

KODEN

ULTRASONIC
DRILLING MONITOR

DM-682/684



DM-682/684 Drilling Monitor

Koden Target Detection System for Locating What You Want

Using electromagnetic and ultrasonic waves, Koden target detection technology helps you to locate target objects situated on the sea, under the sea or under the ground.

It features Koden's long-standing positioning technology along with GPS technology that tells you "Where you are now".

Our drilling monitor, often simply referred to as a "Koden" on the job site, is an intelligent utility device intended for civil and foundation work.

The DM-682/684 offers precise measurement, display and recording of perpendicularity of drilled holes and the shapes of cross-sections.

It helps to improve the quality as well as the cutting time and cost of your work.

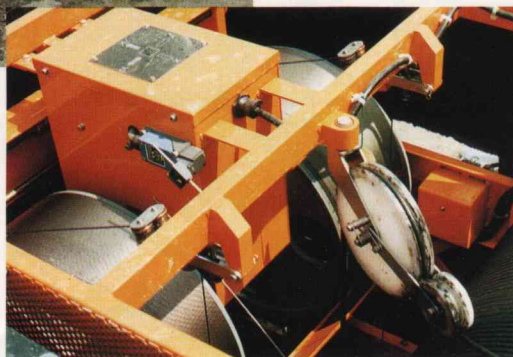
Supported by Koden's quality aftersales service, the DM-682/684 is widely used not only on major civil and construction sites domestically but also all over the world.

FEATURES

1. Easier and simpler to operate. You can handle the DM-682/684 just like a home appliance.
2. Clear and precise records make your data reading and analysis easier.
3. It offers clear records even in highly concentrated mud which used to prevent accurate measurement.
4. Measurement range and depth data are indicated on the recording paper with arrows and numbers.
5. The sensor suspended from a winch is automatically stopped at the casing and bottom.
6. A newly employed circuit breaker eliminates troublesome fuse replacement.

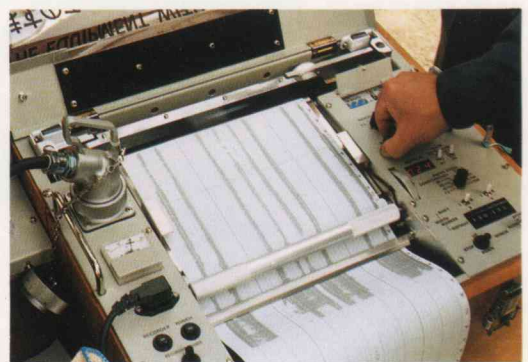


The winch unit located over a drilled hole.

