

# Certification of

# EXPLOSION PROTECTED ELECTRICAL EQUIPMENT

Administered by: Standards Australia Quality Assurance Services

## Certificate of Conformity

*Certificate No:* **AUS Ex 1533**      *Issue: 0:*      *Original Issue* **03-06-2002**

*Date of Expiry:* **03 June 2012**

*Certificate Holder:* **ABB OY Electrical Machines, LV Motors  
STROMBERGIN Puistotie 5A  
VAASA FINLAND 65320**

*Electrical Equipment:* **Range of Ex n Electric Motors  
Motors M2BA from Sizes 71, 80, 90, 100, 112, or 132, and  
Motors M3GP from Sizes 160, 180, 200, 225, or 250  
Motors M3GP from Sizes 280 or 315**

*Type of Protection  
and Marking Code:* **Ex n II T2-T3 IP55/56  
AUS Ex 1533**

*Manufactured by:* **ABB OY, Electrical Machines, LV Motots  
PO Box 633  
Strombergin Puistotie 5A  
FIN 65101 VAASA FINLAND**

*Issued by:*

**Quality Assurance Services** 

A subsidiary of Standards Australia  
286 Sussex Street Sydney NSW 2000 Australia  
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Standards Australia Quality Assurance Services Pty Limited A.B.N. 67 050 611 642

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*This certificate is granted subject to the conditions as set out in Standards Australia Miscellaneous Publication MP 69 and the Procedures (Doc Q7134) of the scheme.*

*The electrical equipment and any acceptable variation to it specified in the schedule to this certificate and the identified documents, was found to comply with the following standards:*

**AS 2380.9:1991:** Electrical equipment for explosive atmospheres Explosion-protection techniques Part 9: Type of protection n - Non sparking.

*This Certificate does not ensure compliance with electrical safety and performance requirement other than those included in the Standard(s) listed above.*

*The equipment listed has successfully met the examination and test requirements as recorded in*

Test Report No: **LCIE TEST Reports**

- File Reference:
- Test Report No. 39314010 A for Size 70-80-90-100-112-132 and
  - Test Report No. 39314010 B for Size 160-180-200-225-250 and
  - Test Report No. 39314010 C for Size 280-315

*Signed for and on behalf of issuing authority*

**General Manager - Certification**

*Position*

**03 June 2002**

*Date of issue*

**Certificate No: AUS Ex 1533 Issue 0**

*This certificate and schedule may not be reproduced except in full.*

*This certificate is not transferable and remains the property of Standards Australia Quality Assurance Services and must be returned in the event of its being revoked or not renewed.*

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## Schedule

### Certified Equipment:

The three phase Asynchronous Ex n motors manufactured by ABB LV Motors are defined within the following ranges M2BA from Sizes 71, 80, 90, 100, 112, and 132, M3GP from Sizes 160, 180, 200, 225, and 250, M3GP from Sizes 280 and 315, as specified in the Table 1 below.

The range of motors comply with Australian Standards: AS 2380.9 and AS 2380.1.

The three (3) phase motors are designed to operate at network voltage supply between 190 V and 800 V / 3 phase. Tolerances according to:

- IEC 60034-1 (+/-5%) for motors rated in multi-voltages use (e.g.: 380 V-420 V or 380 V / 400 V / 415 ).
- IEC 38 (+/-10%) for motors rated in single voltage use. (e.g. 400 V / 690 V or 415 V or 440 V)
- Direct On Line network supply: 50 Hz / 60 Hz.
- Variable Speed Application with frequency range from 0 up to 90 Hz Duty S1 or Continuous

In the case of variable frequency, a second name plate will be fixed on the motor giving voltage, current and load conditions according to the frequency range and the relevant inverter characteristics. The motor will be equipped with internal thermosensors.

**Table 1**

**SUMMARY OF NOMINAL RATINGS FOR ABB Ex n RANGE OF MOTORS**

FRAME SIZE	KW RATING AT 50HZ	POLES	ABB DRAWINGS
71	0.18 - 0.55	2-4-6	1AD.051.004
80	0.37 - 1.1	2-4-6	1AD.051.009
90	0.75 - 2.2	2-4-6	1AD.051.006
100	1.5 - 3.0	2-4-6	1AD.051.005
112	2.2 - 4.0	2-4-6	1AD.051.007
132	3 - 7.5	2-4-6	1AD.051.008
160	4 - 22	2-4-6-8	3GZF100716-AR
180	11 - 30	2-4-6-8	3GZF100718-F
200	15 - 37	2-4-6-8	3GZF100720-S
225	18.5 - 55	2-4-6-8	3GZF100722-G
250	30 - 75	2-4-6-8	3GZF100725-F
280	37 - 110	2-4-6-8	3GZF100728- D
315	55 - 200	2-4-6-8	3GZF100731-C

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Addendum to Certificate No.....

