



## **Bearing Temperature Sensor ADB20 & ADB29 series.**

Dear 4B Customer:

Congratulations on your purchase. 4B appreciates your business and is pleased you have chosen our products to meet your needs.

Please read in its entirety and understand the literature accompanying the product before you place the product into service. Please read the safety precautions carefully before operating the product. With each product you purchase from 4B, there are some basic but important safety considerations you must follow to be sure your purchase is permitted to perform its design function and operate properly and safely, giving you many years of reliable service. Please read and understand the Customer Safety Responsibilities listed below. Failure to follow this safety directive and the Operation Manuals and other material furnished or referenced, may result in serious injury or death.

### ***SAFETY NOTICE TO OUR CUSTOMERS***

- A. In order to maximize efficiency and safety, selecting the right equipment for each operation is vital. The proper installation of the equipment, and regular maintenance and inspection is equally important in continuing the proper operation and safety of the product. The proper installation and maintenance of all our products is the responsibility of the user unless you have asked 4B to perform these tasks.
- B. All installation and wiring must be in accordance with Local and National Electrical Codes and other standards applicable to your industry. (Please see the article "Hazard Monitoring Equipment Selection, Installation and Maintenance" at [www.go4b.com](http://www.go4b.com).) The installation of the wiring should be undertaken by an experienced and qualified professional electrician. Failure to correctly wire any product and/or machinery can result in the product or machine failing to operate as intended, and can defeat its design function.
- C. Periodic inspection by a qualified person will help assure your 4B product is performing properly. 4B recommends a documented inspection at least annually and more frequently under high use conditions.
- D. Please see the last page of this manual for all warranty information regarding this product.

### ***CUSTOMER SAFETY RESPONSIBILITIES***

#### **1. READ ALL LITERATURE PROVIDED WITH YOUR PRODUCT**

Please read all user, instruction and safety manuals to ensure that you understand your product operation and are able to safely and effectively use this product.

#### **2. YOU BEST UNDERSTAND YOUR NEEDS**

Every customer and operation is unique, and only you best know the specific needs and capabilities of your operation. Please call the 24-hour hotline at 309-698-5611 for assistance with any questions about the performance of products purchased from 4B. 4B is happy to discuss product performance with you at any time.

#### **3. SELECT A QUALIFIED AND COMPETENT INSTALLER**

Correct installation of the product is important for safety and performance. If you have not asked 4B to perform the installation of the unit on your behalf, it is critical for the safety of your operation and those who may perform work on your operation that you select a qualified and competent electrical installer to undertake the installation. The product must be installed properly to

perform its designed functions. The installer should be qualified, trained, and competent to perform the installation in accordance with Local and National Electrical Codes, all relevant OSHA Regulations, as well as any of your own standards and preventive maintenance requirements, and other product installation information supplied with the product. You should be prepared to provide the installer with all necessary installation information to assist in the installation.

#### **4. ESTABLISH AND FOLLOW A REGULAR MAINTENANCE AND INSPECTION SCHEDULE FOR YOUR 4B PRODUCTS**

You should develop a proper maintenance and inspection program to confirm that your system is in good working order at all times. You will be in the best position to determine the appropriate frequency for inspection. Many different factors known to the user will assist you in deciding the frequency of inspection. These factors may include but are not limited to weather conditions; construction work at the facility; hours of operation; animal or insect infestation; and the real-world experience of knowing how your employees perform their jobs. The personnel or person you select to install, operate, maintain, inspect or perform any work whatsoever, should be trained and qualified to perform these important functions. Complete and accurate records of the maintenance and inspection process should be created and retained by you at all times.

#### **5. RETAIN AND REFER TO THE OPERATION MANUAL FOR 4B'S SUGGESTED MAINTENANCE AND INSPECTION RECOMMENDATIONS**

As all operations are different, please understand that your specific operation may require additional adjustments in the maintenance and inspection process essential to permit the monitoring device to perform its intended function. Retain the Operation Manual and other important maintenance and service documents provided by 4B and have them readily available for people servicing your 4B equipment. Should you have any questions, please call the 4B location who supplied the product or the 24-hour hotline number in the USA -309-698-5611.

