

Panel Voltmeter - Ammeter - Frequency meter

Direct or alternative current 50Hz 60Hz 400Hz

LOREME
94000CA

- **Voltage input up to 800 Vrms (AC + DC) 94000uCA**
Two input ranges: 100V and 800V
- **Current input (AC and DC)**
94000iCA : direct input. Up to 10A
94000iCHall : for remote Hall effect sensor up to 250A
94000iCmV : mV input for shunt or Tio (current transformer)
94000iCROGO: input for Rogowski coil sensor
- **Frequency measurement 94000-Hz**
- **1000 pts Led display for measurement**
Available in Red, Green, Yellow, Blue
- **Relay output option: 94000CA/R**
- **4-20mA analog output option**
- **Size 72 x 36 mm**
Compact depth



The 94000CA is a digital meter for voltage or current measurement designed for low-cost or small size applications. The optional relay allows to use it as a protection relay.

Description:

94000uCA (voltmeter)

- TRMS voltage measurement (100Vac+dc and 800 Vac+dc ranges)
- frequency range : 0...50...60Hz, option for 400 Hz
- compatible with wave train, phase angle variation
- configurable PT ratio for external potential transformer

94000iCA (ammeter)

- RMS current measurement (10A ac+dc direct input)
- frequency range: 0...50...60Hz, option for 400 Hz
- compatible with wave train, phase angle variation
- configurable CT ratio for external current transformer

94000-Hz (frequency meter)

- frequency measurement (100Vac and 800 Vac input ranges)
- measurable frequency range 1Hz to 450 Hz

Front face :

- 3 digits, 7 segments LED display (1000 pts), 14 mm height
- 2 push buttons for device configuration:
external Transformer ratio, threshold setting, ...
- LED indicator for alarm status

Relay output: (option 94000CA/R)

- 1 free potential changeover contact
usable in alarm, protection ,
- Threshold, direction of alarm, delay adjustable with push buttons in front face.

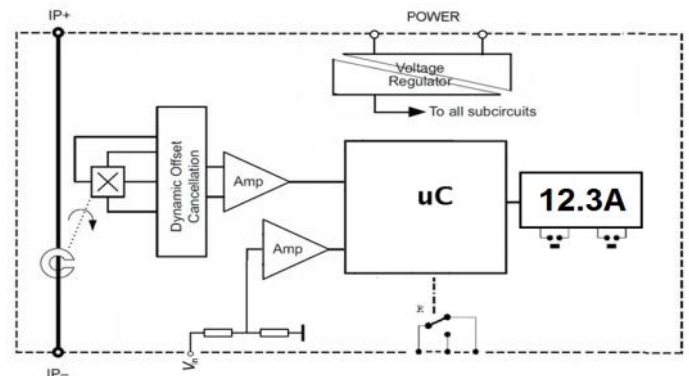
Analog output: (94000CA/S)

- One 4-20mA isolated output. Available only on the model with isolated current sensor input, for the retransmission of measure (configurable output range).

Feature:

- DIN panel case : 72 x 36 mm
- Pluggable screw terminal blocks (2.5 mm²)
- Universal power supply AC and DC
- Galvanic isolation input / power supply / relay
- Conformal coating
- Protection rating IP54 (front face without buttons)

Synoptic:



Associated current sensors



Version and order code:

[Request a quote](#)

94000uCA	AC+DC voltmeter (100V and 800V, 50-60Hz)
94000iCA	AC+DC ammeter, direct input, 10A max
94000iCHall	AC+DC ammeter, for Hall effect sensor up to 250A (sensor type: Hco-d8 up to 80A, HCO12v-d20 up to 250A)
94000iCmV	ammeter, mV input for shunt (AC+DC) or Tio : split core current transformer (AC only)
94000iCROGO	ammeter for Rogowski coil sensor (AC only)

