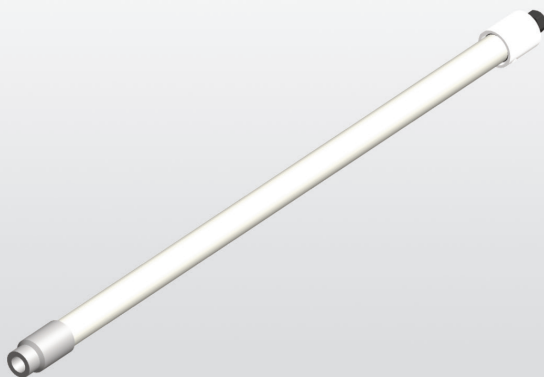


100 GP/100 ULTRA/500 PRO series pH/Redox (ORP) sensors



Dip pole assembly

Measurement made easy

Introduction

This publication details part numbers and installation procedures for sensor dip pole accessories (ABB-supplied pole and customer-supplied pole) for use with 100 GP, 100 ULTRA and 500 PRO series pH / Redox (ORP) sensors.

Tools required

- Small flat-headed screwdriver
- Solvent cement
- PTFE tape

For more information

Publications for the associated sensors multi-input transmitters are available for free download from:

www.abb.com/measurement

or by scanning this code:



Search for or click on:

Operating instruction 100 GP, 100 ULTRA, 500 PRO ¾ in pH/Redox (ORP) sensors	OI/100/500-EN
Operating instruction OI/AWT210 2-wire conductivity pH/ORP transmitter	OI/AWT210-EN
Operating instruction AWT440 multi-input transmitter	OI/AWT440-EN
Operating instruction AWT420 universal 4-wire single- and dual-input transmitter	OI/AWT420-EN
Data sheet AWT210 2-wire transmitter	DS/AWT210-EN
Data sheet AWT440 multi-input transmitter	DS/AWT440-EN
Data sheet AWT420 universal 4-wire single- and dual-input transmitter	DS/AWT420-EN

1 Safety

Potential safety hazards

The sensor operates on 3.3 V DC. There are no hazardous voltages present in the sensor.

WARNING

Before removing a sensor from the process, reduce process pressure to zero and ensure the sensor is cool enough to handle.

WARNING

Potential high pressure/high temperature

- These procedures must be carried out by suitably trained personnel and in accordance with any local regulations and practices.

2 Specification

ABB-supplied dip pole materials

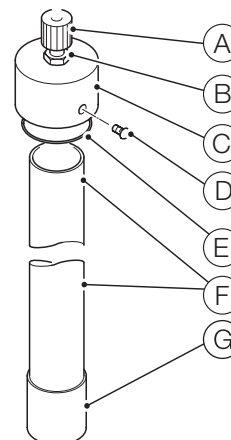
- Lower mounting adaptor: ABS
- Dip pole: ABS
- O-ring: Nitrile
- End cap: ABS
- Gland nut: Nylon
- Screw: stainless Steel

3 Accessory part numbers/kits

Description	Part number	Qty
2.5 m dip pole assembly – 1¼ in. NB comprising: dip pole, pole mounting adaptor, end cap assembly	3KXA163000L0021	1
1.0 m dip pole assembly – 1¼ in. NB comprising: dip pole, pole mounting adaptor, end cap assembly	3KXA163000L0022	1
Pole mounting adaptor kit – comprising: pole mounting adaptor, end cap assembly, O-ring (excludes dip pole)	3KXA163000L0023	1
Wall mounting accessory	ATS4000700	1
Rail mounting kit for 40mm or 1.25 in. dia dip pole, suitable for 42 or 51 mm (1.7 or 2.0 in.) dia handrail (tilt only)	ATS4000760	1
Open tank flanged dip mount (for mounting on user-supplied mounting bracket)	ATS4000785	1
Guard for ¾ in style bodies	3KXA163000L0024	1
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Table 1 Dip pole assemblies and pole mounting adaptor kit

