



EU-TYPE EXAMINATION CERTIFICATE



Equipment or Protective System intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

- [3] EU-Type Examination Certificate Number: **DEMKO 11 ATEX 7265494X Rev. 1**
- [4] Product: **Solenoid coil housing for the 'Atkomatic' – Type 15800 and 30800 series**
- [5] Manufacturer: **Circor Aerospace Inc.**
- [6] Address: **2301 Wardlow Circle, Corona, CA 92880, USA**
- [7] This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- [8] UL International Demko A/S, notified body number 0539 in accordance with Article 17 of the Council Directive 2014/34/EU of 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to design and construction of products 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. **4788855972.1.1**
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
- EN 60079-0:2012+ A11:2013 EN 60079-1:2014**
- [10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to special conditions for safe use specified in the schedule to this certificate.
- [11] This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by the certificate.
- [12] The marking of the product shall include the following:

 **II 2 G Ex db IIB T5 Gb (Type 15800 series)**

 **II 2 G Ex db IIB T4 Gb (Type 30800 series)**

Certification Manager
Jan-Erik Storgaard

This is to certify that the sample(s) of the Product described herein ("Certified Product") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

Date of issue: 2012-03-26
Re-issued: 2019-05-31

Notified Body UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark
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Schedule

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[15] Description of Product

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 1/2" 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 through 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.

Design Options

- The 30800 series solenoid coil housings may be fitted with one of two cylindrical cap design assemblies.

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 as 158b0-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 1/4 in. – 1 in. and flanged cylinder cap on 1 1/4 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

** Are additional variant valve design component options (to which the solenoid coil housings are intended to be fitted) that do not contribute to the explosion protection method or form part of this certification.

Temperature range

The ambient temperature range is -20°C < Ta < 60°C

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Schedule

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Electrical data

See product nomenclature above for various voltage supply options with a maximum rated power:

- 138 VA. (Type 15800 series)
- 506 VA. (Type 30800 series)

Routine tests

Each 15800 series cylinder cap assembly shall be subjected to a routine overpressure test of 7.6 bar (110.4 psi) minimum for at least 10 s as required by clause 16.1 of EN 60079-1:2014. There shall be no permanent deformation or damage to the enclosure.

Each 30800 series enclosure fitted with a cylinder cap assembly shall be subjected to a routine overpressure test of 9.91 bar (143.7 psi) minimum for at least 10 s as required by clause 16.1 of EN 60079-1:2014. There shall be no permanent deformation or damage to the enclosure.

In addition each 15080 and 30800 series cylinder cap assembly shall be additionally subjected to a routine overpressure test, based upon the process pressure of 'Atkomatic' valve in accordance with the Pressure Equipment Directive 2014/68/EU.

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Descriptive Documents

The scheduled drawings are listed in the report no. provided under item no. [8] on page 1 of this EU-Type Examination Certificate.

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Specific conditions of use:

- The ambient temperature range is $-20^{\circ}\text{C} < T_a < 60^{\circ}\text{C}$.
- The maximum constructional gap (iC) is less than that required by Table 1 of EN 60079-1:2014 as detailed below:

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

Note: Flamepath 1 on the solenoid base component in part is interrupted by four 10.668 mm (0.420") holes. Each having an engaged part flamepath length between components from the inside of the enclosure to each hole of 9.4 mm minimum. Complying with EN60079-1 clause 5.2.4.

- 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.

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Essential Health and Safety Requirements

The Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9.

Additional information

CAUTION - The flying leads for Type 15800 Solenoid coil housing shall be suitably temperature rated for at least 88°C.

CAUTION - The flying leads for Type 30800 Solenoid coil housing shall be suitably temperature rated for at least 98°C.

A certified stopping box in type of explosion protection flameproof enclosure "d", is to be fitted within 1/2 inch from the enclosure wall.

The solenoid coil enclosure has flying leads from the coil, which are to be terminated in a suitably certified enclosure in type of explosion protection flameproof "d" or in type of explosion protection increased safety "e".

Additional protection may be required to prevent the cover bolts on the series 15800 valves from losing if end user intended application is subject to vibration. Ensuring that the specified flamepath gaps are not enlarged, maintaining the concept of protection afforded

Precautions must be taken to ensure that the process medium temperature within the valves to which the flameproof solenoid enclosure are fitted do not exceed 260°C (500°F).

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in Annex III to Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014.