



Bearing Temperature Sensor ADB810 & ADB819 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.) 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



4B Components Limited.

Bearing Temperature Sensor ADB810 & ADB819 series.

The WDB810 and WDB819 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 ADB810 (NTC) sensor cable has two cores and the ADB819 (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.

The ‘*’ at the end of the Part No. is used to indicate the type of approval: e.g. C=CSA, A=ATEX, I=IECEX.

Part Number	Description
ADB810V3*	2 CORE CABLE – CABLE ENTRY - 100mm (4") PROBE - 3 MTR(10ft) LONG
ADB810V3*/5	2 CORE CABLE – CABLE ENTRY - 100mm (4") PROBE - 5 MTR(16ft) LONG
ADB810V3*/D2	2 CORE CABLE – CABLE ENTRY - 50mm (2") PROBE - 3 MTR(10ft) LONG
ADB810V3*/5/D2	2 CORE CABLE – CABLE ENTRY - 50mm (2") PROBE - 5 MTR(16ft) LONG
ADB810V3*/D8	2 CORE CABLE – CABLE ENTRY - 200mm (8") PROBE - 3 MTR(10ft) LONG
ADB810V3*/5/D8	2 CORE CABLE – CABLE ENTRY - 200mm (8") PROBE - 5 MTR(16ft) LONG
ADB810V3 ^{1/2} *	2 CORE CABLE – CONDUIT ENTRY - ¹ = ANY PROBE LENGTH - ² = ANY CABLE LENGTH
ADB819V3*	4 CORE CABLE – CABLE ENTRY - 100mm (4") PROBE - 3 MTR(10ft) LONG
ADB819V3*/5	4 CORE CABLE – CABLE ENTRY - 100mm (4") PROBE - 5 MTR(16ft) LONG
ADB819V3*/D2	4 CORE CABLE – CABLE ENTRY - 50mm (2") PROBE - 3 MTR(10ft) LONG
ADB819V3*/5/D2	4 CORE CABLE – CABLE ENTRY - 50mm (2") PROBE - 5 MTR(16ft) LONG
ADB819V3*/D8	4 CORE CABLE – CABLE ENTRY - 200mm (8") PROBE - 3 MTR(10ft) LONG
ADB819V3*/5/D8	4 CORE CABLE – CABLE ENTRY - 200mm (8") PROBE - 5 MTR(16ft) LONG
ADB819V3*/5/D12	4 CORE CABLE – CABLE ENTRY - 300mm (12") PROBE - 5 MTR(16ft) LONG
ADB819V3C ^{1/2} *	2 CORE CABLE – CONDUIT ENTRY - ¹ = ANY PROBE LENGTH - ² = ANY CABLE LENGTH

NTC sensors

Each sensor typically has the following electrical specification (using the ADB810V3AI version).

Resistance at 25°C	-	10,000 Ohms
Resistance at 60°C	-	2,487 Ohms
Resistance at 90°C	-	916 Ohms
Minimum temperature	-	-30C
Maximum temperature	-	+110C
Maximum Voltage	-	+5VDC
Maximum Current	-	1mA

Pt100 sensors

Each sensor typically has the following electrical specification (using the ADB819V3AI version).

Resistance at -30C	-	88.22 Ohms
Resistance at +60C	-	123.24 Ohms
Resistance at +100C	-	138.50 Ohms
Minimum temperature	-	-30C
Maximum temperature	-	+110C
Maximum Current	-	1mA

ALL ADB8 sensors

Fixing Thread.	-	1/4" BSP.
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 -40°C to +40°C

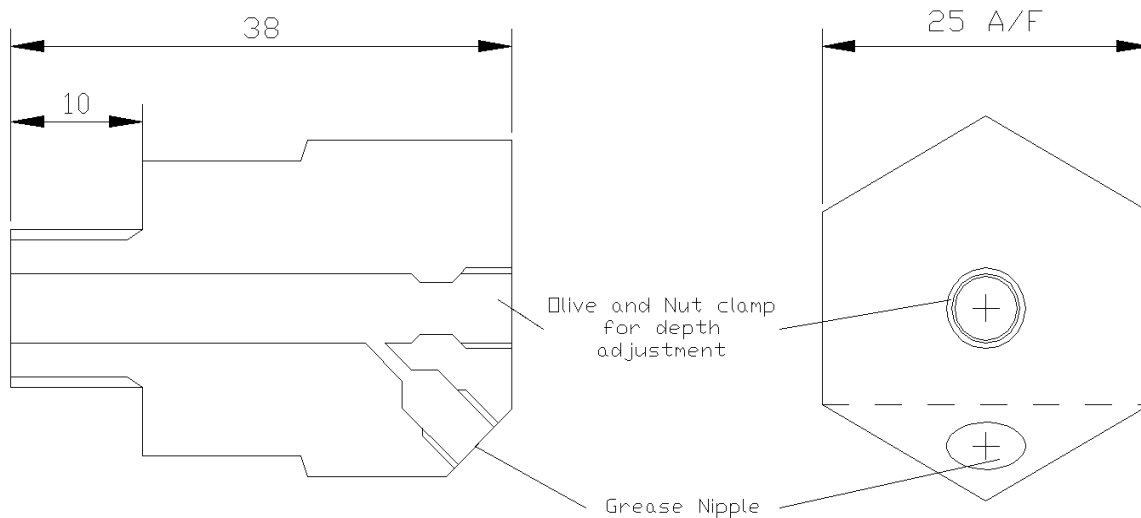
Maximum continuous cable temperature is 125°C

Protection.