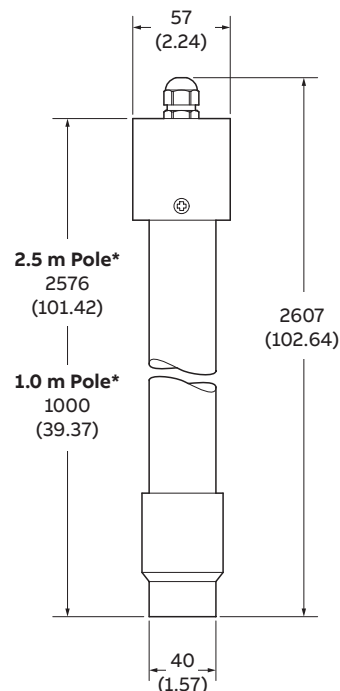
4 Overview



- (A) Gland nut
- (B) Split gland body
- (C) End cap
- (D) Self-tapping screw
- (E) O-ring
- (F) Dip pole
- (G) Lower mounting adaptor

Figure 1 Dip pole assembly overview

5 Dimensions



*Dimensions for ABB-supplied pole only.

Figure 2 Dip pole dimensions

6 Fitting the sensor

Fitting the sensor to ABB-supplied pole

Referring to Figure 3:

- 1 Unscrew self-tapping screw (A) and remove end cap (B) and O-ring (C) from upper end of dip pole (D).
- 2 Pass cable (E) through lower mounting adaptor (F) and dip pole (D).
- 3 Wrap PTFE tape (or similar) around thread (G) and screw sensor (H) into lower mounting adaptor (F). Ensure cable (E) is not twisted.
Note. Do not overtighten to prevent damage to sensor 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 cable E through O-ring (C), end cap (B) and split gland body (J).
- 6 Refit O-ring (C) and end cap (B) over upper 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).

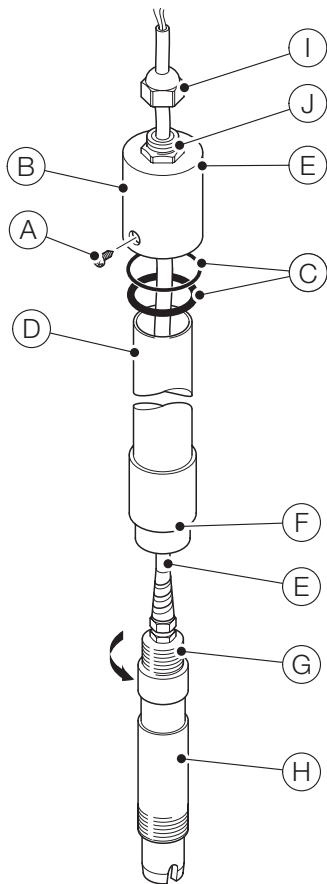


Figure 3 Fitting the sensor to ABB-supplied pole

Fitting the sensor customer-supplied pole

Referring to Figure 4:

- 1 Clean mating surfaces of mounting adaptor (A) and customer-supplied dip pole (B) thoroughly and use solvent cement (not supplied) to bond the 2 items together.
Note. Leave solvent cement to cure for at least 12 hours.
- 2 Pass cable (C) through mounting adaptor (A) and dip pole (B).
- 3 Wrap PTFE tape (or similar) around thread (D) and screw sensor (E) into mounting adaptor (A). Ensure cable (C) is not twisted.
Note. Do not overtighten to prevent damage to sensor 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 cable (C) through O-ring (H), end cap (I) and split gland body (G).
- 6 Fit O-ring (H) and end cap (I) over upper end of dip pole (B) and secure using self-tapping screw (J).
- 7 Position (split) rubber grommet and plastic seat over cable (C), slide them into split gland body (G) and refit gland nut (F).

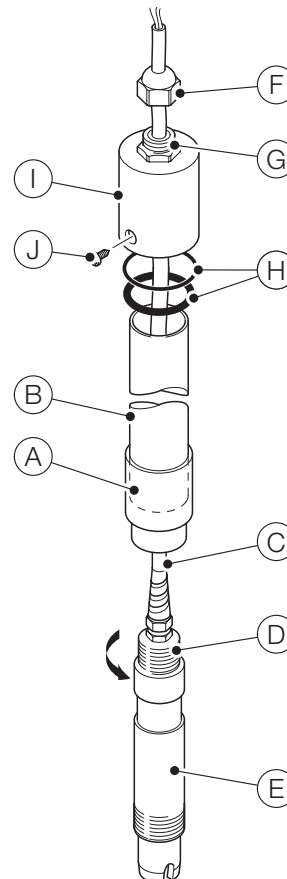


Figure 4 Fitting the sensor to customer-supplied pole

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