

## 2100-Delta Voltage Tester with Current-Function TRMS

Beha-Amprobe is completing the 2100-Series voltage tester range with the 2100-Delta, a rugged feature rich TRMS voltage tester with current-function

Safety rated up to CAT III 1000 V / CAT IV 600 V, the 2100-Delta is the ideal product for troubleshooting in industrial and commercial environments. Use it to check voltage, current, resistance, continuity and frequency, all in one instrument. Connect the test probes safely to the top of the housing of the instrument when testing for voltage, giving you an extra hand. The 2100-Delta simply checks current up to 200 A AC by sliding the fixed jaw around the conductor without the need to break the circuit. And like the 2100-Alpha, 2100-Beta and 2100-Gamma, the 2100-Delta is naturally equipped with reinforced components for dependable performance. It has an ingress protection degree of IP 64, is built according the voltage tester standard EN 61243-3:2014 and is GS approved.

- **2 instruments in 1:**  
Voltage tester and current tester up to 200 A AC
- **One tool on your toolbelt** – all you need to get the job done
- **TRMS**
- **'Extra pair of hands'** click system for probes
- **Extended range** up to 1000 V AC / 1500 V DC
- **4 year warranty**

### Features

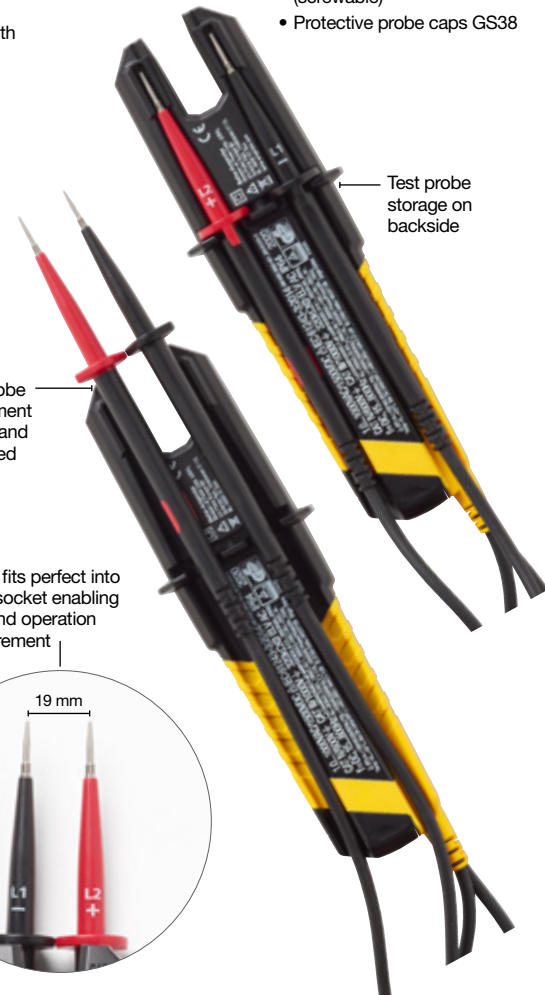
- **TRMS**
- **Open jaw** for fast and easy current measurement
- **Safety rated** CAT III 1000 V / CAT IV 600 V
- **Built according to** IEC 61243-3:2014, EN 61243-3:2014, DIN VDE 0682-401:2015
- **GS mark** from TÜV Rheinland
- **IP64 splash and dust proof** making the tool usable under humid conditions
- **LC display with backlight and LED indicators**
- **Polarity indication**
- **Auto power ON/OFF** and ON/OFF button
- **Self-Test function** checking all LEDs, flashlight, buzzer, vibration, all symbols on LCD and backlight
- **Buzzer and vibration function** during voltage measurements
- **Data hold**
- **Flashlight** / measurement area illumination for working in poorly lit areas with white LED
- **Backlight for LCD**