#### **6. SERVICE REQUEST AND ONLINE PRODUCT REGISTRATION**

If you have questions or comments about the operation of your unit or require the unit to be serviced please contact the 4B location who supplied the product or send your request via fax (309-698-5615), email (4b-usa@go4b.com), or call us via our 24-hour hotline number in the USA - 309-698-5611. Please have available product part numbers, serial numbers, and approximate date of installation. In order to assist you, after the product has been placed into service, complete the Online Product Registration section which is accessed via our website [www.go4b.com](http://www.go4b.com)

## 4B Elevator Components Limited. Bearing Temperature Sensor ADB20 & ADB29 series.

The WDB20 and WDB29 series is a range of bearing sensors manufactured to screw directly into a bearing housing. Each sensor is fitted with a grease nipple to allow lubrication of the bearing without the need for removal of the sensor. The sensor is fitted with a mechanism to allow the temperature probe to set at variable depth to suit your application. The sensor housing is designed with a standard conduit entry thread so can be connected directly to a junction box. The ADB20 (NTC) sensor cable has two cores and the ADB29 (PT100) series has four cores and the table below shows the connections. The connections are not polarity sensitive therefore special connection requirements are eliminated. It is advisable however to connect all sensors in an identical manner, this will reduce the risk of shorting. Please refer to the relevant device manual for detailed connection information.

| <b>Part Number</b> | <b>Description</b>                                                                |
|--------------------|-----------------------------------------------------------------------------------|
| ADB20V3C           | 2 CORE CABLE – CONDUIT ENTRY - 100mm (4") PROBE - 3 MTR(10ft) LONG – CSA APPROVED |
| ADB20V3C/5         | 2 CORE CABLE – CONDUIT ENTRY - 100mm (4") PROBE - 5 MTR(16ft) LONG – CSA APPROVED |
| ADB20V3C/D2        | 2 CORE CABLE – CONDUIT ENTRY - 50mm (2") PROBE - 3 MTR(10ft) LONG – CSA APPROVED  |
| ADB20V3C/5/D2      | 2 CORE CABLE – CONDUIT ENTRY - 50mm (2") PROBE - 5 MTR(16ft) LONG – CSA APPROVED  |
| ADB20V3C/D8        | 2 CORE CABLE – CONDUIT ENTRY - 200mm (8") PROBE - 3 MTR(10ft) LONG – CSA APPROVED |
| ADB20V3C/5/D8      | 2 CORE CABLE – CONDUIT ENTRY - 200mm (8") PROBE - 5 MTR(16ft) LONG – CSA APPROVED |
| ADB29V3C           | 4 CORE CABLE – CONDUIT ENTRY - 100mm (4") PROBE - 3 MTR(10ft) LONG – CSA APPROVED |
| ADB29V3C/5         | 4 CORE CABLE – CONDUIT ENTRY - 100mm (4") PROBE - 5 MTR(16ft) LONG – CSA APPROVED |
| ADB29V3C/D2        | 4 CORE CABLE – CONDUIT ENTRY - 50mm (2") PROBE - 3 MTR(10ft) LONG – CSA APPROVED  |
| ADB29V3C/5/D2      | 4 CORE CABLE – CONDUIT ENTRY - 50mm (2") PROBE - 5 MTR(16ft) LONG – CSA APPROVED  |
| ADB29V3C/D8        | 4 CORE CABLE – CONDUIT ENTRY - 200mm (8") PROBE - 3 MTR(10ft) LONG – CSA APPROVED |
| ADB29V3C/5/D8      | 4 CORE CABLE – CONDUIT ENTRY - 200mm (8") PROBE - 5 MTR(16ft) LONG – CSA APPROVED |

### **NTC sensors**

Each sensor typically has the following electrical specification (using the ADB20V3C version).

|                     |   |              |
|---------------------|---|--------------|
| Resistance at 25°C  | - | 10,000 Ohms  |
| Resistance at 60°C  | - | 2,487 Ohms   |
| Resistance at 90°C  | - | 916 Ohms     |
| Minimum temperature | - | -22F(-30C)   |
| Maximum temperature | - | +230F (110C) |

### **Pt100 sensors**

Each sensor typically has the following electrical specification (using the ADB29V3C version).

|                            |   |              |
|----------------------------|---|--------------|
| Resistance at -22F (-30C)  | - | 88.22 Ohms   |
| Resistance at +140F (60C)  | - | 123.24 Ohms  |
| Resistance at +212F (100C) | - | 138.50 Ohms  |
| Minimum temperature        | - | -22F(-30C)   |
| Maximum temperature        | - | +230F (110C) |

### **ALL ADB2 sensors**

|                |   |                                   |
|----------------|---|-----------------------------------|
| Fixing Thread. | - | 1/8" NPT.                         |
| 2 core cable   | - | Red + White (NTC)                 |
| 4 core cable   | - | Red + Red + White + White (Pt100) |

### **Maximum Temperature Conditions.**

Designed to work in ignitable dust temperature class T125°C (sensor body)

Free air ambient temperature of -4°F to +122°F

Maximum continuous cable temperature is 250°F

### **Protection.**

CSA Class II Division 2 Groups E, F & G



**Installation Instructions:**

Remove the existing grease nipple from the bearing sensor.