**Table 2**

MANUFACTURER'S DOCUMENTS				
Item	Subject <span style="font-size: small;">Technical description</span>	Drawing or document reference	Rev	Date
1	Technical file descriptive	<i>MX45133</i>	0	00-02.17
2	<i>Assembly drawing size 71</i>	<i>1AD.051.004</i>	A	98-02
3	<i>Assembly drawing size 80</i>	1AD.051.009	A	99-03
4	<i>Assembly drawing size 90</i>	1AD.051.006	A	99-11
5	<i>Assembly drawing size 100</i>	1AD.051.005	0	99-04
6	<i>Assembly drawing size 112</i>	1AD.051.007	A	99-03
7	<i>Assembly drawing size 132</i>	<i>1AD.051.008</i>	A	99-12
8	Terminal box sizes 71 .. 90	<i>A9.0010</i>	0	99 - 07 - 16
9	Terminal box sizes 100 .. 132	A9.0011	0	99 - 07 - 16
10	Terminal board sizes 71 .. 90	3GZX284020 (KL253)	0	96 - 05 - 21
11	Terminal board sizes 100 .. 132	3GZX284001 (KL248)	A	94 - 10 - 07
12	Protection roof (V1)	5AD.306.007	0	99-12
13	Clearances in the terminal boxes	MX35104	0	99-11-22
14	Clearances of the fans	MX 35103	0	99-11-25
15	External earthing	3GZF100707	A	00 - 03 - 06
16	Terminal Box with term.	3GZF100716-AS	A	00-08-25
17	Terminal Box with term.	3GZF100720-T	A	00-08-25
18	Separate terminal box	3GZF100716-AB	A	00-06-05
19	Prot. Roofs for fan covers	3GZF100716-AT	A	00-09-04
20	Sealing	3GZF100716-AF	A	00-05-16
21	Rating plate	3GZF194716-15	A	02-05-14
22	Technical file descriptive	3GZF500916-50	0.0	11.09.00
23	Assembly size 160	3GZF100716-AR	A	25.08.00
24	Assembly size 180	3GZF100718-F	A	25.08.00
25	Assembly size 200	3GZF100720-S	A	25.08.00
26	Assembly size 225	3GZF100722-G	A	25.08.00
27	Assembly size 250	3GZF100725-F	F	25.08.00
28	Terminal box and board size 160 - 180	3GZF100716-AS	A	25.08.00
29	Terminal box and board size 200 - 250	3GZF100720-T	A	25.08.00
30	Separate terminal box size 160 - 250	3GZF100716-AB	A	05.06.00
31	Protective cover V1	3GZF100716-AT	A	04.09.00
32	Sealing size 160 ... 250	3GZF100716-AF	A	16.05.00

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**Table 2** Continued

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**Issue: 0**

Addendum to Certificate No.....

**Drawings and Documents :**

MANUFACTURER'S DOCUMENTS				
Item	Subject	Drawing / Document ref.	Rev.	Date
33	Technical description	3GZF500928-28	A	28.01.2002
34	<i>Assembly size 280</i>	3GZF100728-D	A	16.01.2002
35	<i>Assembly size 315</i>	3GZF100731-C	A	16.01.2002
36	Terminal box and board size 280 - 315	3GZF500728-42	A	17.01.2002
37	Separate terminal box size 280 - 315	3GZF500728-43	A	17.01.2002
38	Shaft sealings	3GZF500728-34	A	11.12.01
39	Protection roof for fan cover	3GZF100716-AP	B	21.01.02
40	Encoder assembly	3GZF100716-AH	B	11.12.01
41	Brake mounting	3GZF100716-AL	B	26.11.01
42	Backstop mounting	3GZF100716-AN	B	11.12.01
43	Special fan	3GZF100716-AG	B	26.11.01
44	PT100 in bearings	3GZF500728-9	B	18.09.01
45	Technical file descriptive	3GZF500916-50	0.0	11.09.00
46	<i>Assembly size 160</i>	3GZF100716-AR	A	25.08.00
47	<i>Assembly size 180</i>	3GZF100718-F	A	25.08.00
48	<i>Assembly size 200</i>	3GZF100720-S	A	25.08.00
49	<i>Assembly size 225</i>	3GZF100722-G	A	25.08.00

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### Drawings and Documents :

MANUFACTURER'S DOCUMENTS				
Item	Subject	Drawing / Document ref.	Rev.	Date
50	Assembly size 250	3GZF100725-F	F	25.08.00
51	Terminal box and board size 160 - 180	3GZF100716-AS	A	25.08.00
52	Terminal box and board size 200 - 250	3GZF100720-T	A	25.08.00
53	Separate terminal box size 160 - 250	3GZF100716-AB	A	05.06.00
54	Protective cover V1	3GZF100716-AT	A	04.09.00
55	Sealing size 160 ... 250	3GZF100716-AF	A	16.05.00
56	Rating Plate-Australian Standards	3GZF194713-2	A	17-05-02
57	Rating Plate-Australian Standards	3GZF194716-15	A	14-05-02

- The revision of the above technical documents / drawings may be upgraded as long as any changes do not affect the Ex n protection technique.
- Changes that may affect the Ex n technique will require supplementary certification.

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