

> PILE DRIVING MONITOR

TECHNICAL SPECIFICATIONS



GENERAL SPECIFICATIONS

Weight (including battery)	4 kg
Dimensions (width, height, depth)	172 x 200 x 342 mm
Operating temperature	-10 .. +40 °C
IP Classification	IP65
Optics	
Transmitters	4 pcs IR-LED
Measuring FOV (Field-of-view)	50 mrad (vertical, 50 cm / 10 m)
Pointers	2 pcs Class 2 visible laser, 635nm
Reflector(s)	
6 to 10 m (optimum)	3M Diamond Grade tape
Extended range <6m, >10m	Tape reduced or increased in width accordingly
Sampling rate	100 .. 4000 Hz
Accelerometer, tilt & rotate	
Static measuring range	+ - 50 °
Supply power	
Battery (removable)	Ultralife UBBL25, Li-ion 10.8V, 4.8Ah
Charger	Mascot 2240LI/3CELL
Power Connector	Amphenol (IP67), 11-14 V DC IN
Trigger interface	Active LOW, 0 .. max 5V
Data interfaces	
WLAN	Lantronix xPico Wi-Fi
USB	LTW, B-type female connector (IP68)
–USB Cable included	5m
Current consumption (12 V, typ.)	
Idle mode	85 mA typ.
Measuring (4000Hz / WLAN)	175 mA typ.
Measuring (4000Hz / USB)	150mA typ.
–With pointers on	+30 mA typ.

WARNINGS AND CLASSIFICATIONS

CLASS 1 LED-DEVICE

Classification IEC 60825-1:2007

CLASS 2 LASER-DEVICE

Classification IEC 60825-1:2007

Class 2: “visible-light lasers (400–700 nm) limited to max 1 mW continuous wave”

WARNING — using the device in any other way that is described can expose the user to dangerous invisible optical radiation.

OPERATIONAL CHARACTERISTICS

Offset Distance Range	6m to 20m maximum from pile
Recommended range	6m to 10m from pile
Recommended Max Rotational Deviations	
From horizontal plane	1V : 10H
From vertical plane	1H : 10V
Recommended accuracy in Offset	10mm or better
Notional Displacement Accuracy	±0.1mm within recommended range
Notional Velocity Accuracy	±0.1m/s within recommended range and at 1kHz conditioning frequency
Recommended Mounting	Solid placement on sand bag on ground or on survey tripod
Sampling rate for pile monitoring	4000Hz +/-0.2%

SECURITY FEATURES

SOFTWARE

Code protection	Code is encrypted, and runs on a virtual CPU, which makes it a black-box to data hackers.
Console binding	Each copy of software is coded to bind to its tablet console. Illegal copy software will not work in other environments.
Digital Output	All data files are protected by encryption. FSG offers consultation and further analysis.
Client logo	Hardwired into every report

HARDWARE

Secure connection	Standard WPA2, password protected
Anti-Amendment Report	Key values of the site report (input identification and output results) are encrypted into a QR code. Through current validation utility authorities can tell whether or not a report is modified. The utility will later be available as a phone app.