

Leica DIGISYSTEM™

Safe and fast location of underground services



- when it has to be **right**

Leica
Geosystems



Find it or avoid it – the Leica DIGISYSTEM™ is your Key

Why locate

Construction sites have many and varied buried services and utilities. Obtaining accurate information about the location of these is a necessity before starting any excavations. It is the responsibility of a company or person to field verify the utilities and avoid damaging existing services.

Legislation

Local legislation normally prescribes the use of a locating device before any kind of excavation takes place. Searching, tracing and marking the line of all services before digging should take place regardless because causing damage of services can have extreme personal injury and financial consequences. Better safe than sorry!



Unique user benefits

Digisystem™ in general

- Default Power mode selection when turned on, for safety
- Fully automatic sensitivity setting, no adjustments needed
- Audio and visual display of signal strength
- Digital signal processing – robust and error free location in the construction environment
- Easy to use – requires only minimal training
- Large push button operation – speed of use in field conditions
- Robust and waterproof – designed for tough working conditions
- DIGICAT™ 100, DIGICAT™ 200 and DIGITEX™ 8/33 initial self check – user has audible and visual indication confirming the system is working correctly
- Competitively price

DIGICAT™ 100

DIGICAT™ 200

- Always starts in power mode at maximum sensitivity – ensures safest operating conditions
- 8 and 33 kHz tracing modes – maximum flexibility
- Compact and lightweight
- Highly visible digital LED display

DIGICAT™ 200

- Depth estimation when used with DIGITEX™ or DIGIMOUSE™

DIGITEX™ 8/33

- Compact design with large accessory compartment
- 8 and 33 kHz modes – maximum traceability
- Battery and output level indicators – piece of mind
- High impact structural polypropylene case – maximum protection

DIGITRACE™ (100/160/260ft, 30/50/80metres)

- Light and easy to handle
- The only cost effective way to trace the full length of a non-metallic conduit
- Trace line highly resistant to harsh conditions

The DIGISYSTEM™ – fast, easy, accurate and value for your money

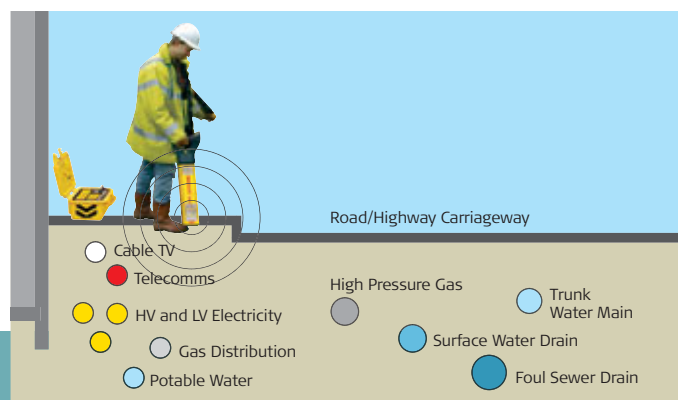
The DIGISYSTEM™ is the DIGICAT™ 100 or DIGICAT™ 200 underground service locator, DIGITEX™ 8/33 signal generator and DIGITRACE™ service tracer. Now locating underground cables and pipes becomes a simple and speedy task. The system increases your onsite safety while saving time and money.

How to locate

Receiving reradiated radio frequencies through internal aerials, detecting the strength and direction of the received signals the operator is given the location and direction of the underground service. Mark the location of the service on the surface of the ground and the excavation team has a clear indication of where not to dig.

System components

The DIGICAT™ can be used to find live (energised) power cables, trace buried metal services which reradiate signals, and when combined with the DIGITEX™ 8/33 generating via specific tracing frequencies highly accurate results can be found. The DIGITRACE™ allows tracing of plastic ducts, clay drains and other non-metallic conduits.



DIGICAT™ 100 / DIGICAT™ 200 Service Locator

DIGICAT™ 100
DIGICAT™ 200

Three selectable operating modes

Power mode

Locates power signals radiated by energised cables.

Radio mode

Traces signals originating from distant radio transmitters. These radio signals penetrate the ground and are reradiated by buried metallic cables and pipes.

Generator mode (8 and 33kHz)

Locates a distinctive signal applied by the DIGITEX™ 8/33 dual frequency signal generator to a metallic underground conductor.

