

# Leica DD SMART utility locator solution

Work safer, work smarter,  
work simpler



# Leica DD SMART utility locator solution

The Leica DD SMART utility locators and DX Shield software open the door to a connected world, anywhere, anytime. Leica DD SMART utility locators detect underground assets deeper, faster and more accurately. Understand site activity and utility locator use in greater detail with DX Shield software. The DD230/220 SMART locators are scalable and designed with the latest Bluetooth technology, providing a wire-free connection to mobile devices.

## Leica DD220 SMART



### Simplicity

Easy to use and learn with on board video support. Intuitive hardware and software significantly reduce errors.



### Safety

With usage alerts and system diagnostics, assets and site workers are protected



### SMART Solution

With on board locate alerts and an automatic locate process, the DD SMART locators help to reduce time spent locating buried utilities and prevent utility damage.



# Greater confidence with SMART locating

Connect and download data stored in the DD SMART utility locators' internal memory, including GPS positioning and transfer it back to the DX Shield software for analysis. USB connectivity provides a convenient connection to DX Office Shield for product configuration, maintenance and data analysis.



## Leica DD230 SMART



### Ease of use

DD SMART utility locators offer an easy-to-use tracing system which delivers high accuracy results without complication.



### Confidence

Trace utilities with confidence in environments with high utility density and complexity.



### Accuracy

Locate utilities accurately with simple workflows using the latest digital technology.

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## System overview

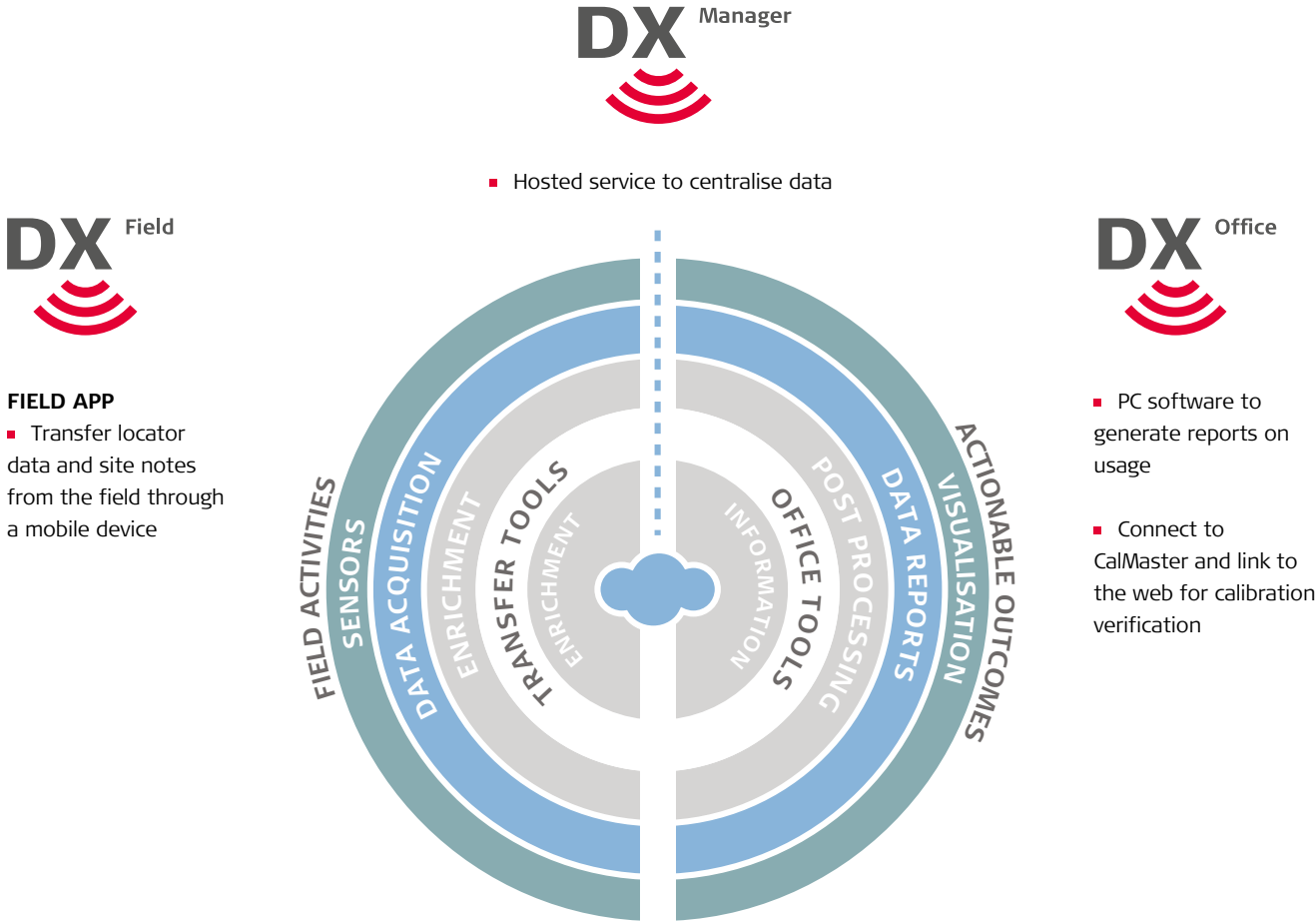
For professionals looking to streamline utility locating operations, the Leica DD SMART utility locators create a single source solution. DX Shield software provides a space for utility analysis and a convenient connection between SMART locators to increase productivity and save time.

