



proyectos s.a.c.i.

Montevideo 581 3P -H C1019ABK - Tel. 54 011 43714928/54 011 43723795 - Fax. 54 011 43723795

email:proyectos@proyectos1.com.ar - WEB: www.proyectos1.com.ar

Instrumentos de verificación multifunción | **MAXTEST HT2038**

Funciones



El instrumento de referencia para el instalador más exigente y para el profesional en vanguardia. Ningún instrumento actualmente en el mercado puede igualarlo en funciones y prestaciones.

- Medida de la impedancia del bucle de defecto con 280A de corriente de prueba, Fase-Fase, Fase-Neutro, Fase-tierra con presentación de los valores: $R-X_L-I_K-U_B-V_M$.
- Prueba de continuidad del circuito de protección con 200mA/10A.
- Prueba de aislamiento en cuadros e instalaciones eléctricas a 250V-500V-1000V_{CC}.
- Medida de la resistividad del terreno (ρ).
- Medida de la resistencia de tierra.
- Medida de la caída de tensión porcentual.
- Medida del tiempo de disparo del interruptor diferencial (en tipos A-AC-B y selectivos).
- Medida de la corriente real de disparo del diferencial.
- Medida de la corriente de cortocircuito min/max.
- Medida del sentido cíclico de las fases.
- Salida RS232 para la transferencia de los datos al PC o a la impresora.
- Sobretensión CAT. III.
- Es el único instrumento capaz de suministrar 280A en la medida de la impedancia del bucle de defecto.
- Incluye el certificado de calibración

TECHNICAL SPECIFICATIONS FOR THE FOLLOWING PRODUCT: H T 2038

Continuity test

R (LOW Ω 200 mA \blacksquare)

Range (Ω)	Resolution (Ω)	Accuracy
0 \div 20	0.01	\pm (2% reading + 2 digits)

Possibility of eliminating cable resistance.

Short circuit current $I_{SC} > 200$ mA d.c. (at the battery voltage $U_{BAT} > 5V$)

Open-circuit voltage $U_{OC} > 4.5V$ (at the battery voltage $U_{BAT} > 5V$)

Resistance measurement on 4-wire protective conductor

R (LOW Ω 10 A \curvearrowright)

Range (Ω)	Resolution (Ω)	Accuracy
0 \div 0.5	0.001	\pm (2% reading + 2 digits)

Measuring current $I_m > 10A$ \curvearrowright

Open-circuit voltage $U_{OC} < 12V$ \curvearrowright (at mains voltage 240V)

Measuring system: 4 wire

Two, three or four - wire earth resistance measurement

R_E (EARTH)

Range* (Ω)	Resolution (Ω)	Accuracy
0 \div 19.99	0.01	\pm (2% reading + 2 digits)
20.0 \div 199.9	0.1	\pm (2% reading + 2 digits)
200 \div 1999	1	\pm (2% reading + 2 digits)

* Automatic range selection

Measuring frequency: 125 Hz \pm 1 Hz

Measuring current: < 10 mA eeff.

Open-terminal measuring voltage: < 65 V ef.

Shape of measuring voltage: sinwave

Ground resistivity measurement

Range s* (Ωm)	Resolution (Ωm)	Accuracy
0 \div 19.99	0.01	\pm (2% reading + $2\pi a \cdot 0.02 \Omega$); $\frac{\rho}{2\pi a} \leq 19.99 \Omega$
20.0 \div 199.9	0.1	\pm (2% reading + $2\pi a \cdot 0.2 \Omega$); $19.99 \Omega < \frac{\rho}{2\pi a} \leq 199.9 \Omega$
200 \div 1999	1	
2.00 k \div 19.99 k	10	\pm (2% reading + $2\pi a \cdot 2 \Omega$); $199.9 \Omega < \frac{\rho}{2\pi a}$
20.0 k \div 199.9 k	100	
200 k \div 377 k	1000	

* Automatic range selection

It is possible to select the distance between two test rods from 0 up to 30 m, but one can reach $a_{max} = 8$ m using standard cables.

Measuring frequency: 125 Hz \pm 1 Hz

Measuring current: < 10 mA eeff.

Open-terminal measuring voltage: < 65 V ef.

Shape of measuring voltage: sinwave

Insulation resistance measurement of electric installation using measuring voltage of 250-500-1000 V

$R_{ISO}/250V / 500 V / 1000 V$ (R_{ISO})

Range* (M Ω)	Resolution (k Ω)	Accuracy
0 \div 1.999	1	\pm (2% reading + 2 digits)
2.00 \div 19.99	10	\pm (2% reading + 2 digits)
20.0 \div 199.9	100	\pm (2% reading + 2 digits)

* Automatic range selection

Display range: 0 \div 1 G Ω

Measuring voltage: 250 V, +10%, / -0% d.c.

