

[1] EC-TYPE EXAMINATION CERTIFICATE

[2] Equipment or Protected System Intended for use
in Potentially explosive atmospheres
Directive 94/9/EC

[3] EC-Type Examination Certificate Number: **Nemko 00ATEX305X** Issue **9**

[4] Equipment or Protective System: **Positioners**

[5] Applicant/ Manufacturer: **Smar Equipamentos Industriais Ltda.**

[6] Address: **Av. Dr. Antonio Furlan Jr., 1028
Sertãozinho -SP-14160.000
Brazil**

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

[8] Nemko AS, notified body number 0470 in accordance with Article 9 of Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety requirements relating to the design and construction of equipment and protective systems 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. **D0002025**

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0: 2009, EN 60079-1: 2007

[10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

[11] This EC-TYPE EXAMINATION CERTIFICATE relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC.

Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

[12] The marking of the equipment or protective system shall include the following:



II 2G

Ex d IIC T6 Gb Ta : -20°C to +60°C

Oslo, 2016-04-19

Asle Kaastad
Certification Manager, Ex-products

[13] Schedule

[14] **EC-TYPE EXAMINATION CERTIFICATE No** **Nemko 00ATEX305X** **Issue 9**

[15] **Description of Equipment or Protective System**

The SMAR FY Series is a flameproof enclosure, intended to control valves positioners and consist in housing and electronic circuit.

The equipment is manufactured in AISI316/CF-8M or SAE305 or SAE336/ANSI356, closed by removable screwed covers with M76 x 1,27 threads, with or without visor, and the cable entry for electronic circuits is mounted in the wall of the housing with options 1/2"-14 NPT or M20x1,5. Under the one cover, being equipped with an inspection glass, an alphanumeric LCD-display is arranged optionally; under the other cover, terminals for the signal-circuit are arranged.

The valves control positioners FY300 Series are available in 4 to 20 mA and for systems with HART®, FOUNDATION™ fieldbus and PROFIBUS PA protocol. FY300 Series positioner provides an output pressure to the control valve actuator, positioning it according to the input received from the output of a controller.

The models FY and SP are valve positioners for single (spring return) or double acting linear motion type control valves and rotary motion control valves. Only cable glands certified according to EN 60079-0 and EN 60079-1 must be used.

Type Designations

FY 301, FY 302, FY 303, SP301, SP302 and SP303.

Technical Data

FY/SP 301: 45VDC, 25mA, Pressure: 20-100 psi

FY/SP 302/303 : 32VDC, 12mA, Pressure: 20-100 psi

Ingress Protection Code

IP66W tested in a saturated solution of NaCl 5% w / w, at 35°C for a period of 200 h

[16] Report No. D0002025

Descriptive Documents

Title:	Drawing No.:	Rev. Level:	Sheet	Date:
Boards Arrangements FY301	102A-0404	04	1	14-09-02
PCB Interconnection FY301	102B-0448	04	1	14-09-02
LM FY301	LM-102-0421	31	1	14-09-10
LM General Components Hart	LM-102-0161	04	1	06-05-10
Label Plate FY301 NEMKO-EXAM/BVS IP66	102A-1412	02	1	16-04-18
Label Plate FY301 NEMKO-EXAM/BVS IP66W	102A-1494	02	1	16-04-18
Label Plate SP301 SPIRAX SARCO NEMKO-EXAM/BVS IP66	102A-1446	04	1	16-04-18
Label Plate SP301 SPIRAX SARCO NEMKO-EXAM/BVS IP66W	102A-1502	04	1	16-04-18
Mechanical Drawing FY NEMKO	101-E-0082	08	1	10-07-26
Boards Arrangements FY302/303	102A-0405	05	1	15-05-15
PCB Interconnection FY302/303	102B-0447	05	1	15-05-15
LM FY302/303	LM-102-1152	01	1	15-05-28
LM General Components Fieldbus/Profibus PA	LM-102-0232	03	1	06-05-10
Label Plate FY302 NEMKO-EXAM/BVS IP66	102A-1413	03	1	16-04-18
Label Plate FY302 NEMKO-EXAM/BVS IP66W	102A-1495	03	1	16-04-18
Label Plate FY303 NEMKO-EXAM/BVS IP66	102A-1414	03	1	16-04-18
Label Plate FY303 NEMKO-EXAM/BVS IP66W	102A-1496	03	1	16-04-18
Label Plate SP302 SPIRAX SARCO NEMKO-EXAM/BVS IP66	102A-1447	05	1	16-04-18
Label Plate SP302 SPIRAX SARCO NEMKO-EXAM/BVS IP66W	102A-1503	05	1	16-04-18
Label Plate SP303 SPIRAX SARCO NEMKO-EXAM/BVS IP66	102A-1448	05	1	16-04-18
Label Plate SP303 SPIRAX SARCO NEMKO-EXAM/BVS IP66W	102A-1504	05	1	16-04-18
Mechanical Drawing FY NEMKO	101-E-0082	08	1	10-07-26

Certificate History and Associated Nemko Reports

Issue	Date	Report	Description
0	2000-09-26	200005319	Prime Certificate released
1	2001-10-15	200140161	The certificate is extended to include minor modifications of components and the PCBs. The modifications do not alter the safety characteristics of the transmitter.
2	2004-11-16	-	The certificate is extended to include new models with model names SP301, SP302 and SP303. These models are identical with earlier certified models FY301, FY302 and FY303 except for models name.
3	2006-05-22	63431	Revised documents. Minor changes of electronic components.
4	2006-07-12	70120	Revised documents. Minor changes of electronic components.
5	2007-10-22	86770	Revised documents. Minor changes of electronic components.
6	2007-12-12	97419	Revised documents. Minor changes of electronic components.
7	2010-05-31	126745	The Certificate is extended to include an upgrade to IP66W.
8	2011-02-15	151468	The Certificate is extended to include an update to new standards.
9	2016-04-19	D0002025	Inclusion of new PCB, updated documents, and update to the latest standard of EN 60079-0: 2012.



[17] Special Conditions for Safe Use

Repairs of the flameproof joints must be made in compliance with the structural specifications provided by the manufacturer. Repairs must not be made on the basis of values specified in tables 1 and 2 of EN/IEC 60079-1.

[18] Essential Health and Safety Requirements

See item 9