

ROTATIONAL RHEOMETER

(Programmable)

Introduction:

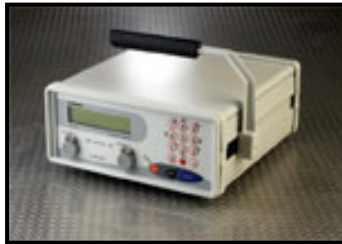
MPRA series of precision rotational rheo-analyzer are available in 4 different regular models apart from tailor made solutions virtually covering all industrial and research applications meeting all electrical, thermal, mechanical, and environmental specifications. These indicators are first choice for online monitoring/identifying rheological parameter of liquid/gases material at simulated temperature. These finds applications in polymer, paint, medicine, food, coating, defense, electrical/mechanical m/c testing instrument, industrial electronics, railway, and avionics and solid state physical application like dielectrics characterization, switch gears, MEMS and many research and development activities. These precision instruments are compatible to any standard or hall/shunt/thermocouple sensor and display with very high degree of accuracy/repeatability/reliability and are available in different constructional material like ceramic-coated MS, poly carbonate cabinets.

Benefits:

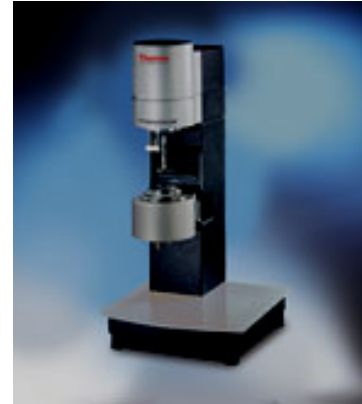
- High input impedance/Low input biased current /higher accuracy/.
- 5-1/2 & 6-1/2 digit display /consistent performance
- ce over large temperature/humidity range (70°C and 80 % RH)
- Scaled directly in nano/pico/femto ampere with repeatable accuracy.
- Auto/manual zero offset without drift.
- Auto drift tracking
- RS-32 interface/high sample rate – 10,000 sample/second.
- Feed back current measurement technique.



MPRA-0009991



MPRA-0099991



MPRA-9999992

Precision Rheometer

Range < 999999 nano N.m.

Model	Range R.P.M.	Range $10^{-9}/10^{-12}/10^{-15}$ Ampere	Angular Rotation/ Frequency/option	Burdon	Accuracy Restricted to Resolution level	Resolution Quantified/ optional	Voltage/current source Volt/current/optional As demanded	INTERFACE
MPRA-9999990101	10.0/5.0 -0.999999	05.0/01.0 -999999nN 1.0 mN-10.0N	300rad 0-400.Hz	< 100 nano Nm	99.99999%	5 u.R.P.M./5nN	015 /001.0 A	RS-232/USB
MPRA-9999990401	10.0/5.0 -0.999999	05.0/01.0 -999999nN 1.0 mN-20.0N	300rad 0-400.Hz	< 100 nano Nm	99.99999%	5 u.R.P.M./5nN	040 /001.0 A	RS-232/USB
MPRA-9999990102	05.0/1.0 -9.99999	10.0/05.0 -999999pN 0.001 m.N-1.00N	300rad 0-400.Hz	< 100 nano Nm	99.99999%	5 u.R.P.M./5pN	015 /001.0 A	RS-232/USB
MPRA-9999990402	05.0/1.0 -9.99999	10.0/05.0 -999999pN 0.001 m.N-2.00N	300rad 0-400.Hz	< 100 nano Nm	99.99999%	5 u.R.P.M./5pN	040 /001.0 A	RS-232/USB
MPRA-9999991002	05.0/1.0 -99.9999	10.0/05.0 -999999pN 0.001 m.N-10.0N	300rad 0-400.Hz	< 100 nano Nm	99.99999%	5 u.R.P.M./5pN	100 /001.0 A	RS-232/USB
MPRA-9999992002	05.0/1.0 -99.9999	10.0/05.0 -999999pN 1.0 mN-199N	300rad 0-400.Hz	< 100 nano Nm	99.99999%	5 u.R.P.M./5pN	200 /001.0 A	RS-232/USB
MPRA-9999992003	05.0/1.0 -99.9999	10.0/05.0 -999999pN 0.0001 mN-10.0 N	300rad 0-400.Hz	< 100 nano Nm	99.99999%	5 u.R.P.M./5fN	200 /010.0m A	RS-232/USB

Six digit after product code indicate count, next, Two digit indicate voltage and last digit indicate
01- nano amp/02-pico amp/03-femto amp.

General electrical/mechanical specifications:

Operating voltage: 220 volt A.C. (50-20,000 Hz)/ 12 D.C.
 Measurement range (full scale): as above in different model.
 Range (R.P.M.): 10^{-06} - 10^{-01} / 10^{-1} - 10^{+5} † least count- 5.0 R.P.M.
 Torque (N.m.) rang : 10^{-12} - 10^{-07} / 10^{-7} - 10^{-2} / 10^{-02} - 10^{+2} least count- 5.0 pico Newton
 Angular rotation range: 0-300 degree with resolution of 0.001 degree
 Oscillation frequency: 0.0009 – 999.999 Hz
 Viscosity range: upto 3000.000 Pas
 Temperature range -20 °C to +180 °C
 Response time: 1000 sample/sec
 Burden: less than 100 micro volt/full scales current or better
 Input capacitance: 10 nF
 Accuracy: 99.999 % reading
 Repeatability: 100 of reading
 Resolution: 1/5 pico N.m. 2. /1/2/5 mill rpm or optional and may be altered based on time behaviour of signal
 Linearity adjustment: upto 100 nano-Newton
 Input imedence: ultra low(<1000 burdon),
 Filtering: low pass(adjustable)
 Offset: variable upto 10,000 nano (manual/auto)
 CMMR: >80 db at 50-60 Hz
 Isolation: > 100 giga ohm
 Connector: BNC-9 pinx2 and BNC-25 pinx2
 Size: 5X8X8 inches/rack mounted or portable
 Interface: RS-232

Option : Additional software to plot V/I OR ANY DESIRED INFERENTIAL PARAMETER.
 THESE SPECIFICATIONS OR PART THERE OF MAY BE MODIFIED TO MEET ANY TAILOR MADE SOLUTIONS.

NOTES: The numeral after product code indicates the (ampere meter) range and last digit corresponds to size (5x5x8, 8x8x12)

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