

# 2100 Series Two Pole Voltage Testers

#### 2100-Alpha | 2100-Beta | 2100-Gamma

The Beha-Amprobe 2100-Alpha, 2100-Beta and 2100-Gamma are rugged and reliable two pole voltage testers for voltage and continuity checks. Built tough for use in industrial and commercial environments, the 2100 Series is safety rated up to CAT III 1000 V / CAT IV 600 V and measures voltage range up to 1000 V AC and 1200 V DC (2100-Gamma only). Designed with reinforced components for dependable performance, the 2100 Series has an ingress protection degree of IP 64 and is built according to voltage tester standard EN 61243-3:2014 and is GS approved.





#### 2100 Series Features

- Colored LED display to make different voltage levels more visible
- Automatic AC/DC voltage detection with polarity indication
- Voltage test up to 1000 V AC / 1200 V DC (2100-Gamma)
- Switchable load and 10 mA or 30 mA RCD trip test with two push buttons
- Automatic continuity test with visual (LED)
- Low resistance indication to check wiring in contactor and relay application without influence of the coils (2100-Gamma)
- Single pole test to check phase polarity
- Two pole phase rotation indication with indicator for right and left rotation
- Robust, double insulated cable with wear indication shows when the test leads are excessively worn or damaged and need replacement
- Backlight (2100-Beta/2100-Gamma)
- Torch light / measurement area illumination for working in poorly lit areas
- Audible indication when detected voltages above 50 V AC and 120 V DC
- Auto power ON/OFF and ON/OFF button
- Non contact cable break detector / EF (electric field)
- Resistance measurement to 1999 ohms (2100-Gamma)
- Data Hold (2100-Beta/2100-Gamma)
- IP 64 splash and dust proof
- GS approved, built according to IEC 61243-3:2014, EN 61243-3:2014, DIN VDE 0682-401:2015
- Safety rated CAT IV 600 V / CAT III 690 (CAT III 1000 V 2100-Gamma)







#### Two Button Switchable Load/ RCD Trip Test

When the two buttons are not pressed the unit is in high impedance mode, providing additional safety protection when testing live power sources, and avoiding accidental tripping of residual-current devices (RCD). When the buttons are pressed the unit is in low impedance mode, eliminating inaccurate readings as result of ghost voltage. Additionally, in systems with RCDs you can press the buttons to intentionally trip 10 mA or 30 mA RCDs and determine if they are wired correctly.



### Long, durable test leads with wear indicator

Extra-long 1.5 m test leads make testing fast and convenient. The two pole tester's rugged, durable test leads have two layers of insulation for added durability and safety. If the inner, contrasting-colored layer is showing, that's a sign that the test leads require replacement.



## 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.







### Quick Guide

Features:	2100-Alpha	2100-Beta	2100-Gamma
Safety Rating (measurement category)	CAT III 690 / CAT IV 600	CAT III 690 / CAT IV 600	CAT III 1000 / CAT IV 600
Voltage Test	•	•	•
Voltage Indication - LCD		6 - 690 V AC/DC	6 - 1000 V AC, 6 - 1200 V DC
Voltage Indication - LED	12 - 690 V AC/DC	12 - 690 V AC/DC	12 - ≥690 V AC/DC
Continuity Test (visual and audible indication)	< 500 kΩ	< 500 kΩ	< 500 kΩ
RCD Trip Test (10 mA or 30 mA)	•	•	•
Single Pole Phase Test	•	•	•
Full Range Polarity Detection	•	•	•
Two Pole Phase Rotation Indication	Right/Left	Right/Left	Right/Left
IP 64 Splash and Dust Proof	•	•	•
Backlight		•	•
Torch Light/Measurement Area Illumination	•	•	•
Double Insulated Cable with Wear Indication	•	•	•
4 mm Test Probe Extensions (screwable) and protective probe caps GS38	•	•	•
Data Hold Function		•	•
Resistance Measurement			01999 Ω
Low Resistance Indication			Sound $< 10 \Omega$
Non contact cable break detector / EF (electric field)			•



