

Installation Guide

Model 2078 Screw-In Type Conductivity Cell

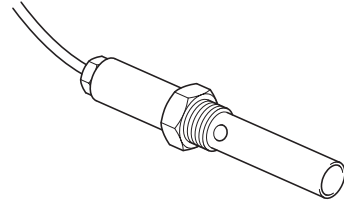


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ABB Limited
Stonehouse,
Gloucestershire, GL10 3TA
UK
Tel: +44 (0)1453 826661
Fax: +44 (0)1453 827856

ABB Inc.
2175 Lockheed Way
Carson City, NV 89706
USA
Tel: +1 (0) 775 883 4366
Fax: +1 (0) 775 883 4373



Health and Safety

To ensure that our products are safe and without risk to health, the following points must be noted:

1. The relevant sections of these instructions must be read carefully before proceeding.
2. Warning labels on containers and packages must be observed.
3. Installation, operation, maintenance and servicing must only be carried out by suitably trained personnel and in accordance with the information given.
4. Normal safety precautions must be taken to avoid the possibility of an accident occurring when operating in conditions of high pressure and/or temperature.
5. Chemicals must be stored away from heat, protected from temperature extremes and powders kept dry. Normal safe handling procedures must be used.
6. When disposing of chemicals ensure that no two chemicals are mixed.

Safety advice concerning the use of the equipment described in this manual or any relevant hazard data sheets (where applicable) may be obtained from the Company address on the back cover, together with servicing and spares information.

Use of Instructions

Information in this manual is intended only to assist our customers in the efficient operation of our equipment. Use of this manual for any other purpose is specifically prohibited and its contents are not to be reproduced in full or part without prior approval of the Marketing Communications Department.

Although **Warning** hazards are related to personal injury, and **Caution** hazards are associated with equipment or property damage, it must be understood that operation of damaged equipment could, under certain operational conditions, result in degraded process system performance leading to personal injury or death. Therefore, comply fully with all **Warning** and **Caution** notices.

Caution.
An instruction that draws attention to the risk of damage to the product, process or surroundings.

Information.
Further reference for more detailed information or technical details.

Warning.
An instruction that draws attention to the risk of injury or death.

Note.
Clarification of an instruction or additional information.

Client Warranty

Prior to installation, the equipment referred to in this manual must be stored in a clean, dry environment, in accordance with the Company's published specification. Periodic checks must be made on the equipment's condition.

In the event of a failure under warranty, the following documentation must be provided as substantiation:

1. A listing evidencing process operation and alarm logs at time of failure.
2. Copies of operating and maintenance records relating to the alleged faulty unit.

We provide a comprehensive after sales service via our Worldwide Service Organization. Contact one of the following offices for details of your nearest Service and Repair Centre.

United Kingdom
ABB Limited
Tel: +44 (0)1453 826661
Fax: +44 (0)1453 827856

United States of America
ABB Inc.
Tel: +1 (0) 775 883 4366
Fax: +1 (0) 775 883 4373

Customer Support

Use of Instructions

1 PREPARATION

1.1 Checking the Code Number – Table 1.1

Basic Type No.	Mounting & Version	Cell Constant (K)	Process Connection Type	Temperature Compensation
Code Characters 1,2	3,4,5	6	7	8
20 Electrolytic conductivity measuring cells	78/ Screw-in (stainless steel)	3 0.05 4 0.1	0 3/4 in. BSP (fitted with plug and socket) 1 3/4 in. BSP 7 3/4 in. NPT 8 3/4 in. NPT (fitted with plug and socket)	0 None 5 Pt100 resistance thermometer

Table 1.1 Checking the Conductivity Cell Code Number

2 MECHANICAL INSTALLATION

2.1 Siting Requirements – Fig 2.1

Caution. Ensure the integral cable (where applicable) does not touch hot or abrasive objects when the plug is connected to the bulkhead socket.

Note. Allow sufficient clearance for easy removal of cell for cleaning – see Fig. 2.2 for overall dimensions of cells.

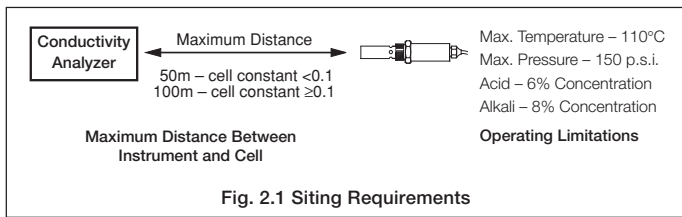


Fig. 2.1 Siting Requirements

2.2 Cleaning the Conductivity Cell

Before installing the conductivity cell, clean the electrodes as follows:

Unscrew the outer electrode and thoroughly clean it with a nylon-bristle brush (supplied) and a warm detergent solution. Clean the central electrode in a similar manner, taking care not to damage it. For more tenacious deposits a 2% hydrochloric acid solution may be used. Rinse thoroughly with distilled water after cleaning. The electrodes should have a dull, frosted appearance which must not be removed by polishing or abrasive cleaning. Refit the outer electrode.

