

PAT 250 series

Handheld portable appliance testers with Bluetooth®



- CertSuite PAT software included (1 year licence*)
- Control of testing from CertSuite PAT
- Save results to the cloud and produce reports quickly
- Simple tick or cross for pass or fail indication
- Battery powered with rechargeable options
- Safe 250 V insulation and leakage test for surge-protected and IT equipment
- Continuity test 200 mA
- Substitute leakage testing
- Mains powered and 10 mA and 30 mA portable RCD lead testing
- Fast testing and report generation
- Tough, rubber armour with built-in front cover and lightweight for portability

DESCRIPTION

The PAT250 series of hand-held portable appliance testers enables simple, fast safety testing in all environments including offices, shops and business units. Its tough, reliable functionality is ideally suited for training organisations with high turnover, intensive courses.

With rubber armoured cases and hardened, scratch-proof glass, the PAT250s are exceptionally tough instruments.

Battery powered operation makes the PAT250s perfect for those locations where an electrical supply is not available, inconvenient or unsafe, especially building sites and warehouses. The PAT250 series conforms to all UK and European requirements for electrical safety testing.

CERTSUITE PAT SOFTWARE

The PAT250 series is supplied with CertSuite PAT as standard (1 year licence, subscription applies after 1 year). With CertSuite PAT, recording PAT test results and producing professional quality test reports is quick and easy. Unlimited reports and jobs are supported.

For more information on CertSuite PAT please visit megger.com or scan the QR code →



*After 1 year a subscription charge applies please see megger.com for further information.

Test groups

Test groups enable the correct sequence of tests to be performed automatically with minimum intervention by the user. This keeps testing simple, reduces test times to a minimum and helps to prevent testing errors.

THE PAT250:

- The PAT250 has additional tests available for testing portable RCDs (PRCDs) of 10 mA and 30 mA.
- Separate tests for continuity, insulation, mains powered leakage testing and SELV measurements can be made using the Quick Test (QT) button.
- Test group pass limits and test duration can be configured by the user.
- Bond lead resistance can be nulled to reduce measurement errors.
- Live circuit measurement is available for testing the mains supply and socket polarity or electrical circuit voltage to 300 V ac.
- Can be used for testing fixed appliances.

Continuity test

Used for measuring the proper bonding of all metal parts of a class I device to the protective conductor.

Tests are performed at 200 mA DC in both polarities to be compliant with international and UK regulation or recommendations. This test is safe to perform on equipment where higher test currents could cause damage.

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Insulation testing

Used for measuring the separation of conductive parts or conductors from earth. This test is usually performed at 500 V dc. The PAT250 series maintains the necessary test voltage down to 0.5 MΩ.

Substitute leakage testing

Substitute leakage testing enables the measurements of AC leakage currents, which could differ significantly from the DC Insulation test results.

Substitute leakage testing is performed at less than 40 V ac. and does not require a mains supply.

Substitute leakage testing is used for measuring protective conductor current and touch current, in addition to an insulation test, or where it is considered an insulation test may damage equipment.

The Substitute leakage test will not operate equipment and so can be used where the operation of the equipment under test is undesirable.

Portable RCD testing (PRCD)

Portable RCDs can be tested using the PAT250SX. There is no need to find a non-RCD protected supply as the PAT150 will not trip external RCDs.

Both 10 mA and 30 mA RCDs can be tested both for disconnection times and the manual test button function.

Separated Extra Low Voltage (SELV) supplies

SELV supplies should be tested to ensure the output voltage does not exceed maximum limits as defined in the international regulations for Extra Low voltage systems. The PAT250SX permits up to 50 V AC measurement, with a PASS or fail indication for SELV.

Differential Leakage (Protective Conductor Current), Touch Current and operational test

The PAT150 includes the facility for mains powered leakage test. This test has the benefit that equipment under test will function during the test sequence.

Battery life

The PAT250SX operates from AA Alkaline or NiMH cells. Battery life is typically four days, based on one hundred and twenty assets per day.

The PAT250SX can be re-charged with NiMH batteries fitted.

SPECIFICATIONS

Environmental Condition

Operating ambient 20 °C
Humidity 45% rh ± 20 points

Continuity Test

Test voltage Compliance voltage:
+4 V DC -0% / +30% (open circuit)

Test current Bi-directional +200 mA
-0 % + 50 mA (into 2 Ω load)

Continuity accuracy Resistance: ± 5% ± 3 digits
(0 to 19.99 Ω)

Resolution Resistance 10 mΩ

Display range 0.01 to 19.99 Ω

Continuity test nulling
up to 9.99 Ω

Test time User selectable from 2 s to 20 s
or selected during test to 180 s

Insulation Test

Insulation test 250 V DC -0% +25% open circuit
500 V DC -0% +25% open circuit
≥ 500 V 0% DC across 0.5 MΩ load

Short circuit/charge current < 2mA DC

Insulation accuracy ± 3% ± 10 digits (0 to 19.99 MΩ)

