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Instrumentos de verificación multifunción COMBITEST HT2019

Características



Es un instrumento multifunción para la verificación de la instalación eléctrica

- Amplio visualizador LCD (64 × 64mm)
- Prueba de continuidad 200mA.
- Medidas de aislamiento (50, 100, 250, 500, 1000V.).
- Medida del tiempo de disparo del diferencial, tipo A, AC y selectivo.
- Medida de la corriente de disparo del diferencial, tipo A, AC.
- Medida de la impedancia de línea.
- Medida de la resistencia de bucle de Tierra con o sin la intervención del diferencial.
- Cálculo de la corriente de cortocircuito.
- Prueba del sentido cíclico de las fases.
- Salida RS232 para impresora o PC.
- 350 posiciones de memoria.
- Salida RS232 para PC
- Alimentación a pilas (6 × 1,5V tipo AAA)
- Autoapagado.
- Dimensiones: 224 × 163 × 59mm.
- Sobretensión CAT III 600V.
- Certificado de calibración.

CONTINUITY TEST OF EARTH, PROTECTIVE AND EQUALISING POTENTIAL CONDUCTORS

Test Mode	Measuring Range (Ω)	Resol. (Ω)	Accuracy (*)
AUTO, R+, R-	0.01 ÷ 19.99 20.0 ÷ 99.9	0.01 0.1	±(2% Reading + 2 dgt)
R+Timer R-Timer	0.01 ÷ 9.99	0.01	

(*) Include the resistance of the calibration

Test current >200mA DC under 16 Ω (Include the resistance of the calibration)
40mA DC from 16 Ω to 99.9 Ω Current measurement resolution 1mA
Open circuit test voltage 9V

INSULATION RESISTANCE MEASUREMENT

Range (*) (M Ω)	Resol. (M Ω)	Accuracy
0.01 ÷ 19.99	0.01	±(2% Lettura + 2 dgt) if V/R ≤ 1 μ A
20.0 ÷ 199.9	0.1	±(5% Lettura + 2 dgt) if V/R > 1 μ A
200 ÷ 1999	1	

(*) Automatic selection of the measuring range

DC test voltage 50, 100, 250, 500, 1000V_{dc}
Open circuit voltage 1.1 x Rated voltage test
Short circuit current <3.0mA - 500V selected
<2.0mA - 50, 100, 250, 1000V selected
Rated measuring current 2.17mA - 500V/230k Ω
1mA - 1k Ω ·V_{nom}

RCD TRIPPING TESTS

Rated tripping current (I_{ΔN}) 10mA, 30mA, 100mA, 300mA, 500mA
Type of RCD AC, A General and Selective
Range phase to earth voltage 100V ÷ 250V 50, 60 Hz

MEASUREMENT OF TRIPPING TIME IN TEST OF GENERAL AND SELECTIVE RCD, TYPE AC AND A

Tripping time t_{ΔN}

Measuring Range (ms)	Resol (ms)	Accuracy
½ I _{ΔN} , I _{ΔN}	0÷999	±(2% Reading + 2 dgt)
2 I _{ΔN}	0÷200 general	
	0÷250 selective	
5 I _{ΔN} RCD	0÷50 general 0÷160 selective	

Contact voltage U_t

Range (V)	Resolution (V)	Accuracy
0 ÷ 2U _{t lim}	0.1	±(2% Reading + 2 dgt)

U_{t LIM} (U_L): 25V o 50V

Earth resistance R_A without RCD tripping

Range (Ω)	Resolution (Ω)	Accuracy I _{ΔN}
1 ÷ 1999	1	-0%, (2% Reading + 2 dgt)

Test current

0.5 I_{ΔN} (during U_t test)
15mA (during R_{A 15mA})

TRIPPING CURRENT FOR GENERAL RCD TYPE A AND AC

General RCD with I_{ΔN} ≤ 10mA

Type RCD	Range I _{ΔN} (mA)	Resol. (mA)	Accuracy I _{ΔN}
AC	(0.5 ÷ 1.4) I _{ΔN}	0.1 I _{ΔN}	- 0%, +5% I _{ΔN}
A	(0.5 ÷ 2.4) I _{ΔN}	0.1 I _{ΔN}	- 0%, +5% I _{ΔN}

