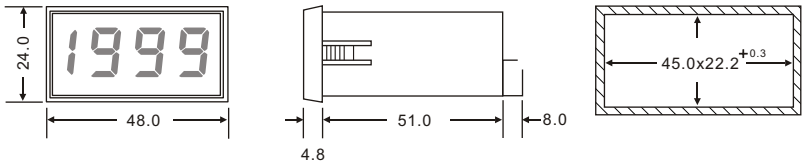
Digital Panel Meter

CSMS-321 **CSM-321** **CSR-321**

- Measuring DCA, DCV, ACA, ACV, Temperature
- Accuracy: ±0.1%(DC), ±0.25%(AC), ±1%(Thermocouple), ±0.2%(Pt100Ω)
- Dimension is 1/32 DIN standard (48x24mm)
- Option for Isolated DC 5V, 12V, 24V available

Dimension & Panel Cutout (Unit: mm)



CSMS-321

ORDER INFORMATION

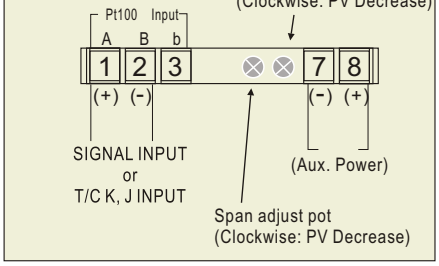
CSMS-321 Input Type — Input Range — Aux. Power

CODE	Input Type
D	DC
A	AC
T	Temperature

CODE	INPUT RANGE	CODE	INPUT RANGE	CODE	INPUT RANGE
A	199.9uA	1	0~50mV	K	K (0~1200°C)
B	1.999mA	2	199.9mV	J	J (0~750°C)
C	19.99mA	3	1.999V	P1	Pt100 (-40~199.9°C)
D	199.9mA	4	19.99V	P2	Pt100 (0~600°C)
E	1.999A	5	199.9V	O	Specify
F	4~20mA	6	250V		
G	0~1mA	7	1~5V		
H	0~10mA	8	0~10V		
I	0~20mA	9	0~5V		
AO	Specify	VO	Specify		

CODE	Aux. POWER
D5	DC 5V
D12	DC 12V
D24	DC 24V
DO	Specify DC

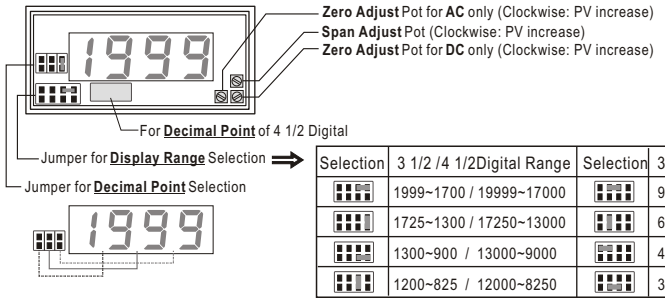
Connection Diagram:



CSM-321 3 1/2 Digital CSM-421 4 1/2 Digital

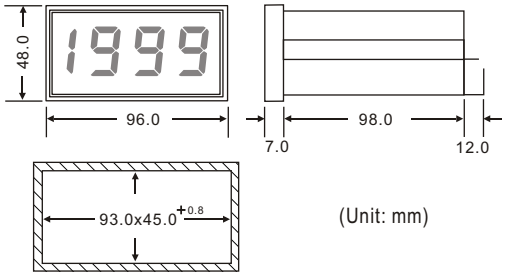
- Measuring DCA, DCV, ACA, ACV, Hz
- CSM-321 Accuracy: ±0.1%(DC), ±0.2%(AC),
- CSM-421 Accuracy: ±0.04%(DC), ±0.1%(AC)
- Dimension is 1/8 DIN standard (96x48mm)

Table (1)- Zero & Span Adjustment / Display Range & Decimal Selection



Selection	3 1/2 /4 1/2Digital Range	Selection	3 1/2 / 4 1/2 Digital Range
	1999~1700 / 19999~17000		900~625 / 9000~6250
	1725~1300 / 17250~13000		625~425 / 6250~4250
	1300~900 / 13000~9000		425~300 / 4250~3000
	1200~825 / 12000~8250		300~200 / 3000~2000

