



ENGLISH

Datasheet

Stock No. 123-3258

RS PRO ICM 138N Power Clampmeter



Feature:

- 6000 Count digital display
- Backlit, Large scale display
- True RMS reading on AC+DC mode
- Auto AC/DC 600 Amps capability and selection
- Auto AC/DC 1000 Volts capability and selection
- Auto Ohms/Continuity/Diode selection
- Power 600K Watt capability
- 20K Ohms Resistance capability
- Continuity Beeper
- Frequency Counter
- Power and Power factor measurement
- Total Harmonics distortion measurement
- °C / °F Temperature Function
- Inrush Current measurement
- DCA Auto-Zeroing Key
- Peak Hold
- MIN/MAX Function
- Display Hold
- Phase rotation indication
- Auto Power Off
- 4 feet Drop Proof
- Deluxe Carrying Case
- Convenient Battery Door
- CAT III 600V / CAT II 1000V Safety Standard

Specifications:(All at 23°C ±5°C, ≤80% R.H.)

Voltage:

Function	Range	Accuracy*
DCV	60.00V	±(0.7% + 5dgt)
	600.0V	
	1000V	
ACV	60.00V	±(1.0% + 5dgt) 45 ~ 500Hz
	600.0V	
	1000V	

Overload protection: 1000V_{rms}

Input Impedance: 3.5MΩ // <100pF

AC Conversion Type: AC/DC Coupled True RMS responding

AC+DC V_{rms} Accuracy: same as ACV spec. +1% rdg. + 5dgt

Current:

Function	Range	Accuracy
DCA	600.0A	± (1.5% + 5dgt)
ACA	600.0A	± (1.5% + 5dgt) 45 ~ 65Hz
		±(2.5% + 5 dgt) 66 Hz ~ 400 Hz

Overload protection: 600A_{rms}

Position Error: ±1% of reading.

AC Conversion Type and additional accuracy is same as AC Voltage.

AC+DC A_{rms} Accuracy: Same as ACA spec +1.5% rdg. +5dgt.

– DCA affected by the temperature and the residual magnetism. Press HOLD key > 2sec to compensate it.

Peak Hold: Peak MAX / Peak MIN

Function	Range	Accuracy
ACV	85.0V	± (3.0% + 15dgt)
	1400V	
ACA	85.0A	± (3.0% + 15dgt) (corrected DCA Zero)
	850A	

Overload protection: 1000 V_{rms}, 600 A_{rms}

Accuracy defined for:

Sine wave, ACV>5V_{rms} / ACA≥5A_{rms}, Freq.50~400Hz.

– Only suitable for the repetitive events.

Frequency:

Function	Range	Accuracy
Frequency	20.0 ~ 399.99Hz	$\pm (0.1\% + 5\text{dgt})$
	400 ~ 4000Hz	

Overload protection: 1000 V_{rms}, 600 A_{rms}

Sensitivity:

5V_{rms} for ACV, 5A_{rms} for ACA(>400Hz Unspecified)

- Reading will be 0.0 for signals below 10.0 Hz.

Total Harmonic Distortion:

Function	Range	Accuracy
ACA /ACV	100.0%	$\pm (3.0\% + 10\text{dgt})$

Overload protection: 1000 V_{rms}, 600 A_{rms}

- If ACV<10V_{rms} or ACA <10A_{rms}, it will display "rdy".
- If the fundamental frequency out of range 45 ~ 65Hz, it will display "out.F".

Inrush Current:

Function	Range	Accuracy
ACA	10.0 ~59.9A	2.5% \pm 0.2A
	60.0 ~ 600.0A	2.5% \pm 5dgt

Overload protection: 600 A_{rms}

Accuracy defined for:

Sine wave, ACA \geq 10A_{rms}, Freq. 50/60Hz

- Integration time about 100ms

Active Power: Watt

Function	Range	Accuracy
W~	4.000 kW	Add the errors of Voltage and current.
	40.00 kW	
	400.0 kW	
	600 kW	

Overload protection: 1000 V_{rms}, 600 A_{rms}

Accuracy defined for:

Sine wave , ACV \geq 10 V_{rms}, ACA \geq 5 Arms Freq. 45~65Hz, PF=1.00

- The reading of Active Power will be fluctuated apparently due to the current fluctuation in 4.000 kW range.

Power Factor: $PF = \text{Watt} \div (V \times A)$

Function	Range	Accuracy
PF	-1.00 ~ 0.00 ~ 1.00	$\pm 3^\circ$

Overload protection: 1000 V_{rms}, 600 A_{rms}

Resistance & Continuity & Diode:

Function	Range	Accuracy
Resistance	600.0 Ω	$\pm (1.0\% + 5\text{dgt})$
	6.000 k Ω	
	20.00 k Ω	
Continuity	600.0 Ω	$\pm (1.0\% + 5\text{dgt})$
Diode	2.00V	$\pm(1.5\% + 5\text{dgt})$ for 0.4V ~ 0.8V

Overload protection: 600 V_{rms}

Maximum Open Circuit Voltage for Ω , Continuity: Approximate 2.4V

Maximum Open Circuit Voltage for diode: Approximate 3V

Continuity check:

Internal sounds activates if the resistance of the circuit under test is less than 30 Ω approximately.

Max. display count: 5400 counts.


Temperature:

Function	Range	Accuracy
$^\circ\text{C}$	-50.0 $^\circ\text{C}$ ~ 399.9 $^\circ\text{C}$	$\pm (1\% + 3^\circ\text{C})$
	400 $^\circ\text{C}$ ~ 1000 $^\circ\text{C}$	
$^\circ\text{F}$	-58.0 $^\circ\text{F}$ ~ 751.9 $^\circ\text{F}$	$\pm (1\% + 6^\circ\text{F})$
	752 $^\circ\text{F}$ ~ 1832 $^\circ\text{F}$	

Overload protection: 600 V_{rms}

– The above specification is assumed at the ambient temperature stability within $\pm 1^\circ\text{C}$. The meter needs 1 hour for stability for ambient temperature change more than $\pm 1^\circ\text{C}$.

General:

Sampling Rate:	3 times/sec
Overload Indication:	"OL" or "-OL"
Low Battery Indication:	
Auto Power Off:	Approx. 10 minutes after last operation
Operating Temperature:	0 °C ~ 30 °C (\leq 80% RH) 30 °C ~ 40 °C (\leq 75% RH) 40 °C ~ 50 °C (\leq 45%RH)
Storage Temperature:	-10°C to 50°C, 0% RH to 80% RH (batteries not fitted)
Temperature Coefficient:	0.2 x (Specified accuracy) / °C, < 18°C, > 28°C .
Safety:	IEC 61010-1: CAT IV 600V, CAT III 1000V
Maximum Conductor Size	35mm
Bus Bar Size	40mm x 15mm
Power Requirement:	9V Battery x 1
Battery Life: (Alkaline)	50 hours (without Backlight)
Size:	87.5mm(W) x 257mm(L) x 50.5mm(D)
Weight:	Approx. 380g (with battery)
Accessories:	Battery (installed), Carrying case, Temperature socket, K-type sensor, User Manual