

HST-3000 Copper Measurements

Copper measurements technical feature summary Ω

DVOM measurements		
AC Voltage	0 to 280 V peak (1% +/- 0.5V)	
DC Voltage	0 to 280 (1%+/- 0.5V)	
DC Current	0 to 90 mA (1% +/- 0.5mA)	
Resistance	0-999M Ω	
Resistance accuracy	0 to 9999 $\Omega(1\% +/-5 \Omega)$	
	10 k Ωto 99.9 k Ω (+/- 1%)	
	100 k Ωto 999 k Ω(+/- 3%)	
	1 M Ω to 9.9 M Ω (+/- 3%)	
Leakage (test voltage >100	V) to 999 M Ω	
Distance to short	distance calculation based	
on resis	tance, temperature and wire gauge	

Displays the line capacitance or the calculated distance based on selected cable parameters

Distance range 0 to 30 km (0 to 100 kft)

Accuracy 0 to 6 km (20 kft), (+/- 2%)

Noise and Balance

Longitudinal balance 28 to 100 dB
Noise (voice band, C filter/ psopho) 0 to 50 dBrnC
(equivalent to -90 to -40 dBm)
Power (mains) influence 40 to 120 dBrnC
(equivalent to -50 to +30 dBm)

Generator

Frequency range 200 Hz to 7000 Hz (resolution 1 Hz) Level range 0 to -20 dBm (resolution 1 dB) Level accuracy 0.5 dB Termination impedance 600Ω or 900Ω

Receiver

Frequency range 200 Hz to 7000 Hz (resolution 1 Hz)

Level range +10 to -40 dBm (resolution 0.1 dB)

Level accuracy 0.5 dB

Termination impedance 600Ω or 900Ω

Miscellaneous

Load coil detection/ count distance to first 0 to 5 coils
Caller ID name, phone number , raw data
Phone feature DTMF phone

TDR (optional)

Extra Short range TDR 0 to 600 m (2 kft)

Medium range TDR 30 – 2.5 k m (100 to 8 kft)

Extended Long range TDR 300 to 5 km (1kft to 6 kft)

Vp range (velocity of propagation) 0.300 to 1.000

Gain / Zoom HORZ (distance) manual

VERT (Amplitude) Manual or Automatic TVG

Graphical display dual trace display and cursor

Resistive Fault Location (optional)

Test methods Single pair and separate pair hookup Fault Size (RF) 0 to 20 M Ω Fault location accuracy 0 to 99 Ω , (0.1% + 0.1 Ω + RF/3.5M) 100 to 999 Ω

 $\begin{array}{c} (0.2\% + 0.1\Omega + \text{RF/5M}) \\ \text{up to 7000} \ \Omega \end{array}$

Wideband (optional)

Loop Size

,	
Generator frequency range	10 kHz to 2.2 MHz
Generator level range	+5 to -20 dBm
Receiver frequency range	10 kHz to 2.2 MHz
Receiver level range	+10 to -70 dBm
Termination impedance	100 Ω , 135 Ω
Noise weighting filters	E, F, G, none (IEEE Std 743)
Wideband noise level	+10 to -70 dBm
Impulse noise counter	1 to 60 min or continuous
Impulse Filters	E, F, and G
Impulse Noise Thresholds	E 45 to 100dBrn
	F 40 to 100dBrn
	G 35 to 100dBrn
Spectral measurements frequency	10Hz to 3.8MHz
Spectral measurements level	-80 to +10dBm
	-118 to -28dBm/Hz

Transmission Impairments (Optional)

Wide Band

NEAI	
Frequency range	10 to 2000KHz
Level	0 to 50dB
Impedances	100 and 135
FEXT	
Frequency range	10 to 2000KHz
Level	0 to 50dB
Impedances	100 and 135
SNR	
Filters	E, F, G and None
Level	0 to 50dB
Terminations	75,100, 120, 135 and Bridge
Return Loss	
Frequency range	10 to 2000KHz

Impedances Narrow Band

Level

Noise/Noise with Tone

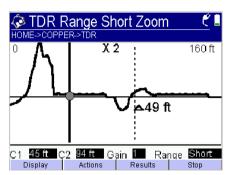
Filters C, Psopho.,Channel and None
Level -60 to +10 dBm
Terminations 600, 900 and Bridge

0 to 50dB

100 and 135

Impulse Noise/Noise with Tone

Filters C, Psopho., Channel, Flat, Optional and None Thresholds 0 to -50dBm (40 to 90 dBr n)



SNR

Filters	C, Psopho., Channel and None
Level	0 to 50dB
Terminations	600, 900 and Bridge
Return Loss	
Frequency range	200 to 5000Hz
Level	0 to 50dB
Impedances	600 and 900

Physical specifications

Size	(H x W x D) 9.5 x 4.5 x 2.75 in
Weight	2.7 lb with battery
Operating temperature	22° F to 122° F
Storage temperature	-40° F to 150° F
Battery life	6-8 hrs typical use
Charging time	7 hrs from full discharge
Display LCD Backlit Monochrome	320x240 0 to 50dB

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