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.

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.

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.