

1 SUPPLEMENTARY EU - TYPE EXAMINATION CERTIFICATE

**2 Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
Directive 2014/34/EU**

3 Supplementary EU - Type Examination Certificate Number: Baseefa09ATEX0231X/5

3.1 In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary Certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20 April 2016.

4 Product: Range of Temperature Sensors

5 Manufacturer: Don Electronics Limited

6 Address: Westfield Industrial Estate, Kirk Lane, Yeadon, Leeds, LS19 7LX

7 This supplementary certificate extends EC – Type Examination Certificate No. Baseefa09ATEX0231X to apply to products designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

8 SGS Baseefa, Notified Body number 1180, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that the product, as modified by this supplementary certificate, has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

9 Item 9 of the original Certificate is replaced by “Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0: 2018 EN 60079-31: 2014

except in respect of those requirements listed at item 18 of the Schedule.”

12 The marking of the equipment has changed from the original Certificate and shall include the following:

⊕ II 1D Ex ta III C T₂₀₀125°C Da

IP65 Tamb -40°C to +°C**

**** +40°C or +60°C to suit the application**

SGS Baseefa Customer Reference No. **4340**

Project File No. **16/0245**

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**R S SINCLAIR
TECHNICAL MANAGER**

On behalf of SGS Baseefa Limited

13

Schedule

14

Certificate Number Baseefa09ATEX0231X/5

15 Description of the variation to the Product

Variation 5.1

To remove the WDB6, WDB7 contact version and MDB sensors from the range.

Variation 5.2

Minor drawing modifications.

Variation 5.3

Design change to the sealing method for the sensor probe/protection sheath, and variable length of probe and cable.

Variation 5.4

Add the option to use NTC, PTC and Pt-series sensors in all the Temperature Sensor Ranges.

Variation 5.5

Add the dual option sensor (two elements) to all the Temperature Sensor Ranges.

Variation 5.6

Equipment description update.

Variation 5.7

To confirm that the equipment covered by this certificate has been reviewed against the requirements of EN IEC 60079-0: 2018 and EN 60079-31: 2014 in respect to the differences from IEC 60079-0: 2007 and IEC 60079-31: 2008 (considered state of the art at the time of the prime assessment), and that none of these differences in the standards affects this equipment, except for the marking with regard to the dust layer depth.

The equipment is now marked as follows:

⊕ II 1D Ex ta IIIC T₂₀₀125°C Da

IP65 Tamb -40°C to +**°C

** +40°C or +60°C to suit the application

Variation 5.8

Omit Specific Condition of Use Number 4, as the M12 connection option is no longer used.

The Equipment Description, is now updated as follows:

The range of Temperature Sensors is rated at a maximum voltage of 24V. The sensors incorporate a NTC, PTC or PT series temperature sensing element. The cable associated with the sensor is held in the body of the detector by a 32mm long spring steel sleeve fitted round the cable providing a tight interference fit into the 8mm counter bored hole within the body. The body has a section at the connection end that is turned down to accommodate an engraved certification label. The body can be manufacturer from brass or steel.

The sensors are designed specifically for use on bearings and are designed to be fitted to the greasing point or mounting bolt (WDB7).

The following alternative constructions are available:

Type WDB1:

This type consists of a piece of hexagon bar turned down on one end to produce a length of 1/8" NPT taper thread which screws into the bearing housing. Two holes are drilled down the length of the bar, one to accommodate the temperature sensor and one to allow greasing of the bearing.

The hole accommodating the temperature sensor is a blind 4mm diameter hole counter bore 8mm diameter. The void containing the thermistor, between the end of the cable and the bottom of the hole is fitted with a thermally conductive compound.

The hole to allow greasing of the bearing is 1.6mm diameter and runs the full length of the hexagon bar. It is counter bored and tapped to suit a standard grease nipple.

Type WDB2:

This type consists of a piece of hexagon bar turned down on one end to produce a length of 1/8" NPT taper thread which screws into the bearing housing. Two holes are drilled down the length of the bar, one to accommodate the temperature sensor and one to allow greasing of the bearing.

The hole for the temperature sensor is 1/8" NPT diameter at the bearing end which is fitted with a copper rivet. The opposite end is opened out drilled and tapped 1/2" NPT to accept a suitable cable gland or conduit entry.

The void, containing the thermistor, between the end of the cable and the copper rivet is filled with a thermally conductive compound. The hole for greasing runs only part way up the hexagon bar with a grease nipple in from the side.

Type ADB2:

This type consists of a piece of A/F hexagon bar turned down on one end to produce a length of 1/8" NPT taper thread which screws into the bearing housing. A hole is drilled down the length of the bar to accommodate the temperature sensor and to allow greasing of the bearing.

