CABLE VERIFICATION & TRACING ANALYZER

Model 6683

SEE WHAT'S HIDDEN.
TRACE IT. VERIFY IT. FIX IT.

Locate, trace, and verify cables, conductors, and metal pipes — powered by precision digital detection

- **Pinpoint faults fast** — find shorts, opens, and breaks with precision and ease
- **Dual operation modes:**
  Unipolar – Trace a single cable quickly using the ground as reference
  Bipolar – Trace two circuits to identify pairs or for more accurate fault location
- **Clear digital and audible feedback** with adjustable sensitivity for accurate tracing
- **Multiple transmitter ID codes** for identifying several lines simultaneously
- **Large backlit LCDs and built-in LED flashlight** for visibility in low-light or confined spaces

Our products are backed by over 130 years of experience in test and measurement equipment, and encompass the latest international standards for quality and safety.

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Cable Verification & Tracing Analyzer
Model 6683

Pinpoint the Problem, Trace the Solution

The Cable Verification & Tracing Analyzer Model 6683 **quickly locates, identifies, and diagnoses electrical wiring, data cables, and metal pipes** — even when buried or hidden in walls. Its transmitter-receiver system combines precision detection, safety, and digital filtering for fast, reliable troubleshooting.

Whether identifying a live line, tracing a circuit back to a breaker, or finding a fault in a buried conductor, the Model 6683 simplifies complex diagnostics into a few intuitive steps.

Key Highlights:

- Detects open circuits and interruptions
- Locates cables in walls, ceilings, or underground
- Identifies presence of voltage via NCV *(non-contact voltage)*
- Works in energized or de-energized systems
- Provides real-time feedback via LCD and audible tone

FEATURES

- Quickly locates and traces electrical or metallic conductors, and identifies cable fault locations such as shorts and open circuits
- **Non-contact voltage detection** (NCV) up to 1000 VAC
- Dual operation modes: **Unipolar** *(de-energized)* and **Bipolar** *(live or de-energized)*
- **Adjustable sensitivity** — **automatic** for quick scans or **manual** for fine detection
- **Clear digital, visual, and audible indicators** with adjustable pitch or optional mute for precise tracing
- **Multiple transmitter ID codes** *(up to 7)* for identifying several lines simultaneously
- Digital filtering technology ensures **reliable detection and strong immunity to interference**
- **Large backlit LCDs** on both transmitter and receiver show transmission power, digital ID, voltage presence indicator, and battery status
- **Built-in LED flashlight** for low-light spaces
- **Auto power-off** on receiver to extend battery life

APPLICATIONS

Data Center & Telecom

- Trace and identify power and communication lines **in cable trays**
- Locate faults or breaks in **network and control wiring**
- Verify circuit continuity and connection points for **rack equipment**
- Detect **energized or de-energized cables** before maintenance or rerouting
- Distinguish **multiple conductors** using multiple transmitter ID codes

Electrical

- Identify **fuses**, **circuit breakers**, and other **protective devices**
- **Trace cables** concealed in walls or ceilings
- **Locate outlets wired in parallel on branch circuits**
- **Locate hidden junction boxes** behind wall coverings or finishes
- **Detect live power source cables** using non-contact voltage

Plumbing & Heating

- **Locate metallic pipes** *(copper, steel)*
- **Trace non-metallic pipes** by inserting a single-conductor cable from one accessible end