DX Shield software allows you to gain a better understanding of task performance and site complexities with easy-to-use reports that provide a fast and convenient overview of product use, reducing utility strikes and saving direct repair costs and project downtime.



# DX Shield software

Connect your DD SMART locator with the DX Field Shield app to enable automatic data synchronisation and access your collected data using your mobile device. The DX Field Shield app provides operators with a remote transfer tool, linking data from the site to DX Manager Shield or DX Office Shield. DX Manager Shield provides organisations with a centralised hosted platform for multiple users, across multiple sites. The site notes and photos from DX Field Shield document site activities. DX Office Shield provides organisations with a scalable local solution on a single-source platform.



# DD SMART Locators

## Technical Specifications



MODE	DD220 SMART	DD230 SMART
Power	50 / 60 Hz mains electrical and harmonics	50 / 60 Hz mains electrical and harmonics
Radio	15kHz to 60kHz	15kHz to 60kHz
Auto	Power, Radio, 33kHz	Power, Radio, 33kHz
Transmitter Modes	131.072 (131) kHz 32.768 (33) kHz 8.192 (8) kHz	131.072 (131) kHz 32.768 (33) kHz 8.192 (8) kHz 512 Hz 640 Hz
Depth Range	Line 0.1m to 5m Line 4 inches to 16.4 feet Sonde 0.1m to 7m Sonde 4 inches to 23 feet	Line 0.1m to 7m 4 inches to 23 feet Sonde 0.1 to 10m Sonde 4 inches to 32.8 feet
Depth Accuracy*	5%	5%
Bluetooth	Class 2 BLE dual mode module Bluetooth Classic 2.1 Bluetooth 4.0 (LE)	Class 2 BLE dual mode module Bluetooth Classic 2.1 Bluetooth 4.0 (LE)
GPS**	Chipset (1): u-blox®GPS Receiver Type: GPS L1C/A, SBAS L1C/A, QZSS L1C/A, GLONASS L1OF, BeiDou B1 Accuracy (2): Horizontal Position 2.5 m Autonomous, 2.0 m SBAS, CEP Start time: Cold 45 s typical, Aided 7 s typical, Hot 1 s typical	Chipset (1): u-blox®GPS Receiver Type: GPS L1C/A, SBAS L1C/A, QZSS L1C/A, GLONASS L1OF, BeiDou B1 Accuracy (2): Horizontal Position 2.5 m Autonomous, 2.0 m SBAS, CEP Start time: Cold 45 s typical, Aided 7 s typical, Hot 1 s typical
Memory Capacity	8 GB internal memory	8 GB internal memory
Environmental Standard	IP66	IP66
Operating Temperature	-20 °C to +50 °C -4 °F to +122°F	-20 °C to +50 °C -4 °F to +122°F
Battery	7.4V Rechargeable Li – Ion	7.4V Rechargeable Li – Ion
Battery operating time***	15 h	15 h
Dimensions (HxWxD)	765x290 x93mm 30.12 x11.42x3.66 inches	765x290 x93mm 30.12 x11.42x3.66 inches