The hole for the temperature sensor is 1/8" NPT diameter at the bearing end. The opposite end is opened out drilled and tapped 1/2" NPT to accept a suitable cable gland or conduit entry. A clearance hole, part threaded, with olive and gland nut allows a 5mm tubular stainless steel temperature sensor to be fitted, adjusted, clamped and sealed in position.

The hole for greasing runs only part way up the hexagon bar with a grease nipple in from the side.

Type WDB7:

This type consists of a temperature sensor cable assembly that is located inside a hexagonal body that is screwed into a 3/8" NPT thread in a blind hole of the body of a lugged connector. The sensor assembly can then be screwed directly on to the end user's equipment. The NPT thread engagement between the male and female threads is deemed to provide a gas tight seal. Loctite 290 and thermally conductive epoxy resin are used additionally to aid the seal functionality.

Type WDB8 and ADB8:

This type consists of any of the body options similar to the Type ADB2 ranges but have a 1/4" BSP thread at the bearing end to suit the application. This uses either a 5mm tubular stainless steel thermistor temperature sensor or the temperature sensor (used on the WDB7).

The Temperature Sensor Range can have PTC, NTC and PT series options, and the Dual Temperature Sensor versions can have any combination of these sensor options.

The Sensors can have different fixing threads and either 'cable' entry or conduit entry threads (see tables below).

Basic Sensor Models Table:

This table details the basic models in the sensor range, for guidance purposes.

Part Number	Sensor Type	Maximum Temperature (°C)
WDB10V3	NTC	105
WDB11V3	PTC	50
WDB12V3	PTC	60
WDB13V3	PTC	70
WDB14V3	PTC	80
WDB15V3	PTC	90
WDB16V3	PTC	100
WDB17V3	PTC	110
WDB18V3	PTC	120
WDB19V3	Pt100 2wire	105
WDB40V3	Pt100 2wire	105
WDB20V3	NTC	105
WDB21V3	PTC	50
WDB22V3	PTC	60
WDB23V3	PTC	70
WDB24V3	PTC	80
WDB25V3	PTC	90
WDB26V3	PTC	100
WDB27V3	PTC	110
WDB28V3	PTC	120
WDB29V3	Pt100 2wire	105
WDB50V3	Pt100 2wire	105
WDB30V3	NTC	105
WDB34V3	PTC	80
WDB70V3	NTC	105
WDB71V3	PTC	50
WDB72V3	PTC	60
WDB73V3	PTC	70
WDB74V3	PTC	80
WDB75V3	PTC	90
WDB79V3	Pt100 2wire	105
WDB810V3	NTC	105
WDB811V3	PTC	50
WDB812V3	PTC	60
WDB813V3	PTC	70
WDB814V3	PTC	80
WDB815V3	PTC	90
WDB816V3	PTC	100
WDB817V3	PTC	110
WDB818V3	PTC	120
WDB819V3	Pt100 2wire	105
ADB20V3	NTC	105
ADB20V3/5	NTC	105
ADB20V3/D2	NTC	105
ADB20V3/5/D2	NTC	105
ADB20V3/D8	NTC	105
ADB20V3/5/D8	NTC	105
ADB29V3	Pt100 4wire	105
ADB29V3/5	Pt100 4wire	105

Part Number	Sensor Type	Maximum Temperature (°C)
ADB29V3/D2	Pt100 4wire	105
ADB29V3/5/D2	Pt100 4wire	105
ADB29V3/D8	Pt100 4wire	105
ADB29V3/5/D8	Pt100 4wire	105
ADB810V3	NTC	105
ADB810V3/5	NTC	105
ADB810V3/D2	NTC	105
ADB810V3/5/D2	NTC	105
ADB810V3/D8	NTC	105
ADB810V3/5/D8	NTC	105
ADB810V3/D12	NTC	105
ADB810V3/5/D12	NTC	105
ADB819V3	Pt100 4wire	105
ADB819V3/5	Pt100 4wire	105
ADB819V3/D2	Pt100 4wire	105
ADB819V3/5/D2	Pt100 4wire	105
ADB819V3/D8	Pt100 4wire	105
ADB819V3/5/D8	Pt100 4wire	105
ADB819V3/D12	Pt100 4wire	105
ADB819V3/5/D12	Pt100 4wire	105
ADB820V3	NTC	105
ADB820V3/5	NTC	105
ADB820V3/D2	NTC	105
ADB820V3/5/D2	NTC	105
ADB820V3/D8	NTC	105
ADB820V3/5/D8	NTC	105
ADB829V3	Pt100 4wire	105
ADB829V3/5	Pt100 4wire	105
ADB829V3/D2	Pt100 4wire	105
ADB829V3/5/D2	Pt100 4wire	105
ADB829V3/D8	Pt100 4wire	105
ADB829V3/5/D8	Pt100 4wire	105

NOTE: Further sensor models are available, with variables such as the sensor type, fixing thread, conduit thread (if present) and whether the sensor is single or dual element, as clarified in the Nomenclature Table below.

