The BS-1210 / BS-1310 Baby Gauge Sensors are made to detect various dimensions, displacements and travel distances. They are compact and tough, that is to say, they achieve excellent durability, vibration / shock resistance and noise resistance despite their small size.

**Overview**
The BS-1210 / BS-1310 Baby Gauge Sensors are made to detect various dimensions, displacements and travel distances. They are compact and tough, that is to say, they achieve excellent durability, vibration / shock resistance and noise resistance despite their small size.

**Features**
- Thin body and takes little space: Easy to install and maintain. Thickness 13 mm
- Superior water-resistance *: Protection class IP64 → IP66
- Superior life time *: Number of sliding times 10 million times → 30 million times
- Expanded temperature ranges *: Operating temperature range +5 to +40 °C → 0 to +50 °C
  Storage temperature range -10 to +55 °C → -10 to +65 °C

* Compared to our existing model

**Example of system configurations**
- Can be connected to not only exclusive counters but also a PLC.

- Provides multiplication switching function/offset setting function/factor setting function.
- Provides calculation display function (MAX, MIN, RANGE).
- When judged in comparator function, color of the backlight changes to green (OK) or red (NG) (DG-4340).
- Enables to add functions with following optional cards.
  BCD output
  Analog output (voltage/current)
  Comparator output
  RS-232C communication
  DC power supply

- Can be connected to a PLC
### Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>BS-1210</th>
<th>BS-1310</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement range</td>
<td>10 mm</td>
<td>10 mm</td>
</tr>
<tr>
<td>Resolution</td>
<td>10 μm</td>
<td>1 μm</td>
</tr>
<tr>
<td>Accuracy</td>
<td>3 μm (at +20 °C)</td>
<td>0.3 (1.2) m/s</td>
</tr>
<tr>
<td>Maximum spindle velocity *1</td>
<td>1 (4) m/s</td>
<td>0.3 (1.2) m/s</td>
</tr>
<tr>
<td>Measurement force (downward)</td>
<td>1.47 N or less</td>
<td></td>
</tr>
<tr>
<td>Number of sliding times</td>
<td>30 million times</td>
<td></td>
</tr>
<tr>
<td>Vibration resistance (when the power is off) *2</td>
<td>98 m/s² in each of the three axial directions (150 minutes per each), 20 cycles of 10 Hz to 150 Hz sweeping</td>
<td></td>
</tr>
<tr>
<td>Shock resistance (when the power is off) *2</td>
<td>980 m/s² in each of direction for each of three axes, three times for each of ±X, Y and Z directions (18 times total), sine half-wave, pulse duration 6 ms</td>
<td></td>
</tr>
<tr>
<td>Protection class</td>
<td>IP66 (not including connector part)</td>
<td></td>
</tr>
<tr>
<td>Operating temperature range</td>
<td>0 to +50 °C</td>
<td></td>
</tr>
<tr>
<td>Storage temperature range</td>
<td>From sensor to counter approx. 1.9 m</td>
<td></td>
</tr>
<tr>
<td>Outer dimension</td>
<td>Total length 94.5 mm</td>
<td></td>
</tr>
<tr>
<td>Cable length</td>
<td>Approx. 110 g (including cable)</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>Instruction manual</td>
<td></td>
</tr>
</tbody>
</table>

*1: When used with Ono Sokki’s Gauge Counter. The values within parentheses () are the maximum spindle velocity used with the DG-4320/DG-4340/DG-5100.

*2: Vibration/shock resistance values described in above are not guaranteed during measurement operation.

*3: When using a release, IP66 is not guaranteed.

*4: When using a measurement tip, IP66 is not guaranteed because it is necessary to remove the dust proof rubber.

### Outer dimensions

- AA-513 Mechanical release
- AA-816 Air release
- ST-022 Gauge stand
- AA-973 Spare dust proof rubber
- AA-844 (30 mm)/AA-845 (50 mm) Extension spindle
- Various extension signal cables
- Various measurement tips

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