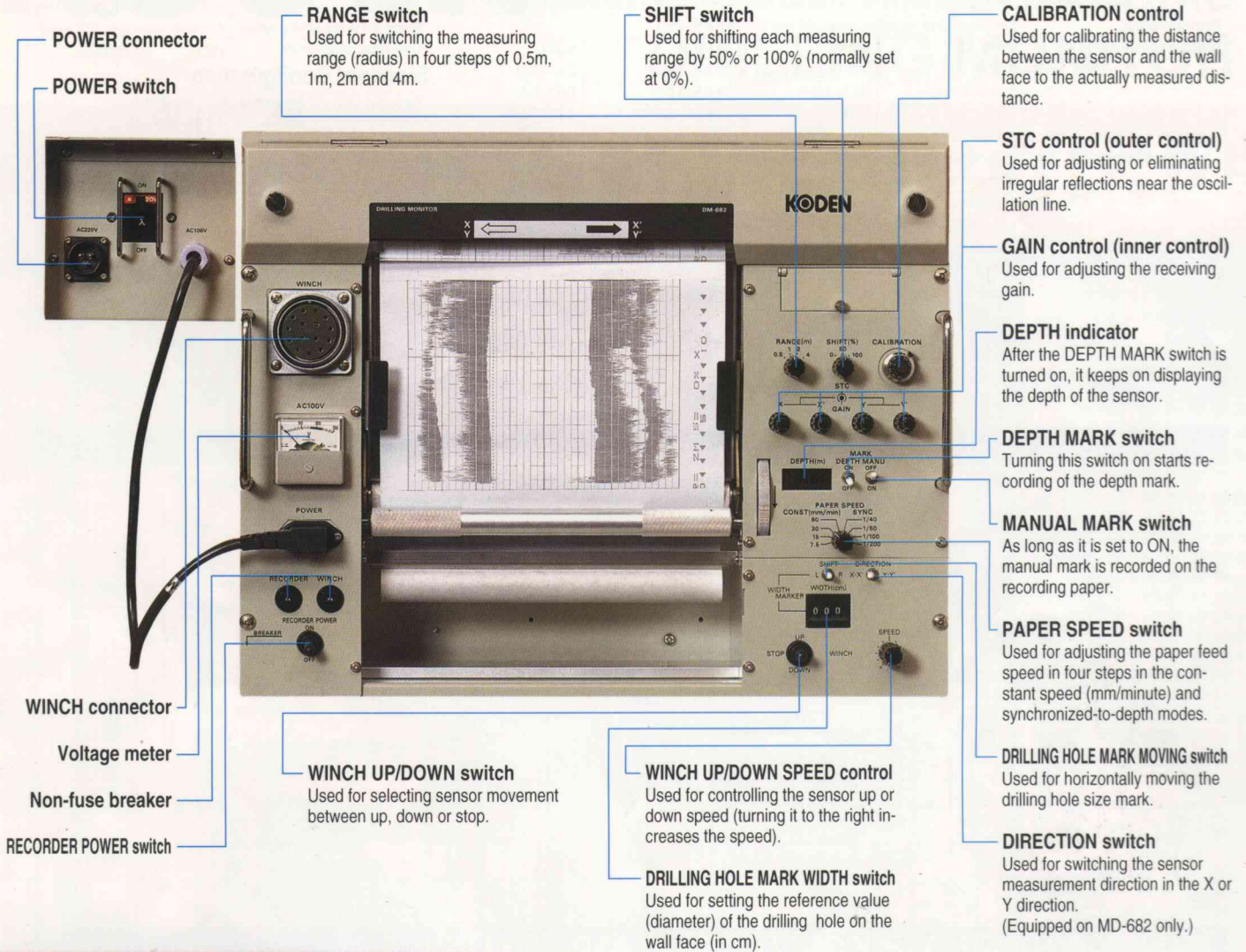


Winch unit

Recorder unit

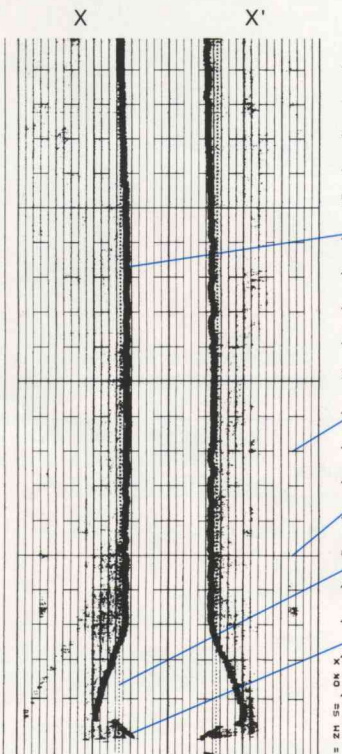


CONTROLS

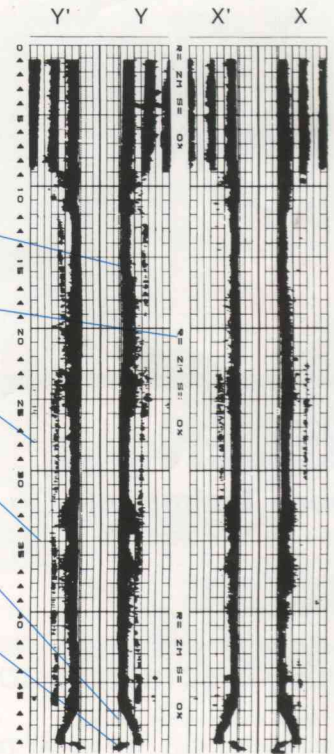


RECORDING EXAMPLES

DM-682



DM-684



Wall face

Range mark

Depth mark (in 1-meter intervals)

Depth mark (in 5-meter intervals)

Drilling hole mark

Bottom

SPECIFICATIONS

Recorder unit

Measuring system	Ultrasonic echo sensing system			
Recording system	DM-682	Direct recording using the belt. Measurement is available in two directions (X - X' and Y - Y').		
	DM-684/684-150	Direct recording using the belt. Simultaneous measurement is available in four directions (X, X', Y and Y').		
Recording paper	Electrosensitive recording paper 250 mm x 20 m (DMP-250)			
Measuring range (radius)	0.5 m	1.0 m	2.0 m	4.0 m
Shift	0 %	0 to 0.5 m	0 to 1.0 m	0 to 2.0 m
	50 %	0.25 to 0.75 m	0.5 to 1.5 m	1.0 to 3.0 m
	100 %	0.5 to 1.0 m	1.0 to 2.0 m	2.0 to 4.0 m
Paper feed rate: Constant speed	7.5 mm/min, 15 mm/min, 30 mm/min and 60 mm/min.			
: Synchronized with the depth	1/40	25 mm/m of sensor up/down movement.		
	1/50	20 mm/m of sensor up/down movement.		
	1/100	10 mm/m of sensor up/down movement.		
	1/200	5 mm/m of sensor up/down movement.		
Measuring accuracy	±0.2 %, F.S.			
Depth mark	A depth mark is printed every 1 m and depth is automatically printed numerically every 5 m.			
Power supply protection circuit	Equipped with two built-in non-fuse breakers (2 A and 8 A), a leakage breaker (20 A) and an overvoltage protection circuit.			
Power supply	100 VAC, 50/60 Hz (DM-682/684)	110 V/120 V/220 V/240 VAC, 50/60Hz (Optional)	380 V/440 VAC, 50/60 Hz (Optional)	220 VAC, 50/60 Hz (DM-684-150)
Power consumption (Depends on the stabilizer used)	500 VA(At 100 VAC)	840 VA(At 220 VAC)	880 VA(At 440 VAC)	2.2 kVA(At 220 VAC) (DM-684-150)
Operating temperature	-10 to +50 °C (14 to 122 °F)			

