

## AT-8000-EUR Advanced Industrial Wire Tracer Series

# CAT IV 600 V Safety Rated for Industrial Environments and Electrical Systems

### Patented Smart Sensor™ displays the location and orientation of energized wires

Designed to keep electricians safe - CAT IV 600 V rated for the highest protection available on any wire tracer. Electricians are protected from the most dangerous level of transient overvoltage spikes up to 8,000 V that are known to occur in industrial environments.

Save time, no blind searching - See hidden wires like never before with the AT-8000-RE Receiver's patented **Smart Sensor™**, which finds and displays the location and orientation of energized wires in walls, floors and ceilings on the large color TFT LCD screen. The Scan and Locate feature clearly identifies the single correct breaker or fuse, eliminating the confusion from multiple false positive readings common in older technology tracing tools. Embedded help screens make set-up easy and error free for novice users and experts alike.

Featuring three power modes "high", "low", and "loop" and two output frequencies (6 kHz and 33 kHz), the AT-8000-TE Transmitter incorporates the best technologies available for optimal wire tracing and breaker identification on both energized and de-energized circuits. The AT-8000-TE automatically sets the signal based on detected voltage and prompts the user to set the power level based on the application, delivering consistently accurate results.



## Features

- Trace Energized and De-energized wires in walls, ceilings, floors and tight spaces
- Identify breakers and fuses
- Pinpoints shorts and opens
- Non-contact voltage mode and passive tracing
- High resolution 89 mm (3.5 in) TFT LCD color display
- Three power modes
  - "High" power mode for normal circuits
  - "Low" power mode for precision tracing in difficult areas
  - "Loop" power mode provides a boosted signal using the signal clamp
- Two automatically selected frequency modes for optimal tracing on energized and de-energized circuits
- Optional CT-400-EUR Signal Clamp for inducing signal into wires without access to bare conductors (included in the AT-8030-EUR Kit only)
- Embedded help screens for easy, error free set-up



### Safety Certification

All Beha-Amprobe tools, including the Beha-Amprobe AT-8000-EUR, are rigorously tested for safety, accuracy, reliability, and ruggedness in our state-of-the-art test lab. In addition, Beha-Amprobe products that measure electricity are listed by a 3rd party safety lab, either UL or CSA. This system assures that Beha-Amprobe products meet or exceed safety regulations and will perform in a tough, professional environment for many years to come.



Large color display guides you in the direction and orientation of the energized wire.



The Smart Sensor™ indicates that it is aligned with the energized wire. The display indicates the wires precise direction and orientation.

Smart Sensor™



### Smart Sensor™

Quickly and easily determine the precise direction and location of energized wires in walls, floors and ceilings with the patented Smart Sensor™. Combined with a fast signal processor that measures small changes in the detected signal multiple times per second with unmatched precision and ease of use for tracing energized wires.

### Breaker and Fuse Identification

Combined with the powerful Transmitter utilizing optimal frequencies for energized and de-energized tracing, the Receiver's Scan and Locate feature identifies the one correct breaker or fuse with the highest recorded signal.

### Tip Sensor

The shape of the Tip Sensor allows tracing in hard to reach areas, corners & tight spaces, as well as precise circuit breaker and fuse identification. By utilizing two different types of antennas (inductive coil and capacitive), the tip sensor enables optimal tracing results of both energized and de-energized circuits, which are automatically selected by operating mode.

### CAT IV 600 V Safety Rated

In harsh industrial environments where three-phase motors work to provide energy for many machines in large scale operations, protection from transient spike events is of high concern for electricians and facility maintenance. The AT-8000-EUR Series introduces a new standard of protection for those who work in industrial environments with a CAT IV 600 V rating, bringing electrical safety to a level never before seen in a wire tracer.



