OUTLINE

The AM-1000-SR is a variable area flowmeter designed and manufactured for sanitary services. The IDF sanitary clamps or unions make its installation on the piping or removing easy. All the liquid wet parts are buff polished.

FEATURES

- For cleaning and maintenance of metal tube type, its construction with clamps makes it easier to disassemble the indicator and transmitter housing.
- Straight through self-draining design.
- Supports a large flow rate (Max. 70 m³/h).
- In addition to the local flow rate indication the various functions can be selected from pneumatic, current, alarm outputs and local totalization with a scaled pulse output.
- For Foods, Pharmaceuticals and Other Sanitary Process.

STANDARD SPECIFICATION

- MODEL AND FUNCTION:
  - AM-1401-SR LOCAL INDICATION
  - AM-1311-SR LOCAL INDICATION + PNEUMATIC OUTPUT
  - AM-1521-SR LOCAL INDICATION + ELECTRIC OUTPUT (DC4-20mA)
  - AM-1691-SR LOCAL INDICATION + LOCAL TOTALIZATION + SCALED PULSE OUTPUT
  - AM-1741-SR LOCAL INDICATION + ALARM CONTACT(S)

- AVAILABLE METER SIZE: 20, 25, 40, 50, 65, 80 and 100
- IDF CLAMP(UNION) SIZE: 1S, 1.5S, 2S, 2.5S, 3S, 3.5S and 4S
- PROCESS CONNECTION: IDF CLAMP or UNION SCREW
- FLOW DIRECTION: BOTTOM to TOP
- SCALE RANGE(WATER): MIN. 0.01 to 0.1 m³/h MAX. 7 to 70 m³/h
- FLUID PRESS.: MAX. 0.68 MPa
- FLUID TEMP.: MAX. 150°C

It is general data, and the maximum temperature may change by terms of use and environment.

- INDICATION ACCURACY: ±1.5% F.S.
- MATERIAL:
  - TAPERED TUBE: SUS304 (SUS316, SUS316L) with #320 to #400 Buff polishing (inner and outer) *
  - BODY TUBES: SUS304 (SUS316, SUS316L) with #320 to #400 Buff polishing (inner and outer) *
  - FLOAT: SUS304 (SUS316, SUS316L) with #320 to #400 Buff polishing *
  - SEAL: NBR (FFM, Silicone rubber, PTFE)
  - CLAMP: SCS13

ASTM materials may be used instead of JIS materials for the body tubes.
* Electrolytic polishing is also available as an option.

DIMENSION AND SCALE RANGE

<table>
<thead>
<tr>
<th>METER SIZE</th>
<th>CONNECTION SIZE</th>
<th>L (mm)</th>
<th>B (mm)</th>
<th>POSSIBLE SCALE RANGE (m³/h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>1S</td>
<td>550</td>
<td>89</td>
<td>0.1 to 1.6</td>
</tr>
<tr>
<td>25</td>
<td>1.5S, 2S</td>
<td>550</td>
<td>92</td>
<td>4.0</td>
</tr>
<tr>
<td>40</td>
<td>1.5S, 2S</td>
<td>550</td>
<td>99</td>
<td>7.1</td>
</tr>
<tr>
<td>50</td>
<td>2S, 2.5S</td>
<td>550</td>
<td>105</td>
<td>15.0</td>
</tr>
<tr>
<td>65</td>
<td>2.5S, 3S</td>
<td>600</td>
<td>113</td>
<td>27.5</td>
</tr>
<tr>
<td>80</td>
<td>3S, 3.5S</td>
<td>600</td>
<td>120</td>
<td>40.5</td>
</tr>
<tr>
<td>100</td>
<td>4S, 4.5S</td>
<td>600</td>
<td>132</td>
<td>70.0</td>
</tr>
</tbody>
</table>

*1: L dimension is common both for Clamp and Screw connection.
*2: POSSIBLE SCALE RANGE is indicated by ow rate of water (Density 1.0g/cm³ and 1.0mPa·s viscosity)
*3: In case the measuring object different from above, a conversion calculation is required. Consult factory for details.

