

ELIMINATE DATA POTHOLE

M-B-W, Inc.

M-B-W of Slinger, Wisconsin, began operations over 35 years ago with the introduction of a lower maintenance vibratory plate compactor. Today M-B-W's product line encompasses a full line of soil compaction products, as well as a number of specialty products for construction applications. Their product lines offer increased productivity, maximum operator safety, and they help to ensure that projects meet increasingly strict compaction and excavation regulations.



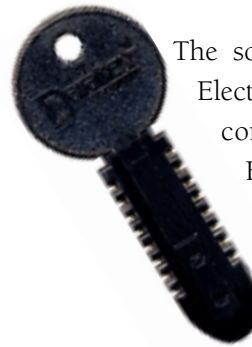
A Hard Hat for Your Data

M-B-W's new Soil Compaction Supervisor (SCS) is a low-cost, easy-to-use seismic technology product. This battery-powered device informs compaction equipment operators when they have achieved maximum soil stiffness and density, and allows for data recording. Employing the SCS on an excavation project lowers the risk of pavement failure (reducing callbacks and repair expenses), provides real-time information during compaction, eliminates the need for licensing or special training, and allows for documentation of excavation details in the event of compaction failure.

To retrieve the recorded information for documentation, M-B-W needed a data transport device to get the data from the site to the office. This device needed to be:

- ✓ Rugged enough to handle the rough-and-tumble nature of excavation sites
- ✓ Off-the-shelf, and fully engineered to reduce their R&D costs and time-to-market
- ✓ Available for their product lifetime, as field retrofits or obsolescence were not options
- ✓ Easy to use so no special training was required
- ✓ Cost-effective to achieve these requirements while maintaining SCS marketability

The Solution is Key



The solution came in the form of Datakey Electronics' LCK16000 serial Key, which contains 16Kb of non-volatile, serial EEPROM memory. The Key can be written to, read and erased via the Microwire interface with their host hardware.

Fully-Engineered



The KC4210PCB Keyceptacle® was designed into the SCS to provide a port for data transmission from the SCS Unit to the LCK16000. The Key is then brought into the

office and inserted into Datakey Electronics' KeyLink™ II Reader/Writer, which downloads the data. The KeyLink II connects to the PC via an RS-232 port.



Construction Zones Won't Slow Down Your Data

On site, a disposable piezoelectric sensor is placed at the bottom of an excavation before filling. A wire connects the sensor to the meter. As the operator of the SCS continues the compaction process, the sensor monitors the soil density. When a predetermined soil density is reached, the meter displays a red stop light. The operator simply inserts the Key into the meter unit and the data is uploaded to the LCK16000. The Key records the number of lifts per excavation, time of compaction per lift, type of compactor used on a given lift and whether or not the crew followed SCS instructions. Back at the office, the information automatically downloads from the Key into an Excel spreadsheet for data interpretation and analysis. The ability to document performance relative to protocol means that:

- ✓ Performance can be reviewed
- ✓ Accountability is enhanced
- ✓ **Due diligence evidence** is available in the event of compaction failure

They Chose Datakey Electronics

M-B-W chose Datakey Electronics because of their products' ability to survive the rugged environment out in the field. Because this solution was fully engineered, they saw decreases in their R&D costs and time-to-market. As many consumer products have obsolescence at mind-boggling rates, they found the long-term, product lifetime support provided by Datakey Electronics to be invaluable. This gave M-B-W peace of mind in knowing that they would not need to do product re-designs or expensive firmware upgrades to products deployed in the field.



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