### Special Applications:

- **RCD-protected** circuit wire tracing
- **Find** breaks, openings, and shorts
- **Trace:**
  - wires in non-metallic pipes and conduits
  - wires in metal conduit
  - shielded wires
  - underground wires
  - low voltage wires and data cables
- **Sort** Bundled Wires
- **Map** a Circuit using Test Leads Connection
- **Trace** Breakers/Fuses on Systems with Light Dimmers
- **Signal Clamp** - Closed Loop/Mapping Circuits

### Applications:

- **Trace** Energized and De-energized wires
- **Identify** breakers and fuses
- **Non-contact voltage mode** and passive tracing
- **Ideal for older industrial environments** where wire locations are not well documented



### Signal Clamp

When there's no access to bare conductors, use the CT-400-EUR signal clamp to induce a signal into either energized or de-energized circuits for wire tracing and load locating. The AT-8000-TE Transmitter's "loop" mode provides a boosted 6 kHz signal through the clamp to further improve accuracy and performance. Simply clamp around the desired wire to induce the signal, then begin tracing.



### Trace Wires Inside Conduit

Trace energized and de-energized wires enclosed in metal conduit by removing the junction box cover and use the AT-8000-RE Receiver's Tip Sensor to identify the specific wire carrying the transmitted signal generated by the AT-8000-TE Transmitter. Wires in non-metal conduit can be traced directly without opening the junction box and using the AT-8000-RE Receiver's Smart Sensor™.



### Non-contact Voltage Detection

The NCV feature extends functionality of the AT-8000-RE Receiver by detecting energized wires from 90 to 600 V and 40 to 400 Hz without the use of the AT-8000-TE Transmitter. Its adjustable sensitivity fits a range of applications, from detecting voltage (higher sensitivity) to precisely pinpointing line/phase wire in a bundle (lower sensitivity).

\* The voltage indication in NCV mode is not sufficient to assure safety. This function is not suitable to test for absence of voltage. This always requires a two-pole voltage test.



### Hot Stick Connection

To enable easier tracing of wires in high ceilings, walls and along floors, and more difficult to reach areas, a universal attachment bracket for connection to Hot Sticks is included. Connecting to the Hot Stick is optional, industry standardized, and type selection is based on preference.




\* The Hot Stick accessory is not part of the Beha-Amprobe product range, but can be purchased separately from electrical distributors.



AT-8000-RE universal attachment bracket for Hot Stick attachment.



The CT-400-EUR Signal Clamp is an optional accessory, included only in the AT-8030-EUR kit.