Measuring current: 1 mA (min.) at 250 k Ω load

Short-circuit current: 1.4 mA (max.)

Display range: 0 \div 1 G Ω

Measuring voltage: 500 V, +10%, / -0% d.c.

Measuring current: 2.2 mA (min.) at 230 k Ω load

Short-circuit current: 2.6 mA (max.)

Display range: 0 \div 1 G Ω

Measuring voltage: 1000 V, +10%, / -0% d.c.

Measuring current: 1 mA (min.) at 1000 k Ω load

Short-circuit current: 1.4 mA (max.)

Measurement of effective (r.m.s.) value of a.c. voltage

$U_{L-L/L-N/PE}$ (Z functions / PHASE ROTATION / RCD / functions / VOLTAGE DROP)

Range (V)	Resolution (V)	Accuracy
0 \div 440	1	\pm (2% reading + 2 digits)

Measurement of frequency

F (Z functions / PHASE ROTATION / RCD functions / VOLTAGE DROP)

Range (Hz)	Resolution (Hz)	Accuracy
45.0 \div 65.0	0.1	\pm (0.1% reading + 1 digits)

Line impedance measurement between the phase and neutral conductors or between two phase conductors

$Z_{L-L/L-N}$ (Z LINE)

Range* (Ω)	Resolution (Ω)	Accuracy
0 \div 19.99	0.01	\pm (2% reading + 2 digits)
20.0 \div 199.9	0.1	\pm (2% reading + 2 digits)
200 \div 1999	1	\pm (2% reading + 2 digits)

* Automatic range selection

Nominal voltage: 100 \div 440 V

Nominal frequency: 45 \div 65 Hz

Prospective short circuit current I_K (Z LINE)

Accuracy of I_K : take into account the accuracy of Z LINE

I_K display range (400 V): 0.20 A \div 40 kA

I_K display range (230 V): 0.11 A \div 23 kA

I_K display range (127 V): 0.06 A \div 12.7 kA

Loop impedance measurement between the phase and protective earth conductor

Z_{L-PE} (Z LOOP)

Range* (Ω)	Resolution (Ω)	Accuracy **
0 \div 19.99	0.01	\pm (2% reading + 2 digits)
20.0 \div 199.9	0.1	\pm (2% reading + 2 digits)
200 \div 1999	1	\pm (2% reading + 2 digits)

* Automatic range selection

Nominal voltage: 100 \div 250 V

Nominal frequency: 45 \div 65 Hz

Prospective short circuit current I_K (Z LOOP)

Accuracy of I_K : take into account accuracy of Z LOOP

I_K display range (230 V): 0.11 A \div 23 kA

I_K display range (127 V): 0.06 A \div 12.7 kA

Phase rotation: (\odot) PHASE ROTATION

L1, L2, L3 \odot L2, L1, L3

Nominal voltage: 100 \div 440 V

Nominal frequency: 45 \div 65 Hz

Contact voltage U_B :

U_B (RCD VOLTAGE/TIME)

Measuring range (V)	Display range	Resolution	Accuracy
10 \div 50 ($U_{BLIM} = 25$ V)	0 \div 100 V	0.1	\pm 10% / -0% (of reading)
10 \div 100 ($U_{BLIM} = 50$ V)			

U_{Blim} : 25 V or 50 V

Nominal voltage: 100 \div 250 V

Nominal frequency: 45 \div 65 Hz

Earth resistance R_E :

R_E (functions RCD)

I_{AN} (mA)	Range R_E (Ω)	Resolution (Ω)	Accuracy
10	0 \div 1999	10	+10%.-0% (of reading) \pm 20 Ω
30	0 \div 1999	3.3	+10%.-0% (of reading) \pm 7 Ω
100	0 \div 999	1	+10%.-0% (of reading) \pm 2 Ω
300	0 \div 199.9	0.3	+10%.-0% (of reading) \pm 0.7 Ω
	200 \div 333	1	
500	0 \div 199.9	0.2	+10%.-0% (of reading) \pm 0.4 Ω
1000	0 \div 100.0	0.1	+10%.-0% (of reading) \pm 0.2 Ω

Measuring current: $1/3 I_{AN}$

Nominal voltage: 100 \div 250 V

Nominal frequency: 45 \div 65 Hz

Measurement of disconnection time t_{AN} of ordinary or selective RCD

t (RCD VOLTAGE/TIME)

