Green is life tmg

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Test & Measurement

- sales
- rentals
- calibration
- repair
- disposal

Complimentary Reference Material

This PDF has been made available as a complimentary service for you to assist in evaluating this model for your testing requirements.

TMG offers a wide range of test equipment solutions, from renting short to long term, buying refurbished and purchasing new. Financing options, such as Financial Rental, and Leasing are also available on application.

TMG will assist if you are unsure whether this model will suit your requirements.

Call TMG if you need to organise repair and/or calibrate your unit.

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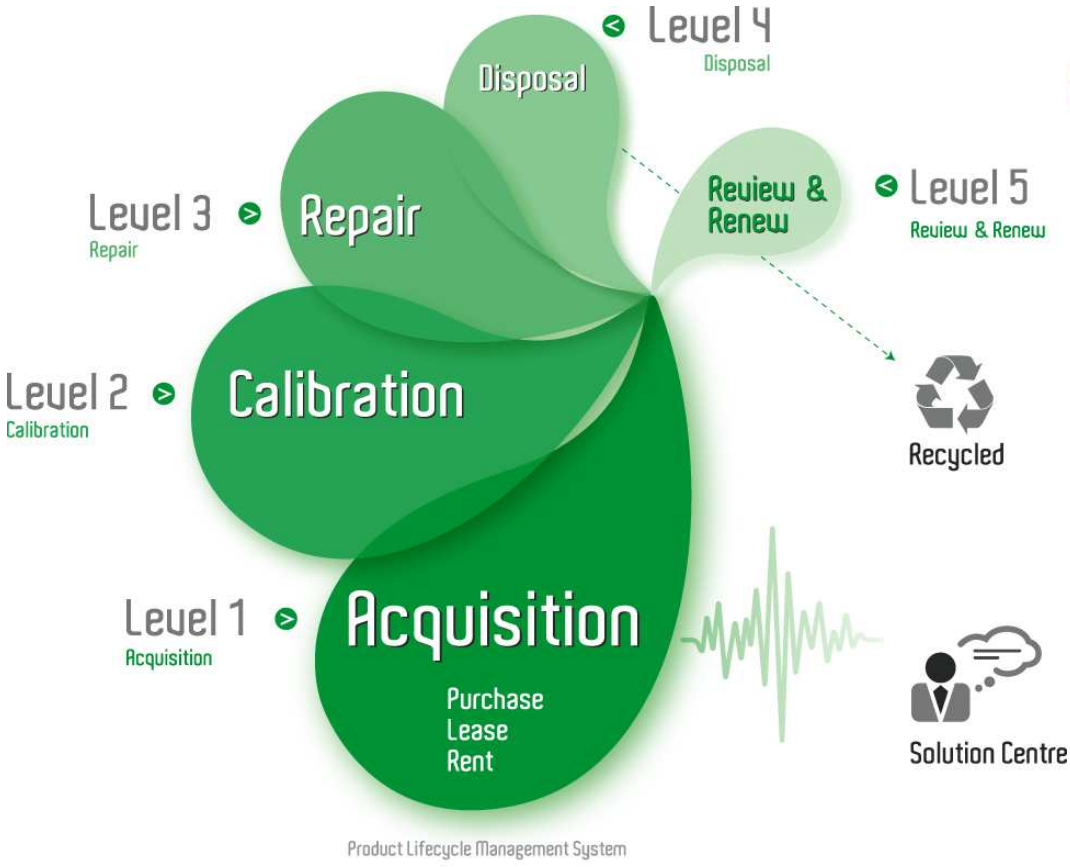

HAMEG Instruments

1.6 GHz Universal Counter
HM8021-4

HM8021-4

Mainframe HM8001-2
required for operation

HZ33, HZ34
Test cable BNC/BNC

Measurement range from 0 Hz to 1.6 GHz

10 MHz time base with 1ppm stability (TCXO)

Input A: Input impedance 1 MΩ, max. sensitivity 20 mV_{rms}
Input C: Input impedance 50 Ω, max. sensitivity 30 mV_{rms}

Time interval resolution up to 10 ps

External Gate input (with Option HO801)

1.6 GHz Universal Counter HM8021-4

Valid at 23 °C after a 30 minute warm-up period

Measurement functions

Frequency A/C, Period A;
Totalize A;
Pulse width ⎍ / ⎍ (averaged);
Totalize A during ext. gate

Input characteristics (Input A)

Frequency range:	
0 – 150 MHz:	DC-coupled
10 Hz – 150 MHz:	AC-coupled
Sensitivity: (normal triggering)	
DC – 80 MHz	20 mV_{rms} (sine wave) 80 mV (pulse)
80 MHz – 150 MHz	60 mV_{rms} (sine wave)
20 Hz – 80 MHz (auto trig.)	50 mV_{rms} (sine wave)
Minimum pulse width:	5 ns
Input noise:	100 µV (typ.)
Coupling:	AC or DC (switchable)
Input impedance:	1 MΩ II 40 pF
Attenuator:	x 1, x 20 (switchable)
Max. input voltage:	
0 to 440 Hz:	400 V (DC + AC_{peak})
1 MHz:	decreasing to 8 V_{rms}

Input characteristics (Input C)

Frequency range:	100 MHz – 1.6 GHz
Sensitivity:	
to 1.3 GHz:	30 mV (typ. 20 mV)
to 1.6 GHz:	100 mV (typ. 80 mV)
Input impedance:	50 Ω nominal
Coupling:	AC
Max. input voltage:	5 V (DC + AC_{peak})

Input characteristics (external gate)

Input impedance:	4.7 kΩ
Max. input voltage:	±30 V
High/low level:	› 2 V/‹ 0.5 V
Min. pulse duration:	50 ns
Min. effective gate time:	150 µs

Frequency measurement (Input A)

LSD:	(2.5x10^{-7}s x freq.)/measurement time
Resolution:	±1 or 2 LSD

Period duration measurement

Range:	10,000 sec to 66.6 ns
LSD:	(2.5 x 10^{-7}s x period)/measurement time
Resolution:	±1 or 2 LSD

Totalize (manual / external gated)

Range:	DC to 20 MHz
Min. pulse duration:	25 ns
LSD:	±1 count
Resolution:	LSD
Ext. gate error:	
in manual mode only	100 ns

Time interval (averaged)

LSD:	100 ns to 10 ps
Resolution:	1 or 2 LSD

Offset

Range:	covers the entire measurement range

Gate time

(Gate time cannot be less than 1 period.)

Range:	100 ms – 10 s in 3 steps
External gate time:	min. 150 µs

Timebase

Frequency:	10 MHz clock 10 MHz crystal
Accuracy (between 10° C and 40° C):	±5 x 10^{-7}
Aging:	±3 ppm/15 years

Miscellaneous

Display:	8-digit 7-segment LED display with 7.65 mm digit height, sign and exponent
Power consumption:	approx. 7 Watt
Operating temperature:	+10° C to +40° C
Max. relative humidity:	10 % – 90 % (without condensation), 5 % – 95 % RH
Dimensions (W x H x D):	135 x 68 x 228 mm
Weight:	approx. 0.6 kg

Accessories supplied: Operator's Manual
Optional accessories:
HZ33/HZ34 Test Cable 50 Ω (BNC-BNC)
HZ24 (Attenuators 50 Ω
HZ10S/R Silicone test lead

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