Specifications	AT-8000-RE Receiver	AT-8000-TE Transmitter	CT-400-EUR Signal Clamp
Measurement Category	CAT IV 600 V	CAT IV 600 V	CAT IV 600 V, CAT III 1000
Display size	8.9 cm (3.5 in)	(LED signals)	-
Display Dimensions (W x H)	70 x 52 mm (2.76 x 2.07 in)	-	-
Display Resolution	320px x 240px	-	-
Display type	Color TFT LCD	-	-
Color Display	•	-	-
Booting time	30 sec	< 2 sec	-
Backlight	•	-	-
LED Indicator	Green Flashing: Signal Detection	Operating mode LEDs: red Battery status LEDs: green, yellow, red	-
Operating Temperature range	-20 °C to 50 °C (-4 °F to 122 °F)	-20 °C to 50 °C (-4 °F to 122 °F)	0 °C to 50 °C (32 °F to 122 °F)
Operating Humidity	45%: -20 °C to <10 °C (-4 °F to <50 °F) 95%: 10 °C to <30 °C (50 °F to <86 °F) 75%: 30 °C to <40 °C (86 °F to <104 °F) 45%: 40 °C to 50 °C (104 °F to 122 °F)	45%: -20 °C to <10 °C (-4 °F to <50 °F) 95%: 10 °C to <30 °C (50 °F to <86 °F) 75%: 30 °C to <40 °C (86 °F to <104 °F) 45%: 40 °C to 50 °C (104 °F to 122 °F)	95%: 10 °C to <30 °C (50 °F to <86 °F) 75%: 30 °C to <40 °C (86 °F to <104 °F) 45%: 40 °C to <50 °C (104 °F to <122 °F)
Storage temperature and humidity	-20 °C to 70 °C (-4 °F to 158 °F), ≤ 95% RH	-20 °C to 70 °C (-4 °F to 158 °F), ≤ 95% RH	-20 °C to 60 °C (-4 °F to 140 °F), ≤ 95% RH
Operating altitude	0 to 2000 m (0 to 6561 ft)	0 to 2000 m (0 to 6561 ft)	0 to 2000 m (0 to 6561 ft)
Transient protection	-	8.00 kV (1.2/50µS surge)	-
Pollution degree	2	2	2
IP Rating	IP 52	IP 40	IP 40
Drop test	1 m (3.28 ft)	1 m (3.28 ft)	1 m (3.28 ft)
Power Supply	4 x AA (alkaline or NiMH rechargeable)	8 x AA (alkaline or NiMH rechargeable)	-
Power consumption	4xAA battery: 2W	Hi/Lo mode: 70 mA Loop mode with Clamp: 90 mA Consumption without signal transmission: 10 mA	-
Battery life	Approx. 9 h	Hi/Lo mode: approx. 25 h Loop mode: approx. 18 h	-
Low battery indication	•	•	-
Fuse	-	1.6 A, 700 V, fast-acting, Ø 6x32mm	-
Maximum conductor size	-	-	32 mm (1.26 in)
Response time	Smart mode: 750 ms Tip Sensor Energized: 300 ms Tip Sensor De-Energized: 750 ms NCV: 500 ms, Battery monitoring: 5 s	Line voltage monitoring: 1 sec Battery voltage monitoring: 5 sec	Instantaneous
Voltage Warning Indicator	-	> 30 V AC/DC	-
Non-Contact Voltage (NCV)	90-600 V AC	-	-
Signal indications	Audible beep, bargraph display, numeric display	LEDs and audible beep	-
Operating Frequency	Energized: 6.25 kHz De-Energized: 32.768 kHz	Energized: 6.25 kHz De-Energized: 32.768 kHz	Loop Mode: 6.25 kHz High / Low Mode: 32.768 kHz
Acoustic Indication	Piezo Buzzer	Audible beep	-
Range Detection (Open air)	<b>SmartSensor™:</b> Pinpointing: Around 5 cm (2 in) radius (+ - 2%) Direction indication: Up to 1.52 m (5 ft) (+ - 2%) <b>Tip sensor (Energized):</b> Pinpointing: Around 5 cm (2 in) (+ - 1%) Detection: Up to 6.7 m (22 ft) (+ - 1%) <b>Tip sensor (De-energized):</b> Detection: Up to 4.3 m (14 ft) (+ - 5%) <b>NCV detection (40 to 400 Hz):</b> Pinpointing: Around 5 cm (2 in) radius (+ - 5%) Detection: Up to 1.2 m (4 ft) (+ - 5%)	-	-
Current Output of signal (typical)	-	Energized circuit: HI mode: 60 mA RMS LO mode: 30 mA RMS De-energized circuit: HI mode: 130 mA RMS LO mode: 40 mA RMS Loop mode: 160 mA RMS	-
Signal voltage output (nominal)	-	De-energized circuit: LOW: 29 V RMS, 120 Vp-p HIGH: 33V RMS, 140 Vp-p With CT-400-EUR: loop mode: 31 V RMS, 120 Vp-p	-
Dimensions (L x W x H)	Approx. 278 x 113 x 65 mm (10.92 x 4.43 x 2.55 in)	Approx. 183 x 93 x 50 mm (7.2 x 3.66 x 1.97 in)	Approx. 150 x 70 x 30 mm (5.9 x 2.75 x 1.18 in)
Weight	0.544 kg (1.20 lb)	Approx. 0.57 kg (1.25 lb)	Approx. 0.114 kg (0.25 lb)
Certifications			



