Aztec ADS430100 and ADS430105
Dip pole assembly and pole mounting adaptor kit

Installation procedures

Measurement made easy

1 Introduction

This publication details installation procedures for the ADS430100 dip pole assembly and ADS430105 pole mounting adaptor kit used with the ADS430 (RDO-PRO-X) optical dissolved oxygen probe. The procedures must be carried out by a trained technician.

Tools required
- Flat-bladed screwdriver
- Adjustable spanner
- Solvent cement

2 For more information

Further information is available from: www.abb.com/analytical

or by scanning these codes:

Sales
Service
3 Identification

The contents are shown in Table 3.1.

<table>
<thead>
<tr>
<th>Description</th>
<th>Part no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dip pole assembly, comprising: dip pole, pole mounting adaptor, end cap assembly</td>
<td>ADS430100</td>
</tr>
</tbody>
</table>


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Table 3.1 Dip pole assembly ADS430100

<table>
<thead>
<tr>
<th>Description</th>
<th>Part no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pole mounting adaptor kit, comprising: pole mounting adaptor, end cap assembly, 2 x O-rings (1 per pole size)</td>
<td>ADS430105</td>
</tr>
</tbody>
</table>


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Table 3.2 Pole mounting adaptor kit ADS430105 (excludes dip pole*)

*Dip pole to be user-supplied:
metric requirement: ABS pole, 40 mm OD
or
imperial requirement: ABS pole 1 1/4 in. NB

3.1 Optional mounting brackets

<table>
<thead>
<tr>
<th>Description</th>
<th>Part no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tilt-only mounting bracket, (standard), suitable for max. handrail diameter 42 mm (1.65 in.)</td>
<td>ADS430125</td>
</tr>
<tr>
<td>suitable for max. handrail diameter 50 mm (1.97 in.)</td>
<td>ADS430128</td>
</tr>
</tbody>
</table>

Table 3.3 Optional mounting brackets

**IMPORTANT (NOTE)**
- The mounting bracket fixing procedures in Section 5, page 3 are applicable to ABB-supplied brackets (above) only. For non-ABB mounting brackets, follow the manufacturers’ mounting instructions.

4 Fitting the probe

4.1 Dip pole assembly ADS430100 – fitting the probe

Referring to Fig. 4.1:
1. Unscrew self-tapping screw [A] and remove end cap [B] and O-ring [C] from end of dip pole [D].
2. Pass cable [E] through bottom pole mounting adaptor [F] and dip pole [D].

**IMPORTANT (NOTE)** Do not overtighten to avoid damage to probe or adaptor.

4. Unscrew gland nut [I] and remove internal (split) rubber grommet and plastic seat (not shown) from split gland body [J].
5. Pass probe cable [E] through O-ring [C], end cap [B] and split gland body [J].
6. Refit O-ring [C] and end cap [B] over end of dip pole [D] and secure using self-tapping screw [A].
7. Position (split) rubber grommet and plastic seat over cable [E], slide them into split gland body [J] and refit gland nut [I].
8. Proceed to Section 5, page 3 to mount the assembly to a handrail.

Fig. 4.1 ADS430100 – fitting the probe to ABB-supplied pole
4.2 Pole mounting adaptor kit ADS430105 – fitting dip pole adaptors and probe

Referring to Fig. 4.2:

1. Clean mating surfaces of bottom pole mounting adaptor A and (customer-supplied) dip pole B thoroughly and use solvent cement (not supplied) to bond the 2 items together.

   ![IMPORTANT (NOTE)] Leave solvent cement to cure for at least 12 hours.

2. Pass cable D through adaptor A and dip pole B.
3. Wrap PTFE tape (or similar) around thread C and screw probe E onto thread. Ensure cable D is not twisted.

   ![IMPORTANT (NOTE)] Do not overtighten to avoid damage to probe or adaptor.

4. Unscrew gland nut F and remove internal (split) rubber grommet and plastic seat (not shown) from split gland body G.
5. Pass probe cable D through (correct) O-ring* H, end cap I and split gland body G.
6. Fit O-ring* H and end cap I over end of dip pole B and secure using self-tapping screw J.
7. Position (split) rubber grommet and plastic seat over the cable, slide them into split gland body G and refit gland nut F.
8. Proceed to Section 5, page 4 to mount the assembly to a handrail.

*2 x O-rings are supplied: 1 for 40 mm OD pipe, 1 for 1 1/4 in. NB pipe

Fig. 4.2 ADS430105 – fitting dip pole adaptors and probe to 40 mm OD or 1 1/4 in. NB customer-supplied pole
5 Mounting

**IMPORTANT (NOTE)**
- Ensure the temperature sensor (see Fig. 5.2) is below the free surface of the liquid being monitored before securing the boom in the operating position.
- The optimum angle of the probe will be affected by the nature of the sample. Therefore, adjustment may be required if there is excessive air bubble (or similar interferent) build-up on the end of the probe.

5.1 Fixing optional ABB mounting brackets
1. Select the required position for the dip pole system on the handrail. When locating the dip pole, allow sufficient cable slack for positioning / servicing.
2. Referring to Fig. 5.1:
   - Fit handrail clamps A around handrail B and secure saddleassembly C to the handrail in the horizontal position. Leave nuts D finger-tight for later adjustment.
3. Fit dip pole clamps E around dip pole F using nuts G.
4. Referring to Fig. 5.2
   - Adjust the centre line of the handrail clamp until it is at right angles H to the dip pole with probe I (and temperature sensor) immersed in undisturbed monitored liquid J.
5. Tighten 4 handrail clamp securing nuts D.

**IMPORTANT (NOTE)** Do not overtighten.

6. To lock the angle of the bracket and pole, loosen 4 handrail clamp securing nuts D and rotate the mounting bracket until locking screw K aligns with the hole in the saddle. Tighten locking screw K and 4 handrail clamp securing nuts D.
7. Connect probe cable connector L to the AWT440 transmitter.

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**Fig. 5.1 Fitting the tilt bracket assembly – ADS430125 and ADS430128**

**Fig. 5.2 Adjusting the dip pole position**