Slacked the olive nut and remove the sensor probe.

Screw the sensor body in to the 1/8" NPT threaded hole in the bearing housing.

Re-insert the temperature probe in to the olive nut adjusting the depth to suit the bearing depth.

Tighten the olive nut using the recommended special spanner.

The maximum recommended torque for the olive nut is 2 Nm (18 lb-in)

It is important to use the correct water tight conduit fittings for the installation.

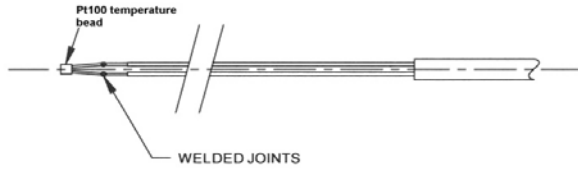
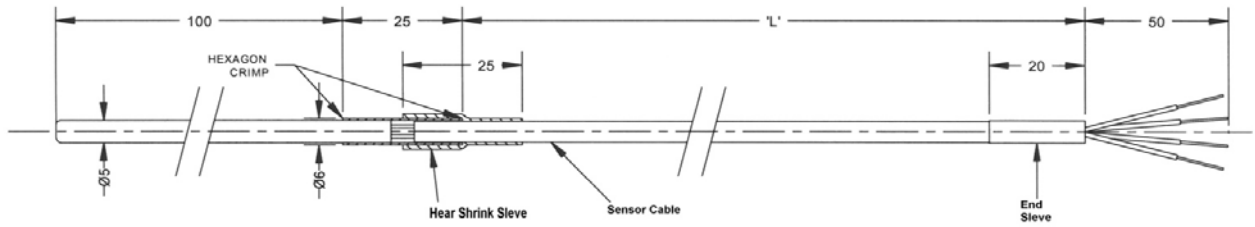


This specially designed wrench will allow the installer to tighten the olive nut during installation.

**For further information contact:**

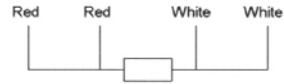
[www.go4b.com](http://www.go4b.com)



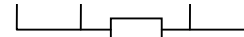


Pt100 adjustable probe assembly

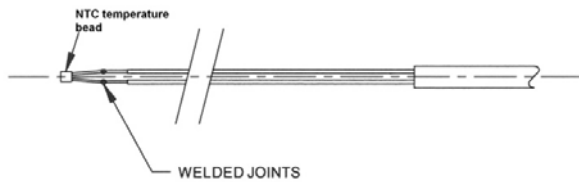
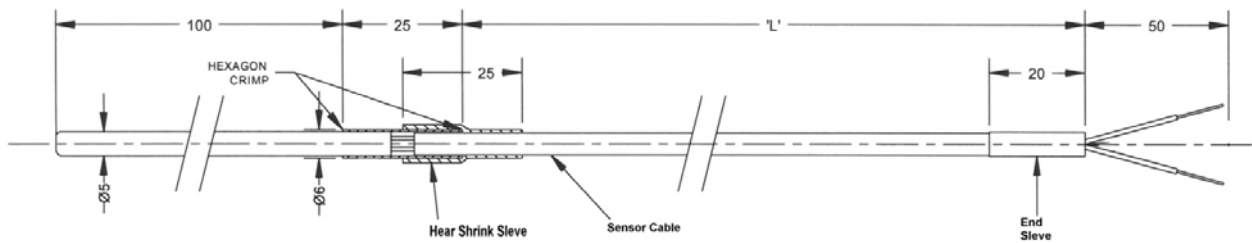
WIRING COLOUR CODE  
IN ACCORDANCE WITH BS EN 60751:1996