Resolution 0.01 mA

Display range 0.10 MΩ to 99.99 MΩ

Test duration User selectable from 2 s to 20 s or
selected during test to 180 s

Substitute Leakage Test

Leakage current Accuracy ± 5% ± 3 digits

Test frequency Nominal mains frequency 50 Hz

Test voltage < 50V ac

Resolution 0.01 mA

Display range 0.10 to 19.99 mA

Test duration 0.01 mA

Display range User selectable from 2 s to 5 s
Reading corrected to 230 V AC

Differential Leakage Current

Test voltage Nominal supply voltage 230 V AC

Test frequency Nominal mains frequency 50 Hz

Test accuracy ± 5% ± 3 digits ± 3 uA/A

Resolution 0.01 mA

Display range 0.10 to 19.99 mA

Test duration User selectable from 2 s to 5 s

Touch Current Test

Test voltage Nominal mains 230 V AC

Test frequency Nominal mains 50 Hz

Test accuracy ± 5% ± 3 digits

Resolution 0.01 mA

Display range 0.10 to 3.99 mA

Test duration User selectable from 2 s to 5 s

SELV Device Test

Test voltage 0 to 300 V AC

Test accuracy ± 3% ± 3 digits

Resolution 0.1 V AC

Display range 0.1 to 300 V AC

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Extension Lead Test

Test voltage	5 V
Polarity	Lead OK Live/neutral shorted Live/neutral reversed Live/neutral open circuit

Extension Portable RCD Test

Test voltage	Nominal mains 230 V
Test frequency	50 Hz
Test current accuracy	+2 % to +9 % (1 x I, 5 x I)
Test accuracy	Trip time ± 1 % ± 1 ms
Resolution	Trip time 0.01 ms
Display range	0 to 200 ms (1 x I) 0 to 40 ms (5 x I)

Main Supply Test

Frequency measurement range	50 Hz
Test voltage	40 to 300 V AC
Test accuracy	± 3 % ± 3 digits
Resolution	0.1 V AC
Display range	40 to 300 V AC

Circuit Test

(Carried out automatically, not available to user)

Test voltage	5 V
Test frequency	Nominal mains 50 Hz
Test current	<100mA short-circuit

Safety

Instrument designed to IEC 61010-1: 2010
Test leads designed to IEC 61010-031: 2008

PAT250

300 V to Earth Category II
Mains fuse protection to 250 V rms AC

EMC

Design to meet IEC 61326-1: 2012 and IEC 61326-2-2: 2005.

Performance standard

BS EN 50678:2020
BS EN 50699:2020

User replaceable fuse	13 A fused mains plug (PAT250-UK only) One F 100 mA 250 V 5x20 mm HBC
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Operating temperature	0 °C to +40 °C
Storage temperature	-20 °C to +60 °C
Humidity	90 % rh @ +10 °C to +30 °C 75 % rh @ +10 °C to +60 °C

Operating altitude	up to 2,000 m
IP rating	IP40 (with front cover closed)

Mechanical

Battery life	Over 1000 full Class 1 tests using 3400 mAh Alkaline battery
Battery type	eight AA LR6 cells 12 V DC (Alkaline cells) 9.6 V DC (NiMH cells)

Weight

PAT250 (instrument)	1300g (45.8 oz)
(shipping)	2795g (98.6 oz)
PAT250SRX (instrument)	1300g (45.8 oz)
(shipping)	2975g (104.9 oz)

Dimensions

Dimensions	Instrument and case 203 (L) x 148 (W) x 78 mm (H) (8 x 5.7 x 3.2 inches) Instrument and packaging 456 (L) x 178 (W) x 89 mm (H) (18 x 7.1 x 3.5 inches)
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Product Selection Table:	UK	Germany	Netherlands Spain Belgium	France Belgium Poland	Switzerland	Australia New Zealand
Connector Interfaces						
Mains test socket	BS1363	CEE 7/4 Schuko	CEE 7/4 Schuko	CEE 7/5 French	Swiss SEV 1011	AS/NZS 3112 (15A)
Power Supply						
AA alkaline/NiMH	■	■	■	■	■	■
Rechargeable	■	■	■	■	■	■
Testing						
Protective Earth Resistance	■	■	■	■	■	■
250V insulation	■	■	■	■	■	■
500 V insulation	■	■	■	■	■	■
Cable test	■	■	■	■	■	■
Live protective conductor current	■	■	■	■	■	■
Live touch current	■	■	■	■	■	■
Substitute leakage	■	■	■	■	■	■
Functional test (part of Live leakage test)	■	■	■	■	■	■
10 mA PRCD	■	■	■	■	■	■
30 mA PRCD	■	■	■	■	■	■
SELV voltage	■	■	■	■	■	■
Lead resistance nulling	■	■	■	■	■	■
Function Keys						
Class 1	■	■	■	■	■	■
Class 2	■	■	■	■	■	■
Lead/cord	■	■	■	■	■	■
PRCD	■	■	■	■	■	■
Single test	■	■	■	■	■	■
LCD Backlight	■	■	■	■	■	■
Setup	■	■	■	■	■	■
On/Off	■	■	■	■	■	■
Standard Accessories						
4m plug lead probe + croc clip	2	2	2	2	2	2
Extension lead adaptor	BS1363	IEC 83:1975 Std C 1b	IEC 83:1975 Std C 1b	IEC 83:1975 Std C 1b	SN SEV 1011	AS/NZS 3112:2000
AC Charger Adaptor						
Mains Supply Cord						
Carry case						

