

Technical Data

RPM4-LP

Low Pressure Monitor



Versatile, high performance draft range pressure measurements in a compact package

Fluke Calibration RPM4-LP provides reliable draft range pressure measurements, from very low differential pressures to a full scale range of ± 15 kPa (± 150 mbar, ± 60 inH₂O).

With Infinite Ranging™ technology, RPM4-LP offers a low percent of span uncertainty for any selected span from as low as ± 1.25 kPa (± 12.5 mbar, ± 5 inH₂O) to the full scale of RPM4-LP.

RPM4-LP AutoRange™ and other features enable the user to configure RPM4-LP for optimal pressure measurement with little experience or setup time.

Compact size and a rugged design makes the RPM4-LP just as powerful for in-situ calibration of draft range pressure sensors as it is in the lab.

High performance measurement capability, powerful features, intuitive interface and robust packaging make the RPM4-LP the perfect solution in a wide variety of high end pressure calibration, testing and measurement applications.

The RPM4-LP includes many of the features of the standard RPM4:

- Self-Defense System (SDS) valves automatically isolate and vent pressure to protect the Reference Pressure Transducer
- Stability based Ready/Not Ready Indication
- Built-in fluid head corrections
- User defined pressure units
- Intelligent AutoZero function
- Optional remote [ENTER] switch
- 12 V dc power and battery pack option
- RS-232 and IEEE-488 communications
- PC based recalibration utility software included

Unit Under Test Differential Pressure Range				RPM4-LP Measurement Uncertainty (percent of UUT span)
kPa	psi	mbar	inH ₂ O	
± 15	± 2.2	± 150	± 60	± 0.015 %
± 7.5	± 1.1	± 75	± 30	± 0.015 %
± 2.5	± 0.36	± 25	± 10	± 0.015 %
± 1.2	± 0.18	± 12	± 5	± 0.015 %
± 0.5	± 0.072	± 5	± 2	± 0.038 %
± 0.25	± 0.036	± 2.5	± 1	± 0.075 %
± 0.12	± 0.018	± 1.2	± 0.5	± 0.15 %
± 0.06	± 0.009	± 0.6	± 0.25	± 0.3 %
± 0.03	± 0.005	± 0.3	± 0.12	± 0.6 %

Precision measurement over a wide range of draft pressures: The table shows the total 1-yr measurement uncertainty delivered by RPM4-LP for commonly used draft pressure range devices.

Specifications

General specifications	
Power requirements	RPM4: 85 V ac to 264 V ac, 50/60 Hz, 25 V a max and 12 V dc @ 9 Ah Battery/charger: 100 V ac to 240 V ac, 50/60 Hz
Normal operating temperature range	15 °C to 35 °C (59 °F to 95 °F)
Vibration	Meets MIL-T-28800D
Weight (typical)	5 kg (11 lb)
Dimensions (H x W x D)	RPM4: 10 cm x 22.7 cm x 24 cm (3.9 in x 8.9 in x 9.5 in) Battery/charger: 8 cm x 22.5 cm x 20 cm (3.1 in x 8.9 in x 7.9 in)
Communications ports	RS-232 (COM1, COM2), IEEE-488.2
Maximum/minimum working pressure ¹	± 15.6 kPa (± 62.4 inH ₂ O)
Pressure range	-15 to 15 kPa (-60 to 60 inH ₂ O)
Operating media	Clean, dry, noncorrosive gas
Calibration	ISO 17025 Accredited (A2LA) Calibration Report Included
Pressure connections	1/8 in. NPT F
CE mark	Available, must be specified

Pressure measurement specifications	
Warm up time	30 minute temperature stabilization recommended from cold power up
Resolution	To 1 ppm, user adjustable
Predicted one year stability ²	± 0.005 % of reading
Measurement uncertainty for 1 year ³	± 0.015 % of AutoRanged span
Minimum autoranged span	± 1.25 kPa (± 5 inH ₂ O)

¹ The RPM4-LP is a precise measuring instrument to measure very low pressure and therefore can be damaged by excessive negative or positive pressure on either test port. Care must be taken to insure the test pressure stays within the pressure range of the unit. The RPM4-LP is not recommended to be used with a PPC4 as an external RPT.

² Predicted one year stability limit (k=2) assuming regular use of AutoZero function.

³ Maximum deviation of the RPT indication from the true value of applied pressure including precision, predicted one year stability limit, temperature effect and calibration uncertainty, combined and expanded (k=2) following the ISO "Guide to the Expression of Uncertainty in Measurement." AutoRanged span is the difference between positive and negative full scale values (ie., ± 15 kPa span equals 30 kPa).

Ordering information	
Model Number	Description
RPM4-LP	Pressure Monitor -15 to 15 kPa (-60 to 60 inH ₂ O), no CE mark
RPM4-LP-CE	Pressure Monitor -15 to 15 kPa (-60 to 60 inH ₂ O), with CE mark
Accessories	
Battery Pack/Charger	12 V dc battery with charger
Rack Mount Kit	Rack mount kit for standard 19 in. rack
Footswitch	Remote [ENTER] footswitch
3990-801	Manual Pressure Control Pack
PK-7000-PPC/3990	Interconnections kit for RPM4 and 3990 with quick connector test connection

Fluke Calibration. Precision, performance, confidence.™

Electrical	RF	Temperature	Pressure	Flow	Software
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