Red Black      Brown Orange

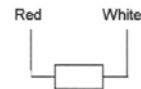


Alternative cable type

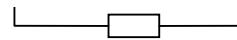


NTC adjustable probe assembly

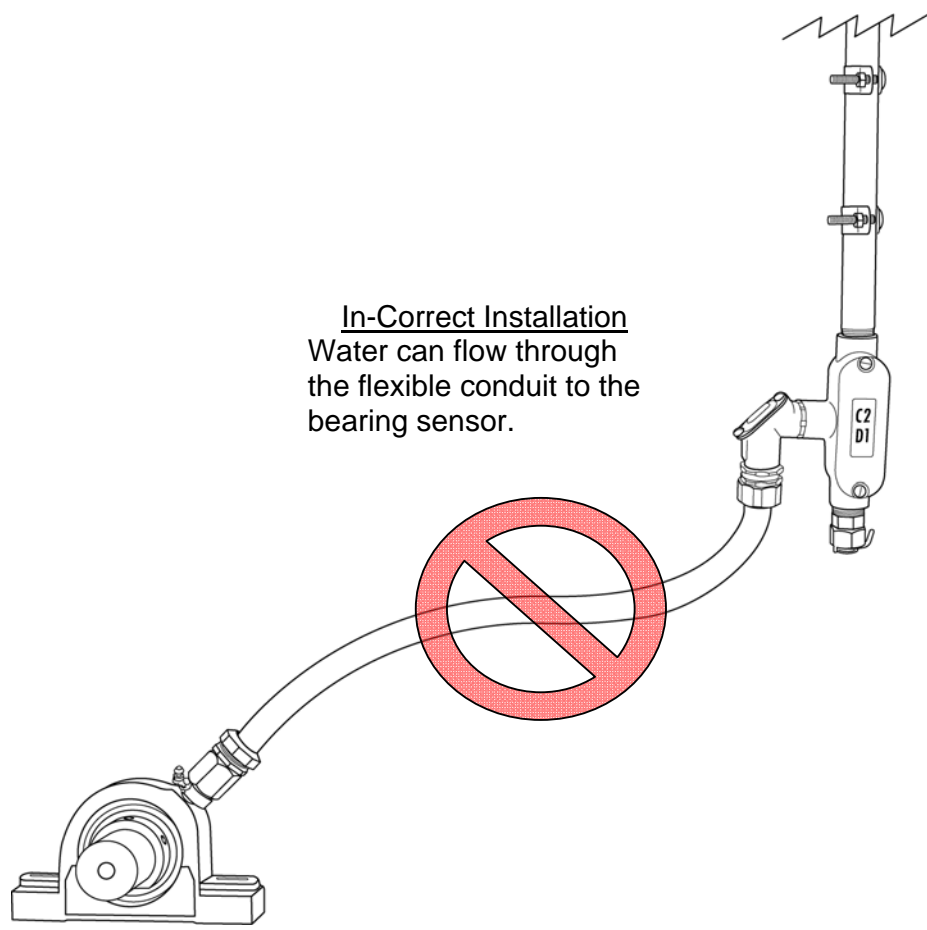
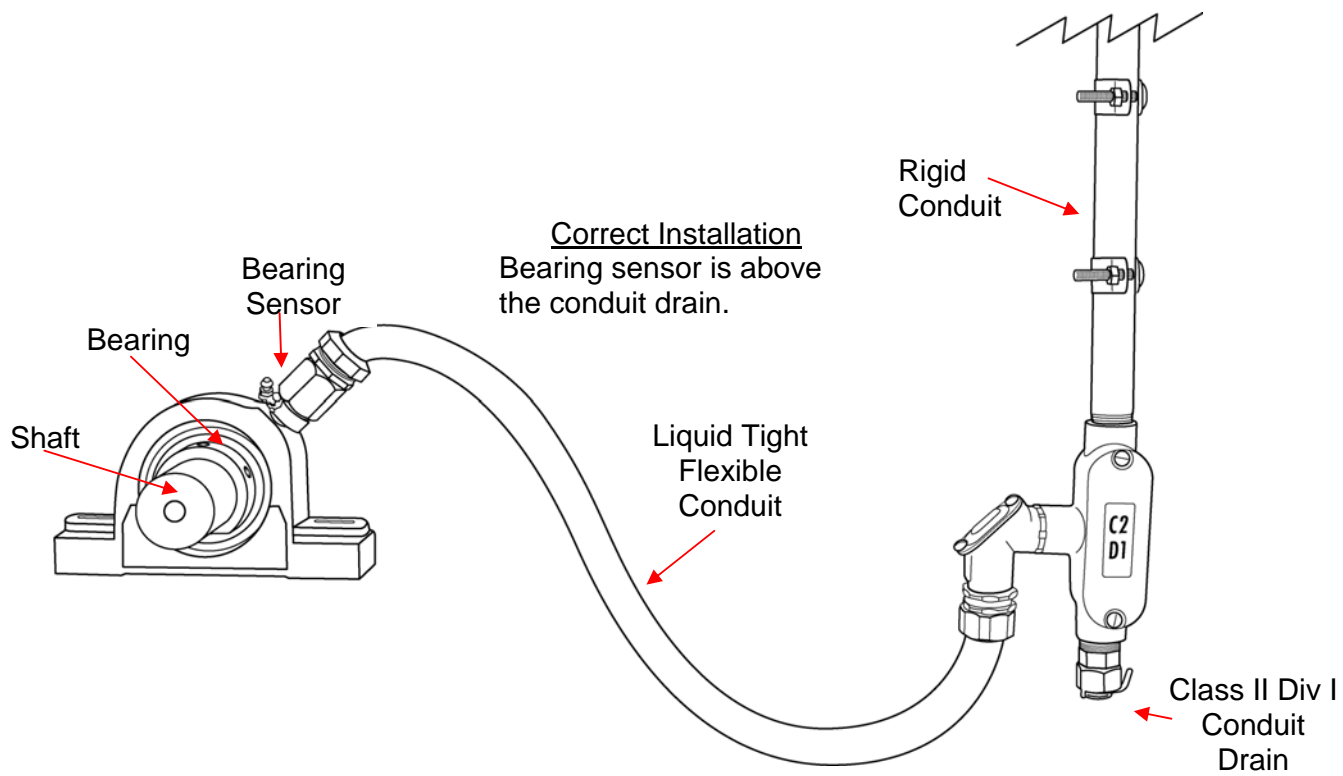
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IN ACCORDANCE WITH BS EN 60751:1996