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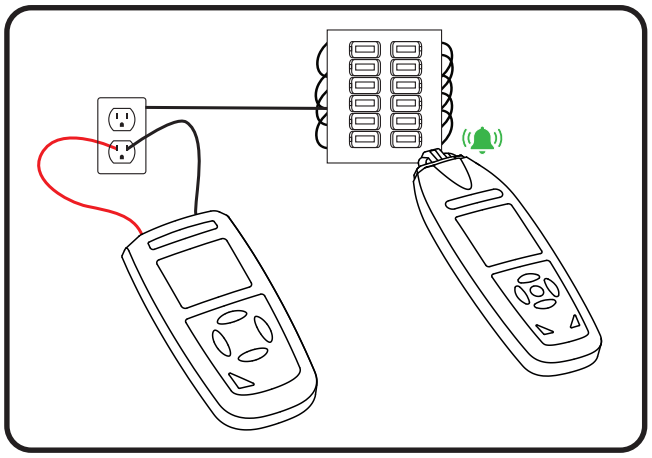
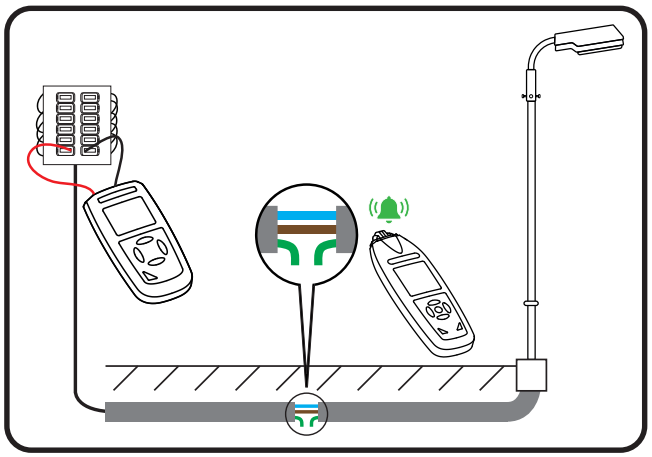
Model 6683
Applications



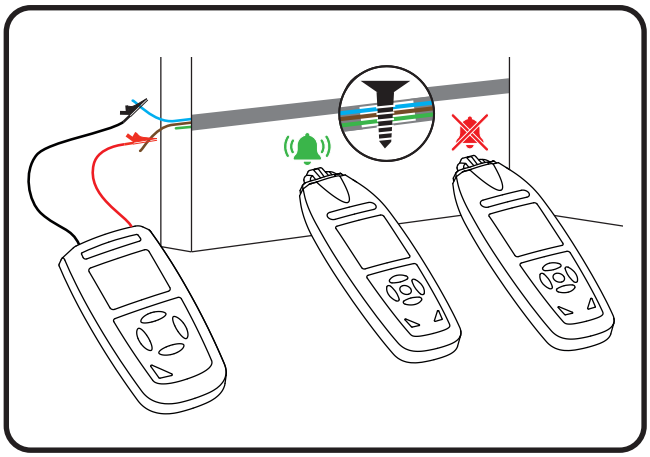
Locate and track lines and sockets

If voltage is present, the **TRANSMITTER signals its presence** and **indicates its value**. The signal emitted is **digitally coded to prevent interference**, and its power can be **adjusted manually** to refine detection. In more complex cases, the **identification code can be configured** to allow **up to 7 transmitters** to be used simultaneously.

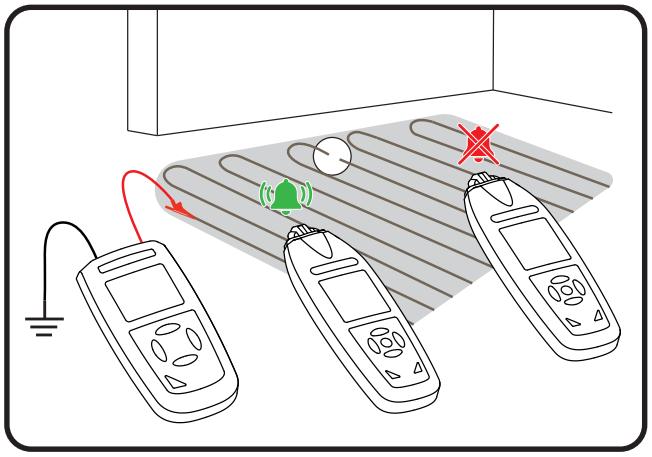
The **RECEIVER** is equipped with a **built-in flashlight, a silent mode** and **automatic or manually adjustable sensitivity** for better selectivity to adapt to all situations on the construction site. Because of its NCV function, the receiver can be **used alone to locate a hot conductor connected to an energized system**.



