

# Fluke 1620 Series GEO Earth Ground Testers

<b>RA 3-pole ground resistance measurement (IEC 1557-5)</b>	
Measuring Voltage	Fluke 1623 $V_m = 48 \text{ V ac}$ Fluke 1625 $V_m = 20/48 \text{ V ac}$
Short circuit current	Fluke 1623 $> 50 \text{ mA}$ Fluke 1625 $250 \text{ mA ac}$
Measure frequency	Fluke 1623 $128 \text{ Hz}$ Fluke 1625 $94, 105, 111, 128\text{Hz}$
Resolution	Fluke 1623 $0.001 \Omega \text{ to } 10 \Omega$ Fluke 1625 $0.001 \Omega \text{ to } 100 \Omega$
Measuring range	Fluke 1623 $0.001 \Omega \text{ to } 19.99 \text{ k}\Omega$ Fluke 1625 $0.001 \Omega \text{ to } 299.9 \text{ k}\Omega$
Intrinsic error	Fluke 1623 $\pm (2 \% \text{ of reading} + 3 \text{ digit})$ Fluke 1625 $\pm (2 \% \text{ of reading} + 2 \text{ d})$
Operating error	Fluke 1623 $\pm (5 \% \text{ of reading} + 3 \text{ d})$ Fluke 1625 $\pm (5 \% \text{ of reading} + 5 \text{ d})$
<b>RA 4-pole ground resistance measurement (IEC 1557-5)</b>	
Measuring Voltage	Fluke 1623 $V_m = 48 \text{ V ac}$ Fluke 1625 $V_m = 20/48 \text{ V ac}$
Short circuit current	Fluke 1623 $> 50 \text{ mA}$ Fluke 1625 $250 \text{ mA ac}$
Measure frequency	Fluke 1623 $128 \text{ Hz}$ Fluke 1625 $94, 105, 111, 128\text{Hz}$
Resolution	Fluke 1623 $0.001 \Omega \text{ to } 10 \Omega$ Fluke 1625 $0.001 \Omega \text{ to } 100 \Omega$
Measuring range	Fluke 1623 $0.001 \Omega \text{ to } 19.99 \text{ k}\Omega$ Fluke 1625 $0.001 \Omega \text{ to } 299.9 \text{ k}\Omega$
Intrinsic error	Fluke 1623 $\pm (2 \% \text{ of reading} + 3 \text{ d})$ Fluke 1625 $\pm (2 \% \text{ of reading} + 2 \text{ d})$
Operating error	Fluke 1623 $\pm (5 \% \text{ of reading} + 3 \text{ d})$ Fluke 1625 $\pm (5 \% \text{ of reading} + 5 \text{ d})$
<b>RA 3-pole ground resistance measurement with current clamp</b>	
Measuring Voltage	Fluke 1623 $V_m = 48 \text{ V ac}$ Fluke 1625 $V_m = 20/48 \text{ V ac}$
Short circuit current	Fluke 1623 $> 50 \text{ mA}$ Fluke 1625 $250 \text{ mA ac}$
Measure frequency	Fluke 1623 $128 \text{ Hz}$ Fluke 1625 $94, 105, 111, 128\text{Hz}$
Resolution	Fluke 1623 $0.001 \Omega \text{ to } 10 \Omega$ Fluke 1625 $0.001 \Omega \text{ to } 10 \Omega$
Measuring range	Fluke 1623 $0.001 \Omega \text{ to } 19.99 \text{ k}\Omega$ Fluke 1625 $0.001 \Omega \text{ to } 29.99 \text{ k}\Omega$

Intrinsic error	Fluke 1623 $\pm$ (7 % of reading + 3 d) Fluke 1625 $\pm$ (7 % of reading + 2 d)
Operating error	Fluke 1623 $\pm$ (10 % of reading + 5 d) Fluke 1625 $\pm$ (10 % of reading + 5 d)