Nomenclature Table ~ Sensor type designation code:

WDB***V* *****/***
 ADB***V* *****/***/D*
 WDB7**V* *****/***

WDB	*	*	*	V*	****	/***
	Thread Size	Body type/size	Sensor type	Version number	Approval Info	Cable length

WDBDUAL	*	*	**	V*	****	/***
	Thread Size	Body type/size	Two sensor types	Version number	Approval Info	Cable length

ADB	*	*	*	V*	****	/***	/D*
	Thread Size	Body type/size	Sensor type	Version number	Approval Info	Cable length	Probe length

ADBDUAL	*	*	**	V*	*****	/***	/D*
	Thread Size	Body type/size	Two sensor types	Version number	Approval Info	Cable length	Probe length

WDB7	*	*	V*	*****	/***
	Body/sensor style	Sensor	Version number	Approval Info	Cable length

WDB7DUAL	*	**	V*	*****	/***
	Body/sensor style	Two sensor types	Version number	Approval Info	Cable length

16 Report Number

GB/BAS/ExTR20.0122/00

17 Specific Conditions of Use

As those listed previously, but with condition number 4 on the prime certificate now omitted.

18 Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

19 Drawings and Documents

Number	Issue	Date	Description
New Drawings:			
DE8106-5-011-S	6	20/08/20	Single sensor element temperature sensor assembly
DE8106-5-012-S	6	20/08/20	Dual sensor element temperature sensor assembly
Updated Drawings:			
DE1107-1	5	13/07/20	Large WDB series bearing sensor with cable entry machining
DE1107-2	6	13/07/20	ADB series bearing sensor with adjustable gland machining
DE1107-4	6	13/07/20	ADB series bearing sensor for rub block with adjustable gland machining
WE1998049-2	15	20/08/20	Bearing sensor Labelling detail
WE20071004-4A	8	20/08/20	WDB7 temperature sensor Labelling detail
Unchanged Drawings:			
DE1301-1	2	03/12/13	ADB91 housing
WE1991266-1	2	20/04/10	WDB2 cable arrangement
WE1991266-3	5	03/12/13	WDB2 housing
WE1991266-7	3	03/12/13	ADB2 housing
WE1998049-1	2	20/04/10	WDB1 cable arrangement
WE1998049-3	4	03/12/13	WDB1 housing
WE2004793-1	1	20/04/10	Alternate cable arrangement
WE20071004-1	3	03/12/13	WDB7 arrangement
WE20071004-2	4	03/12/13	WDB7 housing
WE20071004-3	1	20/04/10	WDB7 cable arrangement

Obsolete Drawings:

DE1107-3	3	---	MDB housing
DE1107-5	3	---	Rub Block Puck
DE1107-6	1	---	Rub Block Plate
DE2007947-1	2	---	WDB6 housing arrangement
DE2007947-2	4	---	WDB6 housing
PPL.0068	3	---	ADB 2wire
PPL.0069	3	---	ADB 4wire
WE1991266-2	11	---	WDB Engraving CAI
WE2007984-2	4	---	WDB6 Label
WE20071004-5	0	---	WDB7 contact sensor arrangement
DE1386-1-001-S	1	---	ADB82 housing
DE1542-1-001-S	1	---	ADB92 housing
DE1542-1-002-S	1	---	WDB91 housing
DE1542-1-003-S	1	---	WDB92 housing

All drawings are common to, and held on, IECEx BAS 09.0111X

1 **SUPPLEMENTARY EC - TYPE EXAMINATION CERTIFICATE**

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
Directive 94/9/EC**

3 Supplementary EC - Type Examination Certificate Number: **Baseefa09ATEX0231X/4**

4 Equipment or Protective System: **Range of Temperature Sensors**

5 Manufacturer: **Don Electronics Limited**

6 Address: **Westfield Industrial Estate, Kirk Lane, Leeds, LS19 7LX**

7 This supplementary certificate extends EC – Type Examination Certificate No. Baseefa09ATEX0231X to apply to equipment or protective systems designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

This supplementary certificate shall be held with the original certificate.

