IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	**IECEx UL 19.0086X**	Page 1 of 3	Certificate history:
Status:	**Current**	Issue No: 0	
Date of Issue:	2019-08-29		
Applicant:	**Circor Aerospace Inc.** 2301 Wardlaw Cir. Corona, CA, 92880 **United States of America**		
Equipment:	**Solenoid coil housing, Type 15800 and 30800 Series**		
Optional accessory:			
Type of Protection:	**Flameproof "db"**		
Marking:	Ex db IIB T5 Gb (Type 15800 series) Ex db IIB T4 Gb (Type 30800 series)		

Approved for issue on behalf of the IECEx Certification Body: **Erin LaRocco**

Position: **Staff Engineer**

Signature: (for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

UL LLC
333 Pfingsten Road
Northbrook IL 60062-2096
United States of America

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Certificate No.: **IECEx UL 19.0086X**

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Manufacturer: **Circor Aerospace Inc.**
2301 Wardlaw Cir.
Corona, CA, 92880
United States of America

Additional manufacturing locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

IEC 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

US/UL/ExTR19.0097/00

Quality Assessment Report:

US/UL/QAR17.0021/01

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The equipment represented in this certificate consists of solenoid coil housings, constructed in the type of protection flameproof enclosure “d”, and fitted to valves which may be either normally open or normally closed and intended to be attached to gas, liquid or steam processes. The solenoid coil housing is cylindrical in shape and consists of a cover and housing. The housing has a protruding boss to accommodate a suitably certified ½” NPT stopping box and intended for connection within conduit systems only. Internally there is a central cylindrical cap assembly tube. The cylindrical cap assembly tube has a solid or fabricated top stop preventing the process medium entering the solenoid coil housing. Around the cylindrical cap assembly there is an encapsulated solenoid coil that operate various valve stems to control the appropriate process medium within the associated valve. The solenoid coil has two flying leads that pass thought the cable entry and are intended to be terminated within another suitably certified enclosure.

The 15800 series solenoid coil housings are manufactured from cast iron enclosure with a threaded cover. The central cylindrical cap assembly threading into a bushing, which in turn is threaded into the base of the main body of the enclosure.

The 30800 series solenoid coil housings are fabricated from brass/bronze/steel enclosure construction with a bolted cover utilizing four stainless steel M10 cap head screws. The central cylindrical cap assembly passes through main body of the enclosure and cover and is secured in place by an external nut.

Please see Annex for additional information.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The ambient temperature range is -20°C < Ta < 60°
- The maximum constructional gap (iC) is less than that required by Table 1 of IEC 60079-1 as detailed below:

Flamepath	Maximum Gap	Minimum Width	Comment
1. Between the cover and base of the 15800 series solenoids.	0.0381 mm (0.0015 in.)	10.92 mm	Flange Joint
2.Between the cylindrical cap assy. nut and nameplate of the 30800 series solenoids.	0.0381 mm (0.015 in.)	12.38 mm	Flange Joint
3.Between the nameplate and main body of the 30800 series solenoids. (This joint is optionally bonded with adhesive.)	0.0381 mm (0.015 in.)	36.19 mm	Flange Joint
4.Between the cylindrical cap assy. and base of the 30800 series solenoids.	0.0381 mm (0.015 in.)	12.19 mm	Flange Joint

- CAUTION – If the bolting on the 15800 series housing must be removed for any reason, ensure that M10 bolts marked “A2-70” or “A4-70” are installed.

Annex:

Annex to IECEx UL 19.0086X Issue 0.pdf

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Issue No.: 0

TYPE DESIGNATION

Nomenclature for type 158b0-cdefghjkAm, where	Nomenclature for type 3b8cd-efghjkmnAp, where
*b = pipe connection sizes c = Voltage AC/60 Hz 0 – AC/50 Hz or DC 1 - 24 VAC 2 – 100 VAC 3 - 115 VAC 4 – 200 VAC 5 – 230 VAC 6 – 460 VAC d = Voltage AC/50 Hz 0 – AC Voltage/60 Hz or DC 1 – 24 VAC 2 – 110 VAC 3 – 220 VAC 4 – 380 VAC e = Voltage DC 0 – AC Voltage 1 – 12 VDC 2 – 24 VDC 3 – 32 VDC 4 – 72 VDC 5 – 125 VDC 6 – 250 VDC *f = pipe connection thread type *g = Maximum Differential Pressure in PSID *h = Seat/Pilot Material *j = External Seal Material *k = Fluid Media Type A = ATEX coil housing *m = Options Specials (Variant of the valve portion only) are identified as158b0-zzzz where zzzz is a unique number, and b is the pipe connection size	b = normal position of valve 1 – normally closed 2 - normally open *c = pipe connection sizes d =body style 0 – threaded cylinder cap on ¼ in. – 1 in. and flanged cylinder cap on 11/4 in.- 1 1/2 in. (3000 psig) 1 - screwed cylinder cap on 1 1/4 in.-2 in. (1500 psig) e = voltage AC/60 Hz 0 – AC/50 Hz or DC 1 - 100 VAC 2 – 115 VAC 3 - 200 VAC 4 – 230 VAC 5 – 460 VAC f = Voltage AC/50 Hz 0 – AC Voltage/60 Hz or DC 1 – 110 VAC 2 – 220 VAC g = Voltage DC 0 – AC Voltage 1 – 12 VDC 2 – 24 VDC 3 – 48 VDC 4 – 125 VDC 5 – 250 VDC h = pipe connection thread type *j = Maximum Differential Pressure in PSID *k = Seat/Pilot Material *m = External Seal Material *n = Fluid Media Type A = ATEX coil housing *p = Options Specials (Variant of the valve portion only) are identified as 3b8cd-zzzz where zzzz is a unique number, and other letters are from above description