



The Company's policy is one of continuous product improvement and the right is reserved to modify the information contained herein without notice.

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IM/P880 Issue 1

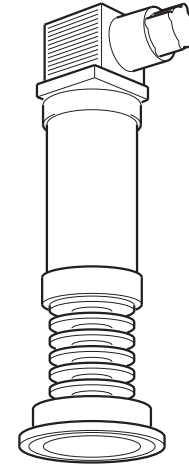


ABB Instrumentation



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.

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ABB Instrumentation provides a comprehensive after sales service via a Worldwide Service Organization. Contact one of the following offices for details on your nearest Service and Repair Centre.

Customer Support

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.

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 Technical Communications Department, ABB Kent-Taylor.

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.

Use of Instructions

1 INTRODUCTION

i Information.

- Pressure range must be compatible with the maximum pressure being measured.
- Pressure media must be compatible with the transmitter wetted parts listed in these instructions.
- Liquid must not be allowed to freeze in the pressure port.
- Exposed ends of cables must be free from moisture.
- Wetted parts: 316L stainless steel

The hygienic flush-diaphragm transmitters of the **DATUM P880 Series** are ideally suited to fulfill the pressure measurement requirements of the food, dairy and pharmaceutical industries.

The cleanliness requirements of the food processing industry have dictated the hygienic design of these transmitters. They can also withstand, without damage, the various cleaning phases specific to these industries e.g. sterilizing cycles, autoclaving and steam flushing.

- Stainless steel 316L flush diaphragm
- IP65
- High temperature
- Performance evaluation report delivered by INRA laboratory

2 MECHANICAL INSTALLATION

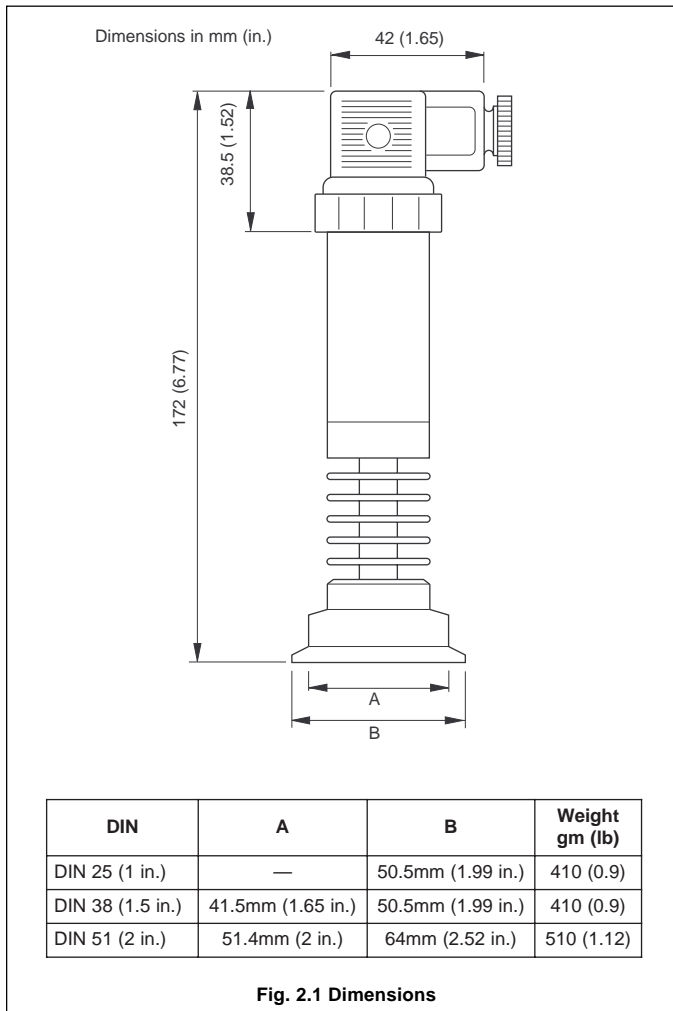
2.1 Pressure Connections

Triclamp: DN25 (1 in.), DN38 (1.5 in.) and DN51 (2 in.)

2.2 Environmental Limits

- Temperature limits: -25°C to +85°C (14°F to 131 °F)
- IP65 (with connector)

2.3 Dimensions – Fig. 2.1

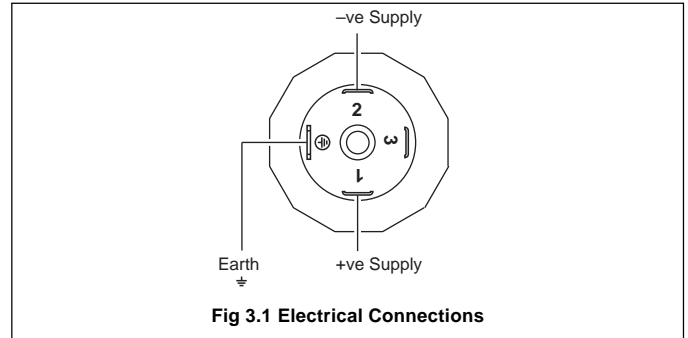


3 ELECTRICAL INSTALLATION

i Information. To combat the effects of lightning strikes it is recommended that the receiving equipment be fitted with a Lightning Protection Unit (LPU) at the point of cable entry into the building.

3.1 Electrical Connections and Specification

3.1.1 Electrical Connections



3.1.2 Electrical Specification

Power Supply	13 to 40V d.c. 24V nominal
Output Signal	4 to 20mA

3.2 Grounding

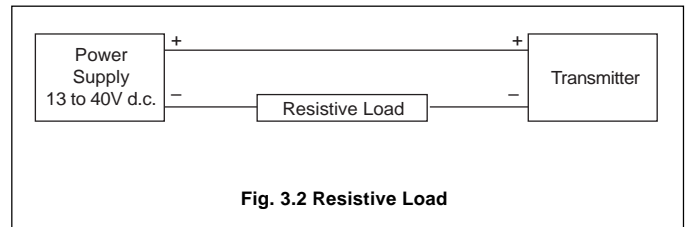
All versions should be grounded by the installation pipework. If this is not possible, the sensor should be grounded at the instrumentation end via the appropriate pin. For maximum protection against RFI all versions should be installed using screened cable with the screen grounded at the instrumentation end.

3.3 Resistive Loading

The total permissible resistive load in the loop (to include all the cable resistance) can be:

$$\text{Zero to } \frac{(50 \times \text{supply voltage} - 8)}{0.02} \text{ ohms}$$

e.g. with a 24V d.c. supply the permissible load is from zero up to 800 ohms – see Fig. 3.2.



3.4 Applying Power

Before applying power, ensure the correct polarity and excitation levels are applied.

3.5 Calibration

Transmitters are calibrated to a fixed range at time of order; this can be identified from the product code.

4 MAINTENANCE

4.1 Routine Inspection

Limited to periodic inspection of the cable and connector to ensure that these are neither damaged nor softened by incompatible liquid.

4.2 Repair

The transmitters cannot be repaired locally. If damaged, return to the Company at the address shown overleaf or to accredited dealers when a replacement/repair is required.