

# Leica Digicat i-Series

Safe and fast location  
of underground services



**SITE PROOF**  
by Leica Geosystems

- when it has to be **right**

**Leica**  
Geosystems

# Leica Digicat i-Series

## Making Cable Avoidance Easier and Safer

Every year site workers are injured due to inadvertently striking buried utilities such as electricity cables or gas pipelines. Obtaining accurate information about the location of buried utilities has never been more essential to protect employees and equipment during any excavation project.

Local legislation prescribes the use of a locating device before any kind of excavation takes place. It makes perfect sense to search for, trace and mark all services before work commences.

With all our Digicat locators, users can detect buried utilities with ease. The range has been specifically designed to reduce human error and to increase site safety with its wealth of intelligent and unique features.

### Typical users of the Digicat:

- Excavation contractors
- Utility installation & repair contractors
- General contractors
- Builders
- Gas & Electricity companies
- Cable TV companies
- Pipe laying contractors

### The Digicat is comprised of:

- Digicat 500i/550i or 600i/650i Service Locator
- Digitex 100t Signal Transmitter
- Digitrace Service Tracer and additional accessories

The Digicat range makes locating underground cables and pipes a simple and efficient task, increasing your onsite safety and ultimately saving you time and money.

### How does the Digicat locate?

The Digicat range locates buried conductive services by receiving electromagnetic signals which radiate from them.

The Digicat's intelligent software interprets the signal data and provides the operator with an audible and visual response to the location and direction of buried utilities. The operator can mark the ground or use a GIS mapping device\* to note the location, providing the excavation team with clear indications of utility positions.

\* on Digicat models with Bluetooth® functionality







## Leica Digicat Benefits

- State-of-the-art Digital Signal Processing (DSP) technology
- Automatic controls – making the Digicat easy-to-use, requiring minimal user experience
- Power Mode start-up ensuring the most potentially dangerous current carrying services are detected first
- Hazard Zone feature indicating shallow buried service in power, 8 and 33 kHz modes, (within approximately 30 cm) alerting increased risk
- Built-in test function for testing hardware and software
- LCD screen with built-in light sensor, automatically enabling the backlight in dark conditions
- Robust, lightweight design, specifically engineered for tough site conditions
- Service Due Indicator supporting planned maintenance schedules or quality systems by displaying a wrench icon after 12 months

The Digicat i-Series locators have multiple modes of operation allowing users to have maximum control at their fingertips.



### Auto Mode

Automatically locates power or radio signals, helping to confirm the presence of services upon initial site occupation making cable detection easier and safer.



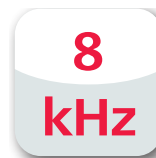
### Power Mode (Default mode)

Locates power signals radiated by energised cables which pose the most significant risk to excavation teams.



### Radio Mode

Traces signals originating from distant radio transmitters. These signals penetrate the ground and are reradiated by buried conductive services.



### Transmitter Modes (8 & 33 kHz)

Locates a specific signal applied by the Digitex dual frequency signal generator to a metallic underground conductor.



# Leica Digicat i-Series

## High level intelligence



### Depth Indication

The Digicat 550i & 650i feature utility depth indication, when used in conjunction with the Digitex 100t signal generator or Digimouse in 8 or 33 kHz modes. With a single press of the button operators are provided with the approximate depth of the buried utility.

### Hazard Zone

Buried utilities close to the surface pose a significant safety risk to site works. The new Hazard Zone function provides an additional warning to the close proximity of buried services, alerting users to the immediate danger.

### Enhanced Sonde Detection

The Digicat i-Series feature numeric signal strength readout, specifically designed for easy sonde location. The highest number displayed indicates the exact position of the Digimouse beneath the ground.

### Service Due Indicator

Supporting customer planned maintenance schedules or quality systems, by displaying a wrench icon after 12 months.

### Pinpoint Assist

Maintains the highest peak reading obtained on the signal strength indicator for a period of time, allowing the operator to swiftly and accurately pinpoint the service position.



### Additional Features (Digicat 600 i-Series only)

#### Data Logging

The Digicat 600 i-Series records and stores information while in use. Information is recorded every second after completion of the initial start-up routine. These records are stored in the locators memory and can be retrieved and transferred via Bluetooth to a PC or other electronic device for analysis. Storage time is approximately 80 hours use.

#### Logicat Software\*

Allows you to upload the stored records to view the locators use, simply upload all records or search by date.

#### Bluetooth Connectivity

The Digicat 600 i-Series has the added benefit of Bluetooth wireless connectivity. It allows the Digicat to integrate seamlessly with mobile mapping technology to log survey data, in addition to enabling wireless Bluetooth data transfer.

\*Digicat 600 i-Series features full Logicat software compatibility, see page 6.