2100 Series Specifications

			eries specification
	2100-Alpha	2100-Beta	2100-Gamma
Voltage Test			
LED voltage range	12 690 V AC/DC	12 690 V AC/DC	12 ≥690 V AC/DC
LED indicator	±12, ±24, 50, 120		±12, 24, 50, 120, 230, 400, ≥690 V
LED tolerances		acc. to EN 61243-3:2014	5 4000 V 45 /5 4000 V D5
LCD voltage range	_	6 690 V AC/DC	61000 V AC / 61200 V DC
LCD resolution LCD tolerance	-	. (20)	1 V
Frequency range	_	± (3%) DC, 16 2/3 Hz1000 Hz	ordg + 3 LSD)
LED and LCD response time		<1s	
Acoustic indication			
Voltage detection		≥50 V AC, ≥120 V DC Automatic (AC/DC)	
Polarity detection		Full range	
Range detection		Automatic	
			≤3.5 mAAC at 1000 VAC /
Current I (load buttons not activated)	≤3.5 mA AC/DC	at 690 V AC/DC	≤4.5 mADC at 1200 VDC
Internal load (load buttons not activated)	Approximately 2.4	W at 690 V AC/DC	Approximately 3.5 W at 1000 VAC / Approximately 5.4 W at 1200 VDC
Test current switchable load (load buttons activated)	≤250 mA AC/DC at 690 V AC/DC		≤350 mAAC at 1000 VAC / ≤420 mADC at 1200 VDC
Switchable load (load buttons activated)	Approximately 170 W at 690 V AC/DC		Approximately 350 W at 1000 VAC / Approximately 500 W at 1200 VDC
Automatic power ON	LED: >10 V	LED: >10 V	LED: >10 V
<u> </u>		LCD: >10 V	LCD: > 10 V
mpedance at ELV level	270 kΩ @ 50 VAC	270 kΩ @ 50 VAC	320 kΩ @ 50 VAC
mpedance at ELV level and switched load	5 kΩ @ 50 VAC	5 kΩ @ 50 VAC	5 kΩ @ 50 VAC
rip Test of RCD (earth leakage circuit breaker)			
Test current switchable load (load buttons activated)		>30 mAAC at 230 VAC	
Single Pole Phase Test			
/oltage range	100690 VAC	· · · · · · · · · · · · · · · · · · ·	1001000 VAC against earth
requency range		40 Hz70 Hz	
Acoustic indication		yes	
ndication		Red LED	
ontinuity Test (Rx) / Diode Test			
ange		0500 kΩ	
olerance		0% to +50%	
est current		<5 μΑ	
Acoustic indication		yes	
Diode test		yes	
ndication		Yellow LED	
Overvoltage protection	690 V A		1000 VAC/1200 VDC
Automatic power ON		< 500 kΩ	
Phase Rotation Indication			
/oltage range -	170690 V AC		1701000 V AC phase to phase
requency range	407		4070 Hz
ndication		Green LEDs	
Resistance Measurement ( $\Omega$ ) / Low Resistance Indication	on " •)) " (2100-Gamma only)	0. 4000.0	
Resistance range on LCD		01999 Ω	
	1Ω		
		(F0/ 10 LCD) -+ 200C	
olerance		± (5% rdg + 10 LSD) at 20°C	
olerance Temperature coefficient		± (5 LSD / 10 K)	
Tolerance Temperature coefficient Test current		± (5 LSD / 10 K) <30 μA	
Tolerance Temperature coefficient Test current Test consistance indication		$\pm$ (5 LSD / 10 K) <30 μA Acoustic indication <1050 Ω	4000 115 (1205 : 7 7
Tolerance Temperature coefficient Test current Tolerance indication Tolerance indication Tolerance indication	690 V /	$\pm$ (5 LSD / 10 K) <30 μA Acoustic indication <1050 Ω	1000 VAC/1200 VDC
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Tolerance Temperature coefficient Test current Town resistance indication Town contact cable break detector / EF (electric field) Tolerance range Trequency range Treduction Total Hold The saurement Area Illumination / Torch Light Torch light	-	± (5 LSD / 10 K)  <30 μA  Acoustic indication <1050 Ω  AC/DC  only voltage measurement (12690V AC/DC)	1001000 VAC 5060 Hz 3 levels shown by LCD segments: voltage and resistance measurement,
Tolerance Temperature coefficient Test current Town resistance indication Town contact cable break detector / EF (electric field) Tolerance range Trequency range Treduction Total Hold The assurement Area Illumination / Torch Light Torch light Torch light Torch light Test current	-	± (5 LSD / 10 K)  <30 μA  Acoustic indication <1050 Ω  AC/DC  only voltage measurement (12690V AC/DC)  White LED	1001000 VAC 5060 Hz 3 levels shown by LCD segments: voltage and resistance measurement,
Tolerance Temperature coefficient Test current Town resistance indication Town contact cable break detector / EF (electric field) Tolage range Trequency range Treduction Total Hold The saverement Area Illumination / Torch Light Torch light Toch light To	-	± (5 LSD / 10 K)  <30 μA  Acoustic indication <1050 Ω  AC/DC  only voltage measurement (12690V AC/DC)  White LED	1001000 VAC 5060 Hz 3 levels shown by LCD segments: voltage and resistance measurement,
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Resolution Tolerance Temperature coefficient Test current Low resistance indication Overvoltage protection Non contact cable break detector / EF (electric field) Voltage range Frequency range Indication Data Hold  Measurement Area Illumination / Torch Light Torch light Backlight General Specifications Operation time (DT) Recovery time Operating temperature Storage temperature Humidity Operating altitude Safety rating (measurement category) Pollution degree Protection degree Safety regulations Approvals, compliance Power Supply Power consumption Battery lifetime Dimensions (HxWxD)	CAT IV / 600V,	± (5 LSD / 10 K)  <30 μA  Acoustic indication <1050 Ω  AC/DC   only voltage measurement (12690V AC/DC)  White LED  White LED  White LED  30 s 240 s -15°C to +55°C -15°C to +55°C Max. 95% RH Up to 2000 m  CAT III / 690V  2 IP 64  243-3:2014, EN 61243-3:2014, DIN VDE 0682-GS mark from TÜV Rheinland, CE Battery 2 x 1.5V (AAAV IEC LR03) Approximately 90 mA	1001000 VAC 5060 Hz 3 levels shown by LCD segments:  voltage and resistance measurement, Non contact cable break detector / EF  CAT IV / 600V, CAT III / 1000V  401:2015