General RCD with I_{ΔN} > 10mA

Type RCD	Range I _{ΔN} (mA)	Resol. (mA)	Accuracy I _{ΔN}
AC	(0.5 ÷ 1.4) I _{ΔN}	0.1 I _{ΔN}	- 0%, +5% I _{ΔN}
A	(0.5 ÷ 2) I _{ΔN}	0.1 I _{ΔN}	- 0%, +5% I _{ΔN}

FREQUENCY MEASUREMENT

Range (Hz)	Resol. (Hz)	Accuracy
15.3 ÷ 99.9	0.1	±(0.1%Reading+1 digit)

VOLTAGE MEASUREMENT

Electrical System	Range (V)	Resol (V)	Accuracy
Single phase	0 ÷ 250	1	± (2%Reading + 2 digit)
Two or Three phase system	0 ÷ 440		± (5%Reading + 2 digit)

LINE IMPEDANCE MEASUREMENT (phase-phase, phase-neutral)

Range (Ω)	Resolution (Ω)	Accuracy
0.01 ÷ 19.99 20.0 ÷ 199.9	0.01 0.1	±(5%Reading + 2 digit)

Max peak test current 100V (test voltage) 3.17A test duration: 80ms
230V (test voltage) 6.64A test duration: 40ms
400V (test voltage) 11.5A test duration: 40msAccuracy current measurement ±10% I_{max PK}
Test frequency 50, 60Hz

FAULT LOOP IMPEDANCE MEASUREMENT (phase-earth)

Range (Ω)	Resolution (Ω)	Accuracy
0.01 ÷ 19.99 20.0 ÷ 199.9 200 ÷ 1999	0.01 0.1 1	±(5%Reading + 2 digit)

Max peak test current 100V (test voltage) 3.17A test duration: 80ms
230V (test voltage) 6.64A test duration: 40msAccuracy current measurement ±10% I_{max PK}
Test frequency 50, 60Hz

FAULT LOOP IMPEDANCE MEASUREMENT WITHOUT RCD TRIPPING (phase-earth R_{a 15mA})

Range (Ω)	Resolution (Ω)	Accuracy
1 ÷ 1999	1	±(5%Reading + 2 digit)

Test current 15mA
Test frequency 50, 60Hz

MECHANICAL FEATURES

Dimensions 222(L)x162(La)x57(H)mm
Weight (batteries included) approx. 1000g

POWER SUPPLY

Battery type 6 batteries 1.5-LR6-AA-AM3-MN 1500
Battery life approx. 40 hours in stand-by or 500 LOW Ω tests or 250 R_{ISO} tests (500V/500k Ω) or 1000 LOOP or RCD or PHASE SEQUENCE 3.15A - 500V (*) 200mA - 250V (*)

Fusible

(*) Not accessible to the operator

DISPLAY and MEMORY

Display LCD custom 65mmx65mm
Memory 350 tests
Interface optical RS232 to print or to download the tests

ENVIRONMENTAL WORKING CONDITIONS

Reference temperature 23° ± 5°C
Working temperature -10°C ÷ 50°C
Relative humidity allowed < 80%
Storage temperature -20 ÷ 60°C
Storage humidity < 70%

STANDARDS

ELECTRICAL STANDARDS

EN61557-4 continuity test
EN61557-2 insulation resistance
EN61557-3 fault loop impedance
EN61557-6 RCD tripping test

CEI EN 60947-2 point B 4.2.4.1. (CEI 17-5)

SAFETY STANDARDS

The instrument complies with: EN 61010-1 e EN 61557-1
Insulation class 2, double insulation
Pollution level 2
Inside use, max height 2000m
Overvoltage category CAT III
Max voltage P-PE (phase-earth) 250V
Max voltage P-P (phase-earth) 440V

EMC

This instrument was designed in compliance with the EMC standards in force and its compatibility was tested relating to:

EN 55011 radiated emission
EN 50140, EN 61000 immunity
EN 61000-4-2 electrostatic discharges
EN 50140 R.F. field
EN 61000-4-4 Fast transient

This instrument was designed in compliance with the 72/23/CEE, CEM 89/336/CEE, and the 93/68/CEE.

NOTE ABOUT ACCURACY

Accuracy is indicated as [% reading + digit number]. It refers to the following atmospheric conditions: temperature 23°C ± 5°C with a relative humidity of <75%.