Application Guide

	DIGICAT™ 100	DIGICAT™ 200	DIGITEX™ 8/33	DIGITRACE™	SIGNAL CLAMPS	DIGIMOUSE™ (Sondes)	PROPERTY CONNECTION
Energised main electricity cables	■	■					
Metal pipe and nonenergised main cables	■	■	■		■		
Copper telecom cables	■	■	■		■		
Tracing non metallic drains	1) ■	■		■			
and pipes	2) ●	●				●	
Metallic gas pipes	■	■	■		■	■	
Point of damage (tree root ingress, etc.) to surface or foul water sewers (usually non metallic)	1) ■	■	■	■			
2) ●	●	●				●	
Property electrical distribution	■	■	■				■
Fibre optic telecom cables (only possible if there are trace cables laid alongside)	■	■	■				
Plastic ducting	1) ■	■	■	■			
2) ●	●	●				●	
Depth Estimation		■					

1) + 2) are alternative methods



Depth indication

In addition to the well proven functions of the DIGICAT™ the DIGICAT™ 200 offers a one touch depth estimation. When operating with the DIGITEX™ 8/33 (33kHz mode) the real depth and location of all services can be estimated ($\pm 10\%$ accuracy). An important advantage when it comes to increase productivity in locating and excavating tasks.

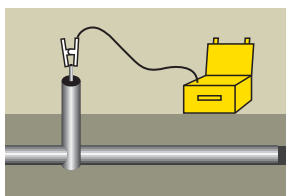




DIGITEX™ 8/33 Signal Generator

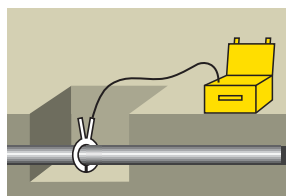
DIGITEX™ 8/33

How to apply a tracing signal



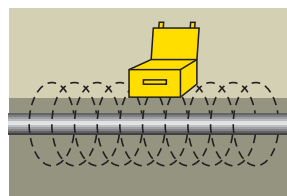
Direct Connection

Connecting the DIGITEX™ 8/33 to a valve, junction box, domestic power distribution network, or other access point of the conductor is the most effective method and is the preferred choice whenever possible.



Use a Signal Clamp

A Signal Clamp is used to apply the DIGITEX™ 8/33 signal to a pipe or live electricity cable. Supply is not interrupted by the applied signal and the operator is not exposed to any live services.



Induction

The DIGITEX™ 8/33 induces a tracing signal into the underground pipe or cable. This is a quick and convenient method when direct connection or signal clamping is not possible.



Power / Mode Controls

Mode Indicators

Battery compartment

Accessory storage compartment

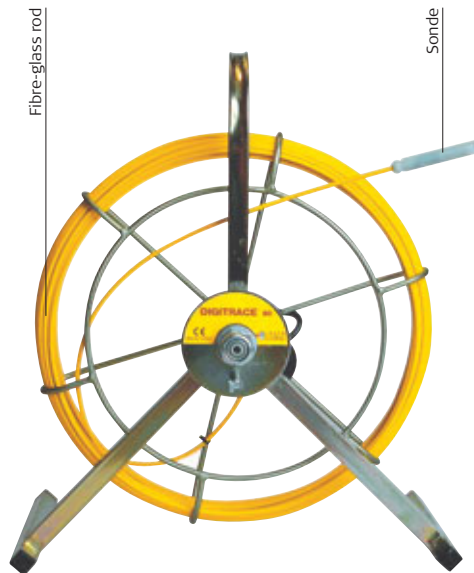
Signal / Battery Level Display

Connection socket

DIGITRACE™ 30/50/80 Service Tracer

DIGITRACE™

The DIGITRACE™ enables a complete length of drain, duct or pipe (non-metallic) to be traced when used in conjunction with the DIGICAT™ and the DIGITEX™ 8/33 signal generator. The DIGITRACE™'s coiled fibre-glass rod, which protects the central copper tracing conductor, is available in lengths of 100ft [30metres], 160ft [50metres], or 260ft [80metres]. The fibre-glass rod is inserted and pushed along in the service under investigation. The DIGITEX™ 8/33 is connected, and the tracing signal is located on the surface by the DIGICAT™.



Excellent customer support

Technical Support

Users of the DIGI products always have easy access to technical support, should it be required. Front line technical support for all tools is provided by experienced professionals at your local dealer or your nearest Leica Geosystems representative. However, the user friendly operation of the system and clear, easily understood operating directions located on the product result in minimal support required!

Service and Repair

Leica Geosystems strongly recommends the tools are regularly (every 12 months) serviced and calibrated by fully trained service technicians, either in a authorised Leica dealer workshop or a Leica Geosystems service center. The repair costs for DIGI equipment are very competitive and turn around is usually within 5 days.