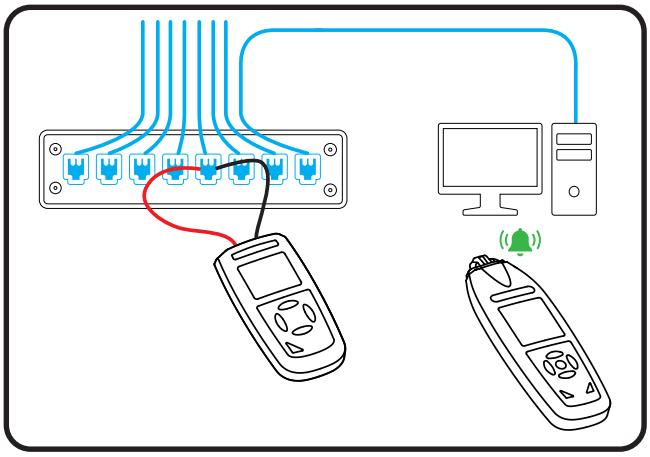
Locate a cable fault



Locate damaged cables



Detect faults in an underfloor heating system (unshielded)



Trace twisted pair and other data cables

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Model 6683
User Interface & Buttons

Transmitter (6683E)

Receiver (6683R)

TRANSMITTER KEYPAD (6683E)

⏻	To turn instrument ON or OFF
▲▼	To increase or decrease the signal transmission strength
CODE SEL	To select the transmitter identification code
☀	To switch the display backlighting ON or OFF

RECEIVER KEYPAD (6683R)

⏻	To turn instrument ON or OFF
🔦	To turn flashlight ON or OFF
▲▼	To increase or decrease signal reception sensitivity in manual mode
NCV	To activate or deactivate the NCV *(non-contact voltage)* function
☀	**Short press:** To switch the display backlighting ON or OFF
🔇	**Long press:** To activate or deactivate the sound signal
MODE	To switch detection sensitivity level from automatic to manual mode. In this case, the setting is made using the ▲▼ buttons. If the NCV function is active, it can be deactivated to switch in the transmitter signal detection function.