### Functions

- **Voltage and polarity test TRMS** up to 1000 V AC / 1500 V DC
- **Current measurement TRMS** up to 200 A AC – perfect tool for maintenance and troubleshooting
- **Voltage mode** to measure AC / DC voltage down to 1 V
- **Single pole phase test** to determine the phase conductor
- **Continuity test (Rx)** to check wiring
- **Low resistance indication (L Rx)** (<20 Ω) – most important tool to check wiring in contactor and relay application without influence of the coils
- **Phase rotation indication with two probes** – no third hand required. Separate indicators for "Right" and "Left" rotation
- **Resistance measurement** up to 100 kΩ
- **Non contact cable break detector / EF** (electric field) to locate the exact position of the fault location of a broken phase conductor
- **Frequency measurement** up to 800 Hz
- **Diode test**



- Test probe protection cover with compartment to store 4 mm test probe extension and protective probe caps
- 4 mm test probe extension (screwable)
- Protective probe caps GS38



2100-Delta





### Non contact cable break detector / EF (Electric Field)

The non contact cable break detector / EF is a perfect feature to locate the exact position of the fault location of a broken phase conductor. Hold the voltage tester with the sensor towards the cable or wire to be tested. The voltage tester indicates the strength of the signal digitally on the LCD screen.

### Easy electrical troubleshooting

The 13 mm open jaw allows a quick check of the current and load conditions during maintenance or while troubleshooting any electrical equipment.

### Test probe protector cover with accessory storage

Store the 4 mm test probe extensions and GS38 protective probe caps, ensuring you always have them when needed. The test probe protector cover tip also helps to open UK electrical safety outlets.

## 2100 Series Quick Guide



Features	2100-Alpha	2100-Beta	2100-Gamma	2100-Delta
<b>Safety rating</b> (measurement category)	CAT III 690 V / CAT IV 600 V	CAT III 690 V / CAT IV 600 V	CAT III 1000 V / CAT IV 600 V	CAT III 1000 V / CAT IV 600 V
<b>Voltage test</b>	•	•	•	•
<b>Voltage indication - LCD</b>	–	6...690 V AC (16 2/3...1000 Hz), 6...690 V DC	6...1000 V AC (16 2/3...1000 Hz), 6...1200 V DC	1.0...1000 V AC (15...800 Hz) TRMS, 1.0...1500 V DC (±)
<b>Voltage indication - LED</b>	+12 / -12 / 24 / 50 / 120 / 230 /400 / 690 V	+12 / -12 / 24 / 50 / 120 / 230 /400 / 690 V	+12 / -12 / 24 / 50 / 120 / 230 /400 / ≥690 V	+120 / -120 / 230 / 400 / 690 / 1000 V
<b>Full range polarity detection</b>	•	•	•	•
<b>Current measurement</b>	–	–	–	0.1...200.0 A AC (50/60 Hz) TRMS
<b>Single pole phase test</b>	•	•	•	•
<b>Continuity test (Rx)</b> (visual and audible indication)	< 500 kΩ	< 500 kΩ	< 500 kΩ	< 500 kΩ
<b>Switchable load / RCD Trip TEST</b> (10 mA or 30 mA)	•	•	•	–
<b>Two pole phase rotation indication</b>	Right/Left	Right/Left	Right/Left	Right/Left
<b>Resistance measurement</b>	–	–	0...1999 Ω	0...100 kΩ
<b>Non contact cable break detector / EF</b> (electric field)	–	–	•	•
<b>Frequency measurement</b>	–	–	–	1...800 Hz
<b>Low resistance indication (L Rx)</b>	–	–	Sound < 10 Ω	Sound + indication < 20 Ω
<b>Diode test</b>	–	–	–	•
<b>Data hold function</b>	–	•	•	•
<b>IP 64 splash and dust proof</b>	•	•	•	•
<b>Backlight</b>	–	•	•	•
<b>Flashlight/measurement area illumination</b>	•	•	•	•
<b>Reinforced insulated cable</b>	•	•	•	•
<b>4 mm test probe extensions (screwable) and protective probe caps GS38</b>	•	•	•	•
<b>Holster</b>	–	–	–	•