Range t_{AN} (ms) Ordinary type	Range t_{AN} (ms) Selective type	Resolution (ms)	Accuracy
0 \div 1000 ($1/2 I_{AN}, I_{AN}$)	0 \div 1000 ($1/2 I_{AN}, I_{AN}$)	1	\pm (2% of reading + 2 ms)
0 \div 200 ($2 I_{AN}$)	0 \div 200 ($2 I_{AN}$)		
0 \div 50 ($5 I_{AN}$)	0 \div 150 ($5 I_{AN}$)		

Table of effective (r.m.s.) values (10 ms) of differential currents:

1/2 I_{AN} (mA)		I_{AN} (mA)		2 I_{AN} (mA)		5 I_{AN} (mA)					
5	3.5	5	10	20	10	20	28.3	20	250	353.6	250
15	10.5	15	30	42.4	30	60	84.9	60	250	353.6	250
50	35	50	100	141.4	100	200	283	200	500	707.1	500
150	105	150	300	424.3	300	600	849	600	1500	2121	- / -
250	175	250	500	707.1	500	1000	1414	- / -	2500	3535	- / -
500	354	500	1000	1414	- / -	2000	2828	- / -	- / -	- / -	- / -

Accuracy of differential currents: $\pm 5\%$

Nominal voltage: 100 \div 250 V

Nominal frequency: 45 \div 65 Hz

Measurement of disconnecting current I_A

I_A (RCD CURRENT)

Range I_A (mA)	Resolution (mA)	Accuracy
(0.50 \div 1.40) I_{AN}	0.1 I_{AN}	\pm 0.15 I_{AN}

Contact voltage U_B at the disconnecting current

U_B (I_B) (RCD CURRENT)

Measuring range (V)	Display range	Resolution	Accuracy
10 \div 50 ($U_{BLIM} = 25$ V)	0 \div 100 V	0.1	\pm 10% / -0% (of reading)
10 \div 100 ($U_{BLIM} = 50$ V)			

U_{Blim} : 25 V or 50 V adjustable

Nominal voltage: 100 \div 250 V

Nominal frequency: 45 \div 65 Hz

Disconnection time t_A at the disconnecting current

t (I_B) (RCD CURRENT)

Range (ms)	Resolution (ms)	Accuracy
0 \div 500	1	\pm (2% reading + 2 ms)

Voltage drop

ΔU (VOLTAGE DROP)

Range ΔU (%)	Resolution (%)	Accuracy
0 \div 20	0.1	\pm 1 digit
Range U_1, U_2 (V)	Resolution U_1, U_2 (V)	Accuracy
100 \div 440	0.1	\pm (2% reading + 2 digit)

Nominal voltage: 100 \div 440 V

Nominal frequency: 45 \div 65 Hz

4-WIRE high resolution impedance

Z ($Z_{2\Omega}$ Im = 280 A max.)

Range (m Ω)	Resolution (m Ω)	Accuracy
0 \div 199.9	0.1	\pm (2% reading + 2 m Ω)
200 \div 1999	1	\pm 2% reading

Nominal voltage: 100 \div 440 V

Nominal frequency: 45 \div 65 Hz

High resolution prospective short circuit current I_K ($Z_{2\Omega}$ Im = 280 A max.)

Accuracy of I_K : take into account the accuracy of $Z_{2\Omega}$

I_K measuring range (400 V): 200 A \div 400 kA

I_K measuring range (230 V): 115 A \div 230 kA

I_K measuring range (127 V): 63.5 A \div 127 kA

GENERAL SPECIFICATIONS

POWER SUPPLY 4 x 1.5V alkaline batteries IEC LR 20

BATTERY LIFE TIME approx. 300 hours

LC DISPLAY matrix (127 x 34 mm) and (240 x 64 dots)

MEMORY SIZE approx. 1000 storage locations

COMMUNICATION RS 232 (format: 1 start bit, 8 data bits, 1 stop bit); baud rate 4800

MASS (without batteries) approx. 8 kg

DIMENSIONS (W x H x L) 450 mm x 350 mm x 130 mm

Overvoltage category ($Z_{2\Omega}$ function) III

Overvoltage category (other function) II

Pollution degree 2

Protection class double insulation

Working temp. range 0 \div 40°C

Nominal temp. range 5 \div 35°C

Storage temp. range 10 \div 60°C

STANDARD APPLIED

EN 61010-1 safety regulation

EN 50081-1 1991 EMC regulations

EN 50082-1 1991 EMC regulations

CEI 64.8 612.3 and VDE 0413/1 insulation resistance

CEI 64.8 612.6.3 and VDE 0413/3 loop/line impedance and prospective short-circuit current

CEI 64.8 612.2 and CEI 64-4 e VDE 0413/4 continuity

CEI 64.8 app. D part