**PSW 31_/33_-14**

**Data sheet PSW 31_/33_-14 – Date: 08/2019 – Subject to technical changes without notice**

**Duty cycle**

20 % (basis time 600 s) at nominal torque

**Mode of operation**

S3

**Supply voltage**

24 V DC ± 10 % galvanically separated between control and motor and bus

**Nominal current**

PSW 31_: 2.4 A, PSW 33_: 3.1 A

**Power consumption (control unit)**

0.1 A

**Positioning accuracy**

absolute measurement of position taken directly at the output shaft

0.9°

**Positioning range**

250 rotations not subject to mechanical limits

**Shock resistance**

in accordance with IEC/DIN EN 60068-2-27

50 g 11 ms

**Vibration resistance**

in accordance with IEC/DIN EN 60068-2-6

10..55 Hz 1.5 mm/

55..1000 Hz 10 g/

10..2000 Hz 5 g

**Output shaft**

14 mm solid shaft or 14 mm hollow shaft with adjustable collar

**Snap-on brake**

optional (holding torque = nominal torque)

**Maximum axial force**

20 N

**Maximum radial force**

40 N

**Ambient temperature**

0...45°C

**Storage temperature**

−10...70°C

**Protection class**

IP 68 at standstill, IP 66 during rotation (tested with water)

**Material**

stainless steel

**Weight**

700 g

**Certificates**

CE, optional: NRTL (UL, CSA, ANSI)

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**Product**

<table>
<thead>
<tr>
<th>Nominal torque</th>
<th>Self-holding torque</th>
<th>Nominal rated speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSW 311-14</td>
<td>1 Nm</td>
<td>0.5 Nm</td>
</tr>
<tr>
<td>PSW 312-14</td>
<td>2 Nm</td>
<td>1 Nm</td>
</tr>
<tr>
<td>PSW 332-14</td>
<td>2 Nm</td>
<td>1 Nm</td>
</tr>
<tr>
<td>PSW 335-14</td>
<td>5 Nm</td>
<td>2.5 Nm</td>
</tr>
</tbody>
</table>

**Data interfaces**

CANopen, PROFIBUS DP, DeviceNet, Modbus RTU, Sercos, EtherCAT, PROFINET, EtherNet/IP, POWERLINK, IO-Link

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**All dimensions in mm.**

For details of the connections please see also p. 47 and the instruction manual.
### ORDER KEY PSE/PSS/PSW 3 SERIES

All the positioning systems in the PSE/PSS/PSW 3 series share the same order key.

To provide the best possible overview and to simplify customer documentation, the diverse range of options available for the PSE/PSS/PSW 3 series has been organised in a shared order key.

#### Order key

**PSE/PSS/PSW:**

<table>
<thead>
<tr>
<th>Protection class</th>
<th>A Design</th>
<th>B Type</th>
<th>C Bus communication (see p. 7)</th>
<th>D Connections</th>
<th>E Brake (see p. 11)</th>
<th>F Certification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Positioning System</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Efficient (see p. 20-25)</td>
<td>IP54</td>
<td>PSE</td>
<td>CA: CANopen</td>
<td>0: standard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stainless (see p. 27-30)</td>
<td>IP65</td>
<td>PSS</td>
<td>DP: PROFIBUS DP</td>
<td>T: with jog keys</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Washable (see p. 32-35)</td>
<td>IP68</td>
<td>PSW</td>
<td>DN: DeviceNet</td>
<td>Y: 1 connector, Y-encoded</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Standard equipment (connections)

- always provided with 3 plugs/sockets (not for IO-Link or Y-encoded connector)
- address switches always provided (also I-buses, not for IO-Link)

*For further information on connections and address settings see also "Overview: bus communication" on p. 47.*

#### Nominal Torque – Nominal Speed Combinations

**Example 1**

You require the protection class IP54 and a maximum torque of 2 Nm. The speed should be greater than 100 rpm. An 8 mm hollow shaft and longitudinal construction meet the requirements of your application.

Your wish to use EtherNet/IP as the bus and connect the PSE to the control unit using a hybrid connector and hub. You do not require an additional holding brake in your application.

→ **PSE 312-8-EI-Y-0-0**

**Example 2**

IP68, max. 3 Nm, > 100 rpm, horizontal construction, 14 mm solid circular shaft, IO-Link via a connector, with brake.

→ **PSW 325-14V-IO-0-M-0**
ACCESSORIES PSE/PSS/PSW 3 SERIES

The connectors shown here can be used for all three types of device (PSE/PSS/PSW). This ensures that the PSE (IP 54) and PSS (IP 65) comply with the IP protection classes. We will also be pleased to help you find a suitable mating connector for the PSW (IP 68) if necessary – just ask us!

<table>
<thead>
<tr>
<th>Bus communication</th>
<th>Power supply + databus connector (2x) (for option 0)</th>
<th>Power supply + databus (2x) + jog key connector (for option T, not for PSW)</th>
<th>Cable and connectors for 1-connector solution (for option Y or IO-Link)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CANopen ²</td>
<td>Connector set: Order no. 9601.0060</td>
<td>Connector set: Order no. 9601.0062</td>
<td>5 m: Order no. 9601.0245</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10 m: Order no. 9601.0233</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20 m: Order no. 9601.0234</td>
</tr>
<tr>
<td>PROFIBUS DP</td>
<td></td>
<td></td>
<td>5 m: Order no. 9601.0240</td>
</tr>
<tr>
<td>Modbus RTU</td>
<td>Connector set: Order no. 9601.0088</td>
<td>Connector set: Order no. 9601.0090</td>
<td>10 m: Order no. 9601.0244</td>
</tr>
<tr>
<td>DeviceNet</td>
<td>Connector set: Order no. 9601.0112</td>
<td>Connector set: Order no. 9601.0317</td>
<td>Hub on request</td>
</tr>
<tr>
<td>Sercos</td>
<td>Connector set: Order no. 9601.0088</td>
<td>Connector set: Order no. 9601.0090</td>
<td>5 m: Order no. 9601.0240</td>
</tr>
<tr>
<td>EtherCAT</td>
<td></td>
<td></td>
<td>10 m: Order no. 9601.0244</td>
</tr>
<tr>
<td>PROFINET</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>EtherNet/IP</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>POWERLINK</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IO-Link ³</td>
<td>-</td>
<td>-</td>
<td>Connector: Order no. 9601.0107 ²</td>
</tr>
</tbody>
</table>

¹ see under "D" in the order key  ² power supply and bus via one cable, without second databus connector  ³ A- or B- coding of the connectors is possible

Further Accessories

- Jog key box (for option T, not for PSW)  Order no. 9601.0241
- Screw cap to cover the second bus connection (for PSS/PSW)  Order no. 9601.0176

MODULES AND DESCRIPTION FILES

Take advantage of our functional modules or description files for the various buses. You can download the files on our website:

[www.halstrup-walcher.de/en/software](http://www.halstrup-walcher.de/en/software)