Table (2)- Dimension & Panel Cutout



ORDER INFORMATION

CSM-3 2 1 Input Type **N** — Input Range — Aux. Power

CODE	Digital
3	3 1/2 Digital
4	4 1/2 Digital

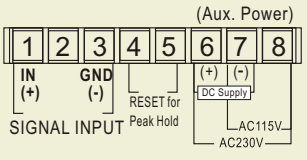
CODE	Option
N	None
H	Peak Hold

CODE	Input Type
D	DC
A	AC
TR	TRMS
F	Frequency

CODE	3 1/2	(4 1/2)	CODE	3 1/2	(4 1/2)	CODE	3 1/2	(4 1/2)
A	199.9uA	(199.99uA)	1	199.9mV	(199.99mV)	1	199.9Hz	(199.99Hz)
B	1.999mA	(1.9999mA)	2	1.999V	(1.9999V)	2	1999Hz	(1999.9Hz)
C	19.99mA	(19.999mA)	3	19.99V	(19.999V)	F	Specify	(Specify)
D	199.9mA	(199.99mA)	4	199.9V	(199.99V)	1	AC 2~200V	
E	1.999A	(1.9999A)	5	300V	(300.0V)	2	AC 30~600V	
F	5.00A	(5.000A)	6	600V	(600.0V)	3	Pulse 5V	
G	10.00A	(10.000A)	V	Specify	Specify	4	Pulse 12V	
I	Specify	Specify				5	Pulse 24V	
						O	Specify	

CODE	Aux. POWER
A	AC 115/230V
D12	DC 12V
D24	DC 24V
D48	DC 48V
DO	Specify DC
AO	Specify AC

Connection Diagram:



CSR-321 3 1/2 Digital CSR-421 4 1/2 Digital Process Meter

- Measuring process signal mA, Vdc, Potentiometer, Pulse/u
- CSR-321 Accuracy: ±0.1% & CSR-421 Accuracy: ±0.04%
- Dimension is 1/8 DIN standard (96x48mm) as above Table (2)
- Zero & Span Adjustment, Decimal Point and Display Range selection as above Table (1)

ORDER INFORMATION

CSR-3 2 1 — Input Range — Excitation Supply — Aux. Power

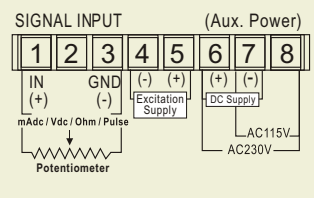
CODE	Digital
3	3 1/2 Digital
4	4 1/2 Digital

CODE	Current	CODE	Voltage	CODE	Potentiometer/ohm	CODE	Strain Gauge	CODE	Frequency
A1	0~1mA	V1	0~50mV	RP1	50~10K ohm	S1	1.0mV / V	H1	0~100Hz
A2	0~10mA	V2	0~60mV	RP2	10K~100K ohm	S2	1.3mV / V	H2	0~200Hz
A3	0~20mA	V3	0~1V	RPO	Specify (3-w)	S3	1.5mV / V	H3	0~500Hz
A4	4~20mA	V4	0~5V	R1	199.9 ohm	S4	2.0mV / V	H4	0~1KHz
AO	Specify mA	V5	0~10V	R2	1999 ohm	S5	2.5mV / V	H5	0~2KHz
		V6	1~5V	R3	10.00K Ohm	S6	3.0mV / V	H6	0~5KHz
		V7	0~100mV	RO	Specify (2-w)	S7	4.0mV / V	H7	0~10KHz
		VO	Specify (V i/p)			S8	3.33mV /V	H8	0~40KHz
						SO	Specify (mV/V)	HO	Specify (Hz)

CODE	Excit. Supply
N	None
E1	DC 10V
E2	DC 12V
E3	DC 24V
E4	DC 5V
EO	Specify

CODE	Aux. Power
A	AC 115/230V
A3	AC 380V
A4	AC 415V
A24	AC 24V
D12	DC 12V
D24	DC 24V
D48	DC 48V
DO	Specify DC
AO	Specify AC

Connection Diagram:



AC / DC CURRENT METER

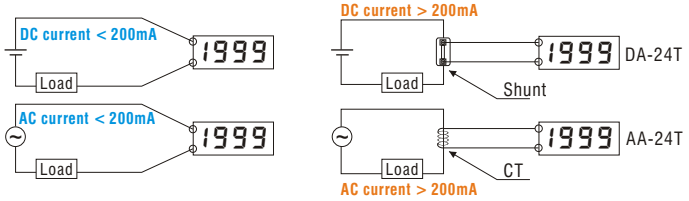
- Dual Slope A/D Converter with high Accuracy less than 0.2% of F.S.
- 4 Digital Display for range 1999 with large LED 25.4mm, easy to monitor
- Outside dimension is 1/8 DIN standard (96x48mm)

AA-24T DA-24T

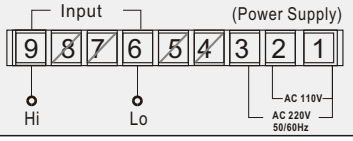
Illustration:

