9QGPS5510
Shear beam load cell
Measurement made easy
Universal load cell combining sturdy design, high accuracy and low cost.

- Stainless steel
- IP rating IP 67
- Sturdy design
- Complies with OIML / R60 up to 3000 d for scales in class III (EN 45501)

Mounting kits available with following properties
- Stabilization without tension rods
- Compensation of thermal dilatations and of default of parallelism

Available options (non exhaustive list)
- ATEX intrinsic safety
- Amplified output (V or mA) and digital output signal (RS-232C, RS-485, USB)
- Dual Wheatstone bridge
- IP rating IP 68
- High service temperature −50 to 180 °C (−58 to 356 °F)
Applications
The load cell 9QGPS5510 is perfectly designed to the following applications:
• Low profile scales, pallet, platform scales
• Packaging, batching and filling machines
• Reactors, tanks, vessel or hoppers weighing

Capacities
0.5 - (0.75) - 1 - 1.5 - 2 t

Explosion protection (Option)
ATEX intrinsic safety
• Ex II 1GD Ex ia IIC T6 or T4 Ga Ex ia IIIC T80°C Da

Specification

<table>
<thead>
<tr>
<th></th>
<th>A3</th>
<th>C1</th>
<th>0.03 %</th>
<th>C3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy class</td>
<td>3000 d*</td>
<td>3000 d OIML</td>
<td>3000 d*</td>
<td>3000 d OIML</td>
</tr>
<tr>
<td>Combined error (nonlinearity and hysteresis)</td>
<td>&lt; ± 0.03 % F.S.</td>
<td>&lt; ± 0.05 % F.S.</td>
<td>&lt; ± 0.03 % F.S.</td>
<td>&lt; ± 0.02 % F.S.</td>
</tr>
<tr>
<td>Repeatability error</td>
<td>&lt; ± 0.015 % F.S.</td>
<td>&lt; ± 0.02 % F.S.</td>
<td>&lt; ± 0.015 % F.S.</td>
<td>&lt; ± 0.02 % F.S.</td>
</tr>
<tr>
<td>Creep error over 30 min.</td>
<td>&lt; ± 0.03 % F.S.</td>
<td>&lt; ± 0.04 % F.S.</td>
<td>&lt; ± 0.03 % F.S.</td>
<td>&lt; ± 0.02 % F.S.</td>
</tr>
<tr>
<td>Sensitivity tolerance</td>
<td>&lt; ± 0.2 % F.S.</td>
<td>&lt; ± 0.3 % F.S.</td>
<td>&lt; ± 0.2 % F.S.</td>
<td>&lt; ± 0.1 % F.S.</td>
</tr>
<tr>
<td>Temperature coefficient of the sensitivity</td>
<td>&lt; ± 0.1 % F.S./10 °C</td>
<td>&lt; ± 0.02 % F.S./10 °C</td>
<td>&lt; ± 0.015 % F.S./10 °C</td>
<td>&lt; ± 0.009 % F.S./10 °C</td>
</tr>
<tr>
<td>Temperature coefficient of zero signal</td>
<td>&lt; ± 0.05 % F.S./10 °C</td>
<td>&lt; ± 0.03 % F.S./10 °C</td>
<td>&lt; ± 0.023 % F.S./10 °C</td>
<td>&lt; ± 0.013 % F.S./10 °C</td>
</tr>
<tr>
<td>Reference temperature</td>
<td>23 °C (73.4 °F)</td>
<td>23 °C (73.4 °F)</td>
<td>23 °C (73.4 °F)</td>
<td>23 °C (73.4 °F)</td>
</tr>
</tbody>
</table>

Temperature data

| Nominal temperature range | −10 to 45 °C (14 to 113 °F) | −10 to 45 °C (14 to 113 °F) | −10 to 45 °C (14 ... 113 °F) | −10 to 45 °C (14 to 113 °F) |
| Service temperature range | −25 to 70 °C (−13 to 158 °F) | −25 to 70 °C (−13 to 158 °F) | −25 to 70 °C (−13 ... 158 °F) | −25 to 70 °C (−13 to 158 °F) |
| Storage temperature range | −50 to 85 °C (−58 to 185 °F) | −50 to 85 °C (−58 to 185 °F) | −50 to 85 °C (−58 ... 185 °F) | −50 to 85 °C (−58 to 185 °F) |

