To ensure proper and safe use of the equipment, please carefully read and follow the instructions in the Operation Manual.

Koden promotes intelligent foundation work.

- Deeper excavation measurement in high accuracy
- Clear recording even in slurry contaminated with dirt and sand
- High quality excavation work reducing time and cost

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The DM-602/604 helps improve the quality of a drilled hole and reduces working time and cost!

**General**

Recent progress and development in foundation engineering has resulted in great strides in excavation techniques. By using artificial slurry of high density and specific gravity, deeper excavation has been made possible. The DM-602/604 series Drilling Monitor system has been developed in compliance with the user’s needs arisen from the recent construction environment to accurately measure and record the shape of a drilled hole of greater depth. It can be easily positioned and set up for measurement to provide quick and accurate recordings of excavations. The DM-602/604 series Drilling Monitor provides the following advantages:
- Helps improve the quality of a drilled hole and reduces working time and cost.
- Provides on site records of the perpendicularity of drilled holes and the shape of cross sections in high accuracy.
- Provides numerical measurement data that can be easily imported into various Windows applications (Excel, Word, PowerPoint, etc.) for work reports, etc. (Option)

**Features**

- The DM-602/604 supplies clear records of a drilled hole even in slurry, heavily contaminated with dirt and sand.
- The DM-602/604 supplies clear and precise records thanks to its unique signal processing technique that discriminates wall echoes from the noise.
- The DM-602/604 has the facility to cancel the oscillation line echo that often prevents very close echo recordings.
- The sensor device is automatically controlled to stop at the casing and at the bottom of the hole. An emergency return function is also included.
- Depth range mark, depth mark, drilled hole mark, date, time, etc. can be printed on the recording paper.
- Limit switches are provided to avoid possible wire breakage or entanglement of the wire and cable.
- The recorded result can be output to an external PC via a built-in RS 232C output port. (Option)
- A non-fuse circuit breaker is used for circuit protection, eliminating the need for cumbersome fuse replacement at the construction site.

**Main controls switches**

- **RANGE switch**: Used for switching the measuring range (radius) in four steps of 0.5 m, 1 m, 2 m and 4 m.
- **GAIN switch**: Used for switching the gain control method to AUTO or MANUAL.
- **CALIBRATION control**: Used for calibrating the distance between the sensor and the wall face to the actual measured distance.
- **STC control (outer control)**: Used for adjusting or eliminating irregular reflections near the oscillation line.
- **GAIN control (inner control)**: Used for adjusting the receiving gain.
- **DEPTH RESET switch**: Used to reset the depth record to 0 m.
- **SPEED/DEPTH display window**: Used to display the speed and the depth of the sensor.
- **MANUAL MARK switch**: As long as it is set to ON, the manual mark is recorded on the recording paper.
- **PAPER SPEED switch (MENU)**: Used to change the paper speed in 4 steps in CONSTANT and PROPORTIONAL speed modes.
- **DATA PRINT/RECORD START & STOP switch**: Used to start and stop recording as well as print test data.
- **UP/STOP/DOWN switch**: Used for selecting sensor movement between up, down or stop.
- **WINCH connector**: Used for controlling the sensor up or down speed (turning it to the right increases the speed).
- **DRILLING HOLE MARK WIDTH switch**: Used for setting the reference value (diameter) of the drilling hole on the wall face (in cm).
- **POWER switch with circuit breaker**: Helps improve the quality of a drilled hole and reduces working time and cost.

**Recording Examples**

- Drilling hole mark
- Wall face
- Depth mark (in 1-meter intervals)
- Depth mark (in 5-meter intervals)