



Certificate of Compliance

Certificate: 70146376

Master Contract: 270683

Project: 70146376

Date Issued: May 09, 2018

Issued to: **CEMP S.r.l.**
Via Piemonte, 16
20030 Senago - Milano
ITALY

Attention: Mr. Marco Garbuio

The products listed below are eligible to bear the CSA Mark shown



Issued by: *E Giusti*
E Giusti

PRODUCTS

CLASS 4228 01 – MOTORS AND GENERATORS for Hazardous Locations.

CLASS 4228 81 – MOTORS AND GENERATORS for Hazardous Locations – Certified to U.S. Standards.

Ex db IIB T4 Gb

Class I, Zone 1, AEx db IIB T4 Gb

Three-phase asynchronous motors type E3AB**160**, frame size 160, duty service S1, S2 or S9, detailed electrical ratings are given in the table below:

Frame	Power [kW] (50Hz)	Power [kW] (60Hz)	Voltage [V]	Frequency [Hz]	Poles
160	7,5	9,0	240 – 416 347 – 600 480 - 575 600	50-60	2
160	11	13,2		50-60	2
160	15	18,0		50-60	2
160	18,5	22,2		50-60	2
160	22	26,4		50-60	2
160	11	13,2		50-60	4
160	15	18,0		50-60	4
160	18,5	22,2		50-60	4



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Temperature code is determined based on the maximum ambient temperature: shaft power is de-rated for Ta above +40°C according to the table presented below:

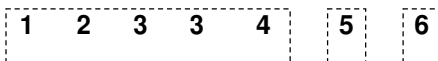
De-rating according to ambient temperature

Ambient temperature [°C]	40	45	50	55	60
ΔT limit[°K] (Insulation class B)	80	75	70	65	60
Shaft power reduction	0%	5%	10%	15%	20%
Temperature Class	T4				

Notes:

- The manufacturer performs the heating test to verify the temperature rise so that limits of temperature class are respected.
- For machines with duty service S9 (inverter) following conditions shall be taken into account for safe use:
 - End user shall connect the PTC (or PT100) to a certified device, in safe area, able to make/break the rated current in case the thermal device trips.
 - Power is de-rated according to manufacturer’s document referenced ‘Attachment D’, Ver.1, dated 22/03/2018.
 - To limit the bearing current, parasitic capacitances and resonant frequencies, the end user shall limit the dV/dt maximum to 1500V/microsec by using sinusfilter and taking in account the cable length and voltage between inverter and motor.

Model Code:



- Pos.1 = series**
- Pos.2 = motor type;**
- Pos.3 = terminal box**
- Pos.4 = motor size;**
- Pos.5 = stator core length;**
- Pos.6 = polarity**

Pos.1: Motor series

E3AB	Flame proof electric motors for gas group IIB
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Pos.2: Motor type (electrical features)

3	Three phase motor one polarity	7	Three phase motor suitable for frequency converter
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Pos.3: Terminal box

0	With standard terminal box	3	Plate and cable gland version
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Pos.4: Size

160	Motor size 160		
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Pos.5: Stator core length

	As per attachment F		
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Pos.6: Polarity number

2	2 pole		
4	4 pole		



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APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 60079-0:15	Explosive Atmospheres - Part 0: Equipment - General Requirements
CAN/CSA-C22.2 No. 60079-1:16	Standard for Explosive Atmospheres - Part 1: Equipment Protection by Flameproof Enclosures “d
CAN/CSA-C22.2 No. 100:14	Motors and generators
UL 1004-1 (2012)	Standard for safety Rotating Electrical Machines - General Requirements
UL 1004-9 (2016)	Standard for safety Form Wound and Medium Voltage Rotating Electrical Machines
UL 60079-0:2013	Explosive Atmospheres - Part 0: Equipment - General Requirements
UL 60079-1:2015	Standard for Explosive Atmospheres - Part 1: Equipment Protection by Flameproof Enclosures “d”

MARKINGS

Product markings shall be in accordance with the related standards. In addition, it shall be the responsibility of the manufacturer to provide additional markings on the product to comply with the requirements of the local regulatory authorities. For example, in Canada, any caution and warning markings must be provided in French and English.

The following information appear on a permanent metallic nameplate (see drawing GA160AEX_B_eng, nameplate position are given in GD2E8120):

- Submitter’s name
- Catalogue, Model, or series designation
- Month and year of manufacturer, date code or serial number
- Hazardous location rating : see ‘Product’
- Rated Voltage : V
- Rated current : A
- Maximum Power rating : kW (hp)
- Frequency in Hz
- Number of phases
- Rated speed : rpm
- Insulation system code
- Certificate No : CA.CSA.17. 70146376
- Ambient temperature
- Colling method: “Totally Enclosed Fan Cooled” if applicable

Warnings:

“Do not open while energized/ Ne pas ouvrir sous tension” (on the terminal boxes: main and auxiliaries)

“A SEAL SHALL BE INSTALLED WITHIN 50 mm OF THE ENCLOSURE” and “UN SCÉLLEMENT DOIT ÊTRE INSTALLÉ À MOINS DE 50 mm DU BOÎTIER”

“Space Heaters/Elements chauffants : P=...W, U=...V”

“Space heaters shall be connected only when the motor is switched off and cooled down to +40°C / Les elements chauffants ne doivent etre sous tension seulement lorsque le moteur est à l’arrêt et refroidi à +40°C”



Supplement to Certificate of Compliance

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*The products listed, including the latest revision described below,
are eligible to be marked in accordance with the referenced Certificate.*

Product Certification History

Project	Date	Description
70146376	May 09, 2018	Original cCSAus Certification