Compact, Safe and Fully Integrated
“The Ultimate in Steer by Wire for Warehouse Trucks”

Optional Turning Wheel
Absolute Position Control
Vast Experience
Allied Motion has supplied the fork lift truck industry with compact, safe and reliable all electric steer by wire and power assist servo systems for decades. The new EPS series leverage from this experience of over 200 000 units from previous generations in the field.

Covers all sizes of warehouse trucks
The Allied Motion EPS series of steering systems offer compact, versatile, long-life, trouble-free steering for all common warehouse truck sizes, from the smallest pallet lifter to multi-ton reach trucks or 3 wheel counter balance trucks.

New Feature  Turning Wheel Absolute Position Control
- Patent Pending

A common headache for manufacturers of fork lift truck using steer-by-wire is the homing sequence. When the truck key is turned, most trucks utilize a homing sequence where the turning wheel rotates until a homing sensor is activated, and the absolute position of the turning wheel is known.

With the optional Allied Motion Turning Wheel Absolute Position Control none of this is needed. This option (patent pending) allows the controller to know the absolute position of the turning wheel, without the need of external sensors. When the driver turns the key, the drive wheel makes a very small movement, hardly noticeable to the operator and then the truck steering direction is known by the EPS. This position information can be communicated to external systems via CAN.

Even if the truck wheel has been manually moved during power off (for example in service with the wheel lifted) the EPS will still figure out the absolute position once power is turned on again. No external parts means higher reliability, easier assembly, maintenance and lower cost!

Preliminary, may be changed without notice.
## Technical Data and Dimensions

### Gear Ratio

<table>
<thead>
<tr>
<th>Model/Unit</th>
<th>EPS-070</th>
<th>EPS-090</th>
<th>EPS-110</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gear Ratio</td>
<td>33.6</td>
<td>33.6</td>
<td>33.6</td>
</tr>
<tr>
<td>Nominal Voltage</td>
<td>VDC</td>
<td>VDC</td>
<td>VDC</td>
</tr>
</tbody>
</table>

### Peak Output Torque, 5 s

<table>
<thead>
<tr>
<th>Model/Unit</th>
<th>EPS-070</th>
<th>EPS-090</th>
<th>EPS-110</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nm / lb-ft</td>
<td>35/26</td>
<td>40/30</td>
<td>50/38</td>
</tr>
<tr>
<td>rpm</td>
<td>70</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>Nm / lb-ft</td>
<td>60/44</td>
<td>70/52</td>
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</table>

### Minimum output wheel diameter for Peak Torque mm

<table>
<thead>
<tr>
<th>Model/Unit</th>
<th>EPS-070</th>
<th>EPS-090</th>
<th>EPS-110</th>
</tr>
</thead>
<tbody>
<tr>
<td>mm</td>
<td>36</td>
<td>40</td>
<td>40</td>
</tr>
</tbody>
</table>

### Other voltages or gear ratios available on request

For updated dimensions with tolerances, please request drawings from info@alliedmotion.com

### Dimensions in mm

For updated dimensions with tolerances, please request drawings from info@alliedmotion.com

## Drawings

### EPS-070

![EPS-070 Diagram](image1)

### EPS-090

![EPS-090 Diagram](image2)

### EPS-110

![EPS-110 Diagram](image3)
SWS Steering Wheel Sensor

The Allied Motion SWS is specifically developed for use in reach trucks and other vehicles using steer-by-wire power steering. The steering wheel can be mounted directly to the SWS.

- Flat, only 29 mm in height!
- For direct mount of typical EPS Steering Wheels
- Suitable “friction feeling” for typical Reach Truck Steering Wheels
- PWM or CAN versions for direct connection to the EPS or to the truck network

Download the SWS Datasheet on www.alliedmotion.com