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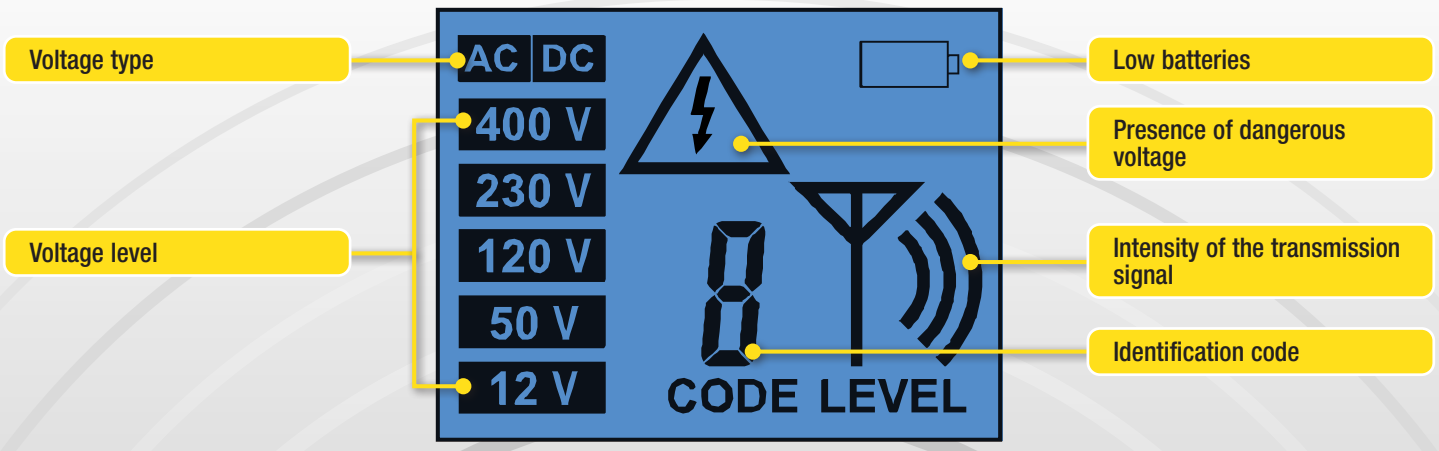
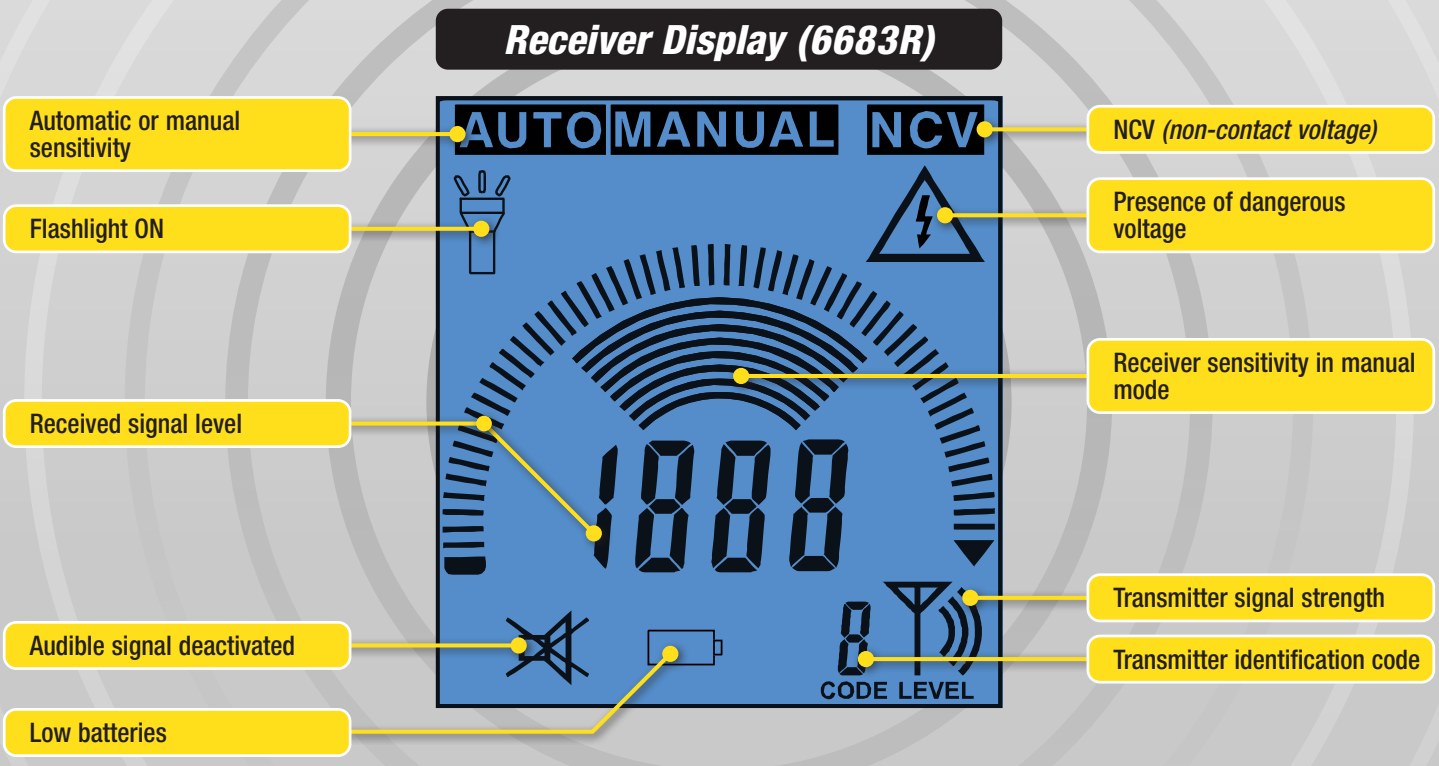
Model 6683
Screen Displays

Transmitter Display (6683E)



Receiver Display (6683R)



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Model 6683
Specifications

300 V CAT III | CE | ⧈

MODEL	6683E (TRANSMITTER)
Display	Backlit LCD display
Information Displayed	Measured voltage level, type *(AC or DC)*, transmitted signal power, battery status, identification code, voltage presence
Output Signal Frequency	125 kHz
External Voltage Identification Range	(12, 50, 120, 230) V and 400 V (50/60) Hz or DC ± 2.5 %
Signal Power	Adjustable *(3 levels)*
Transmitter Identification	Digital signal coding allowing the use of 7 transmitters simultaneously
Power Supply	(6) 1.5 V AAA batteries
Safety	IEC/EN 61010-2-030 300 V CAT III
Operating / Storage Temperature	Operating Temperature: (32 to 104) °F (0 to 40) °C Storage Temperature: (-4 to 140) °F (-20 to 60) °C
Dimensions / Weight	Dimensions: (6.3 x 3.30 x 1.57) in (160 x 84 x 40) mm; Weight: 12.34 oz (350 g)
MODEL	**6683R (RECEIVER)**
Display	Backlit LCD display
Information Displayed	Signal amplitude, detection sensitivity, transmitter identification code and transmitted signal strength, battery status, voltage presence
Detection Depth With Transmitter	Unipolar application: (0 to 6) ft (0 to 2) m Bipolar application: (0 to 1.6) ft (0 to 0.5) m Single loopback line: Up to 8.2 ft (2.5 m)
Detection Sensitivity	Automatic or manual adjustment *(7 levels)*
Non-Contact Voltage (NCV) Function	(12 to 1000) VAC
Other Functions	Flashlight; audible signal deactivation
Power Supply	(6) 1.5 V AAA batteries
Safety	Type F sensor compliant with IEC/EN 61010-031 300 V CAT III
Operating / Storage Temperature	Operating Temperature: (32 to 104) °F (0 to 40) °C Storage Temperature: (-4 to 140) °F (-20 to 60) °C
Dimensions / Weight	Dimensions: (7.8 x 2.63 x 1.42) in (198 x 67 x 36) mm; Weight: 10.93 oz (310 g)

Consult factory for NIST Calibration prices.

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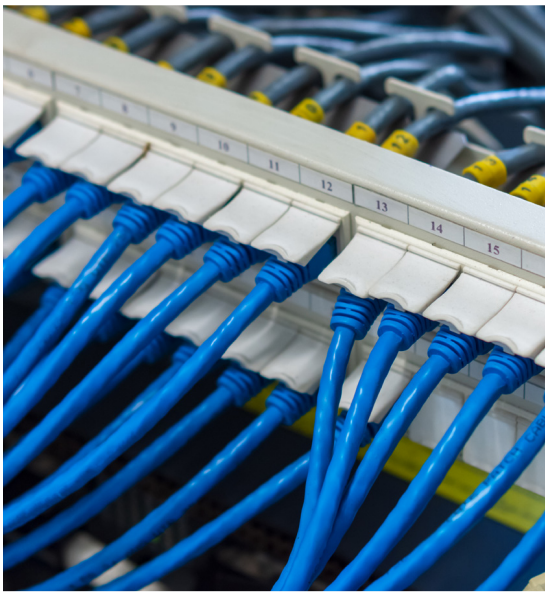
Model 6683
Ordering Information



PRODUCT INCLUDES

Cable Verification & Tracing Analyzer Model 6683. . . . . Cat. #2127.89

- Transmitter and Receiver
- Soft carrying case
- Set of (2) 5 ft silicone color-coded (red/black) safety leads with 4 mm straight/right angle banana plugs
- (2) Alligator clips (red/black)
- 110 V outlet adapter with banana plugs
- Mini ground rod
- E14 bulb adapter
- (6) 1.5 V AAA (LR03) batteries
- Multilingual user manual

ACCESSORIES

- Probe – Black test probe (Rated 1000 V, CAT IV, 15 A, UL V2). . . .**Cat. #5000.97**
- Probe – Red test probe (Rated 1000 V, CAT IV, 15 A, UL V2) . . . . .**Cat. #5000.98**

REPLACEMENT PARTS

- Adapter – 110 V outlet with 4 mm banana plugs . . . . . .**Cat. #2118.49**
- Lead – Set of (2) 5 ft silicone color-coded (red/black) with 4 mm straight/right angle banana plugs (Rated 1000 V, CAT IV, UL). . . . . .**Cat. #5000.94**
- Clip – Safety alligator – Black (1000 V, CAT IV, 15 A, UL V2) . . . . .**Cat. #5000.99**
- Clip – Safety alligator – Red (1000 V, CAT IV, 15 A, UL V2) . . . . . .**Cat. #5100.00**
- Mini ground rod for use with Models 6681 & 6683 . . . . . .**Cat. #5100.22**
- Adapter – E14 Bulb adapter for use with Model 6683 . . . . . .**Cat. #5100.23**
- Case – Replacement soft carrying case for Model 6683 . . . . . .**Cat. #5100.24**

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