\*Depth to an undistorted signal

\*\* (1) All data/information according to manufacturer u-blox®GPS; Leica Geosystems does not assume any liability whatsoever for such information.

(2) Accuracy is dependent upon various factors including atmospheric conditions, multipath, obstructions, signal geometry and number of tracked satellites.

\*\*\* Constant use at 20°C/68°F

# DA Signal Transmitters

## Technical Specifications



MODE	DA220	DA230
Induction Mode Frequencies	32.768 (33) kHz / 8.192 (8) kHz	32.768 (33) kHz / 8.192 (8) kHz
Power Output	Up to 1 Watt max.	Up to 1 Watt max.
Direct Connection Mode Frequencies	131.072 (131) kHz / 32.768 (33) kHz / 8.192 (8) kHz	131.072 (131) kHz / 32.768 (33) kHz / 8.192 (8) kHz / 512 Hz / 640 Hz
Power Output* 1 Watt Model 3 Watt Model	Up to 1 Watt max. Up to 3 Watt max.	Up to 1 Watt max. Up to 3 Watt max.
Environmental Standard	IP67	IP67
Operating Temperature	20 °C to +50 °C / -4 °F to +122°F	20 °C to +50 °C / -4 °F to +122°F
Storage temperature	-40°C to +70°C, / -40°F to +158°F	-40°C to +70°C, / -40°F to +158°F
Battery	7.4V Rechargeable Li-ion	7.4V Rechargeable Li-ion
Battery operating time **	15 h	15 h
Dimensions (HxWxD)	250 x 206 x 113 mm / 9.84 x 8.11 x / 4.45 inches	250 x 206 x 113 mm / 9.84 x 8.11 x / 4.45 inches
Weight with batteries	2.38Kg / 5.25 lbs	2.38Kg / 5.25 lbs

\*Utility impedance of 300 Ohms

\*\*Defined at 20°C (77°F) power level 2



### TRACE RODS

Used with the DD Locators and DA Signal Transmitter to trace the route of non metallic drains, ducts or pipes.  
Trace Rod 50M / Trace Rod 80M



### TRANSMITTER CLAMPS

Used with the DA Signal transmitter to apply a trace signal to utilities such as telecom cables, power cables and pipes.  
Transmitter Clamp 100mm (4") / Transmitter Clamp 80mm (3.15")



### PROPERTY PLUG CONNECTOR

Used with the DA Signal transmitter to apply a trace signal to residential electrical supplies

### SONDES

Used to trace the route of drains, sewers plastic pipes and ducts. Available in many sizes to cover a wide range of applications.



### Mini Sonde 33

18mm (0.7") diameter with a 33kHz output.  
Working range 7 metres (23ft)



### Duct Sonde 33

24mm (0.95") diameter with a 33kHz output.  
Working Range 5m (16.4ft)



### Midi Sonde 8/33

38mm (1.5") diameter with an 8kHz or 33kHz output.  
Working Range 5m (16.4ft)



### Clamp Sonde 33

40mm (1.57") diameter with a 33kHz output. Clamp sonde clamps onto a 12mm (0.74inch) flexible rod.  
Working range 5m (16.4ft)



### Maxi Sonde 8/33

55mm (2.17") diameter with an 8kHz or 33kHz output. Working range 12m (39.4ft)