94000-Hz Panel frequency meter

option: /R: 1 threshold relay

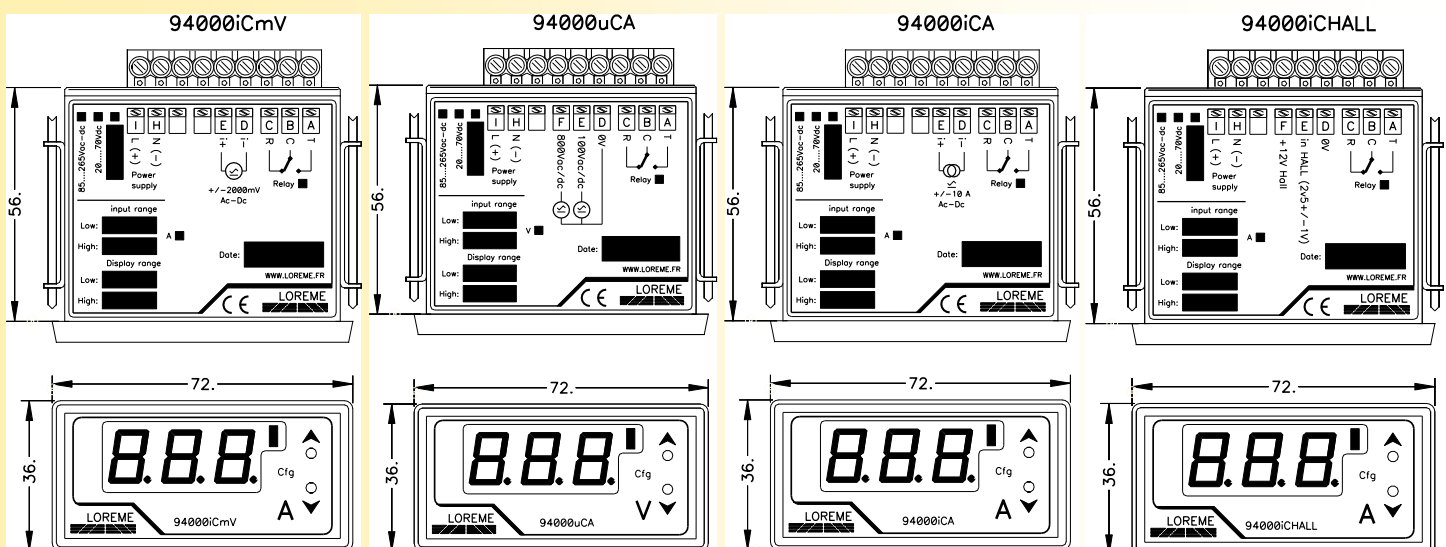
/S: 4-20mA analog output (Only for 94000iCA model)

- **400Hz** for measure on networks up to 440Hz
option /R and /S are not cumulative.