Training

Training for operators of the DIGI underground service location system is available from qualified instructors infield or at the dealers location.

Technical Specifications

DIGICAT™ 100

Frequency	Power mode 50/60 Hz, Radio mode 15–30 Hz Generator mode 8 and 33 KHz
Depth	Power to 10ft [3m], Radio to 7ft [2m], Generator to 10ft [3m]
Protection	Conforms to IP54
Batteries	6 x AA alkaline (IEC LR6) (supplied)
Battery life	30 hours intermittent use
Weight	2.83 kg [6.2 lb] including batteries

DIGICAT™ 200

Frequency	Power mode 50/60 Hz, Radio mode 15–30 Hz Generator mode 8 and 33 KHz
Depth	Power to 10ft [3m], Radio to 7ft [2m], Generator to 10ft [3m]
Depth Estimation	Depth estimation with DIGITEX™ (33KHz mode) or DIGIMOUSE™. To 10ft [3m] within 10% accuracy (typical).
Protection	Conforms to IP54
Batteries	6 x AA alkaline (IEC LR6) (supplied)
Battery life	30 hours intermittent use
Weight	2.83 kg [6.2 lb] including batteries

DIGITEX™ 8/33

Frequency	8 or 33 KHz Constant dual frequency available in connection mode
Tracing Range	Induction typical 1500ft [50m], connection typical 800ft [250m]
Protection	Conforms to IP57 (with the lid shut)
Included Accessories	Crocodile equipped connection cable set with earth spike
Batteries	4 x C alkaline (IEC LR14) (supplied)
Battery Life	40 hours continuous use
Weight	2.95 kg [6.5 lb] including standard accessories and batteries

DIGITRACE™ 30/50/80

(100/160/260ft [30/50/80metre]) coil of copper conductor sheathed by fibre glass	
Protection	Conforms to IP57
Included Accessories	Connections to DIGITEX 8/33 cable set
Weight	3.0/3.25/3.5 kg [6.6/7.2/7.7 lb]

The DIGISYSTEM™

Your Key to safer Digging

■ Safe ■ Quick ■ Easy ■ Full Range

Increased safety

Every year, site workers are injured due to inadvertently striking buried electricity cables or gas pipelines. With the DIGISYSTEM™ operators can locate, trace and mark underground services precisely and reliably prior to excavation. Personal safety should come first.

Cost of Damage

Damaging underground services can result in person injury, pain and suffering, as well as high repair and fine costs. If you are not fully aware of your local legislation, and are not using a location system to day, look what it could cost you:

- Repair of damaged underground service (cables, pipes, valves, connectors, ducting, ...)

- Cost for disruption of damaged services (electricity, telecom services, water, gas, ...)
- Insurance claims for serious or fatal injuries
- Consequential loss claims
- Defending a claim for negligence
- Downtime on your site
- The list goes on...

Typical users of the DIGISYSTEM™

- Excavation contractors
- Utility installation and repair contractors
- General Contractors
- Builders
- Gas and electricity companies
- Cable TV companies
- Pipelaying Contractors
- Estate Agents

Accessories



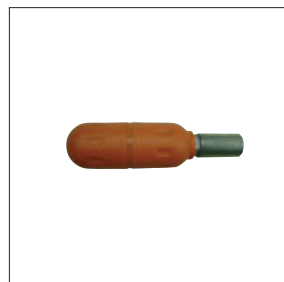
Signal Clamp

For use with the DIGITEX™ 8/33 connecting the signal to cylindrical metallic services (e.g. pipes, insulated electr. cables).



Property Connection Set

For use with the DIGICAT™ 100/200 and DIGITEX™ 8/33 connecting the tracing signal to any internal power outlet and locating the electricity supply cable outside the building.



DIGIMOUSE™

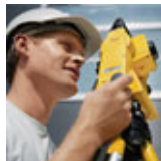
For use with drain rods and the DIGICAT™ to trace non metallic pipes (33 KHz version)



Whenever you need to locate underground services, the Leica Digisystem is the right solution. The system ensures fast and accurate location of buried cables and pipes and it increases your onsite safety. The Digisystem 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 Digisystem tools are rugged and efficient, meeting all the needs of your tracing operations.

When it has to be right.

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Total Stations – used worldwide in projects that demand the highest standards.



2D and 3D Machine Automation Systems – increase your productivity and accuracy thereby enhancing operator convenience.



Digital and automatic levels – built to meet the demands of construction sites.