

Applications

The fiberglass rod MPBX is a multi-point borehole extensometer designed to monitor settlements and deformations in busy locations that are difficult to access, such as city streets, highways, airport taxiways, and port facilities.

Operation

An MPBX includes anchors, rods, a reference head, and sensors. Anchors are joined to rods and installed at specified depths in the borehole. Rods run upwards from the anchors to the reference head, which is installed at the surface. Sensors inside the reference head monitor the rods, which follow the upward or downward movement of the anchors.

The MPBX is terminated flush with the surface with a waterproof canister containing a wireless data logger and long-life battery pack. The logger transmits measurements to the internet via a cellular connection. GEO's traffic-rated Lid-Link® antenna is used, if necessary, to ensure reliable transmissions.

Options

The fiberglass rod MPBX can be adapted to suit almost any site conditions. Some of the options are:

Monitored Points: The MPBX can monitor a maximum of 5 points. Each point must have its own anchor, rod assembly, and sensor.

Anchors: A wide variety of anchors is available, including simple groutable anchors, packer anchors, hydraulic prong anchors, and snap ring anchors.

Sensors: Both vibrating wire and 4-20mA sensors are available, with measurement ranges from 2 to 12 inches.

Communications: Cellular modems can transmit measurements directly to the internet. If other sensors are located in the same area, a node-and-gateway type logger may be more economical. In this case, the gateway transmits measurements to the internet.



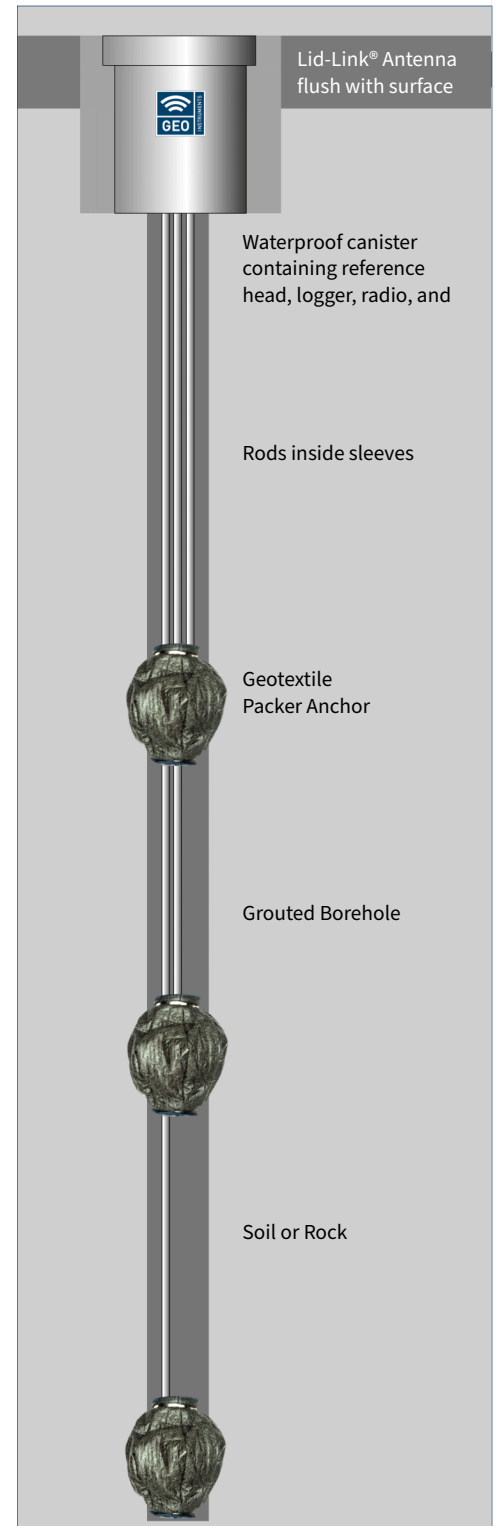
Installation of pre-assembled anchors and rods



Installation of waterproof canister



Installation of traffic rated Lid-Link® antenna



Drawing of the fiberglass rod MPBX shows a 3-point extensometer with packer anchors, waterproof canister for head and logger, and Lid-Link® antenna.