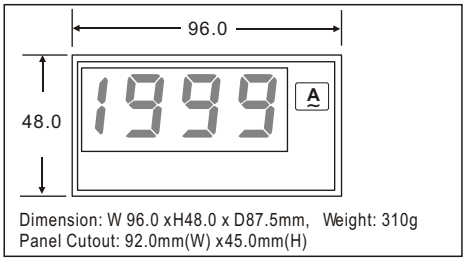
Switch-1							Switch-2			
Switch No. / Max. Input Range	1	2	3	4	5	Input Impedance	Switch No. / Decimal Point	1	2	3
1.999mA	ON	X	X	X	ON	100Ω	1 digit	X	X	ON
19.99mA	X	ON	X	X	ON	10Ω	2 digits	X	ON	X
199.9mA	X	X	ON	X	ON	1Ω	3 digits	ON	X	X
5.0A	X	X	X	Δ	Δ	0.1Ω	Decimal point selection is dependent on the amplification			
remarks	"Δ" is optioned, ON or OFF is dependent on the amplification									

How to measure AC / DC Current:



Connection Diagram:





Dimension: W 96.0 xH48.0 x D87.5mm, Weight: 310g
Panel Cutout: 92.0mm(W) x45.0mm(H)

ORDER INFORMATION

A A - 24 Measuring Range - Specify ratio of CT or Shunt

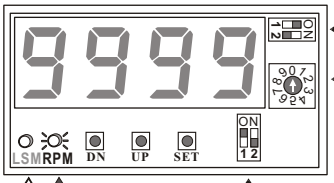
CODE	Input Voltage
A	AC voltage
D	DC voltage

CODE	Measuring Range
T	0~5A
T-1	0~200mA
T-2	4~20mA for DA only

SM-20 Tachometer, Line speed Meter & Duty Meter

Power Supply	110V /220VAC ± 20%, 50/60Hz
DC Power Output	12VDC / 60mA Max.
Sampling Time (S.T.)	1~99 Seconds settable
Pules Per Revolution (PPR)	1~999PPR Settable
Decimal Point	Auto Shift
Response Frequence	High Speed <2.5K Hz ; Low Speed <30Hz
Dielectric Strength	Over 2.5KV /1 min., Between Power & each terminal
Isolation Strength	Over 100M /500VDC, Between Power & each terminal
Operating Temp./Hum.	-20°C ~+60°C ; 35 ~ 85%RH

Operation for Inner Rotary Switch & Push Buttons



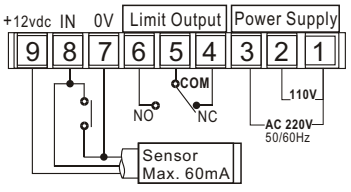
Indication for Meter type, please POWER ON again after changed the Meter type.

SW1
#1=ON= No Decimal Point
#1=Off= With Decimal Point

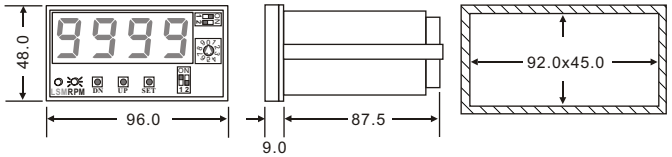
Rotary Switch for selection the Meter's type		
#0 = Tachometer	<RPM>	Revolutions per minute
#1 = Tachometer	<RPS>	Revolutions per Second
#2 = Tachometer	<RPH>	Revolutions per Hour
#3 = Line speed Meter	<M/min.>	Meter per minute
#4 = Line speed Meter	<Yd/min.>	Yard per minute
#5 = Duty Meter	<Sec>	Time of Duty

SW2
#1=ON= Un-lock the parameter setting
#1=Off= Lock the parameter setting
#2=ON= With limit setting
#2=Off= Without limit setting

Connection Diagram:



Dimension & Panel Cutout (Unit: mm)



Operation for Parameter Setting

① Normal running status — SET (For 2sec.) — 8888
When the #1 Slide Switch of Sw2 is ON status for un-lock the parameter.

② Setting for PPR — SET — P001
Range: 1~999
Set by UP or DN Key

③ Setting for Diameter — SET — d000
(No this setting for Meter is ROM / RPS / RPH)
Range: 1~999

④ Setting for Limit value — SET — 0000
Range: 1~999
Set by UP or DN Key
Display is flicking

⑤ Setting for limit status — SET — C0
C0: PV>limit for Relay ON
C1: PV<limit for Relay ON

⑥ Power ON Delay Time — SET (Back to running status) — d000
Range: 0~99sec.