Note: The rechargeable version of the PAT250 has the identifier (R)

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ORDERING INFORMATION

Description	Order Code	Description	Order Code
PAT250SX-UK PAT & SOFTWARE	1016-040	Included accessories for PAT250	
PAT250SX-AU PAT & SOFTWARE	1016-041	Extension lead adaptor	
PAT250SX-CH PAT & SOFTWARE	1016-042	Mains plug test lead	
PAT250SX-DE PAT & SOFTWARE	1016-044	Continuity/earth bond lead	1001-233
PAT250SX-EU PAT & SOFTWARE	1016-045	SELV/mains voltage test lead Red x1	1005-077
PAT250SX-FR PAT & SOFTWARE	1016-046	Carry case 1005-075	
PAT250SRX-UK PAT & SOFTWARE	1016-047		
PAT250SRX-AU PAT & SOFTWARE	1016-048	Included accessories for PAT250SRX	
PAT250SRX-CH PAT & SOFTWARE	1016-049	AC Mains charger – multi-country	1003-436
PAT250SRX-DE PAT & SOFTWARE	1016-050		
PAT250SRX-EU PAT & SOFTWARE	1016-051	Optional accessories	
PAT250SRX-FR PAT & SOFTWARE	1016-052	Plug adaptor IEC C6 - C13	1001-232
PAT250SRX-UK-RS PAT & SOFTWARE	1016-053	110 V Extension lead adaptor	6220-639
PAT250SX-UK-RS PAT & SOFTWARE	1016-054	415 V adaptor lead (4-pin) to BS1363 (16 A)	1000-767
		415 V adaptor lead (5 pin) to BS1363 (16 A)	1000-770
		Extension lead adaptor BS1363	1001-234
		Extension lead adaptor Schuko	1001-235
		Extension lead adaptor Australia	1001-236
		Extension lead adaptor Switzerland	1005-081
		Mains plug test lead	6231-601
		Mains plug test lead (CEE 7/7)	1005-078
		Mains plug test lead (AS/NZS 3112)	1005-080

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The word 'Megger' is a registered trademark

Megger®

Services d'EURO-INDEX

EURO-INDEX est un fabricant, importateur et distributeur de diverses marques A dans le domaine des instruments de test et de mesure. Nous fournissons également une large gamme de services pour optimiser l'utilisation de ces instruments dans vos activités. Ces services comprennent naturellement l'entretien, la réparation et l'étalonnage des instruments, mais nous proposons aussi une assistance sous forme de formation via notre EURO-INDEX Academy et la location d'instruments.

Centre de Service Agréé

EURO-INDEX est un Centre de Service Agréé pour toutes les marques représentées. Cela signifie que vos instruments sont pris en charge par des techniciens formés par le fabricant et disposant des outils et logiciels adéquats. Seules des pièces d'origine sont utilisées et la garantie de votre instrument, ainsi que les certifications (ATEX, EN50379, etc.) restent intactes.

Laboratoire de maintenance et de calibrage

Le laboratoire des Pays-Bas est accrédité RvA selon la norme EN-ISO/IEC 17025. Cette accréditation est valable pour différentes grandeurs, telles que spécifiées dans le champ d'application associé au numéro d'accréditation K105. Les certificats de calibrage RvA sont acceptés à l'international et équivalents à ceux de BELAC.



Service Mobile

Outre les laboratoires d'étalonnage fixes de Zaventem et de Capelle aan den IJssel, nous disposons également d'un laboratoire itinérant appelé "Service mobile". Nos services peuvent venir vers vous, en offrant une qualité équivalente.

MQS®

MQS® est une formule d'entretien exclusive comportant un entretien et un calibrage périodiques de vos instruments de mesure à un coût fixe et faible. Via un portail Web gratuit (monmq.be), vous avez toujours accès à vos certificats de calibrage.

Location d'instruments de mesure

- Vaste assortiment
- Précision démontrable par le certificat d'étalonnage actuel
- Conseils avisés
- Les instruments sont livrés avec leurs accessoires

EURO-INDEX Academy

- Formations et séminaires
- Vidéos de démonstration et d'instruction
- Notes d'application



Comptoir de service



Entretien, réparation et calibrage



Formations et séminaires



Service Mobile

Sous réserve de modifications EURO-INDEX® FR 23001



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