**PSS 30_-8**

**Product**

<table>
<thead>
<tr>
<th>Product</th>
<th>Nominal torque</th>
<th>Self-holding torque</th>
<th>Nominal rated speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSS 301-8</td>
<td>1 Nm</td>
<td>0.5 Nm</td>
<td>210 rpm</td>
</tr>
<tr>
<td>PSS 302-8</td>
<td>2 Nm</td>
<td>1 Nm</td>
<td>115 rpm</td>
</tr>
<tr>
<td>PSS 305-8</td>
<td>5 Nm</td>
<td>2.5 Nm</td>
<td>40 rpm</td>
</tr>
</tbody>
</table>

**Data interfaces**

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

**Technical Specifications**

- **Duty cycle**: 20% (basis time 600s) at nominal torque
- **Mode of operation**: S3
- **Supply voltage**: 24 VDC ± 10% galvanically separated between control and motor and bus
- **Nominal current**: 2.2 A
- **Power consumption (control unit)**: 0.1 A
- **Positioning accuracy**: 0.9° (absolute measurement of position taken directly at the output shaft)
- **Positioning range**: 250 rotations not subject to mechanical limits
- **Shock resistance**: 50 g 11 ms
- **Vibration resistance**:
  - 10...55 Hz: 1.5 mm/
  - 55...1000 Hz: 10 g/
  - 10...2000 Hz: 5 g
- **Output shaft**: 8 mm solid shaft or 8 mm hollow shaft with adjustable collar
- **Maximum axial force**: 20 N
- **Maximum radial force**: 40 N
- **Ambient temperature**: 0...45°C
- **Storage temperature**: -10...70°C
- **Protection class**: IP 65 under installed and wired conditions

**Material**

- as for PSE, but with stainless steel housing

**Weight**: 650 g

**Certificates**

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

**Note**: welded V2A housing, ball bearings at the output shaft with sealing disc.

The order key and accessories can be found on p. 18 / 19.

---

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>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protection class</td>
<td>Design</td>
<td>Type</td>
<td>Bus communication (see p. 7)</td>
<td>Connections</td>
<td>Brake (see p. 11)</td>
</tr>
<tr>
<td><strong>Positioning System Efficient</strong> (see p. 20-25)</td>
<td>IP54</td>
<td>PSE</td>
<td>30x8/-14 (V)</td>
<td>CA: CANopen</td>
<td>0: standard</td>
</tr>
<tr>
<td><strong>Positioning System Stainless</strong> (see p. 27-30)</td>
<td>IP65</td>
<td>PSS</td>
<td>31x8/-14 (V)</td>
<td>DP: PROFIBUS DP</td>
<td>T: with jog keys</td>
</tr>
<tr>
<td><strong>Positioning System Washable</strong> (see p. 32-35)</td>
<td>IP68</td>
<td>PSW</td>
<td>32x14 (V)</td>
<td>SE: Modbus RTU</td>
<td>Y: 1 connector, Y-encoded</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>33x14 (V)</td>
<td>E: Sercos</td>
<td>Z: 1 connector, Y-encoded, with jog keys</td>
</tr>
</tbody>
</table>

* You can find the order key for the PSE 34x_2 on page 26.  
* (V) not for PSW or IO-Link, always via an extra connector

#### Standard equipment (connections)

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

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

#### Form/Type Torque Output shaft

<table>
<thead>
<tr>
<th>Horizontal</th>
<th>Vertical</th>
</tr>
</thead>
<tbody>
<tr>
<td>x = 1 Nm</td>
<td>8 = 8 mm hollow shaft</td>
</tr>
<tr>
<td>x = 2 Nm</td>
<td>14 = 14 mm hollow shaft</td>
</tr>
<tr>
<td>x = 5 Nm</td>
<td>8V = 8 mm solid shaft</td>
</tr>
<tr>
<td>x = 10 Nm</td>
<td>14V = 14 mm solid shaft</td>
</tr>
<tr>
<td>x = 18 Nm</td>
<td></td>
</tr>
<tr>
<td>x = 25 Nm</td>
<td></td>
</tr>
</tbody>
</table>

* only for PSE  
* only for PSS/PSW  

### TORQUES AND SPEEDS

#### 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

---

Nominal torque – nominal speed combinations

### Protection class

- **A**
- **B**
- **C**
- **D**
- **E**
- **F**

### Design

- **PSE**
- **PSS**
- **PSW**

### Type

- IP54
- IP65
- IP68

### Bus communication (see p. 7)

- CA: CANopen
- DP: PROFIBUS DP
- SE: Modbus RTU
- E: SERCOS
- PL: IO-Link

### Connections

- 0: standard
- T: with jog keys
- Y: 1 connector, Y-encoded
- Z: 1 connector, Y-encoded, with jog keys

### Brake (see p. 11)

- 0: without
- M: with

### Certification

- 0: NRTL certification in accordance with UL, CSA, ANSI and CE

---

1) You can find the order key for the PSE 34x_2 on page 26.  
2) (V) not for PSW or IO-Link, always via an extra connector
3) only with 14 mm output shafts
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 (IP54) and PSS (IP65) comply with the IP protection classes. We will also be pleased to help you find a suitable mating connector for the PSW (IP68) 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</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
<tr>
<td>PROFIBUS DP</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
<tr>
<td>Modbus RTU</td>
<td>Connector set: Order no. 9601.0086</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>DeviceNet</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
<tr>
<td></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></td>
<td></td>
<td></td>
<td>10 m: Order no. 9601.0244</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hub on request</td>
</tr>
<tr>
<td>Sercos</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EtherCAT</td>
<td>![Image]</td>
<td>![Image]</td>
<td></td>
</tr>
<tr>
<td>PROFINET</td>
<td>![Image]</td>
<td>![Image]</td>
<td></td>
</tr>
<tr>
<td>EtherNet/IP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>POWERLINK</td>
<td>Connector set: Order no. 9601.0112</td>
<td>Connector set: Order no. 9601.0317</td>
<td></td>
</tr>
<tr>
<td>IO-Link</td>
<td>-</td>
<td>-</td>
<td>Connector: Order no. 9601.0107</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