Specification Comparison	AT-8020-EUR	AT-8030-EUR
Measurement Category	CAT IV 600 V	CAT IV 600 V
Traces energized and de-energized wires	•	•
Locates energized and de-energized breakers and fuses	•	•
Receiver "Breaker Identification" mode to instantly identify the correct breaker	•	•
Finds shorts and opens	•	•
Transmitter "High" and "Low" modes for most wire tracing applications	•	•
Transmitter "Loop" mode for closed loop de-energized circuits	•	•
Non-contact voltage detection	•	•
Two frequency modes for optimal tracing in energized (6 kHz) and de-energized (33 kHz) circuits	•	•
Transmitter Operating Voltage	0 to 600 V AC/DC	0 to 600 V AC/DC
Receiver Display	Color 89 mm (3.5 in) LCD	Color 89 mm (3.5 in) LCD
Rechargeable Batteries	-	•
Signal clamp attachment to induce signal	(optional accessory)	•

Kit Contents	AT-8020-EUR	AT-8030-EUR
AT-8000-RE Receiver	1	1
AT-8000-TE Transmitter	1	1
TL-8000-EUR Test Lead And Accessory Kit*	1	1
CC-8000-EUR Hard Carrying Case	1	1
User Manual & QSG	1	1
1.5 V AA (IEC LR6) Batteries	12	-
Battery Chargers	-	3
Rechargeable Batteries	-	12
ADPTR-SCT-xx Socket adapter	1	1
CT-400-EUR Signal Clamp	-	1
HS-1 Magnetic Hanger	-	1



Specifications	TL-8000-EUR
Measurement Category	CAT IV 600 V (test leads and alligator clips) CAT II 1000V (test probes)
Operating voltage and current	600 V, 10 A max. (red/black leads), 600 V, 6 A max. (green lead) 600 V, 10 A max. (alligator clips), 1000 V, 8 A max. (test probes)
Operating temperature	0 °C to 50 °C (32 °F to 122 °F)
Operating Humidity	95%: 10 °C to <30 °C (50 °F to <86 °F) 75%: 30 °C to <40 °C (86 °F to <104 °F) 45%: 40 °C to <50 °C (104 °F to <122 °F)
Storage temperature and humidity	-20 °C to 60 °C (-4 °F to 140 °F), ≤ 95% RH
Operating altitude	2000 m (0 to 6561 ft)
Pollution degree	2
IP Rating	IP 20
Drop test	1 m (3.28 ft)
Dimensions	Red/black leads: 1 m (3.28 ft), Green lead: 7 m (22.97 ft) Alligator clips: approx. 95 x 45 x 24 mm (3.74 x 1.77 x 0.94 in) Test probes: approx. 134 x 23 x 14 mm (5.28 x 0.91 x 0.55 in)
Weight	Approx. 0.4 kg (0.88 lb)
Certifications	

**TL-8000-EUR test lead and accessory kit includes:**

- 2 x 1 m test leads (red, black)
- 1 x 7 m test lead (green)
- 2 x alligator clips (red, black)
- 2 x test probes (red, black)

Specifications	ADPTR-SCT-xx
Measurement Category	CAT II
Operating voltage and current	102 to 253 V AC, 4 A MAX.
Operating temperature	0 °C to 40 °C (32 °F to 104 °F)
Operating Humidity	≤ 80% RH
Storage temperature and humidity	0 °C to 40 °C (32 °F to 104 °F), ≤ 80% RH
Operating altitude	0 - 2000 m (0 to 6561 ft)
Pollution degree	2
IP Rating	IP 40
Drop test	1 m (3.28 ft)
Dimensions	Approx. 75 x 50 x 65 mm (2.95 x 1.97 x 2.56 in)
Weight	Approx. 0.057 kg (0.125 lb)
Certifications	



Optional Accessories	
HS-1	Magnetic hanger
TL-8000-25M	Test lead
CT-400-EUR	Signal clamp