

# 3½ Digit *MINI METER* for AC / DC / RTD and T/C

## CSMS-321

### ► FEATURES

- Measures DCA, DCV, ACA, ACV, Temperature
- Accuracy: DC :  $\pm 0.1\%$ ; AC :  $\pm 0.25\%$ ;  
Pt100 :  $\pm 0.2\%$ ; Type K, J :  $\pm 1\%$
- 3 1/2 Digit display: 1999
- Easy-to-wire, screw terminal
- Outside dimensions 48 x 24mm
- High stability & low cost

Only 48 x 24mm

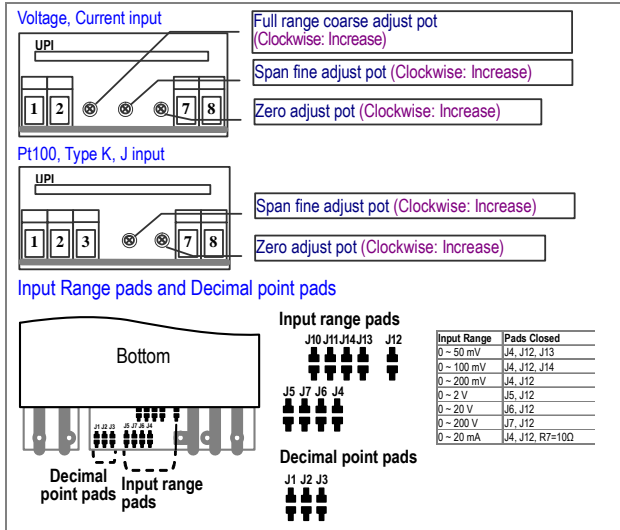


### ► MEASUREMENT

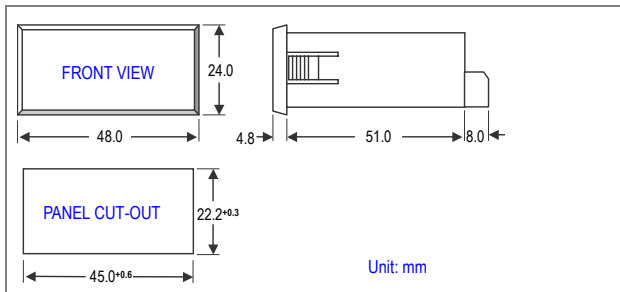
Measuring Range	Resolution	Input Impedance	Variable to be measured
Current	199.9 $\mu$ A	0.1 $\mu$ A	$\leq 1K \Omega$
	1.999 mA	0.001 mA	$\leq 100 \Omega$
	19.99 mA	0.01 mA	$\leq 10 \Omega$
	199.9 mA	0.1 mA	$\leq 1 \Omega$
	1.999 A	0.001 A	$\leq 0.05 \Omega$
Voltage	199.9 mV	0.1 mV	$\geq 5M \Omega$
	1.999 V	0.001 V	$\geq 1M \Omega$
	19.99 V	0.01 V	$\geq 1M \Omega$
	199.9 V	0.1 V	$\geq 1M \Omega$
	250 V	1 V	$\geq 1M \Omega$
Temp.	T/C: Type K	0~1200°C	$\geq 1M \Omega$
	T/C: Type J	0~750°C	$\geq 1M \Omega$
	RTD: Pt100	-40.0~199.9°C	$\geq 1M \Omega$
	RTD: Pt100	0~600°C	$\geq 1M \Omega$

- Measuring accuracy:** DC:  $\pm 0.1\%$  F.S.  $\pm 1$  digit  
AC:  $\pm 0.25\%$  F.S.  $\pm 1$  digit  
T/C:  $\pm 1\%$  F.S.  $\pm 1$  digit  
Pt100:  $\pm 0.2\%$  F.S.  $\pm 1$  digit
- Measuring range:** Selectable soldering pads on rear side of pcb
- Decimal point:** Selectable soldering pads on rear side of pcb
- Span adjustment:** Coarse adjustment 10~100% of F.S..  
Fine adjustment  $\leq 10\%$  of F.S.
- Zero adjustment:**  $\leq 5\%$  of F.S.
- Sampling time:** About 3 cycles/sec.
- Polarity indication:** When input is negative "-"
- Over-range indication:** "1" display
- Max. input over capability:** Voltage: 1.2 x rated continuous  
1.5 x rated for 10 seconds  
Current: 1.2 x rated continuous
- Operating temperature:** 0~60 °C
- Operating relative humidity:** 20~95 %RH
- Temperature coefficient:**  $\leq 100$  PPM/°C (0~50°C)  
 $\leq 50$  PPM/°C (23  $\pm 3$ °C)
- Storage temperature:** -10~70 °C
- Power Supply:** DC 5V, 12V, 24V  $\pm 10\%$  (Isolated)
- Power consumption:** 700 mW
- Dielectric Strength:** AC 500V for 1 min (Between Power / Input)  
AC 2.0KV for 1 min (Between Terminal / Case)
- Weight:** 350g

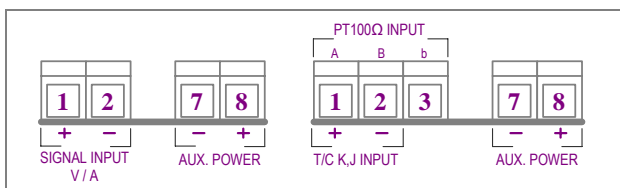
### ► ADJUSTMENT



### ► DIMENSIONS



### ► CONNECTION DIAGRAM



### ► ORDER CODING

CSMS-321 Input Type — Input Range — Aux. Power

CODE	INPUT TYPE	CODE	INPUT RANGE	CODE	INPUT RANGE	CODE	INPUT RANGE	CODE	AUX. POWER
D	DC	A	199.9 $\mu$ A	1	0 ~ 50 mV	K	K 0~1200°C	D5	DC 5 V
A	AC	B	1.999 mA	2	199.9 mV	J	J 0 ~ 750°C	D12	DC 12 V
T	Temperature	C	19.99 mA	3	1.999 V	P1	Pt100 -40.0~199.9°C	D24	DC 24 V
		D	199.9 mA	4	19.99 V	P2	Pt100 0~600°C	DO	Specify DC
		E	1.999 A	5	199.9 V	O	Specify		
		F	4 ~ 20 mA	6	250 V				
		G	0 ~ 1 mA	7	1 ~ 5 V				
		H	0 ~ 10 mA	8	0 ~ 10 V				
		I	0 ~ 20 mA	9	0 ~ 5 V				
		AO	Specify (A i/p)	VO	Specify (V i/p)				