TECHNICAL DATA

Fluke 1621 Kit - Basic Earth Ground Tester

Key features

- 3-pole Fall-of-Potential earth testing for basic measurements
- 2-pole resistance measurements for added versatility
- Easily capture values with single-button operation
- Ensure accurate measurements with automatic ‘noise’ voltage detection
- Hazardous voltage warning offers increased user protection
- Clearly read and record data with a large, backlit display
- Hard carrying case
- Rugged holster and design for tough work environments
- Portable size allows for easy transportation
- Instantly be alerted to measurements outside of your set limit, when you use the adjustable limit setting
- 600 V Cat II

Product overview: Fluke 1621 Kit - Basic Earth Ground Tester

The Fluke 1621 Kit is an easy-to-use earth ground tester. For ground resistance testing, the 1621 Kit is the first line of defense in detecting reliable ground connections. The unit features basic ground testing methods including 3-pole Fall-of-Potential as well as 2-pole ground resistance tests. Its convenient size, rugged holster, and large, clear LCD display make it an ideal field earth ground tester, for most electrical grounding work environments. With a simple user interface and intuitive functionality, the Fluke 1621 Kit is a handy grounding tool for electrical contractors, utility test engineers, and earth ground specialists.

Specifications: Fluke 1621 Kit - Basic Earth Ground Tester

General Specifications		
Measuring functions	3-pole earth ground resistance, 2-pole AC resistance of a conductor, Interference voltage	
Intrinsic error	Refers to the reference temperature range and is guaranteed for one year	
Measuring rate	2 measurements/second	
Battery[1]	One 9 volt alkaline (LR61)	
Battery condition	LO-BAT is displayed if voltage drops below 6.5 V	
Voltages	Between jacks H/C2 and E/C1	250 Veff maximum (effective voltage)
	Between jacks S/P2 and E/C1	250 Veff maximum
Climatic class	VDE/VDI 3540 RZ (conforming to KWG as per DIN 40040, 4/87)	
Temperature performance[2]	Working	-10°C to +50°C (+14°F to +122°F)
	Operating	0°C to +35°C (+32°F to +95°F)
	Storage	-20°C to +60°C (+68°F to +140°F)
	Reference	+23°C ±2°C (+73°F ±4°F)
Temperature coefficient	±0.1% of range per degree Kelvin	
Safety	IEC/EN 61010-1, 600 V CAT II, pollution degree 2	
Dimensions	113 x 54 x 216 mm (4.5 x 2.1 x 8.5 in), including holster	
Weight	850 g (1.9 lb), including standard accessories, volume approximately 600 cm^3	
Electrical Specifications		
Maximum deviations	E_1 Influence factor	Position
	E_1 Deviation influence	0%
	E_2 Influence factor	Supply voltage
	E_2 Deviation influence	0%
	E_3 Influence factor	Temperature E_3
	E_3 Deviation influence	2.3%
	E_4 Influence factor	Serial interference voltage (20 V)
	E_4 Deviation influence	0.6%
	E_5 Influence factor	Probe- and auxiliary probe resistance
	E_5 Deviation influence	10%
Test voltage	3.7 kV	
Protection type	IP 40; IEC/EN 60529	
Electromagnetic compatibility	Emission	IEC/EN 61326 Class B
	Immunity	IEC/EN 61326 Annex C

R_E resistance measurement	Measuring method	Current-voltage measurement with improved cross-talk attenuation, no compensation of measuring lead resistance, with probe (3-pole) or without probe (2-pole), as per IEC/EN 61557-5
	Open circuit voltage	23 to 24 V AC
	Short circuit current	> 50 mA AC
	Measuring frequency	128 Hz
	Maximum permissible overload	250 Veff
Measuring time	8 seconds (average from when START is pressed)	
Limit input	Tester retains set value even if instrument is turned off (assuming battery power supply is sufficient)	
Automatic changeover of resolution	R_H	< 7 kΩ
	Resolution	0.01 Ω
	R_H	< 50 kΩ
	Resolution	0.1 Ω
	R_H	> 50 kΩ
	Resolution	1 Ω
Interference voltage display DC + AC	Vmax	30 Veff
	Common mode rejection	> 80 dB at 50 Hz and 60 Hz
	Ri	680 kΩ
	Measuring uncertainty	< 10% for pure AC and DC signals
Measuring Range		
0.15 Ω to 20 Ω	Resolution	0.01 Ω
	Display range	0 to 19.99 Ω
200 Ω	Resolution	0.1 Ω
	Display range	20 to 199.9 Ω
2 kΩ	Resolution	1 Ω
	Display range	200 to 1999 Ω
Intrinsic uncertainty	±(6% of measured value + 5D)	
Operating uncertainty IEC 61557[3]	±(18% of measured value + 5D)	

1. If the tester is not going to be used, or is being stored for a long period, remove the battery and store separately from the tester to avoid damage from battery leakage.
2. The four temperature ranges for the tester exists to satisfy European Standards requirements; the instrument can be used over the full working temperature range by using the temperature coefficient to calculate accuracy at the ambient temperature of use.
3. Covers all deviations caused by influence quantities E_1-E_5. If the deviation E_4 caused by high probe or auxiliary probe resistance is higher than specified flashes. Measured values are outside of the specified operating uncertainty.

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