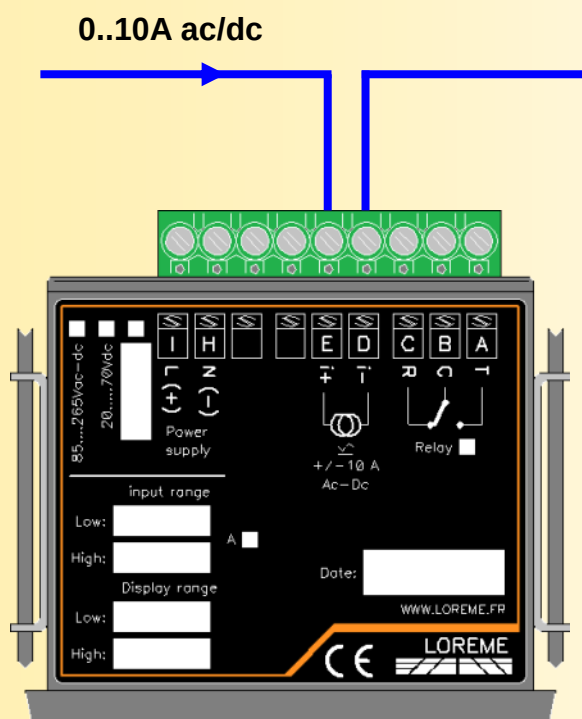
INPUT			RELAY	
TYPE	RANGE	ACCURACY	Switching power: 2A / 250 V, 60VA changeover contact isolation: 1500 Vac	
94000uCA				
AC voltage (direct input)	800 V	0.3% +/-1digit	Analog output Current: 4...20mA +/-10µA admissible load: 0...350 Ohms	
DC voltage (direct input)	800 V	0.3% +/-1digit		
Input impedance	800Kohms			
Measurement Threshold	10 V			
Power consumption	0.8 W			
AC voltage (direct input)	100 V	0.3% +/-1digit	POWER SUPPLY Universal, not polarized, available in 3 versions 20....70Vac/dc 85....265Vac/dc 11Vdc....30Vdc. consumption < 1.5 VA	
DC voltage (direct input)	150 V	0.3% +/-1digit		
Input impedance	100Kohms			
Measurement Threshold	1.5 V			
Power consumption	0.1 W			
Overload	1.5 x Un for 3 seconds		ENVIRONMENT Operating Temperature -10 to 60°C Storage Temperature -20 to +85 °C Thermal drift (% of the full scale) < 0.02% / °C Humidity : 85 % (not condensed) Protection rating : IP54 Weight : 95 g Dielectric strength 1500 Vrms continuous Input/Power/Output-Relay	
94000iCA				
AC current (direct input)	10A	+/- 0.6 %		
Overload	6 x In for 3 sec			
Measurement Threshold	2% of input range			
94000iCmV				
AC voltage (direct input)	2000mV	+/-0.2%	MTBF (MIL HDBK 217F) > 3 000 000 Hrs @ 25°C Life time > 200 000 Hrs @ 30°C	
Overload	6 x Un for 3sec			
Measurement Threshold	1% of input range			
94000-Hz				
Frequency (for all inputs)	1Hz....440 Hz	+/-0.2% +/-1 digit		
response time: standard	1000ms (measure integration) configurable from 0.01 to 60s		Electromagnetic compatibility 2014/30/UE / Low Voltage Directive 2014/35/UE	
			Immunity standard for industrial environments EN 61000-6-2	
			Emission standard for industrial environments EN 61000-6-4	
			EN 61000-4-2 ESD	
			EN 61000-4-8 AC MF	
			EN 61000-4-3 RF	
			EN 61000-4-9 pulse MF	
			EN 61000-4-4 EFT	
			EN 61000-4-11 AC dips	
			EN 61000-4-5 CWG	
			EN 61000-4-12 ring wave	
			EN 61000-4-6 RF	
			EN 61000-4-29 DC dips	
			EN 55011	
			group 1 class A	
			CE	
WIRING AND OUTLINE DIMENSIONS:			panel cut-out : 68.5 x 32.5mm	

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panel cut-out : 68.5 x 32.5mm



**AC or DC Direct current input
up to 10A input range**



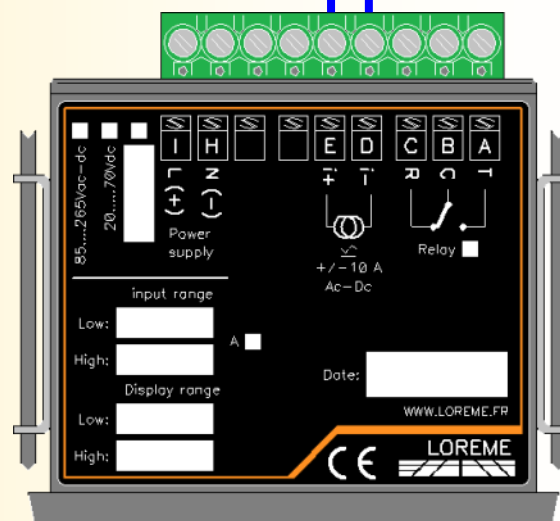
**AC Input via current transformers
1A or 5A range**