Baseefa Customer Reference No. 4340

Project File No. 13/1026

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SGS Baseefa Limited

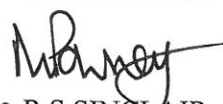
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R S SINCLAIR
GENERAL MANAGER

On behalf of SGS Baseefa Limited

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Schedule

14

Certificate Number Baseefa09ATEX0231X/4

15 Description of the variation to the Equipment or Protective System

Variation 4.1

To allow alternative thread options.

Variation 4.2

To allow alternative metallic body material options.

Variation 4.3

Minor modification to the certification label to show the year of manufacture in the serial number.

Variation 4.4

To add a lock washer to the bearing assembly.

Variation 4.5

To add a new type Contact Sensor WDB7.

Variation 4.6

To add new sensors type ADB and WDB.

Variation 4.7

To redefine the type designation code to incorporate the alternative material options:

WDB***V* *****/***

ADB***V* *****/***/D*

MDB***V* *****/***

WDB7**V* *****/***

WDB	*	*	*	V*	*****	/***
	Thread Size	Body type/size	Sensor type	Version number	Approval Info	Cable length

ADB	*	*	*	V*	*****	/***	/D*
	Thread Size	Body type/size	Sensor type	Version number	Approval Info	Cable length	Probe length

MDB	*	*	*	V*	*****	/***
	Thread Size	Body/sensor style	Sensor	Version number	Approval Info	Cable length

WDB7	*	*	V*	*****	/***
	Body/sensor style	Sensor	Version number	Approval Info	Cable length

16 Report Number

GB/BAS/ExTR13.0313/00

17 Specific Conditions of Use

None additional to those listed previously.

18 Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

19 Drawings and Documents

Number	Sheet	Issue	Date	Description
DE1107-1		3	03/12/13	WDB8 Series bearing sensor with cable entry machining
DE1107-2		4	03/12/13	WDB8 Series bearing sensor with adjustable gland machining
DE1107-3		3	03/12/13	WDB8 Series bearing sensor with M12 connector machining
DE1107-4		4	03/12/13	WDB8 Series bearing sensor for rub block with adjustable gland machining
DE1107-5		3	03/12/13	Rub block machining WDB8 Series
DE1107-6		1	28/11/13	WDB8 Series Rub block plate
DE2007947-1		1	11/02/08	Bearing sensor with M12 connector general arrangement
DE2007947-2		4	03/12/13	Bearing sensor with M12 connector machining
WE1991266	2 of 4	11	19/10/12	Bearing temperature sensor with grease nipple labelling details
WE1991266-3		5	03/12/13	Bearing temperature sensor machining
WE1991266-7		3	03/12/13	Adjustable depth bearing temperature sensor machining
WE1998049-2		11	24/10/12	Bearing temperature sensor with grease nipple labelling details
WE1998049-3		4	03/12/13	Bearing temperature sensor with grease nipple machining
WE2007984-2		4	03/12/13	Bearing temperature sensor WDB6 series labelling details
WE20071004-1		3	03/12/13	Lug sensor for surface temperature measurement WDB7 series
WE20071004-2		4	03/12/13	Lug sensor adaptor and copper lug
NEW DRAWINGS:				
DE1301-1		2	09/09/13	ADB91 series bearing sensor with adjustable gland machining
DE1386-1-001-S		1	03/12/13	Adjustable depth bearing temperature sensor machining
DE1542-1-001-S		1	03/12/13	ADB92 adjustable depth bearing temperature sensor machining
DE1542-1-002-S		1	03/12/13	ADB91 series bearing sensor with cable entry machining
DE1542-1-003-S		1	03/12/13	WDB92 bearing temperature sensor machining
WE20071004-5		0	03/12/13	WDB& Contact temperature sensor assembly

All drawings are common to, and held on, IECEx BAS 09.0111X



1 **SUPPLEMENTARY EC - TYPE EXAMINATION CERTIFICATE**

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
Directive 94/9/EC**

3 Supplementary EC - Type Examination Certificate Number: **Baseefa09ATEX0231X/3**

4 Equipment or Protective System: **Range of Temperature Sensors**

5 Manufacturer: **Don Electronics Limited**

6 Address: **Westfield Industrial Estate, Kirk Lane, Yeadon, Leeds, LS19 7LX**

7 This supplementary certificate extends EC – Type Examination Certificate No. Baseefa09ATEX0231X to apply to equipment or protective systems designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

This supplementary certificate shall be held with the original certificate.

This certificate may only be reproduced in its entirety, without any change, schedule included.

Baseefa Customer Reference No. 4340

Project File No. 11/0052

This certificate is granted subject to the general terms and conditions of Baseefa. It does not necessarily indicate that the equipment may be used in particular industries or circumstances.

R S SINCLAIR
DIRECTOR
On behalf of
Baseefa

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Registered in England No. 4305578. Registered address as above.



13

Schedule

14

Certificate Number Baseefa09ATEX0231X/3

15 Description of the variation to the Equipment or Protective System

Variation 3.1

To add minor drawing modifications.

Variation 3.2

To allow an option maximum ambient of 60°C.

16 Report Number

GB/BAS/ExTR11.0026/00

17 Special Conditions for Safe Use

As previously listed

18 Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

19 Drawings and Documents

Number	Issue	Date	Description
DE1107-1	1	17/10/09	WDB8 Series bearing sensor with cable entry machining
DE1107-2	2	17/10/09	WDB8 Series bearing sensor with adjustable gland machining
DE1107-3	1	17/10/09	WDB8 Series bearing sensor with M12 connector machining
DE1107-4	2	01/10/09	WDB8 Series bearing sensor body for rub block with adjustable gland machining
DE1107-5	1	12/05/10	Rub block machining WDB8 series
WE1991266-3	3	17/03/09	Bearing temperature sensor machining
WE1991266 Sht2 of 4	10	12/11/09	Bearing temperature sensor with grease nipple. Label details
WE1991266-7	1	02/02/10	Adjustable depth bearing temperature sensor machining
WE20071004-4A	5	17/02/11	WDB70V3C temperature sensor labelling details
WE2007984-2	3	17/02/11	Bearing temperature sensor WDB6 series labelling details
WE1998049-2	10	17/02/11	Bearing temperature sensor with grease nipple. Labelling details

This drawing is common to and held on IECEx BAS 09.0111X



1 **SUPPLEMENTARY EC - TYPE EXAMINATION CERTIFICATE**

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
Directive 94/9/EC**

3 Supplementary EC - Type Examination Certificate Number: **Baseefa09ATEX0231X/2**

4 Equipment or Protective System: **Range of Temperature Sensors**

5 Manufacturer: **Don Electronics Ltd**

6 Address: **Westfield Industrial Estate, Kirk Lane, Yeadon, Leeds, LS19 7LX**

7 This supplementary certificate extends EC – Type Examination Certificate No. Baseefa09ATEX0231X to apply to equipment or protective systems designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

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Baseefa Customer Reference No. 4340

Project File No. 10/0714

This certificate is granted subject to the general terms and conditions of Baseefa. It does not necessarily indicate that the equipment may be used in particular industries or circumstances.

A handwritten signature in black ink, appearing to read "R S Sinclair".

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R S SINCLAIR
DIRECTOR
On behalf of
Baseefa



13

Schedule

14

Certificate Number Baseefa09ATEX0231X/2

15 Description of the variation to the Equipment or Protective System

Variation 2.1

To allow the ADB range of sensors main body to be manufactured in variable lengths to suit the customer requirements.

Variation 2.2

To allow the ADB range of sensors to be supplied with variable cable lengths to suit the customer requirements.

The part number code will be amended accordingly to allow variable cable and sensor lengths
i.e. ADB20V # / * (Where # is the cable length and * is the sensor length).

16 Report Number

GB/BAS/TR10.0209/00

17 Special Conditions for Safe Use

None additional to those listed previously

18 Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

19 Drawings and Documents

Number	Issue	Date	Description
PPL/0068	3	06/09/10	Thermistor temperature sensor
PPL/0069	3	06/09/10	Platinum resistance thermometer

These drawings are common to Baseefa09ATEX0231X and held on IECEx BAS09.0111X



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2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
Directive 94/9/EC**

3 Supplementary EC - Type Examination Certificate Number: **Baseefa09ATEX0231X/1**

4 Equipment or Protective System: **Range of Temperature Sensors**

5 Manufacturer: **Don Electronics Ltd**

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7 This supplementary certificate extends EC – Type Examination Certificate No. Baseefa09ATEX0231X to apply to equipment or protective systems designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

This supplementary certificate shall be held with the original certificate.

This certificate may only be reproduced in its entirety, without any change, schedule included.

Baseefa Customer Reference No. 4340

Project File No. 10/0341

This certificate is granted subject to the general terms and conditions of Baseefa. It does not necessarily indicate that the equipment may be used in particular industries or circumstances.

Baseefa

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Baseefa is a trading name of Baseefa Ltd

Registered in England No. 4305578. Registered address as above.

A handwritten signature in blue ink, appearing to read "R S Sinclair".

R S SINCLAIR

DIRECTOR
On behalf of
Baseefa



13

Schedule

14

Certificate Number Baseefa09ATEX0231X/1

15

Description of the variation to the Equipment or Protective System

Variation 1.1

To allow an alternative cable.

Variation 1.2

To allow an optional potting.

16

Report Number

GB/BAS/TR10.0140/00

17

Special Conditions for Safe Use

None additional to those listed previously

18

Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

19

Drawings and Documents

Number	Issue	Date	Description
WE1991266-1	2	20/04/10	Bearing temperature sensor assembly
WE1998049-1	2	20/04/10	Bearing temperature sensor assembly with grease nipple
WE2004793-1	1	20/04/10	Bearing temperature sensor assembly with grease nipple
WE20071004-3	1	20/04/10	Temperature sensor assembly

These drawings are common Baseefa09ATEX0231X to and held with IECEx BAS 09.0111X



EC - TYPE EXAMINATION CERTIFICATE

**Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
Directive 94/9/EC**

- 3 EC - Type Examination Certificate Number: **Baseefa09ATEX0231X**
- 4 Equipment or Protective System: **Range of Temperature Sensors**
- 5 Manufacturer: **Don Electronics Ltd**
- 6 Address: **Westfield Industrial Estate, Kirk Lane, Yeadon, Leeds, LS19 7LX**
- 7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- 8 Baseefa, Notified Body number 1180, in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.
- The examination and test results are recorded in confidential Report No. **GB/BAS/ExTR09.0157/00**
- 9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
IEC 60079-0:2007 IEC 60079-31:2008
- except in respect of those requirements listed at item 18 of the Schedule.
- 10 If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.
- 11 This EC - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protective system. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.
- 12 The marking of the equipment or protective system shall include the following :
- ⊕ II 1D Ex ta IIIC T125°C Da IP65 Tamb -40°C to +40°C**
- This certificate may only be reproduced in its entirety, without any change, schedule included.

Baseefa Customer Reference No. **4340**

Project File No. **09/0554**

This certificate is granted subject to the general terms and conditions of Baseefa. It does not necessarily indicate that the equipment may be used in particular industries or circumstances.

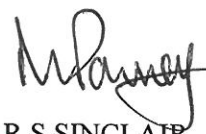
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Baseefa is a trading name of Baseefa Ltd

Registered in England No. 4305578. Registered address as above.


R S SINCLAIR
DIRECTOR
On behalf of
Baseefa



13

Schedule

14

Certificate Number Baseefa09ATEX0231X

15 Description of Equipment or Protective System

The range of Temperature Sensors is rated at a maximum voltage of 24V. The sensors incorporate a NTC, PTC, PT100 or Bimetal CONTACT temperature sensing element. The cable associated with the sensor is held in the body of the detector by a 32mm long spring steel sleeve fitted round the cable providing a tight interference fit into the 8mm counter bored hole within the body. The body has a section at the connection end that is turned down to accommodate an engraved certification label. The body can be manufacturer from Brass or Steel.

The sensors are designed specifically for use on bearings and are designed to be fitted to the greasing point or mounting bolt (WDB7).

Five alternative constructions are available:

Type WDB1.

This type consists of a piece of 19mm A/F hexagon bar turned down on one end to produce a 9.5mm length of 1/8" NPT taper thread which screws into the bearing housing. Two holes are drilled down the length of the bar, one to accommodate the temperature sensor and one to allow greasing of the bearing.

The hole accommodating the temperature sensor is a blind 4mm diameter hole counter bore 8mm diameter. The void containing the thermistor, between the end of the cable and the bottom of the hole is fitted with a thermally conductive compound.

The hole to allow greasing of the bearing is 1.6mm diameter and runs the full length of the hexagon bar. It is counter bored and tapped to suit a standard grease nipple.

Type WDB2.

This type consists of a piece of 27mm A/F hexagon bar turned down on one end to produce a 8mm length of 1/8" NPT taper thread which screws into the bearing housing. Two holes are drilled down the length of the bar, one to accommodate the temperature sensor and one to allow greasing of the bearing.

The hole for the temperature sensor is 1/8" NPT diameter at the bearing end which is fitted with a copper rivet. The opposite end is opened out drilled and tapped 1/2" NPT to accept a suitable cable gland or conduit entry.

The void, containing the thermistor, between the end of the cable and the copper rivet is filled with a thermally conductive compound. The hole for greasing runs only part way up the hexagon bar with a grease nipple in from the side.

Type ADB2

This type consists of a piece of 27mm A/F hexagon bar turned down on one end to produce a 8mm length of 1/8" NPT taper thread which screws into the bearing housing. A hole is drilled down the length of the bar to accommodate the temperature sensor and to allow greasing of the bearing.

The hole for the temperature sensor is 1/8" NPT diameter at the bearing end. The opposite end is opened out drilled and tapped 1/2" NPT to accept a suitable cable gland or conduit entry. A clearance hole, part threaded, with olive and gland nut allows a 5mm tubular stainless steel temperature sensor to be fitted, adjusted, clamped and sealed in position.

The hole for greasing runs only part way up the hexagon bar with a grease nipple in from the side.

Type WDB6.

This type is similar in construction and assembly to the WDB1 type, except this type uses a larger body assembly that incorporates an M12 connection and the bearing end is threaded 1/4" BSP.



Type WDB7.

This type consists of an 8mm temperature sensor cable assembly that is located inside a hexagonal body that is screwed into a 3/8" NPT thread in a blind hole of the body of a lugged connector. The sensor assembly can then be screwed directly on to the end users equipment. The NPT thread engagement between the male and female threads is deemed to provide a gas tight seal. Loctite 290 and thermally conductive epoxy resin are used additionally to aid the seal functionality.

Type WDB8, ADB8 and MDB8.

This type consists of any of the body options similar to the Type WDB6 and ADB2 ranges but have a 1/4" BSP thread at the bearing end to suit the application. This uses either a 5mm tubular stainless steel thermistor temperature sensor or the 8mm temperature sensor (used on the WDB7) or is fitted with an optional M12 connector.

The table below details each model of sensor;

Part Number	Sensor Type	Maximum Temperature (°C)
WDB10V3	NTC	105
WDB11V3	PTC	50
WDB12V3	PTC	60
WDB13V3	PTC	70
WDB14V3	PTC	80
WDB15V3	PTC	90
WDB16V3	PTC	100
WDB17V3	PTC	110
WDB18V3	PTC	120
WDB19V3	Pt100 2wire	105
WDB40V3	Pt100 2wire	105
WDB20V3	NTC	105
WDB21V3	PTC	50
WDB22V3	PTC	60
WDB23V3	PTC	70
WDB24V3	PTC	80
WDB25V3	PTC	90
WDB26V3	PTC	100
WDB27V3	PTC	110
WDB28V3	PTC	120
WDB29V3	Pt100 2wire	105
WDB50V3	Pt100 2wire	105
WDB60V3	NTC	90
WDB61V3	PTC	50
WDB62V3	PTC	60
WDB63V3	PTC	70
WDB64V3	PTC	80
WDB65V3	PTC	90
WDB6PV3	Pt100 2wire	90
WDB61TV3	CONTACT	50
WDB62TV3	CONTACT	60
WDB63TV3	CONTACT	70
WDB64TV3	CONTACT	80
WDB65TV3	CONTACT	90
WDB30V3	NTC	105
WDB34V3	PTC	80
WDB70V3	NTC	105
WDB71V3	PTC	50



Part Number	Sensor Type	Maximum Temperature (°C)
WDB72V3	PTC	60
WDB73V3	PTC	70
WDB74V3	PTC	80
WDB75V3	PTC	90
WDB79V3	Pt100 2wire	105
WDB810V3	NTC	105
WDB811V3	PTC	50
WDB812V3	PTC	60
WDB813V3	PTC	70
WDB814V3	PTC	80
WDB815V3	PTC	90
WDB816V3	PTC	100
WDB817V3	PTC	110
WDB818V3	PTC	120
WDB819V3	Pt100 2wire	105
ADB20V3	NTC	105
ADB20V3/5	NTC	105
ADB20V3/D2	NTC	105
ADB20V3/5/D2	NTC	105
ADB20V3/D8	NTC	105
ADB20V3/5/D8	NTC	105
ADB29V3	Pt100 4wire	105
ADB29V3/5	Pt100 4wire	105
ADB29V3/D2	Pt100 4wire	105
ADB29V3/5/D2	Pt100 4wire	105
ADB29V3/D8	Pt100 4wire	105
ADB29V3/5/D8	Pt100 4wire	105
ADB810V3	NTC	105
ADB810V3/5	NTC	105
ADB810V3/D2	NTC	105
ADB810V3/5/D2	NTC	105
ADB810V3/D8	NTC	105
ADB810V3/5/D8	NTC	105
ADB810V3/D12	NTC	105
ADB810V3/5/D12	NTC	105
ADB819V3	Pt100 4wire	105
ADB819V3/5	Pt100 4wire	105
ADB819V3/D2	Pt100 4wire	105
ADB819V3/5/D2	Pt100 4wire	105
ADB819V3/D8	Pt100 4wire	105
ADB819V3/5/D8	Pt100 4wire	105
ADB819V3/D12	Pt100 4wire	105
ADB819V3/5/D12	Pt100 4wire	105
ADB820V3	NTC	105
ADB820V3/5	NTC	105
ADB820V3/D2	NTC	105
ADB820V3/5/D2	NTC	105
ADB820V3/D8	NTC	105
ADB820V3/5/D8	NTC	105
ADB829V3	Pt100 4wire	105
ADB829V3/5	Pt100 4wire	105
ADB829V3/D2	Pt100 4wire	105



Part Number	Sensor Type	Maximum Temperature (°C)
ADB829V3/5/D2	Pt100 4wire	105
ADB829V3/D8	Pt100 4wire	105
ADB829V3/5/D8	Pt100 4wire	105
MDB810V3	NTC	105
MDB812V3	PTC	60
MDB813V3	PTC	70
MDB814V3	PTC	80
MDB819V3	Pt100 2wire	105
MDB832V3	CONTACT	60
MDB833V3	CONTACT	70
MDB834V3	CONTACT	80

16 Report Number

GB/BAS/ExTR09.0157/00

17 Special Conditions for Safe Use

1. The power supply to the equipment shall be rated for a prospective short circuit current of not more than 10kA.
2. The supply to the equipment must not exceed 24V.
3. If the equipment supply leads are terminated in a hazardous area, the termination arrangement must comply with the Zone/Category/required EPL of the hazardous area that it is to be installed.
4. Suitably certified connectors must be used with the sensors incorporating the optional M12 connection.

18 Essential Health and Safety Requirements

All relevant Essential Health and Safety Requirements are covered by the standards listed at item 9.

19 Drawings and Documents

Number	Sheet	Issue	Date	Description
DE1107-1	1 of 6	0	24/02/09	WDB8 Series Bearing Sensor with Cable Entry Machining
DE1107-2	2 of 6	1	11/08/09	WDB8 Series Bearing Sensor with Adjustable Gland Machining
DE1107-3	3 of 6	0	24/02/09	WDB8 Series Bearing Sensor with M12 Connector Machining
DE1107-4	4 of 6	1	11/08/09	WDB8 Series Bearing Sensor Body for Rub Block with Adjustable Gland Machining
DE1107-5	5 of 6	0	11/02/09	Rub Block Machining WDB8 Series
DE1107-6	6 of 6	0	24/02/09	WDB8 Series Rub Block Plate
DE2007947-1	1 of 2	1	07/02/08	Bearing Sensor with M12 Connector General Arrangement
DE2007947-2	2 of 2	2	07/02/08	Bearing Sensor with M12 Connector Machining
PPL/0068	1 of 1	1	02/03/09	Don Electronics Ltd Thermistor Temperature Sensor
PPL/0069	1 of 1	1	02/03/09	Don Electronics Ltd Platinum Resistance Thermometer
WE1991266-1	1 of 4	1	01/07/03	Bearing Temperature Sensor Assembly



Number	Sheet	Issue	Date	Description
WE1991266	2 of 4	9	26/09/09	Bearing Temperature Sensor with Grease Nipple Labelling Details
WE1991266-3	3 of 4	4	24/06/09	Bearing Temperature Sensor Machining
WE1991266-7	4 of 4	0	24/06/09	Adjustable Depth Bearing Temperature Sensor Machining
WE1998049-1	1 of 3	1	01/07/03	Bearing Temperature Sensor Assembly with Grease Nipple
WE1998049-2	2 of 3	9	02/10/09	Bearing Temperature Sensor with Grease Nipple Labelling Details
WE1998049-3	3 of 3	2	03/07/06	Bearing Temperature Sensor Assembly with Grease Nipple Machining
WE2004793-1	1 of 1	0	01/04/04	Bearing Temperature Sensor Assembly with Grease Nipple
WE20071004-1	1 of 4	1	28/01/08	Lug Sensor for Surface Temperature Measurement WDB7 Series
WE20071004-2	2 of 4	2	28/11/08	Lug Sensor Adapter and Copper Lug
WE20071004-3	3 of 4	0	28/01/08	Temperature Sensor Assembly
WE20071004-4A	4 of 4	9	26/09/09	WDB70V3C Temperature Sensor Labelling Details
WE2007984-2	1 of 1	2	02/09/09	Bearing Temperature Sensor WDB6 Series Labelling Details

All of the above drawings are common to, and held on, IECEx BAS 09.0111X.