

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

Brownfield sites have many and varied installed services and utilities under the ground. Obtaining accurate information about the location of these is a necessity before starting any excavations. It is the full responsibility of every company or person to verify the drawings from 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. But even so, it makes perfect sense to search, trace and mark the line of all services before digging as damage of services can have extreme personal injury and financial consequences.



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 reception
- 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 as to fitness for use
- Highly competitive 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 – swift service location

DIGICAT™ 200

- One stop depth estimation in cooperation 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™ (30/50/80 metres)

- 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

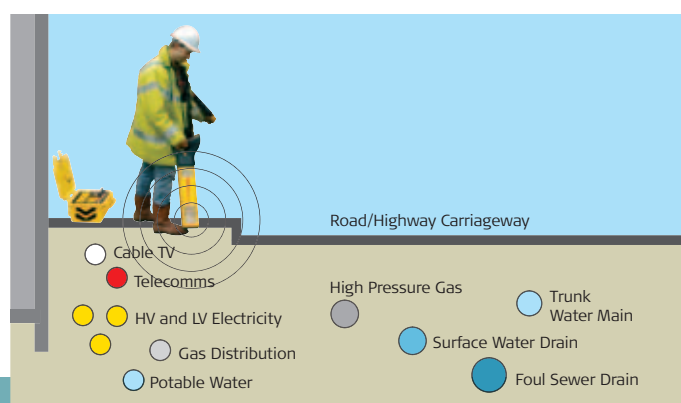
The DIGISYSTEM™ is the DIGICAT™ 100 or DIGICAT™ 200 underground service locator, DIGITEX™ 8/33 signal generator and DIGITRACE™ 30, 50 or 80 service tracer. Now locating underground cables and pipes becomes a simple and speedy task. The system increases your onsite safety and saves effort and money.

How to locate

Via 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, giving the excavation team clear indications 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 with the DIGITEX™ 8/33 signal generator via specific tracing frequencies give highly accurate results. The DIGITRACE™ service tracer allows tracing of plastic ducts, clay drains and other non-metallic conduits.



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	1) ■	■	■	■			
(tree root ingress, etc.) to surface or foul water sewers (usually non metallic)							
	2) ●	●				●	
Property electrical distribution	■	■	■				■
Fibre optic telecom cables (only possible if there are trace cables laid alongside)	■	■	■				
Plastic ducting	1) ■	■	■	■			
(with access)	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 stop depth estimation. In co-operation with the DIGITEX™ 8/33 (operating in the 33kHz mode) the real depth and location of all services can be found. With an accuracy of approx. ± 10%. An important advantage when it comes to increase productivity in locating and excavating tasks.

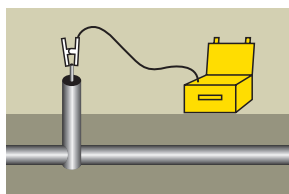




DIGITEX™ 8/33 Signal Generator

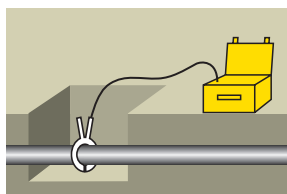
DIGITEX™ 8/33

How to apply a tracing signal



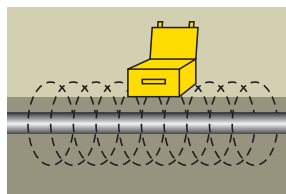
Direct Connection

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 methodology and is preferable to induction 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

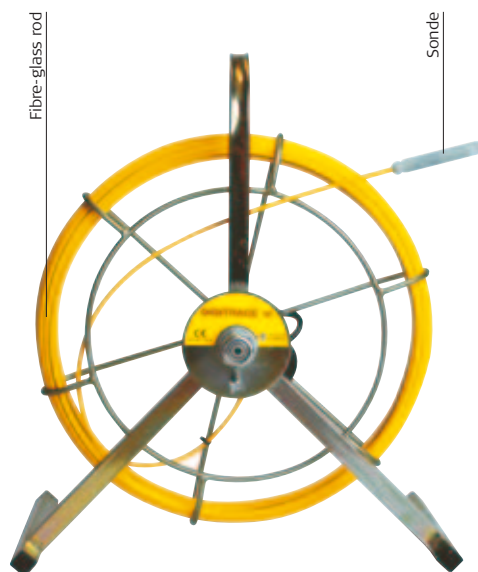
Signal / Battery Level Display

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 or other signal generator. The DIGITRACE™'s 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™ 8/33 is connected, and the tracing signal is located on the surface by the DIGICAT™.



Excellent customer support, service and training

Technical Support

Users of the DIGI range products always 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. However, the user friendly operation of the system and clear, easily understood directions on the product may make this support unnecessary!

Service and Repair

Leica Geosystems strongly recommend that the tools are regularly (every 12 months) serviced and calibrated by fully trained service technicians, either in an authorised Leica dealer workshop or a Leica Geosystems service centre. 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	Art. No 731047
Frequency	Power mode 50/60 Hz, Radio mode 15–30 Hz Generator mode 8 and 33 KHz
Depth	Power to 3m, Radio to 2m, Generator to 3m
Protection	Conforms to IP54
Batteries	6 x AA alkaline (IEC LR6) (supplied)
Battery life	40 hours intermittent use
Weight	2.83 kg including batteries

DIGICAT™ 200	Art. No 731048
Frequency	Power mode 50/60 Hz, Radio mode 15–30 Hz Generator mode 8 and 33 KHz
Depth	Power to 3m, Radio to 2m, Generator to 3m
Depth Estimation	Depth estimation with DIGITEX™ (33KHz mode) or DIGIMOUSE™. To 3m within 10% accuracy (typical).
Protection	Conforms to IP54
Batteries	6 x AA alkaline (IEC LR6) (supplied)
Battery life	40 hours intermittent use
Weight	2.83 kg including batteries

DIGITEX™ 8/33	Art. No 731049
Frequency	8 or 33 KHz Constant dual frequency available in connection mode
Tracing Range	Induction typically 150m, Connection typically 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 including standard accessories and batteries

DIGITRACE™ 30/50/80	Art. No 731050/731051/731052 (30/50/80 metre 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

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.

Cost of Damage

Harm to people and underground services can result in pain, suffering, and high costs apart from the personal issues. 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
- You know the list could go 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 for connection of signal to long cylindrical metallic services (e.g. pipes, insulated electricity cables).



Property Connection Set

For use with the DIGICAT™ 100/200 and DIGITEX™ 8/33 for connection of a tracing signal to any internal power distribution system outlet and locating the electricity supply cable outside the building.



DIGIMOUSE™

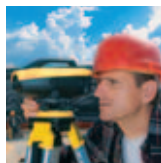
For use with drain rods and the DIGICAT™ to trace non metallic pipes (33 KHz version)



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.

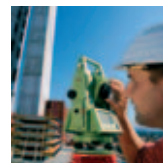
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