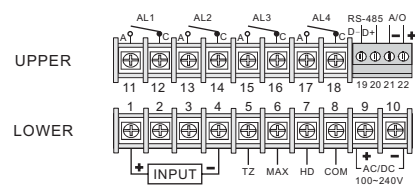


- 2 / 3 Wire sensor

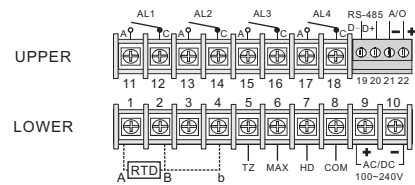


### 4 ALARMS OUTPUT

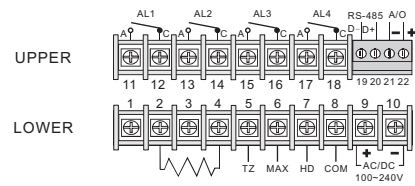
- Voltage , current ( AC / DC )



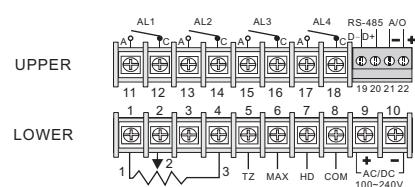
- Temperature ( RTD )



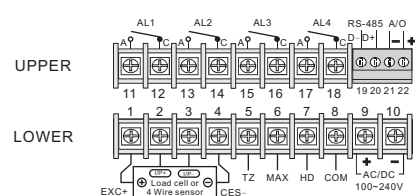
- 2 Wire Resistor



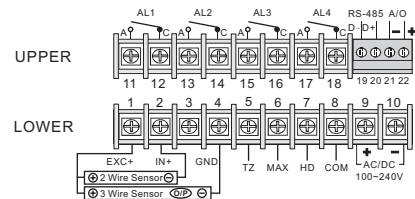
- 3 Wire Retentiometer



- 4 Sensor or load cell



- 2 / 3 Wire sensor



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The specifications are subject to change without prior notice.

