Linkage Configuration for Part-Turn Actuators

EPL681

Questionnaire
QU/EPL681-EN
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1 General description

EPL681 is a software tool to determine the individual linkage layout for your damper application. The torque / force which applies to the damper does not only depend on the actuator torque but also on the angular conditions within the linkage (damper arm, actuator drive arm and connection rod).

Enter the data where required in the following questionnaire and ABB will provide detailed information about:
- resulting length of coupling rod
- torque which applies at the damper within the operating range
- axial force in coupling rod within the operating range
- angular damper arm position depending on actuator drive arm position

All information may be displayed graphically or tabularly.

2 Plant data

Date:

Return Results to:

Phone:

E-Mail:

Customer:

Plant Site:

City/State/Zip:

Plant Section:

Application:

Tag-No.: 

3 Basic arrangement of actuator and damper

For all entries please refer to the photo on the left and the sketch below.
Pay attention to the correct (positive or negative) algebraic sign.

3.1 Enter the vertical and horizontal pivot offset including units

Abb. 1: General arrangement of damper and actuator pivot

<table>
<thead>
<tr>
<th>Vertical pivot offset:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Horizontal pivot offset:</td>
<td></td>
</tr>
</tbody>
</table>
3.2 Enter figures for actuator including units

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial actuator arm angle ( w_1 ):</td>
<td></td>
</tr>
<tr>
<td>Actuator arm length ( a ):</td>
<td></td>
</tr>
<tr>
<td>Actuator torque:</td>
<td></td>
</tr>
<tr>
<td>Rotary direction of the actuator arm (CW / CCW):</td>
<td></td>
</tr>
</tbody>
</table>

Abb. 2: Basic view of actuator arm
3.3 Enter figures for damper including units

Abb. 3: Basic view of damper arm

<table>
<thead>
<tr>
<th>Initial damper arm angle W2:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Damper working angle dW:</td>
<td></td>
</tr>
<tr>
<td>Damper arm length (c):</td>
<td></td>
</tr>
<tr>
<td>Limit damper torque:</td>
<td></td>
</tr>
</tbody>
</table>