Ex II 1D Ex ta IIIC T125°C Da IP65 Tamb -40°C to +40°C

Baseefa09ATEX0231X IECEX BAS 09.0111X

Issue 7: April 2012 Related document:- Changes to this document must be authorised



Installation Instructions:

Remove the existing grease nipple from the bearing sensor.

Drill out and tap to ¼” BSP

Slacken the olive nut and remove the sensor probe.

Screw the sensor body in to the new tapped 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 an appropriate spanner.

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

Special Conditions for Safe Use:

If not used with the ATEX approved Braime temperature monitors the power supply to the sensor shall be rated for a short circuit current of not more than 10KA.

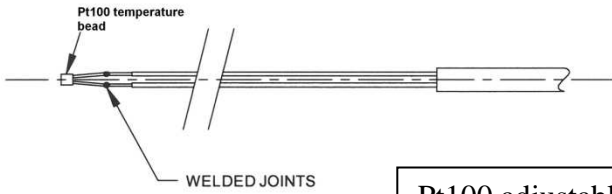
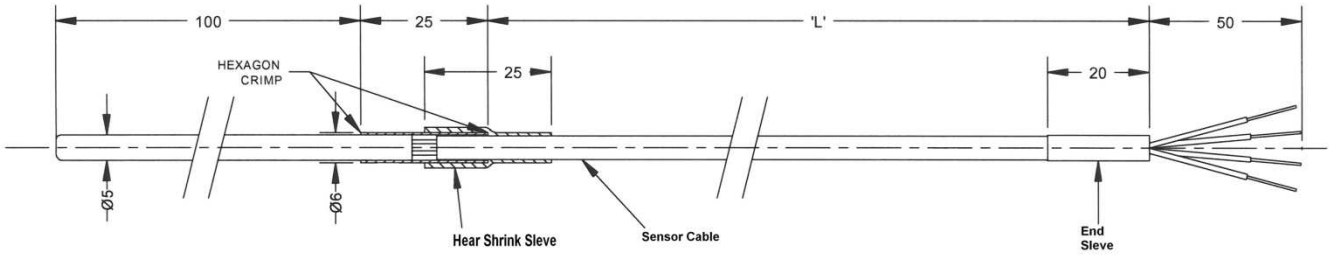
The supply to the equipment **MUST NOT** exceed +24VDC

If the supply leads are terminated in a hazardous area, the termination arrangement must comply with the Zone/Category/EPL of the hazardous area that it is to be installed.

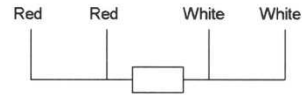
Manufactured by
 Don Electronics Limited
 Westfield Industrial Estate, Kirk Lane,
 Yeadon, Leeds. LS19 7LX
 +44(0)845 130 4798



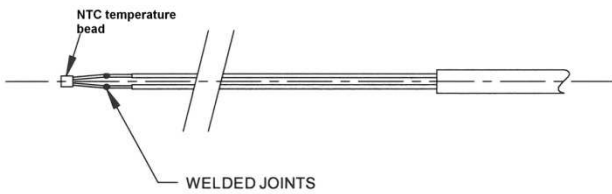
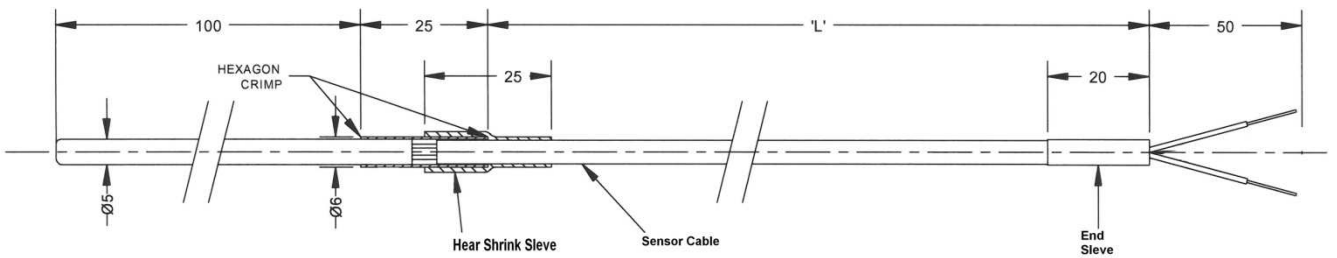
www.go4b.com



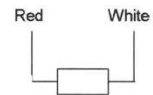
WIRING COLOUR CODE
IN ACCORDANCE WITH BS EN 60751:1996



Pt100 adjustable probe assembly



WIRING COLOUR CODE
IN ACCORDANCE WITH BS EN 60751:1996



NTC adjustable probe assembly

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.

Document Revision	Date revised	Revisions made
R1	July 2009	Initial ATEX release
R2	Sept 2009	Added legal and warranty information Adjusted text alignment and added DofC on the last page
R3	Oct 2009	Added clarification to CSA, ATEX and IECEx classification in part number
R4	Feb2010	Updated legal and warranty information
R5	April 2011	Updated for any cable or probe length
R6	May 2011	Removal of DofC (Supplied Separately)
R7	April 2012	Updated drawing on page 4