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SPECIFICATION OF TRANSMITTER AND INDICATOR

- **AM-1401-SR**
  Local indication type

- **AM-1311-SR**
  Local indication + Pneumatic output type

- **AM-1521-SR**
  Local indication + Electric output type

**DIMENSION OF INDICATOR**

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**AM-1000-SR**
Metal Tube Type Variable Area Flowmeter for Sanitary Application

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**SPECIFICATION OF TRANSMITTER AND INDICATOR**

- AM-1401-SR
  Local indication type

- AM-1311-SR
  Local indication + Pneumatic output type
  - Air supply: 0.14 ± 0.01 MPa
  - Outputs: 20 to 100 kPa (with output gauge)
  - Air consumption: 14 L/min (nor)
  - Connection: Rc 1/4
    - On request: NPT 1/4
  - Output accuracy: ±1.0% F.S. (Against flow calibration)
  - Construction: Dust and splash proof (Equ. to IP54)
  - Ambient Temp: –20 to 80°C
    - Provide heat insulation if required.
  - Accessory: Air set (On request)

- AM-1521-SR
  Local indication + Electric output type
  - Power supply voltage: 12 to 30 V DC
  - Output: 4 to 20 mA DC
  - Max load: Dust and splash proof (24 V DC)
  - Cable entry: Dust and splash proof: 2xG1/2 or 2xNPT1/2
    - Flameproof: 2xG1/2 or 2xNPT1/2
    - Option: Packing type cable gland
    - Specified cable gland (Type SXC-16B Shimada Electric Co.) to be used for flame proof construction work.
  - Output accuracy: ±1.0% F.S. (Against flow calibration)
  - Construction: Dust and splash proof (Equ. to IP54)
    - Exd II BT4 EP-AM-152
    - Exd II CT4 EP-AM-152
  - Ambient Temp: –20 to 80°C
    - Provide heat insulation if required.
  - Accessory: Air set (On request)

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**DIMENSION OF INDICATOR**

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AM-1000-SR Metal Tube Type Variable Area Flowmeter for Sanitary Application

**AM-1691-SR**
Local indication + Totalization
+ Scaled Pulse output type

- **Integration**: 6 digit with reset
- **Count rate**: 50 to 2000c/h
- **Pulse output**: Open collector output
  - Pulse width 100ms, Rating 35 V DC, 50 mA
  - (Signal circuit and power supply circuit are isolated.)
- **Integration accuracy**: ±2.0% F.S.
- **Power supply**: 100 V AC, 50/60Hz as standard. 110 V AC, 50/60Hz also available on your request except flameproof version.
  - A separate transformer is required for other voltage.
- **Power consumption**: Max. 5VA
- **Cable entry**: G1/2 (Female)
  - G1/2 with flameproof cable gland (Option)
  - [TIIS flameproof cable with a diameter of 7 mm to 12 mm (standard: 11 mm to 12 mm)]
  - 1/2 NPT (Option)
- **Enclosure**: Dust and splash proof (Equ. to IP54) type AM-169◻
  - Flameproof (JISd2G4) type EP-AM-169◻
- **Ambient temp**: –20 to 80°C for type AM-169◻
  - –10 to 60°C for type EP-AM-169◻
  - Provide heat insulation if required

**AM-1741-SR**
Local indication + Alarm Contact(s) type

- **Alarm point**: 1 point high alarm or
  - 1 point low alarm or
  - 2 points high and low
- **Switch**: Micro switch SPDT
- **Rating**:
  - Standard: 125/250 V AC, 5A
  - On request: 30 V DC, 0.1A
- **Setting accuracy**: ±1.5% F.S. (against flow calibration)
  - Note: The indication of flow rates except for the alarm setting value may be less accurate just after turning on the switch.
- **Reset span**: Dust and splash proof and
  - Intrinsically safe within 20% (F.S.) (Against flow calibration)
  - Flameproof EP-AM-174◻ within 30% (F.S.) (Against flow calibration)
- **Cable entry**: G1/2 with female screw
  - Conduit connection. Packing type cable gland is also available.
  - [TIIS flameproof cable with a diameter of 7 mm to 12 mm (standard: 11 mm to 12 mm)]
  - On request: NPT 1/2
- **Enclosure**: Dust and splash proof (Equ. to IP54) type AM-174◻
  - Flameproof (JISd2G4) type EP-AM-174◻
  - Intrinsically safe (ExiaIICT6) type IS-AM-174◻
  - *Supplied with safety barrier
- **Ambient temp**: –25 to 80°C for type AM-174◻
  - –10 to 60°C for type EP-AM-174◻
  - IS-AM-174◻
  - Provide heat insulation if required
* Specification is subject to change without notice.