

RM-17 Portable Watthour Test System

Product Bulletin 1700



Unparalleled Accuracy

*Utilizes a True Radian
Reference Standard*

*Store / Upload Test
Result Data*

Portable Printer Support

Time / Date Stamp

Simple Operation

Light, Compact Package

OVERVIEW

The Radian Research RM-17 Portable Watthour Test System offers simplicity without compromise for testing residential watthour meters. In a compact, lightweight package of approximately 10 pounds, the RM-17 delivers accuracy and flexibility beyond commercial table top and floor standing watthour meter test systems. The RM-17 combines simple operation, advanced data management, and exceptional accuracy to provide the definitive, cost effective approach to field testing.

The RM-17 Portable Watthour Test System is the most accurate self-contained residential meter test system available. Unlike other residential meter testers, the RM-17 is not simply a verifier. Instead, the RM-17 incorporates a true Radian Research watthour standard as its reference. The typical accuracy of the RM-17 is $\pm 0.01\%$ with a conservative worst case accuracy of $\pm 0.05\%$ which is traceable to NIST. The inherent Radian watthour standard accuracy allows for the meter's accuracy to actually be tested instead of merely verified. This accuracy will allow the RM-17 to easily test future solid state residential meters.

The RM-17 Portable Watthour Test System automates and greatly simplifies on-site testing of residential billing meters. This simplicity allows non-metering personnel to easily handle testing associated with billing complaints.

Test results are clearly shown on the RM-17's display for the operator and the electric utility customer. Clear, straightforward test procedures make it easy for the utility customer to observe and understand the test. Portable printer support allows test results to be printed on site for further customer assurance.

The RM-17 Portable Watthour Test System eliminates the need for manual recordkeeping making paperless meter testing a reality. Up to 100 sets of test result data can be stored in the RM-17 Hand Controller. These results can later be uploaded to a computer for further storage and manipulation. All test results are time/date stamped to further enhance maintenance of test records. Identifying information such as User ID and Meter ID can be entered and stored with the results of each test.

The ability to create and store multiple test configurations in the hand controller further simplifies the role of field test personnel. Standard test configurations can be created with a computer using optional PCA-Link™ software. These setups can then be downloaded into multiple hand controllers at one time ensuring consistent procedures across an entire field test operation.

As with other Radian products, the RM-17 is backed by the most aggressive warranty in the industry. Technical specifications are detailed on the back page.

Technical Specifications

RM-17 Portable Watthour Test System

■ WATTHOUR ACCURACY

All errors are in percent of reading at any combination of the normal operating conditions. Note that stability is included within the maximum accuracy specification. *Power factor is referenced to Watthours and it is also assumed that voltage is the reference vector.

AT UNITY POWER FACTOR

AT 0.5 LAG POWER FACTOR

0.01% typical, 0.05% maximum

0.01% typical, 0.05% maximum

■ NORMAL OPERATING CONDITIONS

INPUT VOLTAGE	60 to 600 VAC (Autorange)
INPUT CURRENT	1.5, 3, 5, 15, 30, 50 Amps (Autoselect)
POWER FACTOR	Unity and 0.5 Lagging Power Factor
RELATIVE HUMIDITY	0 to 95%
FREQUENCY	48 to 62 Hz
ORIENTATION	Any
RECALIBRATION	365 days
SHOCK AND VIBRATION	Any which is nondestructive
NORMAL OPERATING RANGE	-20° to 70 C ° (-4 to 158 F °)

■ PHYSICAL DESCRIPTION

HAND CONTROLLER	190 mm (7.5") H 105 mm (4.00") W 33 mm (1.25") D approx.
SOCKET ADAPTER	178 mm (7.0") W 178 mm (7.0") D approx.

■ INFLUENCE AFFECTING ACCURACY

NONE

■ INPUT

PICKUP TERMINAL	Lemo, pulse input for Radian RM-1H or RM-DS
INPUT/OUTPUT TERMINAL	BNC, RM-1S Remote Reset Switch

■ OUTPUT

INPUT/OUTPUT TERMINAL	BNC, 0.00001 pulse output value
PRINTER/PCA TERMINAL	●RM-PCA Communications to RS-232 Port ●Serial Printer Interface

■ ACCESSORIES AVAILABLE

- RM-1S Remote Reset Switch
- RM-1H Optical Pickup for Infrared LED
- RM-DS Meter Disk Sensor
- RM-PCA Computer Interface Adapter with PCA-LINK™ Software
- Portable Thermal Printer
- Portable Printer Paper
- RM-TJ Test Jack

■ WARRANTY

The RM-17 is warranted to be substantially stable in calibration over time. If within one year after factory calibration the RM-17 does not meet its specifications, Radian will repair and recalibrate the unit. Radian Research warrants the RM-17 to be free from defects in material and workmanship. Radian will repair or replace any instrument or component therein which, within two years after shipment, proves to be defective upon examination.

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