



**TECHNICKÁ INŠPEKCIA, a.s.**  
**CEOC**  
INTERNATIONAL  
**SLOVENSKÁ REPUBLIKA**



[1] **EU-TYPE EXAMINATION CERTIFICATE**

[2] Equipment or Protective System Intended for use in potentially explosive atmospheres  
Directive 2014/34/EU

[3] EU-Type Examination Certificate Number:

**TI18ATEX 1574 X**

[4] Product: **SELF CONTAINED ELECTRO-HYDRAULIC ACTUATOR / ELECTRIC FAIL SAFE ACTUATOR**

Type: **EHF**

[5] Manufacturer: **ROTEX MANUFACTURERS & ENGINEERS PRIVATE LIMITED**

[6] Address: **703, WESTERN EDGE-II, OFF WESTERN EXPRESS HIGHWAY, BORIVALI (E), MUMBAI-400066, MAHARASHTRA, INDIA**

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] Technická inšpekcia, a.s., Notified Body Number 1354 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of product 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. 1574/5/2018.

[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, EN 60079-31:2014, EN ISO 80079-36:2016, EN ISO 80079-37:2016**

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

[10] If the sign "X" is placed after the certificate number, it indicate that the product is subject to the Specific conditions of 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 this Directive apply to the manufacturing process and supply of this product.

[12] The marking of the product shall include the following:



**II 2 GD Ex db h IIB T5 Gb -20°C ≤ Tamb ≤ +60°C**  
**Ex h tb IIIB T100°C Db IP65 -20°C ≤ Tamb ≤ +60°C**

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Bratislava, November 14<sup>th</sup>, 2018

  
Ing. Dušan Perniš  
General Director

**405737**

This certificate may only be reproduced in its entirety and change, schedule included.

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NB 1354



[13] **Schedule**

[14] **EU-Type Examination Certificate Number: TI18ATEX 1574 X**

[15] Description of product:

The equipment is a Self Contained Electro-Hydraulic Actuator/Electric Fail Safe Actuator; Type- EHF, mainly consists of EHF housing with integral terminal box for mounting terminals, controller assembly with glass window cover, limit switch assembly and integral squirrel cage motor. It also contains manifold assembly which is partly a non-flameproof part of the equipment. Oil tank containing hydraulic oil is mounted on manifold assembly. The equipment is made from cast aluminium alloy LM6.

Terminal box cover is fixed on EHF housing with socket head cap screws of size M8 X 30L (4 nos.) forming a spigot joint. O-ring (Ø3.53mm) made of Nitrile Butadiene Rubber (NBR) is provided on terminal box cover and secured in O-ring groove.

Glass window is cemented on controller assembly cover. The controller assembly cover is fixed on EHF housing with socket head cap screws of size M8 X 30L ( 8 nos.) forming a spigot joint. O-ring (Ø3.53mm) made of Nitrile Butadiene Rubber is provided on controller assembly cover and secured in O-ring groove. Rotary switches (02 numbers) are provided on glass window cover for local controls. The limit switch assembly cover and manifold assembly is fixed on EHF housing with hex head screws of size M12 X 40L (4 nos+ 4 nos.) forming a spigot joint. O-ring (Ø2.62mm) made of Nitrile Butadiene Rubber is provided on limit switch assembly cover and secured in O-ring groove. Operating rod pass through the cover. On top of the cover, indicator cover made of Polycarbonate plastic material is provided to indicate position of valve "Open/ Close".

Squirrel cage motor is mounted on manifold with socket head cap screws of size M8 X 30L (4 nos.) forming a spigot joint. O-ring (Ø3.53mm) made of Nitrile Butadiene Rubber is provided between motor flange and manifold and secured in O-ring groove.

Motor cable is running through the bush to the terminal box assembly for supply connection. The bush is forming cylindrical joint with manifold.

Internal gross volume of the EHF housing is 17.1 litre and net volume is 6.8 litre, for motor enclosure

Gross volume is 1.87 litre and net Volume is 1.83 litre.

Optional Manual Hand Pump is provided for the manual operation of EHF.

**Cable Entries**

The equipment is provided with maximum six cable entries of size M25 X 1.5P. Cable entry has a threaded axial length of 16 mm. Alternate size of the cable entry can be M20 X 1.5P or 1 1/2" NPT. The cable entry port when mated with appropriately Ex d certified cable gland will form a flame path meeting the requirements of the standard.

**Earthing**

One external and one internal earth points of the size M8 are provided with stainless steel screws, spring washer and "C" clamp on the enclosure. The terminals are suited for a connection of a 10mm<sup>2</sup> conductors.

**Properties of Nitril butadine Rubber (NBR)**

Continuous operating Temperature: -40°C to +100°C

Color: Black

Hardness: 40 to 90 Shore A



**Properties of Cementing Material LOCTITE:**

Continuous operating Temperature Range: -50°C to +200°C

Color: Clear

Hardness: 25 Shore A

**[16] Report Number:**

Inspection report No: 1574/5/2018

Final Test Report No: 1574/5/2018

**[17] Specific Conditions of Use:**

- User must refer to manufacturer before carrying out any repairs or refurbishment to the equipment. The gap specified in the approved drawing must never be exceeded.
- Wipe surface of polycarbonate indicator cover used for indicator with moist/wet cloth.
- The fastening screws shall be stainless steel socket head cap screws of property class A2-70 and yield stress 450 MPa
- Only Suitable certified Ex db, Ex tb IP 65 cable glands to be used.
- Read Operating Instructions Supplied with the product before installing and using the product.
- Warning Marking: "WARNING- DO NOT OPEN WHEN AN EXPLOSIVE ATRMOSPHERE IS PRESENT"

**[18] Essential Health and Safety Requirements:**

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

Additional information: None.

**[19] Drawings and Documents:**

Number	Sheet	Issue	Date	Description
12-60-134-510A	4 pgs	03	06.11.2018	Self Contained Electro Hydraulic/Electric Fail Safe Actuator Drawing
12-60-134-511A	1 pg	01	02.11.2018	Name Plate Drawing
12-60-134-512A	1 pg	01	02.11.2018	Fastener Details- Drawing
12-60-134-513A	1 pg	01	02.11.2018	LCD Cover Assembly Drawing
12-60-134-514A	1 pg	01	02.11.2018	LCD Cover Drawing
RTX-IOM-EHF-R04-0318	53 pgs			Installation Operation and Maintenance Manual
HB0045	1 pg		19.07.2018	Aluminum Alloy LM6 Material Test report
PCS-8074	11 pgs			Material Polycarbonate Technical Data Sheet
BEPL/ML/PS/09	1 pg	02	13.10.2003	Material Test Report- ABS
				Nitrile Rubber Technical Data Sheet
E-07-C	1 pg		03.01.2011	Nitrile Rubber O Ring Test Report
KLPL/Ex/RMEL-18/001	40 pgs	00	06.08.2018	Test Report EN 60079-0:2011, EN 60079-1:2007
SI 5366	2 pgs			Technical Data Sheet- Loctite Cementing Material
12-60-134-515A	3 pgs	00	30.10.2018	Ignition Hazard Assessment Report

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Bratislava, November 14<sup>th</sup>, 2018

*[Signature]*  
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