



Product Specification:

UltraTEV[®] Plus²

Wireless Phase Reference (UTP2-WPR)



UltraTEV

Make Partial Discharge
discovery simple

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Wireless Phase Reference

Making Partial Discharge data analysis easy and accurate

To effectively understand and prevent Partial Discharge (PD) in high voltage systems, it is crucial to prioritise phase lock. This can lead to improved data analysis and better informed decision making.

Our latest accessory to the UltraTEV® Plus² accessory, the Wireless Phase Reference ensures accurate phase lock in any environment.

Why you need Wireless Phase Reference with UltraTEV® Plus²

- Ensures the perfect phase reference every time, through multiple methods (mains power connection, e-field, Rogowski coil and photosensor).
- Wireless connection to the UltraTEV® Plus², up to 40 meters away.
- Long life battery, up to 16 hours.



4 ways of achieving Phase Lock

Using EA Technology's UltraTEV[®] Plus² with Wireless Phase Reference, a phase lock can be achieved in four different ways:

- Direct power mains connection.
- E-Field – An internal sensor will detect and lock on to the stray electric fields within the substation.
- Rogowski coil - Detecting AC signals in any conductor
- Photo sensor – A photo sensor on the front of the instrument will lock on to nearby mains frequency lighting such as a fluorescent fitting when there is a line of sight between the sensor and the light.



Wireless Phase Reference being used in situation.



CHANGE HISTORY

DATE	VERSION	AUTHOR	CHANGES
25/04/23	1		

UltraTEV® Plus² Wireless Phase Reference (UTP2-WPR)

Physical

Size	115*118*50mm
Weight	200g
Enclosure	Injection moulded plastic case
Connectors	1x GCS1 Current Sensor (for a cable of 1.5m in length) 1x Power Barrel connector
Mounting Mechanisms	Free-standing Magnets in feet to attach to any magnetic surface. Velcro Strap to wrap around cables (up to 100mm diameter)

Environmental

Operating Temperature	-20 – +50 degrees °C
Humidity	0 – 95% non-condensing
IP Rating	42 (BS EN 60529)
Impact Rating	1IK08 (BS EN 62262)

Indicators and Controls

Indicators	4x LEDs to indicate current Phase Reference Source 1x bi-colour LED for Wi-Fi/WPS status 1x LED to indicate charging status 3x LEDs for the Battery Level
Controls	3x Push Buttons

Power Supplies

Internal batteries	Lithium Polymer 3.7V, 2000mAh
Operating Time	Approx. 16 hours
Battery Conservation	Automatic shutdown after 15 minutes of not being connected.
Power input	9Vac 50Hz/60Hz, 5W
Charging Time	Approx. 3h

Battery Charger/AC power port

Rated voltage	230 VAC
Frequency	50Hz
Max output current	1.1 A
Output Voltage	9VAC
Power Rated	15W
Environment	-10 To 40 degrees C, 0-90%RH
Cable Length	Input: 2.0m Output: 1.8m

Connectivity

	Wi-Fi (IEEE 802.11) – Connecting to the UTP2
Wireless	Frequency: 2.4 GHz Maximum Power: +19.97 dBm Model Number: ESP32-C3-WROOM-02 Antenna: PCB Antenna, 3.42dBi Certificate Number: E1177-210909 Certificate Issued by: Notified Body 1177, TIMCO Engineering, Inc.

Phase Reference

Sources	Mains Input Power, Lighting (Photo sensor), Electric field (High-Z sensor), Rogowski Coil
Frequency Range	50 Hz \pm 1%, 60 Hz \pm 1%
Accuracy	\pm 5deg

Compliance

Electromagnetic Compatibility (EMC)	BS EN IEC 61326-1:2021 (Electrical equipment for measurement, control, and lab use – EMC requirements) BS EN 61000-3-2: 2019 Electromagnetic compatibility (EMC) Part 3-2: Limits – Limits for harmonic current emission BS EN 61000-3-3: 2013 + A1: 2019 (Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply Systems)
Radio	ETSI EN 301 489-17 V3.2.4 (EMC standard for radio Equipment and services, for Broadband Data Transmission Systems) ETSI EN 301 489-1 V2.2.3 (EMC standard for radio equipment and services; Part 1: Common technical requirements)
Safety	BS EN 61010-1:2010+A1:2019 (Safety requirements for electrical equipment for measurement, control, and laboratory use)

For more information please call us on +1 (862) 261-2759 or email us at sales@eatechnologyusa.com

Global Footprint

At EA Technology we specialise in asset management solutions for owners and operators of power network assets.



Founded in 1966 we have over 50 years' experience in the industry and 6 regional offices around the world to support our global customer base.

We help clients to safeguard their networks. Advising them on strategy and implementation of a range of technology solutions to manage power assets, delivering maximum life and minimising cost



Safer, Stronger, Smarter Networks

EA Technology, LLC
400 Morris Avenue, Suite 240
Denville, NJ 07834

t +1 (862) 261-2759
e sales@eatechnologyusa.com
www.eatechnology.com/americas