[Split core current transformer](#)

10A...3000A ac



1A / 5A ac



[Current transformer](#)

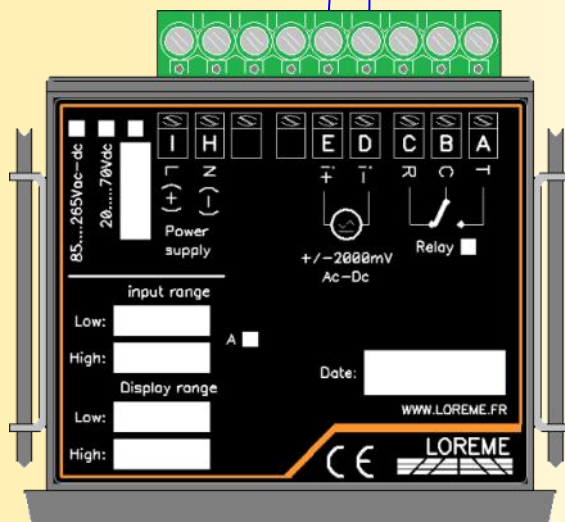


AC or DC current input on external shunt

10A...15KA ac/dc



50mV, 60mV
75mV, 100mV
150mV, 200mV



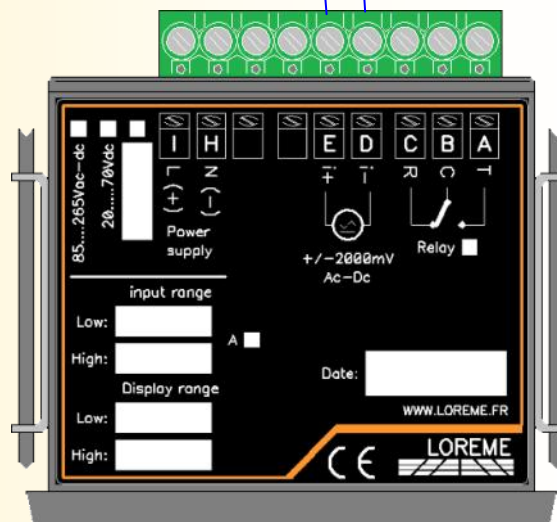
AC Input via split core current transformer with voltage output

5A...500A ac

[Miniature split core current transformer](#)



0...200mVac



[Miniature split core current transformer](#)



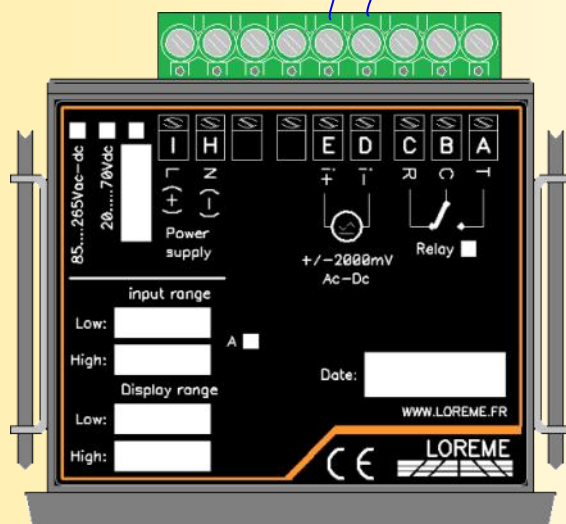
Wiring and using of current input sensors according to the application

AC Input via Rogowski coil with mv output

Flexible split core
current sensor
(Rogowski coil)
Type : ROGOFLEX

100A...40kA ac

0...2000mVac



<http://www.loreme.fr/fichtech/Rogoflex.pdf>



AC or DC input via Hall effect current sensor for high current

0..100A ac-dc

Signal 2.5V +/-1V
ac/dc
and +12Vdc sensor
supply