2.3 Overall Dimensions, Conductivity Cell – Fig. 2.2

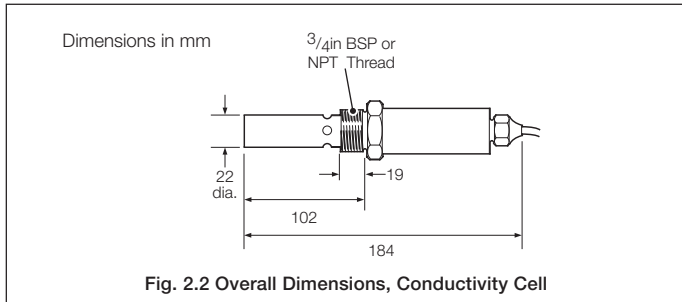


Fig. 2.2 Overall Dimensions, Conductivity Cell

2.4 Installing the Conductivity Cell – Fig 2.3

Caution. After cleaning and installing the conductivity cell, ensure it remains filled with liquid and is not allowed to dry out and ensure that the electrode bore remains fully immersed at minimum fluid levels.

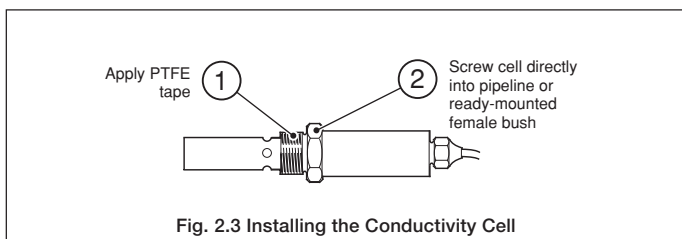


Fig. 2.3 Installing the Conductivity Cell

2.5 Installing the Bulkhead Socket – Fig. 2.4

Mount the socket at a convenient location close to the cell. Refer to Fig. 2.4 for overall dimensions and fixing details.

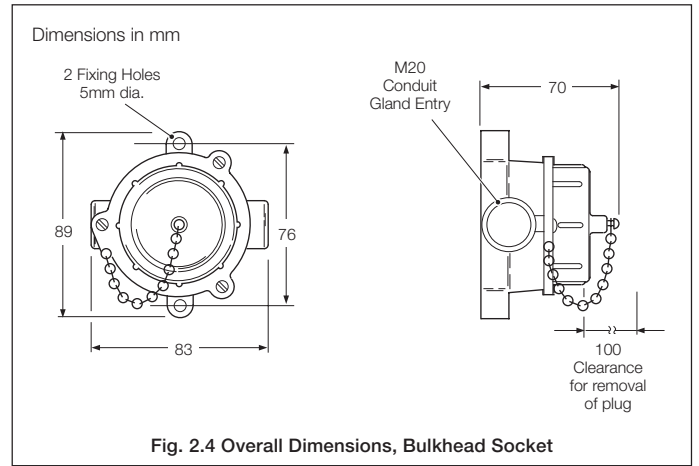


Fig. 2.4 Overall Dimensions, Bulkhead Socket

3 ELECTRICAL CONNECTIONS

Warning. Before making any connections, ensure that the power supply, any high voltage-operated control circuits and high common mode voltages are switched off

3.1 Conductivity Cell to Analyzer Connections

Information. Use cable part no. J/0233/820 to connect the bulkhead socket to the analyzer.

3.1.1 Conductivity Cell Connections – Fig. 3.1

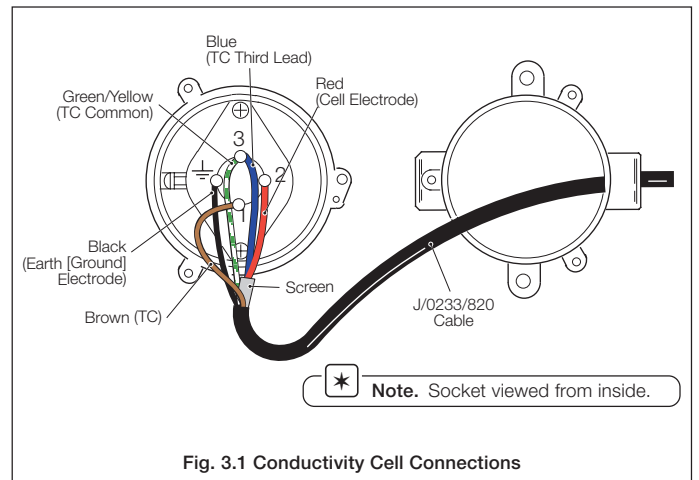


Fig. 3.1 Conductivity Cell Connections

3.1.2 Analyzer Connections

Refer to the analyzer's User Guide for details of connecting cable J/0233/820 to the analyzer.

3.2 Direct Cell-to-Analyzer Connection

If required, the bulkhead socket can be removed from the Model 2078 Conductivity Cell and the cell connected directly to the analyzer. Table 3.1 lists the cell cable core colors and associated cell functions – refer to the analyzer's User Guide for connection details.

Cell Cable Core Color	Cell Function
Green	TC Common
Yellow	TC
Red	Cell Electrode
Blue	Earth (Ground) Electrode

Table 3.1 Cell Cable Core Colors and Cell Functions