

Portable

Ferromagnetic Object Detector

# MB120



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# Ferromagnetic Object Detector **MB120**

The MB120 Portable Ferromagnetic Object Detector is used to detect materials made of ferromagnetic metals, such as iron and nickel, and materials in which electric current flows.

The detector and control unit are integrated and the product is resistant to hydraulic pressure.

The MB120 is designed to be carried by divers so they can detect the target object by listening to warning sounds from the receiver while underwater. For the power supply, batteries (size AA) are used. The MB120 can be used for at least seven hours continuously.

## Purpose of Use

**1. To detect buried unexploded mines, bombs, and ammunition**

**2. To detect buried magnetic objects, such as sunken ships and anchors**

**3. To search for crime-related weapons in rivers and swamps**

**4. To find buried iron pipes and metals**

**5. To detect buried cables through which electricity is transmitted**

### • Features of Detection Using Magnetism

1. Target objects can be detected even when they are near or buried in or under mud, sand, water, ice, snow, wood, plastics, fibers, or non-magnetic metals (e.g. aluminum and copper).
2. By observing the changes in magnetic signals caused by changes in the positional relationship between the target object and the detector, you can obtain the distance and burial depth.
3. The magnitude of the magnetic signal from the target object to the detector is inversely proportional to the third to fourth power of the distance between them. Therefore, the detector can easily detect the target object even when there are magnetic obstacles with a stronger magnetic moment than that of the detection target as long as there is a certain distance between the detector and target object.

## Specifications

### Main Performance

Detection Method	Fluxgate method
Sensitivity	$\pm 0.2, \pm 0.5, \pm 1, \pm 2, \pm 5 \mu\text{T}$
Accuracy	Recorder output: $\pm 1 \text{ V}$ at each full scale
Oscillation Noise	$0.02 \mu\text{T max.}$
Resolution	$0.001 \mu\text{T}$
Background Magnetic Field	$\pm 50 \mu\text{T}$
Output	Alarm output (output to the receiver) Recorder output: $\pm 1 \text{ V}$ at each full scale

### Power Supply Used

Power Supply	Eight size AA batteries
Continuous Operating Time	7 hours min.