## 2100 Series Specifications

	2100-Alpha	2100-Beta	2100-Gamma	2100-Delta
<b>Voltage Test</b>				
<b>LED voltage range</b>	12... 690 V AC/DC	12... 690 V AC/DC	12... ≥690 V AC/DC	120 ... 1000 V AC/DC
<b>LED indicator</b>	+12, -12, 24 V: green LEDs 50, 120, 230 V: yellow LEDs 400, ≥690 V: red LEDs			+120 / -120 / 230 V: yellow LEDs 400 / 690 / 1000 V: red LEDs
<b>LED tolerances</b>	acc. to EN 61243-3:2014			
<b>ELV indication LED</b>	>50 V AC, >120 V DC: red LED			
<b>LCD voltage range</b>	–	6...690 V AC (16 2/3 - 400 Hz), 6...690 V DC	6...1000 V AC (16 2/3 - 400 Hz), 6...1200 V DC	1.0...1000 V AC (15...800 Hz), 1.0...1500 V DC (±)
<b>LCD resolution</b>	–	1 V		0.1 V (1...29.9 V), 1 V (30...1500 V)
<b>LCD tolerance</b>	–	± (3% rdg + 3 dgt)		±(3% +15dgt) (1...29.9 V), ±(3% +3dgt) (30...1500 V)
<b>Frequency range</b>	DC, 16 2/3 Hz...1000 Hz			DC, 15 Hz ... 800 Hz
<b>LED and LCD response time</b>	<1s			
<b>Acoustic indication</b>	≥50 V AC, ≥120 V DC			
<b>Vibration</b>	–	–	–	≥50 V AC, ≥120 V DC
<b>Voltage detection</b>	Automatic (AC/DC)			
<b>Polarity detection</b>	Full range			
<b>Range detection</b>	–			Automatic
<b>Current I</b> (load buttons not activated)	≤3.5 mA AC/DC at 690 V AC/DC		≤3.5 mA AC at 1000 V AC / ≤4.5 mA DC at 1200 V DC	≤3.5 mA AC at 1000 V AC / ≤6 mA DC at 1500 V DC
<b>Internal load</b> (load buttons not activated)	Approximately 2.4 W at 690 V AC/DC		Approximately 3.5 W at 1000 V AC / Approximately 5.4 W at 1200 V DC	Approximately 3.5 W at 1000 V AC / Approximately 9 W at 1500 V DC
<b>Test current switchable load</b> (load buttons activated)	≤250 mA AC/DC at 690 V AC/DC		≤350 mA AC at 1000 V AC / ≤420 mA DC at 1200 V DC	–
<b>Switchable load</b> (load buttons activated)	Approximately 170 W at 690 V AC/DC		Approximately 350 W at 1000 V AC / Approximately 500 W at 1200 V DC	–
<b>Automatic power ON</b>	> 10 V	> 10 V	> 10 V	> 6 V
<b>Impedance at ELV level</b>	270 kΩ @ 50 V AC	270 kΩ @ 50 V AC	320 kΩ @ 50 V AC	320 kΩ @ 50 V AC
<b>Impedance at ELV level and switched load</b>	5 kΩ @ 50 V AC	5 kΩ @ 50 V AC	5 kΩ @ 50 V AC	–
<b>Current test</b>				
<b>Current range</b>	–	–	–	0.1...200.0 A AC
<b>Resolution</b>	–	–	–	0.1 A
<b>Tolerance</b>	–	–	–	±(3% +5dgt)
<b>Frequency range</b>	–	–	–	50/60 Hz
<b>Trip Test of RCD</b>				
<b>Test current switchable load</b> (load buttons activated)	>30 mA AC at 230 V AC			–
<b>Single Pole Phase Test</b>				
<b>Voltage range</b>	> 100 V AC			
<b>Frequency range</b>	40...70 Hz			50/60 Hz
<b>Acoustic indication</b>	Yes			
<b>Indication</b>	Red LED			
<b>Continuity Test (Rx) / Diode Test</b>				
<b>Range</b>	0...500 kΩ			
<b>Tolerance</b>	0% to +50%			
<b>Test current</b>	<5 μA			
<b>Acoustic indication</b>	Yes			
<b>Indication</b>	Yellow LED			
<b>Overvoltage protection</b>	690 V AC/DC		1000 V AC/1200 V DC	1000 V AC/1500 V DC
<b>Automatic power ON</b>	< 500 kΩ			
<b>Phase Rotation Indication</b>				
<b>Voltage range</b>	170...690 V AC phase to phase		170...1000 V AC phase to phase	
<b>Frequency range</b>	40...70 Hz			
<b>Indication</b>	Green LEDs			