#### RA 4-pole selective ground resistance measurement with current clamp

Measuring Voltage	Fluke 1623 $V_m = 48$ V ac Fluke 1625 $V_m = 20/48$ V ac
Short circuit current	Fluke 1623 $> 50$ mA Fluke 1625 250 mA ac
Measure frequency	Fluke 1623 128 Hz Fluke 1625 94, 105, 111, 128Hz
Resolution	Fluke 1623 0.001 $\Omega$ to 10 $\Omega$ Fluke 1625 0.001 $\Omega$ to 10 $\Omega$
Measuring range	Fluke 1623 0.001 $\Omega$ to 19.99 k $\Omega$ Fluke 1625 0.001 $\Omega$ to 29.99 k $\Omega$
Intrinsic error	Fluke 1623 $\pm$ (7 % of reading + 3 d) Fluke 1625 $\pm$ (7 % of reading + 2 d)
Operating error	Fluke 1623 $\pm$ (10 % of reading + 5 d) Fluke 1625 $\pm$ (10 % of reading + 5 d)

#### Stakeless ground loop measurement

Measuring Voltage	Fluke 1623 $V_m = 48$ V ac Fluke 1625 $V_m = 20/48$ V ac
Measure frequency	Fluke 1623 128 Hz (125 Hz on request) Fluke 1625 94, 105, 111, 128Hz
Noise current ( $I_{ext}$ )	Fluke 1623 Max. $I_{ext} = 10$ A (ac) (RA < 20 $\Omega$ ) Max. $I_{ext} = 2$ A (ac) (RA < 20 $\Omega$ ) Fluke 1625 Max. $I_{ext} = 3$ A
Resolution	Fluke 1623 0.001 $\Omega$ to 0.1 $\Omega$ Fluke 1625 0.001 $\Omega$ to 10 $\Omega$
Measuring range	Fluke 1623 0.001 $\Omega$ to 199.9 k $\Omega$ Fluke 1625 0.001 $\Omega$ to 29.99 k $\Omega$
Intrinsic error	Fluke 1623 $\pm$ (7 % of reading + 3 d) Fluke 1625 $\pm$ (7 % of reading + 2 d)
Operating error	Fluke 1623 $\pm$ (10 % of reading + 5 d) Fluke 1625 $\pm$ (10 % of reading + 5 d)

#### Environmental Specifications

Working temperature	-10 $^{\circ}$ C to +50 $^{\circ}$ C
Operating Temperature	0 $^{\circ}$ C to +35 $^{\circ}$ C
Nominal temperature	+18 $^{\circ}$ C to +28 $^{\circ}$ C
Storage Temperature	Fluke 1623 -20 $^{\circ}$ C to +60 $^{\circ}$ C Fluke 1625 -30 $^{\circ}$ C to +60 $^{\circ}$ C
Climatic class	C1 (IEC 654-1), -5 $^{\circ}$ C to +45 $^{\circ}$ C, 5 % to 95 % RH
Protection type	IP56 for case, IP40 for battery door according to EN 60529

## Safety Specifications

<b>Safety Rating</b>	CAT II, 300 V
----------------------	---------------

## Mechanical & General Specifications

<b>Display</b>	<b>Fluke 1623</b> 1999 digit LCD – display with special symbols, digit height 25 mm, fluorescent backlight <b>Fluke 1625</b> 2999 Digit LCD – 7 segment liquid crystal display with special symbols and backlight
<b>Size</b>	133 mm x 187 mm x 250 mm
<b>Weight</b>	<b>Fluke 1623 + 1625</b> 1.1 kg (including batteries)
<b>Warranty</b>	Two years
<b>Battery Life</b>	<b>Fluke 1623</b> Typical > 3000 measurements <b>Fluke 1625</b> Typical 3000 measurements (RE+RH ≤ 1 kΩ) Typical 6000 measurements (RE+RH ≤ 10 kΩ)