Electrical data

| Input resistance       | 352 Ω ± 2 Ω         | 352 Ω ± 2 Ω        | 352 Ω ± 2 Ω         | 352 Ω ± 2 Ω        |
| Output resistance      | 352 Ω ± 2 Ω         | 352 Ω ± 2 Ω        | 352 Ω ± 2 Ω         | 352 Ω ± 2 Ω        |
| Insulation resistance (50 V) | > 5000 MQ | > 5000 MQ          | > 5000 MQ           | > 5000 MQ           |
| Reference excitation voltage | 10 V                 | 10 V               | 10 V                | 10 V               |
| Nominal range of excitation voltage | 3 to 12 V | 3 to 12 V          | 3 to 12 V           | 3 to 12 V           |
| Nominal sensitivity    | 2 mV/V               | 2 mV/V             | 2 mV/V              | 2 mV/V              |

Load limits

| Safe load limit      | 150 % F.S. | 150 % F.S. | 150 % F.S. | 150 % F.S. |
| Breaking load        | > 300 % F.S. | > 300 % F.S. | > 300 % F.S. | > 300 % F.S. |
| Static lateral force limit | 100 % F.S. | 100 % F.S. | 100 % F.S. | 100 % F.S. |
| Permissible dynamic loading | 50 % F.S. | 50 % F.S. | 50 % F.S. | 50 % F.S. |

Table 1: (F.S.: full scale)
* Except thermal drifts
Specifications subject to change without notice
Dimensions
Load cell model 9QGPS5510
All specified dimensions are in mm (in.)

![Dimensions diagram]

Figure 1: Dimensions

<table>
<thead>
<tr>
<th>Ref. Item</th>
<th>Capacities t</th>
<th>Weight kg (lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5510-A</td>
<td>0.5 to 2</td>
<td>0.95 (2.10)</td>
</tr>
</tbody>
</table>

Table 2: Other capacities and dimensions on request

Accessories

![Accessories diagram]

Figure 2: Accessories
Mounting accessories model F5510 (stainless steel)
For load cells 9QGPS5510
All specified dimensions are in mm (in).

Table 3: Other capacities and dimensions on request

<table>
<thead>
<tr>
<th>Ref. Item</th>
<th>Capacities t</th>
</tr>
</thead>
<tbody>
<tr>
<td>F5510-A</td>
<td>0.5 to 2</td>
</tr>
</tbody>
</table>

Figure 4: Other views
**...Dimensions**

Easy mount model I5510 (stainless steel), model I5515 (alloy steel)

For load cells 9QGPS5510

All specified dimensions are in mm (in.)

![Easy mount diagram]

**Figure 5: Easy mount**

<table>
<thead>
<tr>
<th>Ref. Item</th>
<th>Capacities t</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>M</th>
<th>N</th>
<th>Ø1</th>
<th>H2</th>
<th>Weight kg (lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I551x-A</td>
<td>0.5 to 2</td>
<td>50</td>
<td>84</td>
<td>174</td>
<td>210</td>
<td>15</td>
<td>90</td>
<td>120</td>
<td>20</td>
<td>25</td>
<td>140</td>
<td>12.5</td>
<td>≈ 6.76 (14.90)</td>
</tr>
<tr>
<td></td>
<td>(1.97)</td>
<td>(3.31)</td>
<td>(6.85)</td>
<td>(8.27)</td>
<td>(0.59)</td>
<td>(3.54)</td>
<td>(4.72)</td>
<td>(0.79)</td>
<td>(0.98)</td>
<td>(5.51)</td>
<td>(0.49)</td>
<td>(3.86)</td>
<td></td>
</tr>
</tbody>
</table>

**Table 4: Other capacities and dimensions on request**

![Other views diagram]

**Figure 6: Other views**
**Compression ball joint model R5510 (stainless steel)**

For load cells 9QGPS5510

All specified dimensions are in mm (in.)

<table>
<thead>
<tr>
<th>Ref. Item</th>
<th>Capacities</th>
</tr>
</thead>
<tbody>
<tr>
<td>R5510-A1</td>
<td>Range: 500 kg (1102 lb)</td>
</tr>
<tr>
<td>R5510-A2</td>
<td>Range: 750 kg (1653 lb)</td>
</tr>
</tbody>
</table>

Table 5: Other capacities and dimensions on request

**Figure 7:** Compression ball joint

**Figure 8:** Other views
Notes
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