## 2100 Series Specifications (continued)

	2100-Alpha	2100-Beta	2100-Gamma	2100-Delta
<b>Resistance Measurement (Ω)</b>				
Resistance range on LCD	0...1999 Ω		0...100 kΩ	
Resolution	1 Ω		1 Ω (0...2000 Ω) 1 kΩ (2...100 kΩ)	
Tolerance	± (5% +10 dgt) at 20°C		± (5% +10 dgt) at 25°C	
Temperature coefficient	± (5 dgt / 10 K)			
Test current	<30 μA			
Acoustic indication	< 10 Ω		<20 Ω	
Overvoltage protection	690 V AC/DC		1000 V AC/1200 V DC	
<b>Non contact cable break detector / EF (electric field)</b>				
Voltage range	-		100...1000 V AC	
Frequency range	-		50/60 Hz	
Indication	-		3 levels shown by LCD segments: —    —=    —==	
Voltage Mode (<10V)	-		-	
Frequency measurement (Hz)				
Frequency range	-		1...800 Hz	
Resolution	-		1 Hz	
Tolerance	-		±(5% +5dgt)	
Sensitivity	-		> 10 V	
Low resistance indication	-		Sound < 10 Ω	
Diode test	-		-	
Data Hold	-		-	
	only voltage measurement		voltage and resistance measurement, non contact cable break detector / EF	
			voltage, current, resistance and frequency measurement, non contact cable break detector / EF	
<b>Flashlight / measurement area illumination / Backlight</b>				
Flashlight	White LED			
Backlight	-		White LED	
<b>General Specifications</b>				
Operation time (DT)	30 s			
Recovery time	240 s			
Operating temperature	-15°C to +55°C			
Storage temperature	-15°C to +55°C		-20°C...70°C	
Humidity	Max. 95% RH		Max. 85% RH	
Operating altitude	Up to 2000 m			
Safety rating (measurement category)	CAT IV 600 V, CAT III 690 V		CAT IV 600 V, CAT III 1000 V	
Pollution degree	2			
Protection degree	IP 64			
Safety regulations	IEC 61243-3:2014, EN 61243-3:2014, DIN VDE 0682-401:2015			
Approvals, compliance	GS mark from TÜV Rheinland, CE			
Power supply	Battery 2 x 1.5V (AAA/ IEC LR03)			
Power consumption	Approximately 90 mA		Approximately 120 mA	
Battery lifetime	More than 10000 measurements (<5 s / per measurement)			
Dimensions (HxWxD)	Approximately 280 x 78 x 35 mm (11.0 x 3.1 x 1.4 in)		Approximately 210 x 63 x 37 mm (6.3 x 2.5 x 1.5 in)	
Weight	Approximately 320 g (0.71 lb)		Approximately 275 g (0.61 lb)	



**Included in package:**  
 1x 2100-Delta Voltage Tester with Current-Function, 1x Holster, 2x GS 38 protective probe caps, 2x 4mm Ø test probe extension (screwable), 2x 1.5V alkaline batteries, IEC LR03 (installed), 1x User manual