Black      Brown



Alternative cable type



## **WARRANTY INFORMATION**

### **1. EXCLUSIVE WRITTEN LIMITED WARRANTY**

ALL PRODUCTS SOLD ARE WARRANTED BY THE COMPANY (4B COMPONENTS LIMITED, (4B) BRAIME ELEVATOR COMPONENTS LIMITED, AND (4B) S.E.T.E.M. Sarl) HEREIN AFTER REFERRED TO AS 4B TO THE ORIGINAL PURCHASER AGAINST DEFECTS IN WORKMANSHIP OR MATERIALS UNDER NORMAL USE FOR ONE (1) YEAR AFTER DATE OF PURCHASE FROM 4B. ANY PRODUCT DETERMINED BY 4B AT ITS SOLE DISCRETION TO BE DEFECTIVE IN MATERIAL OR WORKMANSHIP AND RETURNED TO A 4B BRANCH OR AUTHORIZED SERVICE LOCATION, AS 4B DESIGNATES, SHIPPING COSTS PREPAID, WILL BE, AS THE EXCLUSIVE REMEDY, REPAIRED OR REPLACED AT 4B'S OPTION.

### **2. DISCLAIMER OF IMPLIED WARRANTY**

NO WARRANTY OR AFFIRMATION OF FACT, EXPRESSED OR IMPLIED, OTHER THAN AS SET FORTH IN THE EXCLUSIVE WRITTEN LIMITED WARRANTY STATEMENT ABOVE IS MADE OR AUTHORIZED BY 4B. 4B SPECIFICALLY DISCLAIMS ANY LIABILITY FOR PRODUCT DEFECT CLAIMS THAT ARE DUE TO PRODUCT MISUSE, ABUSE OR MISAPPLICATIONS, AS AUTHORIZED BY LAW, 4B SPECIFICALLY DISCLAIMS ALL WARRANTIES THAT THE PRODUCT IS FIT OR MERCHANTABLE FOR A PARTICULAR PURPOSE.

### **3. NO WARRANTY "BY SAMPLE OR EXAMPLE"**

ALTHOUGH 4B HAS USED REASONABLE EFFORTS TO ACCURATELY ILLUSTRATE AND DESCRIBE THE PRODUCTS IN ITS CATALOGS, LITERATURE, AND WEBSITES, SUCH ILLUSTRATIONS AND DESCRIPTIONS ARE FOR THE SOLE PURPOSE OF PRODUCT IDENTIFICATION AND DO NOT EXPRESS OR IMPLY A WARRANTY AFFIRMATION OF FACT, OF ANY KIND OR A WARRANTY OR AFFIRMATION OF FACT THAT THE PRODUCTS WILL CONFORM TO THEIR RESPECTIVE ILLUSTRATIONS OR DESCRIPTIONS. 4B EXPRESSLY DISCLAIMS ANY WARRANTY OR AFFIRMATION OF FACT, EXPRESSED OR IMPLIED, OTHER THAN AS SET FORTH IN THE EXCLUSIVE WRITTEN LIMITED WARRANTY STATEMENT ABOVE, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

### **4. LIMITATION OF DAMAGES**

ANY LIABILITY FOR CONSEQUENTIAL, INCIDENTAL, SPECIAL, EXEMPLARY, OR PUNITIVE DAMAGES, OR FOR LOSS OF PROFIT WHETHER DIRECT OR INDIRECT, IS EXPRESSLY DISCLAIMED.