### Ambient Conditions

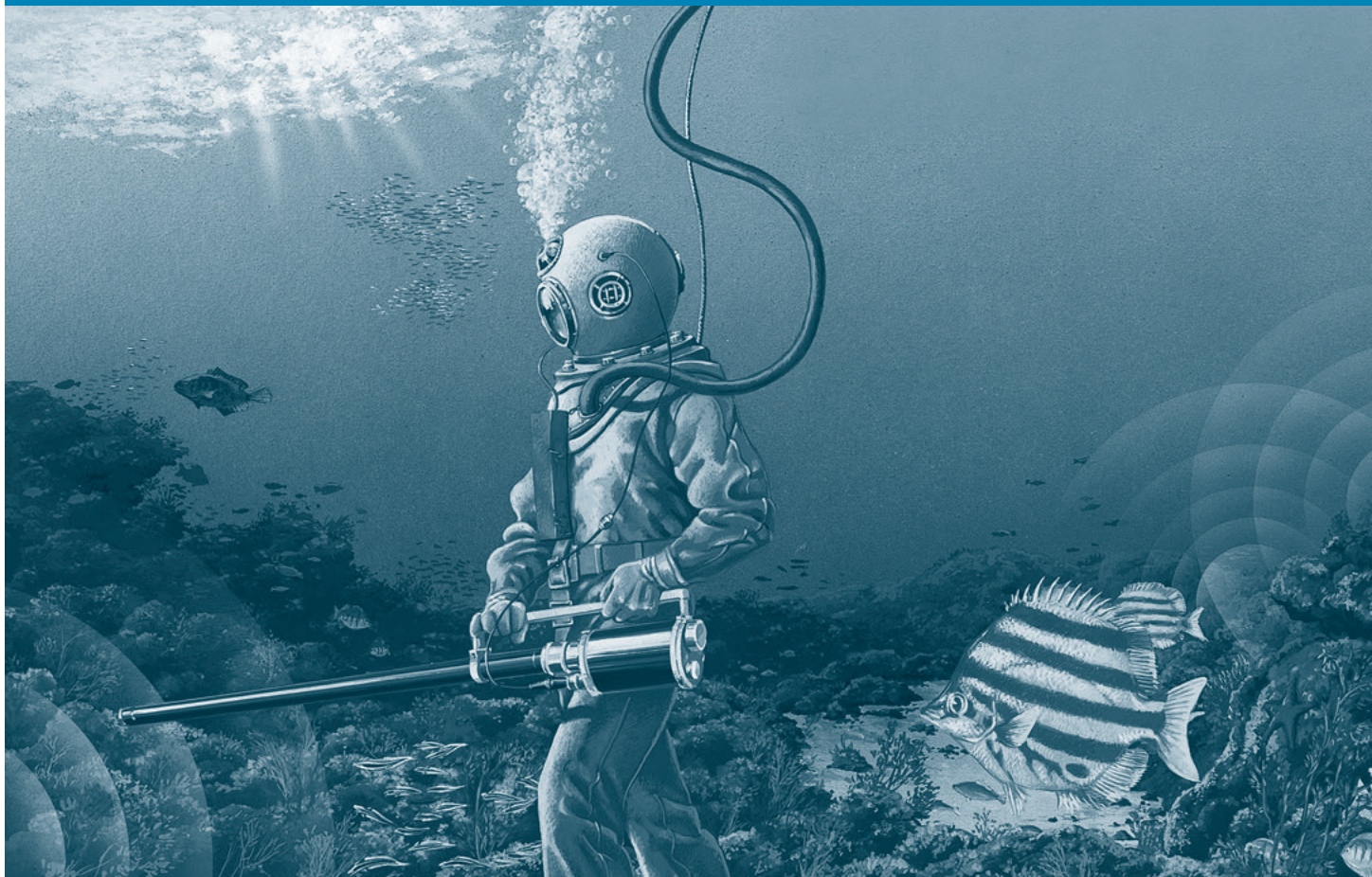
Operating Temperature	$-10 \text{ }^\circ\text{C}$ to $+40 \text{ }^\circ\text{C}$
Storage Temperature	$-20 \text{ }^\circ\text{C}$ to $+50 \text{ }^\circ\text{C}$
Water Resistance	Up to 50 m underwater

## Components

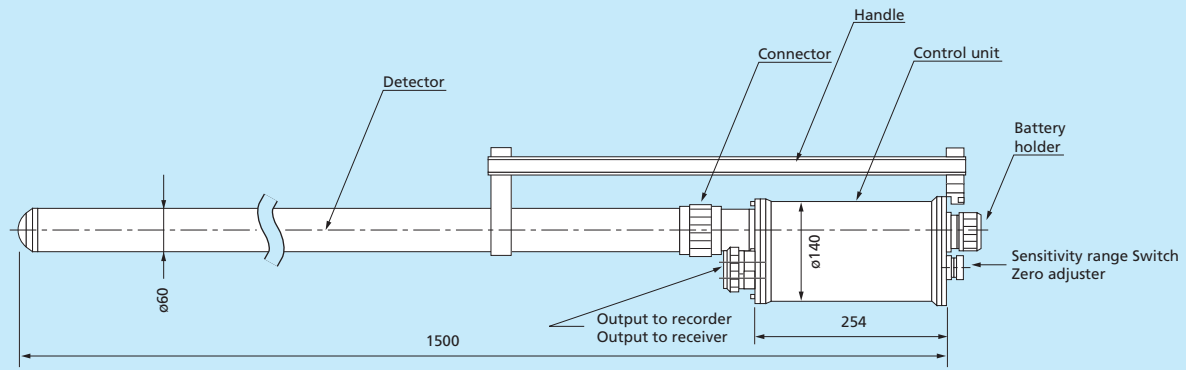
Product Name	Remarks
Detector + Control Unit (integrated)	With a storage case
Check Meter	
Receiver	
<b>Option</b>	
Recorder Cable	50 m



## Example of Use



## External Dimensions



Weight: Approx. 10 kg

(Unit: mm)

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