Sounding system level meter

Sounding M's
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Sounding Ms, the latest continuous level measurement instrument which integrates all functions corresponding to global standard, supports various application and performs as the best level meter guaranteed by MATSUSHIMA.

**Features**

- **Brand-new type level meter** having the unique control system (Patent No. H5-12648).

- **Considerably reduced wiring cost** because the wiring between Sensor and Controller requires only 4 core cable.

- **Maintenance is easy** because mechanical and electrical parts are drastically cut from the Sensor to be installed at silo/hopper.

- **Controller is equipped with all necessary functions for level measurement.**

- **Necessary adjustment is span setting only.**
  - Only inputting figure according to the display. That's all. No tiresome adjustment.
  - No need to call specialist/engineer.

- **Free to choose** Controller from the separated type and built-in type.

- **Span setting is adjustable up to 40m.**

- **Because of the wire-rope system, superior in durability** and replacement work is easy.

- **Sensor is IP55 class besides, wire drum part and electrical part are separated.**
  - **Stable measuring is possible under severe conditions.**

- **Explosion proof is available as standard line-up,** besides, high-temperature, corrosion-proof and high-pressure type are available as option.

- **Appropriate application and maintenance consultation** is provided by MATSUSHIMA with long time history and many supply experiences.

It is the *Sounding Ms* that offers total level measuring engineering.
The latest level meter integrates reliable technology.

**Sounding M's**
(Main body)

1. **Measuring Switch**
   Used under inspection.

2. **Power Switch**
   Used under inspection.

3. **Terminal**
   Connects to controller by 4 core cable.

4. **Lead outlet**
   G 1/2

5. **Casing (aluminum diecast)**
   Pressure-resistant on wire drum part 5KPa
   [Wetted part material SUS304 is option]
   [Pressure-resistant on 0.2MPa is option]

6. **Weight Position Scale**

7. **Operating Motor**
   90W, Equipped with E-class insulation brake [Built in controller is option]

8. **Space for built in controller**
   [Built in controller is option]

9. **Flange (aluminum diecast)**
   [Wetted part material SUS304 is option]

10. **Wire Rope**
    φ3mm SUS304

11. **Link Chain**
    SUS304

12. **Sensing Weight**
    Open drum type SS400 5kg
    Enclosed drum type FC200 4kg
    Object gravity more than 0.8
    [Float type and SUS304 are option]
    Density below 0.8 is also applicable as option.

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**Standard specification**

<table>
<thead>
<tr>
<th>Type</th>
<th>Open drum type</th>
<th>Enclosed drum type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MDMC-2K</td>
<td>MDMC-2S</td>
</tr>
<tr>
<td></td>
<td>MDMC-4K</td>
<td>MDMC-4S</td>
</tr>
<tr>
<td>Measuring range</td>
<td>0~20m</td>
<td>0~40m</td>
</tr>
<tr>
<td>Power</td>
<td>AC100V 50/60Hz, AC110V 60Hz</td>
<td>±10% (150VA)</td>
</tr>
<tr>
<td>Ambience</td>
<td>temperature: -10-50°C protection structure IP55</td>
<td></td>
</tr>
<tr>
<td>Output Signal</td>
<td>DC4-20mA (DC20-4mA measuring display is possible) Isolate output, load resistance 5000ohm or less</td>
<td></td>
</tr>
<tr>
<td>Measuring accuracy</td>
<td>1% (Resolution: 0.1%)</td>
<td></td>
</tr>
<tr>
<td>Contact Output</td>
<td>Upper limit, lower limit, and measuring signal; each 1a Alarm (any of CPU fault, thermal trip, weight-buried, wire-broke); 1a (Normally Close) Contact capacity: AC 250V 2A (DC 60V 1A)</td>
<td></td>
</tr>
<tr>
<td>Measuring Mode</td>
<td>Manual measurement with measuring contact ON. Auto measurement with outside contact by continuous ON. Interval: adjustable 19999 seconds.</td>
<td></td>
</tr>
<tr>
<td>Measuring Frequency</td>
<td>Continuous measuring is available.</td>
<td></td>
</tr>
<tr>
<td>Rope Speed</td>
<td>12.5/14.9m/min</td>
<td></td>
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</table>

[Option] ●Wetted part material:SUS304 ●High temperature type: object temperature 200°C max ●Pressure-resistant case: 0.2MPa max ●Sensing Weight: For powder, fine powder, all sorts of weight ●Power: AC200V60/60Hz ●Built in controller
Sounding M's (Controller)

1. **Interval Lamp**
   Adjustable from 1 to 9999 seconds.

2. **Power Lamp**
   The lamp is turned on when power is entered.

3. **4 figures Digital Indicator**
   Displays measured value by "cm" or ",%".
   Displays parameter under setting.

4. **Connection Diagram**

   - **Upper limit output** to **Under measuring output**
   - **Under measuring output** to **Under normal condition (open)**
   - **Measuring input** to **Reset input**
   - **Controller AATD-100C(AC100V)**
   - **AC100V 50/60Hz**
   - **AC110V 60Hz**

5. **50/60Hz Switching Lamp**
   For switching the power frequency

6. **Fail-safe Lamp**
   This lamp displays the type of alarm.

7. **Upper • lower limit signal Lamp**
   The lamp is turned on when the upper • lower limit signal is outputted.
   Hysteresis can be set optionally set on upper/lower limit signal.

8. **Output Signal Setting Lamp**
   The lamp is turned on while setting DC4mA or DC20mA level.

9. **Connection Details**

   - **Upper limit output** to **Under measuring output**
   - **Under measuring output** to **Under normal condition (open)**
   - **Measuring input** to **Reset input**
   - **Controller AATD-100C(AC100V)**
   - **AC100V 50/60Hz**
   - **AC110V 60Hz**
## Arrangement matters

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Address</td>
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<td>Company</td>
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<td>Section</td>
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<td>Name, Title</td>
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<td>TEL &amp; FAX No.</td>
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</tbody>
</table>

- **Plan**: Quantity ( ), Time ( )
- **Installation place**: outdoor, indoor
- **Facilities name**: ( )
- **Explosion-proof structure**: necessary ( ), unnecessary
- **Object name**: ( )
- **Specific gravity**: Volume gravity ( ), Appearance gravity ( )
- **Angle of repose**: ( )
- **Moisture content**: ( )%
- **Highest temperature**: Object ( ), Ambience ( )
- **Inside pressure**: ( ) Pa
- **Silo, Hopper form**: opening, Air-tight, height from the ground ( ) m, circle (φ ) m, square ( ) m
- **Object charging**: Conveyor ( ), Bucket, Compressed-air
- **Measuring span**: from installing position to 0% ( ) m, from installing position to 100% ( ) m
- **Operating Power**: 100V, 200V (option), 50Hz, 60Hz
- **Option**: Current indicator analogue (vertical wide angle) (display m %), digital (display m %)
- **The others**: ( )

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**Open drum type**

**For 40m**

**Explosion-proof type**