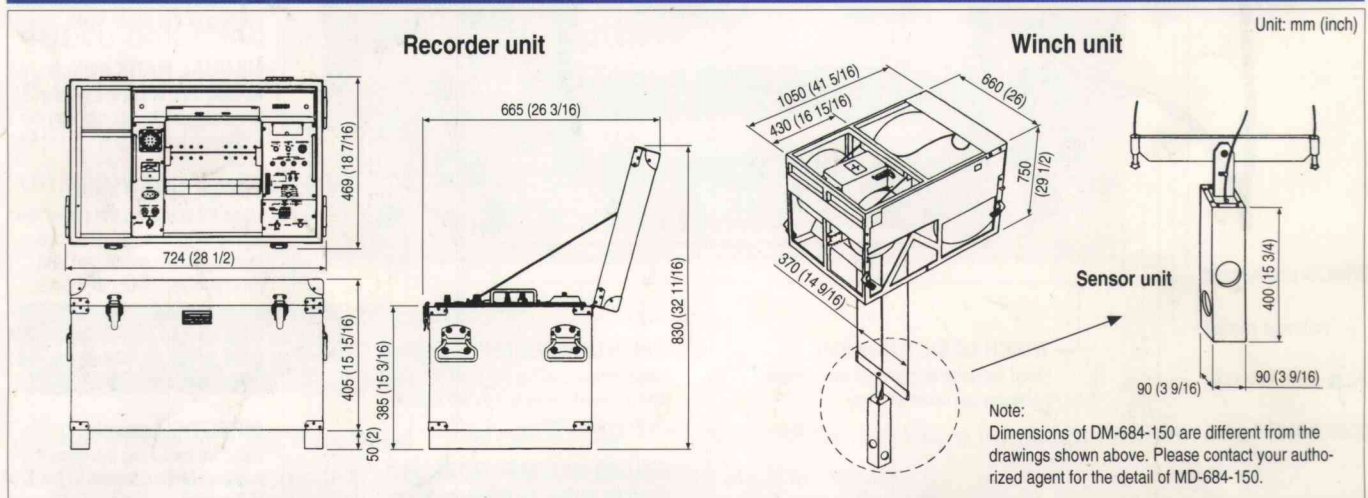
Winch unit

Up/down speed (Continuously controllable from the recording unit)	0 to 20 m/min (DM-682/684) 0 to 24 m/min (DM-684-150)
Up/down movement distance	100 m maximum (DN-682/684) 150 m maximum (DM-684-150)
Bottom and casing sensing system	Automatic sensing by limit switch
Operating temperature	-10 to +50 °C (14 to 122 °F)

Standard Configuration

Recorder unit	DMR-682/684	For DM-682/684	40 kg
	DMR-684-150	For DM-684-150	65 kg
Winch unit	DMW-001/002	For DM-682/684 Comes with a sensor unit and cable.	121 kg
	DMW-003	For DM-684-150 Comes with a sensor unit, cable and weight.	485 kg
Connecting cable	CW-61	With 15-pin connectors at both ends	10 m
	CW-522	With 10-pin connectors at both ends (only for DM-684-150)	10 m
Power cable	CW-73	With 3-pin connector both ends	10 m
Spare parts			1
Operation manual	93170102	For DM-682/684	1
	93170142	For DM-684-150	
Brief operation instructions (Attached to recorder unit)	93070103	For DM-682	1
	93070102	For DM-684	
	93070142	For DM-684-150	

DIMENSIONS



INTELLIGENT KODEN DEVICES FOR CIVIL AND CONSTRUCTION WORK

Ground Penetration Radar System KSD-21 System

The KSD-21 system known for its diverse range of applications. It is based on Koden's long-standing research and development in ground penetration radar systems. The system displays underground targets in clear color images and records them on a personal computer system.

- * Diversified applications.
- * A wide variety of antennas.
- * A series of excellent software.

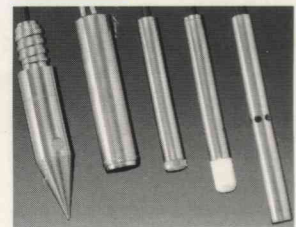


Oscillating Wire Type Sensor Series (from Geokon in the US)

This series employs frequency for the output signal. Variable cable resistance prevents gain deterioration, thus allowing you to make communication using longer cables. It is highly resistant to interference and deterioration due to aging is minimized.

- * Strain gage
- * Reinforcement bar gage
- * Stress gage
- * Displacement gage
- * Earth pressure gage
- * Settlement monitoring
- * Pore water pressure gage
- * Ground-water level gage
- * Clinograph
- * Load cell
- * Depression gage
- * Data logger
- * Other

geokon



* Specifications subject to change without notice.

KODEN

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<http://www.koden-electronics.co.jp>

Certified to ISO 9001 (TUV PRODUCT SERVICE)



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

FOR DETAILS, PLEASE CONTACT: