



EC-TYPE EXAMINATION CERTIFICATE

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

EC-Type Examination Certificate Number : **BAS99ATEX2217**

Equipment or Protective System: **W-DF200L TO W-DF355L CAGE INDUCTION MOTORS**

Manufacturer: **BROOK HANSEN**

Address: **Guiseley, Leeds, LS20 9NZ**

This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

The Electrical Equipment Certification Service, notified body number 600 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 N°

BASEEFA Certification Report No. 99(C)0424/1 dated 1 October 1999

Compliance with the Essential Health and Safety Requirements has been assured by compliance with:


EN 50281-1-1: 1998

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

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.

This EC-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protective system. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment or protective system.

The marking of the equipment or protective system shall include the following:-

 II 2 D T125°C T_{amb} (see schedule)

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

File No: EECS 0245/03/165

This certificate is granted subject to the general conditions of the Electrical Equipment Certification Service. It does not necessarily indicate that the apparatus may be used in particular industries or circumstances.



I M CLEARE
DIRECTOR
27 October 1999



Electrical Equipment Certification Service
Health and Safety Executive
Harpur Hill, Buxton, Derbyshire. SK17 9JN. United Kingdom
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Description of Equipment or Protective System

Mechanical Construction ~ General

The machines are totally enclosed and have cast iron frames with external cooling fins and are category 2 dust proof machines suitable for use where dust layers are kept below 5mm.

They may be orientated horizontally or vertically and mounted from bolt-on cast iron feet or pads, or from an endshield adaptor at the drive end. This may, in turn, use a skirt base adaptor. These may be made from cast iron or fabricated from steel.

Combinations of these methods of fixing may be used as required.

The endshields are made of cast iron and are bolted to the ends of the frame. Drain holes are provided which are fitted with plugs whose screw threads are normally sealed.

Ventilation

An external cooling fan is fitted at the non-drive end which may be manufactured from cast iron, fabricated steel or "conductive" polypropylene. Rotational security is achieved by using a key and grub screws (metal fans) or key and tangs (plastic fans).

The fans are protected by a fan cowl fabricated from pressed steel secured to the frame with radial screws and lockwashers. An additional sheet steel cover is fitted outside the cowl as protection when the motor is mounted vertically.

If required the shaft may be extended at the non-drive end. If it passes through the fan cowl a 5mm nominal running clearance is maintained.

Where motors are provided without external fans they shall be tested and rated as appropriate. In the case of airstream rated motors the minimum air velocity for the motor surface is indicated on the rating plate.

Bearings

The machine bearings are housed in the endshields. Ball bearings are retained by an internal clamp at both ends. Where increased loads are driven, roller, duplex or angular contact bearings may be used. Garter type bearing housing seals made from silicone rubber are used and these are grease lubricated.

Terminal Enclosures

There are two sizes of terminal enclosure. Both, together with their lids, are made from cast iron. The larger enclosure may be used as an "oversize" enclosure for WDF250M and WDF280S frames by the addition of a cast iron or steel adaptor. The stator and auxiliary connections pass through a large access hole in the bottom of the enclosure and into the machine.



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Seals are provided between the lid and body of each enclosure, between the body and the machine and on the adaptor and gland plate. The seals are in the form of flat gaskets and are retained by adhesive. Gaskets between the body of the enclosure and frame adhere to the body as do those between the body and the lid. Those on the gland plate adhere to the glandplate (or spreader box). The enclosures may be mounted with the cable entry either along or across the axis of the machine from either end or side.

Where required, the terminal enclosure may be provided for remote mounting. In this case the motor terminal enclosure opening is covered by a plate or spreader box sealed by a 3mm thick rubber gasket. A similar gasket is used between any sealing plate and remote enclosure. The remote terminal enclosure may be one of the schedule enclosures or any suitable BASEEFA certified enclosure.

Stator and Rotor

The stator and rotor are formed from punched laminations. Whilst the stator is pressed into the frame, the rotor bars, endrings and internal fan wafters are formed by pressure die-casting using aluminium or an aluminium alloy. The core thus formed is shrunk or pressed onto the main motor shaft.

Stator/Rotor air gap

The air gap for any machine in the range is determined by the pole number and the supply frequency.

Electrical Construction

Stator

The stator may be wound for 2, 4, 6, 8 or more poles. The stator windings are of circular section copper wire having a Class F insulation. Details of this and other insulating materials are given in schedule drawing A00471. The stator may be operated at up to the Class F temperature limit.

Main Terminals

Seven main terminal arrangements are used for the range of machines. These are fully described in the schedule drawings.

The first uses six M10 steel terminals fitted into a moulded glass-filled nylon board and is shown on drawing A00472. This arrangement is rated at 180 Amps maximum.

The second arrangement consists of a further moulded glass-filled nylon board with holes through which are fitted M10 terminal screws. These are secured in place with locknuts. This arrangement is shown on A00479 and is rated at 180 Amps maximum.

The third of the small enclosures carries up to 12 terminals. These are mounted in groups of 6 M8 terminals each of which is moulded into a common HD Phenolic board.

This is shown on drawing A00477.



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The first of the larger enclosures, shown on A00473, has 6 M10 terminals formed from screws secured by locknuts through a moulded thermosetting glass-filled phenolic board. Provision is made for "snap-in" phase barriers if required.

The second is shown on A00478 and carries up to 12 terminals. In this case the terminal board is made from phenolic paper laminate through which the M10 terminal screws pass. The heads of the screws are recessed into the underside and the screws are fitted with locknuts.

The connections to the stator leads in all cases are by "right angle lugs" crimped onto the leads and fitted over the top of the studs.

The nylon material used in the smaller terminal enclosures may also be used as a further moulding to cover the main terminals if required. It may also be formed into a slotted support with a barrier to hold the auxiliary terminals and to separate them from the main terminals.

In the above terminal arrangements there are no phase barriers and adequate physical separation is provided between terminal studs and other live parts. Flat terminal links may be used to interconnect the ends of stator windings.

The machines may also be supplied with loose leads in which case sufficient lead length for remaking the insulated crimp joints is provided or, alternatively, the terminal enclosures may be remotely mounted as shown on A00476.

In further arrangements shown on A00511 and 512 the terminals consist of component certified blocks or component certified rail mounted terminals. Again the schedule drawings fully describe the arrangements and list the relevant component approvals or certificates.

Auxiliary Terminals

The auxiliary terminals used with the three smaller main terminal assemblies consist of Wago "snap-in" modular screwless connectors. Internal connections are via a "fast-on" type of spade connection with pre-insulated crimped female connections on the motor auxiliary leads. External connections are made through the Wago "cage clamp" springs.

The other auxiliary terminals are Klippon KSD blocks coded EEx e by BASEEFA Component Certificate Ex 813105U, or Ex N by 4022U/B. Alternative terminals are the MK5/2, MK3/* and BK3. These are coded Ex N by 4020UB & 4021UB, whilst a further arrangement uses BARTEC terminals coded EEx e by PTB Component Certificate Ex 89C3150U.

A further alternative is to provide additional auxiliary terminal enclosures mounted on the side of the main terminal enclosure. This is made of cast iron or fabricated from steel and fitted with the terminal blocks as above.

Each type of main terminal arrangement has an earth terminal inside the enclosure, the external earth is provided on the motor frame itself.



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Auxiliaries

Heaters

Anti condensation heaters certified under BASEEFA Component Certificate No 4076UX may be used.

Thermistors / RTD's

One or more thermistors / RTD's may be embedded in each winding and in the bearing housing to provide monitoring / protection as required.

The auxiliaries are terminated on terminals as referred to above by Class F rated cable. They must be connected to ground when dielectric testing of the machine is carried out.

Ambient Temperature

These motors are designed for use in an ambient temperature range from -20°C to 40°C. This may be extended down to -45°C by making suitable design and material changes. In this case the certification plate described on drawing A22560 will be marked accordingly.

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Report Nos.

99(C)0424/1

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SPECIAL CONDITIONS FOR SAFE USE

None

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Essential Health and Safety Requirements

All requirements are covered by compliance with EN 50281-1-1: 1998.

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DRAWINGS

Number	Issue	Date	Description
A00471C	C	11/5/99	Typical arrangement
A00472		29.9.97	Ex N terminal arrangements W-DF 200L - 280S
A00473		29.9.97	Ex N terminal arrangements W-DF 280M - 315L
A00474A	A	24/3/99	Rotor - fan clearance drawing
A00475A	A	24/3/99	Critical manufacturing drawings W-DF200L - 315L
A00476B	B	3.7.98	Alternative arrangements and terminations



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Number	Issue	Date	Description
A00477		29.9.97	Ex N terminal arrangements W-DF200L - 280S
A00478A	A	20.2.98	Ex N terminal arrangements W-DF280M - 355L
A00479		29.9.97	Ex N terminal arrangements W-DF 200L - 280S
A00511		29.9.97	Rekofa KS..A terminals
A00512		29.9.97	Klippon SAKG40 terminals
A00516		31/10/97	Rotor - fan clearance drawing W-DF355S - 355L
A00517		11/11/97	Critical manufacturing drawings W-DF355 S/M/L
A00578		18/3/99	Ex N terminal arrangements WDF200LX
A22560		11/5/99	Typical arrangement - dust proof motors

These drawings are common to BAS99ATEX3218.

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BASEEFA List Keywords
23PHIMOT



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: BAS99ATEX2217/1

4 Equipment or Protective System: W-DF200L TO W-DF355L CAGE INDUCTION MOTORS

5 Manufacturer: INVENSYS BROOK CROMPTON

6 Address: Guiseley, Leeds, West Yorkshire, LS20 9NZ

7 This supplementary certificate extends EC-Type Examination Certificate No. BAS99ATEX2217 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 and without any change, schedule included.

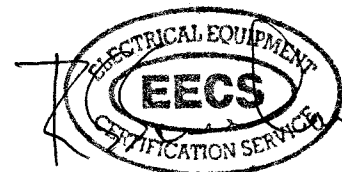
File No: EECS 0245/03/165

BASEEFA Certification Report No. 00(C)1062 dated 23 February 2001

This certificate is granted subject to the general conditions of the Electrical Equipment Certification Service. It does not necessarily indicate that the apparatus may be used in particular industries or circumstances.



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I M CLEARE
DIRECTOR
6 March 2001



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14 **SUPPLEMENTARY EC-TYPE EXAMINATION CERTIFICATE N° BAS99ATEX2217/1**

Description of the Variation to the Equipment or Protective System

VARIATION 1.1

To allow the following motor-drive combinations to be used:-

FRAME	POWER O/P (kW)	POLES	ABB INVERTER TYPE
W-DF225SN	37	4	ACS60100503
W-DF225MN	45	4	ACS60100603
W-DF315LN	154	4	ACS60402603

Report No.

00(C)1062

Special Conditions For Safe Use

None

Essential Health and Safety Requirements

See original certificate.

DRAWINGS

None.

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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 **BAS99ATEX2217X/2**
Examination Certificate Number:

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: **The "W" Range of Cage Induction Motors of Frame Size W-DF200L to W-DF355L**

5 Manufacturer: **ATB Tamel Spolka Akcyjna**

6 Address: **Ul. Elektryczna 6, 33-100 Tarnow, Poland**

7 This supplementary certificate extends EC – Type Examination Certificate No. BAS99ATEX2217 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.

8.1 The original certificate was issued by The Electrical Equipment Certification Service, Notified Body Number 0600, which retains responsibility for its original documentation. SGS Baseefa, Notified Body Number 1180, is responsible only for the additional work relating to this supplementary certificate and any other supplementary certificate it has issued.

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:

Ex II 2 D Ex tb IIC T125°C or T135°C Db T_{amb} (See equipment description)

SGS Baseefa Customer Reference No. **5233**

Project File No. **19/0619**

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R S SINCLAIR
TECHNICAL MANAGER

On behalf of SGS Baseefa Limited

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Certificate Number BAS99ATEX2217X/2

15 Description of the variation to the Product

Variation 2.1

To assess the “W” Range of Cage Induction Motors of frame sizes W-DF200L to W-DF355L against the following standards: EN IEC 60079-0:2018 and EN 60079-31:2014. The equipment has been assessed and is in compliance with the standards listed.

Variation 2.2

To include specific conditions of use in line with IECEx 15.0114X, which also covers the Ex tb certified Range of Cage Induction Motors with frame sizes W-DF200L to W-DF355L. An ‘X’ has been placed after the certificate reference number to indicate that specific conditions of use are now applicable.

Variation 2.3

To add the cable and ATEX certified gland termination arrangement to allow motor to be supplied with loose cable for termination in remote terminal box.

Variation 2.4

To add ATB Tamel M8 and M10 terminal board Types P4566 & P4223 afforded BAS01ATEX2273U and remove ATB Motorentechnik Type KM and Emil A. Peters Type PLD terminals from the certification.

Variation 2.5

To remove the optional Class H winding insulation system from the certificate.

Variation 2.6

To introduce Double Oil Seal and Oil Seal & Gamma Seal alternative types of bearing sealing arrangement.

Variation 2.7

Introduce the additional external earthing arrangements and captive terminal box lid fixing arrangement described on drawing B00045/D.

Variation 2.8

To note minor drawing changes.

Variation 2.9

To amend the product (equipment) description and include ‘Specific Conditions of Use’, as required by the variations listed above and in order to align with Ex ec and Ex tc certification for the equivalent frame sizes.

The product description has been updated as detailed below;

Product Description

The ‘W’ range of cage induction motors with shaft centre heights from 200mm to 355mm are made from frame and end-shields that are constructed from cast iron, the motor frame has external axial cooling fins. The motors are continuously rated for S1 or S2 duty within the limits of Class F winding temperatures when connected to a 3phase a.c. supply up to 100Hz and 693 V maximum.

The motors are designed for use in an ambient temperature range from -20°C to +40°C. This may be extended to -54°C to +60°C by making suitable design and material changes and suitable de-rating.

The motors are of totally enclosed construction and are rated IP65.

The motors may be wound for multiple speed operation and the supplies may be fixed or variable and be inverter generated, subject to specific conditions of use. The motors may be mounted horizontally or vertically by various feet or pads, or from an end-shield adapter.

Stator.

The stator is jig assembled from punched laminations then pressed into the frame with an interference fit. The stator may be wound for 2, 4, 6, 8 or more poles. The stator windings are of circular section copper wire having Class F insulation. Multiple windings may be used and inter-winding connections may be internal or brought out to the terminal enclosure.

Rotor.

The rotor is manufactured from an assembly of laminations with the bars, endrings and internal fan fins formed by pressure die casting using aluminium or an aluminium alloy. Rotor dynamic balancing is achieved by either subtracting weight or adding weights at specific locations. If required the shaft may be extended at either end.

Bearings.

The motors are fitted with ball bearings with roller, duplex or angular contact bearings used to suit the mechanical load for the individual motor. Gamma, non-contact and oil type seals are fitted and used to seal the bearings. Optionally, for applications where a greater degree of ingress protection is required, a Double Oil Seal or Oil Seal & Gamma Seal arrangement may be utilised.

External Cooling arrangement.

The cooling fans may be either plastic or metal. Plastic fans are secured radially with a key and axially by a circlip. Metal fans are additionally secured by a grub screw which may or may not have a lock nut. Fans with peripheral speeds greater than 50m/s must always be metal. The fans are protected by a steel fan cowl which has an additional sheet steel cover when the motor is mounted vertically.

Terminal Boxes.

Main terminal boxes.

The terminal boxes are fitted with silicone, neoprene or NBR rubber gaskets. This creates a seal between the terminal box and the terminal box lid and between the terminal box and the motor frame with a minimum rating of IP65.

There are three sizes of cast iron main terminal enclosures; Small – 176x223, Medium – 221x270, Large – 332x485. The large enclosure may be used as an ‘oversize’ terminal box for the W-DF250M and W-DF280S frames. The medium enclosure may be used as an ‘oversize’ terminal enclosure for the W-DF200LX frame. An adapter plate is used for the oversize terminal enclosures. Main terminal enclosures may have additional auxiliary terminal boxes fitted to them.

Only one terminal box mounting position is available on the motor frames. The mounting position may be sited either side or on top of the motor frame. The main terminal box may be rotated in 90° intervals.

Remote terminal box mounting may be used by the fitting of a steel or cast iron adapter plate and an appropriate conduit and conduit bushing arrangement or by an ATEX certified gland and cable arrangement. The remote terminal enclosure may be one of the schedule enclosures or any suitable ATEX equipment certified terminal box.

The terminal boxes are fitted with ATEX component approved terminal boards / blocks, as detailed below.

Manufacturer	Description / Type	Certificate Number(s)
Weidmüller Interface GmbH & Co	Terminals MK/BK Series	TUV18ATEX8209U
ATB Tamel Spolka Akcyjna	A Range of Motor Terminal Boards	BAS01ATEX2273U

The connections to the stator leads in all cases are by right angle lugs crimped onto the leads and fitted over the top of the studs and flat terminal links may be used to interconnect the ends of stator windings.

The nylon 6.6 material used in the small and medium terminal enclosures may also be used as a further moulding to cover the main terminals if required. It may also be formed into a slotted support with a barrier to hold the auxiliary terminals and to separate them from the main terminals.

Loose Leads.

The motors may be supplied with loose leads fitted with crimp connections and suitably insulated with vinyl or nylon insulation sleeve.

Auxiliaries.

The motors may be fitted when required with thermistors / RTDs and the ATEX component certified anti-condensation heaters, detailed below.

Manufacturer	Description / Type	Certificate Number(s)
Resistance Technology Limited	Type RCH/e Anti-condensation Heater	BAS00ATEX2103U

The thermistors / RTDs may be embedded into each phase or cemented to the periphery of the winding overhang. They may be fitted singularly or in multiples. Extension leads, if required, are insulated with class F sleeving and secured to the windings.

Provision is also made for fitting other ATEX equipment certified auxiliary items which are not the subject of this certification. The manufacturer shall ensure that this equipment is suitably certified for its intended use and will take into account any specific conditions of use when incorporating them into the series of motors.

Air Stream Rated Motors.

The motors may be installed in air stream without external fan and fan cowl. The minimum air velocity required along the surface of the motor is indicated on the motor marking plate(s).

Drain Holes.

A drain hole may be provided in each of the end-shields. The holes are fitted with steel screw plugs and sealed with a non-setting gasket and jointing compound.

Earth Terminals.

An earth terminal is fitted to the motor frame and also within the terminal boxes. Additional external earth points may also be provided, which are either bolted directly into the stator frame or stator foot.

Variation 0.1

The following motor/inverter drive combinations may be used:

Motor Frame	Poles	Power O/P (kW) @ 50Hz	Freq. Range (Hz)	Voltage (V)	Inverter
W-DF200LNX	6	18.5	25 - 50	400	EEKELS 6 Pulse PWM-EVE 400/020M
W-DF225MN-D	6	22	25 - 50	400	EEKELS 6 Pulse PWM-EVE 400/020M
W-DF225SN-D	4	28	10 - 15	415	ABB 800-01-0040-3
W-DF250MN	2	75	10 - 45	415	ABB ACS 601 0100 3000f
W-DF250SN-D	6	30	25 - 50	400	EEKELS 6 Pulse PWM-EVE 400/020M
W-DF315MN	4	132	10 - 50	400	Eurotherm 584SV/1100/400

Variation 0.2

PTFE bearing isolator to be used in place of the labyrinth seal. This bearing isolator acts as a grease seal with a stationary and rotating part.

Variation 0.3

For special / customized applications the Ex tb motors may be assigned the alternative temperature class of T135°C.

16 Report Number

GB/BAS/ExTR19.0336/00

17 Specific Conditions of Use

1. Whenever the drain inspection plugs are removed, they shall be replaced and re-sealed before the machine is used.
2. The installer and user shall ensure the supply lead insulation is suitably rated for the supply.
3. The installer and user shall ensure there are no loose conductor strands after the supply leads have been connected.
4. The lugs terminating the main cables shall have retained insulation which covers the shank and continuously extends over the whole joint.
5. Where remote mounting terminal enclosures are used, the conduit installation shall comply with the local Code of Practice / Installation Instructions e.g. EN 60079-14.
6. The installer and user shall ensure all terminal nuts and screws are tightened.
7. When anti-condensation heaters are fitted the supply to the heaters must be interlocked so that they cannot be energised whilst the motor is running.
8. All gasketed joints must be examined after having been disturbed and the gaskets replaced as necessary to maintain the IP rating.
9. The auxiliary terminals may be used with one solid, multi-stranded or ferruled conductor. In all cases the cable insulation shall extend to within 1 mm of the terminal conductor.
10. Whenever the machine is tested for electric strength (insulation test), the auxiliary devices shall be connected to ground.
11. When the machine is used on an inverter derived supply, as specified in the description, it is rated at T200°C and the supply to the machine must be automatically tripped when detectors in the windings indicate a temperature of 160°C.
12. Any unused cable entries shall be blanked using suitably approved cable blanks.
13. When a PTFE bearing isolator is fitted the shaft temperature at this point must not go outside the range -40°C to +120°C.
14. Cable entry devices, adaptors or reducers and blanking plugs used on the motor frames must be suitably ATEX equipment certified and maintain the IP rating of the enclosure.
15. To maintain the IP65 rating of the motor, the end shields or any screws which break the wall of the enclosure shall not be removed.
16. To avoid an electrostatic build up only clean external motor surfaces with a damp cloth.
17. The external fans must not be exposed to temperatures above the following;
Polyamide +81°C.
Tarnamid +50°C.
Starflam +105°C.

18 Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is affected as follows.

Clause	Subject	Compliance
1.2.7	LVD type requirements	Pass
1.2.8	Overloading of equipment (protection relays, etc.)	Pass
1.4.1	External effects	Pass
1.4.2	Aggressive substances, etc.	Pass

19 Drawings and Documents

Number	Sheet	Issue	Date	Description
1P48T0091	1 of 1	A	07.11.2019	*Maximum Size Cable Entries For Use On Ex ec "W" Series Motors Frames W-DF200L-355L
1P48T0200	1 of 1	-	12.11.2012	Bearings And Sealing Arrangement Used Ex ec "W" Series Motors Frames W-DF200L-355L
3P20T3670	1 of 1	0	09.01.2020	*Paint Systems
3P24T1964	1 of 1	2	18.11.19	*Non-Metallic Material List
A00602	1 of 1	I	18.11.2019	Typical Arrangement Of W-DF200LX - W-DF355L Ex ec Motors To IEC 60079 -7
A00605	1 of 1	D	19.11.2019	Ex ec Terminal Arrangement 'W' Series Frames W-DF200L - W-DF280S 9/12 Terminals (Also Oversize Box For Frame W-DF200LX) To IEC/EN 60079-7
A00608	1 of 1	D	14.11.2019	Ex ec Terminal Arrangement 'W' Series Frames W-DF200L - W-DF280S 180 Amps Maximum (Also Oversize Box For 0.5 Frame W-DF200LX) To IEC/EN 60079-7
A00609	1 of 1	D	14.11.2019	Ex ec Terminal Arrangement "W" Series W-DF200LX 180 Amps Maximum. (Motor Leads Fitted With Sockets) To IEC/EN 60079-7
A00612	1 of 1	B	14.11.2019	Rotor And Fan Clearance Drawing For Ex ec To IEC/EN 60079-7 Frames W-DF200LX - W-DF355L
A22560	1 of 1	B	07/12/16	Typical Arrangement Of W-DF200L – W-DF355L Dust Ignition Proof Motors To EN60079-31
B00043	1 of 1	C	14.11.2019	Ex ec Terminal Arrangement "W" Series "Bk" Auxiliaries Frames W-DF280M – W-DF355L 300 Amps Maximum (Also Oversize Box For W-DF250M – W-DF280S) To IEC/EN 60079-7
B00044	1 of 1	C	18.11.19	Ex ec Terminal Arrangement "W" Series "Bk" Auxiliaries Frames W-DF280M – W-DF355L (Also Oversize Box For W-DF250M – W-DF280S) 6/9/12 Terminals To IEC/EN 60079-7
B00045	1 of 1	D	13.11.2019	Alternative Arrangements And Terminations Ex ec Motors To IEC/EN 60079-7 "W" Series "Bk" Auxiliaries Frames W-DF200LX To W-DF355L
B30530	1 of 1	B	07.11.19	Certification Detail For Increased Ambients (41°C To 80°C) "W" Series W-DF200LX To W-DF355L. Ex ec Motors To IEC/EN60079-7

All drawings are common to BAS00ATEX3133X and IECEx BAS 15.0114X and are held on the latter.

* Indicates drawings are also common to IECEx BAS 15.0113X, BAS00ATEX3119X, BAS00ATEX3133X and BAS00ATEX2205X.