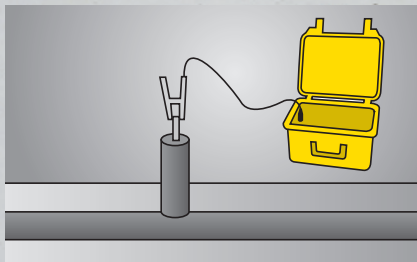


# Leica Digitex 100t Signal Transmitter



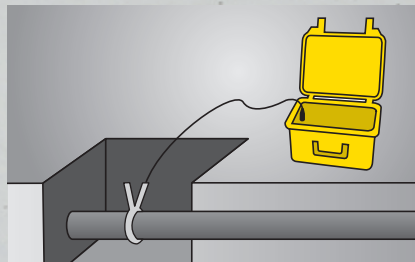
Leica Digitex 100t delivers significantly higher power than previous models. This improved performance will allow users to:

- Trace services over a greater distance
- Improve service detection in areas of high signal interference
- Improve depth estimation when using a depth locator



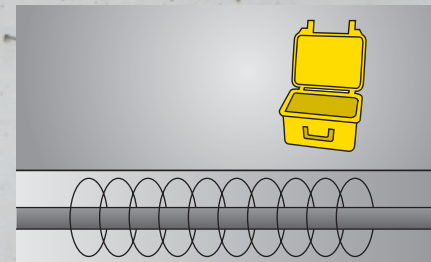
## Direct Connection

Connect the Digitex 100t to a conductive service such as a valve, stop tap or other access point.



## Signal Clamp Connection

A signal clamp is used to apply the Digitex 100t signal to a pipe or live electricity cable. Supply is not interrupted by the signal and the operator is not exposed to any live services.



## Induction

The Digitex 100t induces a tracing signal into the buried pipe or cable. This is a quick and convenient method when direct connection or signal clamping is not possible.

Features	Digitex 100t (Art. No. 795946)
Operating transmission frequencies	<ul style="list-style-type: none"> <li>• 8.192kHz</li> <li>• 32.768kHz</li> <li>• Mixed 8/33 connection mode only</li> </ul>
Output power	4 levels
Induction (Max)	Up to 1W max
Direct connection (100 Ohms)	Up to 1W max when connected to a buried service with an impedance of 100 Ohms
Battery type	4 x D alkaline (IEC LR20), supplied
Battery life (Typical use at 20C)	30hrs intermittent use
Weight	2.4kg/5.3lbs including batteries
Dimensions	7 in. (H) x 10 in. (D) x 11 in. (W)
IP rating (Case lid closed)	IP65
IP rating (Case lid open)	IP54

# Logicat Software

## Simply upload stored records

Logicat software allows you to upload stored records from the Digicat 600i and 650i to view the locators use, simply upload all records or search by date. Upload information includes:

### Time and Date

Identifies when and at what time ground surveys were conducted.

### Usage Duration

Determines how long survey teams searched for buried services and reveals actual product utilisation.

### User Identification

Forces users to become accountable for their actions and identifies those who need additional product training.

### Detection Mode

Allows managers to judge the quality and thoroughness of work. As more comprehensive ground surveys are conducted the locator records the mode of operation including the use of a signal generator.

### Service Detection

Discovers quickly if any buried services were detected during surveys and even determines the signal strength shown on the locator.

### Product Fleet Management

Displays and monitors the service and calibration dates of your locator fleet, ensuring they are kept in perfect working order and not being used when calibration is due.

### Diagnostic Check

Displays locators which have failed the EST (Extended Self Test) and removes them from the active fleet for immediate repair. This reduces the possibility of defective equipment being used on site.

### Management Reports

Produces basic statistical reports from the logged data, allowing users to see how products are utilised and how ground survey teams are using them on-site.

Logicat Software Art. No. 795945



## Digicat Accessories



### Signal Clamp

For use with the Digitex 100t signal transmitter, enabling connection to cylindrical metallic services (e.g. pipes, insulated electricity cables).



### Property Connection Set

For use with the Digitex 100t signal transmitter.

Connection of a tracing signal to any internal power distribution system outlet.



### Digimouse (8 kHz & 33 kHz)

Compact dual frequency signal transmitter used to trace drains, sewers and other non conductive services. Digimouse can be attached to a range of equipment including drain rods, boring tools and inspection cameras.

# Leica Digicat i-Series

## Excellent customer support, service and training

### Technical Support

Users of the Digicat have easy access to technical support, should it be required. Front line technical support for all tools is provided from experienced professionals at your local dealer or your nearest Leica Geosystems representative.

### Service & Repair

Leica Geosystems strongly recommend that the tools are regularly serviced and calibrated every 12 months in an authorised Leica Geosystems service centre or dealer workshop. The repair costs and turnaround times for Digicat products are highly competitive.

### Training

Operator training for the Digicat is available from our own qualified trainers, or via our approved dealers.

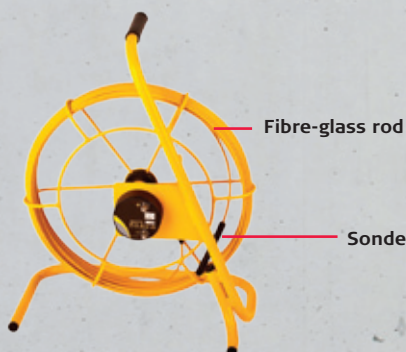
Features	Digicat 500i (Art. No. 50Hzt 780225/60Hzt 780226)	Digicat 550i (Art. No. 50Hzt 780231/60Hzt 780232)	Digicat 600i (Art. No. 50Hzt 795939/60Hzt 795940)	Digicat 650i (Art. No. 50Hzt 795941/60Hzt 795944)
<b>Frequency / Mode</b>	Power mode 50 Hz or 60 Hz, Radio mode 15 kHz to 60 kHz Generator mode 8 kHz and 33 kHz, Auto mode = Power + Radio mode	Power mode 50 Hz or 60 Hz, Radio mode 15 kHz to 60 kHz Generator mode 8 kHz and 33 kHz, Auto mode = Power + Radio mode	Power mode 50 Hz or 60 Hz, Radio mode 15 kHz to 60 kHz Generator mode 8 kHz and 33 kHz, Auto mode = Power + Radio mode	Power mode 50 Hz or 60 Hz, Radio mode 15 kHz to 60 kHz Generator mode 8 kHz and 33 kHz, Auto mode = Power + Radio mode
<b>Depth detection (typical)</b>	Power to 3m (10 ft), Radio to 2m (6.5 ft), Transmitter mode to 3m (10 ft)	Power to 3m (10 ft), Radio to 2m (6.5 ft), Transmitter mode to 3m (10 ft)	Power to 3m (10 ft), Radio to 2m (6.5 ft), Transmitter mode to 3m (10 ft)	Power to 3m (10 ft), Radio to 2m (6.5 ft), Transmitter mode to 3m (10 ft)
<b>Depth estimation</b>		10% of depth in line or sonde 0.3m (1 ft) to 3m (10 ft) depth range		10% of depth in line or sonde 0.3m (1 ft) to 3m (10 ft) depth range
<b>Protection</b>	Conforms to IP54	Conforms to IP54	Conforms to IP54	Conforms to IP54
<b>Bluetooth</b>			Available as standard	Available as standard
<b>Batteries</b>	6 x AA alkaline (IEC LR6 supplied)	6 x AA alkaline (IEC LR6 supplied)	6 x AA alkaline (IEC LR6 supplied)	6 x AA alkaline (IEC LR6 supplied)
<b>Battery life</b>	40 hours intermittent use (at 20°C)	40 hours intermittent use (at 20°C)	40 hours intermittent use (at 20°C)	40 hours intermittent use (at 20°C)
<b>Weight</b>	2.7 kg (6 lbs) including batteries	2.7 kg (6 lbs) including batteries	2.7 kg (6 lbs) including batteries	2.7 kg (6 lbs) including batteries
<b>Compatibility</b>			CSV file compatibility program	CSV file compatibility program
<b>Memory size</b>			32Mb memory	32Mb memory
<b>Capability</b>			80hrs of data	80hrs of data

### Digicat Accessories

The Digitrace enables a complete length of non-metallic drains, duct or pipes to be traced when used in conjunction with the Digicat and the Digitex 100t or other signal transmitters.

The Digitrace coiled fibre-glass rod, which protects the central copper tracing conductor, is available in lengths of 30 metres, 50 metres or 80 metres.

The fibre-glass rod is inserted and pushed along in the service under investigation. The Digitex 100t is connected, and the tracing signal is located on the surface by the Digicat.



Features	Digitrace 30/50/80
	(30/50/80 metre coil of copper conductor sheathed by fibre glass)
<b>Protection</b>	Conforms to IP57
<b>Included Accessories</b>	Connections to Digitex 100t cable set
<b>Weight</b>	3.0 kg (6.5 lbs)/3.25 kg (7 lbs)/3.5 kg (7.5 lbs)





Whenever you need to locate underground services, the Leica Digicat is the right solution. The system ensures fast and accurate location of buried cables and pipes and it increases your onsite safety. The Digicat is designed on a safety-first philosophy, so we remove the ability for the user to «tune out» signals or to accidentally search in the wrong mode. The Digicat tools are rugged and efficient, meeting all the needs of your tracing operations.

**When it has to be right.**

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**Total Quality Management – our commitment to total customer satisfaction.**

Ask your local Leica Geosystems dealer for more information about our TQM program.

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**Leica Sprinter**  
 Quick, easy and efficient digital levelling



**Leica NA700 Series**  
 Jobsite Tough, Clearly Precise



**Leica Builder**  
 Not just for foremen



**Leica Rugby 260SG, 270SG, 280DG**  
 Keeps you working



**Leica Piper 100/200**  
 The world's most versatile pipe laser