

G-66/A



CENTRO DE PESQUISAS DE ENERGIA ELÉTRICA

Organismo de Certificação Acreditado pelo INMETRO



Certificado de Conformidade

Certificate of Conformity / Certificado de Conformidad

Número: Number Número	CEPEL-EX-1717/08X	Emissão: Issue Emissão	19/01/2009	Validade: Validity Válidez	18/01/2010
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Produto: **EXPLOSION PROOF SOLENOID WITH JUNCTION BOX**
Product
Producto

Tipo/Modelo: **36-01, 37-01 e 39-01**
Type - Model
Tipo - Modelo

Número de Série:
Serial Number
Número de Série

Número do Lote: —
Batch Number
Número del Serie

Solicitante/Endereço: **ROTEX AUTOMATION LIMITED**
Requester - Address
Solicitante - Dirección
987/11, GIDC - Makapura
Vadodra 390010
Índia

Fabricante/Endereço: **The same.**
Manufacturer - Address
Fabricante - Dirección

Norma(s) Aplicáveis: **Electrical apparatus for explosive gas atmospheres:**
Suitable Standard(s)
Norma(s) de Aplicación
IEC 60079-0:00 - General requirements;
IEC 60079-1:01 - Flameproof Enclosure "d";
IEC 60529:01 - Classification of degrees of protection provided by enclosures.

Laboratório de Ensaio: **CEPEL - Centro de Pesquisas de Energia Elétrica**
Testing Laboratory
Laboratório de Ensayo
Laboratory of Drives and Safety of Electric and Electronic Apparatus - AP4

Número do Relatório de Ensaio: **RAV-CERT-EX-1658/09**
Test Report Number
Número del Informe de Ensayo
MARKING: BR-Ex d IIC T* IP66

Condições de Emissão: **According to INMETRO Directive 83 dated April 03th, 2006. Model with Evaluation of the Quality System of the Manufacturer and tests on the product. Process approved on 128th Meeting of the Certification on January, 2009.**
Conditions of Issue
Condiciones de Expedición

Observações: **1) This certificate is valid only with its Annex.**
Remarks
Observaciones

Nova Iguaçu, January 19, 2009.

CERT-26138/2008

Emissão original: **19/01/2009**
Original Issue
Expedición Original

SIGNATÁRIO AUTORIZADO
Authorized Signatory
Persona Autorizada

11 via - CLIENTE



ANNEX

TO THE CONFORMITY CERTIFICATE

CEPEL-EX-1717/08X



The EXPLOSION PROOF SOLENOIDS, MODELS 36-01, 37-01 e 39-01, manufactured by ROTEX AUTOMATION LIMITED, are bellow qualified in terms of their specifications, analysis and tests performed.

Specifications:

The Explosion proof Solenoids with junction box, sizes III/III/IV, are manufactured in light metal or stainless steel. The Solenoids are used in valve actuators and identified by following codes:

- 36-01, with cable entrance 3/4"
- 37-01, with cable entrance 1/2"
- 39-01, with cable entrance M20x1.5

Electrical characteristics:

Voltage of feed: 6, 12, 24, 27, 38, 42, 48, 72, 110, 125, 220, 240, 256 e 440 Vdc or Vac
(Permissible variation: $\pm 20\%$)

Frequency: (50 or 60) Hz $\pm 5\%$
Maximum power dissipation: 13W

Analysis and tests performed:

Product assessment following the requirements of the Standards IEC 60079-0:00, IEC 60079-1:01 and IEC 60529:01. Results recorded in Report RAV-CERT-EX-1658/09.

Descriptive documentation of the equipment (filed together to the equipment process - confidential):

Code	Description	Revision	Date
----	Name Plate	01	08/11/2008
WN-1434-INMETRO	Coil label for FPJB Hor. Cable entry "INMETRO"	00	22/10/2008
3.0.4	Design and Engineering Input Specification	00	21/10/2008
WN-1353	Solenoid code	10	22/10/2004
090-01-10-03C	FPJBND Coil Bott. Cover Size I-LM8	04	16/04/2004
11-DNV-31001	Intrinsically safe Coil Driver Circuit Diagram	00	27/03/2005
11-DNV-31101	PCB Layout for Intrinsically safe coil	00	27/03/2005
11-DNV-30901	BOM for AB-PCB-199	00	27/03/2005
11-DNV-31301	MGF. Process & Sequence for intrinsically Safe Coil	00	27/03/2005
11-DNV-10401	IS Coil with Circuit Enclosure: Ex d	00	27/03/2005
11-DNV-10402	Technical data for IS Coil With Circuit Enclosure: Ex d	00	27/03/2005

[Signature]
Page 1/2



ANNEX
TO THE CONFORMITY CERTIFICATE
CEPEL-EX-1717/08X



Marking:

The marking of the **EXPLOSION PROOF SOLENOIDS, MODELS 36-01, 37-01 e 39-01**, shall contain the followings information:

BR-Ex d IIC T* IP66

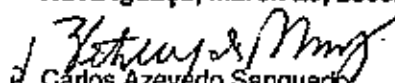
* Temperature class


Range of the ambient temperature (°C)	Temperature class
-40 a 60	T4
-40 a 50	T5
-40 a 35	T6

Remarks:

1. The certificate number has the letter X to indicate the followings special use condition:
 - Shall be used wirings suitable to operation temperature ≥ 80 °C;
 - The accessories used in the cable entrances shall be certified in accordance with the Standards IEC 60079-0:00, IEC 60079-0:01 and IEC60528:01 shall to ensure the minimum index of protection IP66 and shall be suitable to operation temperature of the solenoids;
2. The manufactory is responsible to ensure that the equipments manufactured are in accordance with the equipment specifications related in this annex and submit then to the static overpressure routine test, with 15,3 bar in the welded joint of the plunger;
3. This Certificate is only valid to the Solenoids with flameproof junction box effectively tested. Any modification in the design or using of the different material those defined by descriptive documentation of the equipment without CEPEL's authorization, will invalld this Certificate;
4. This Certificate does not have consideration about the installation of the equipment. The user is responsible to ensure that the equipment will be installed in accordance with the Standard to installation of the electrical equipment in atmosphere explosive;
5. The marking is done in accordance with the Standard IEC 60079-0:00 and the Rule for assessment of the conformity of the electrical equipment for explosive atmosphere compound by gas and flammable steams and shall be fixed in the external surface of the equipment in a visible local. This marking shall be clear and durable considering possible chemical corrosion.

Nova Iguaçu, March 26, 2009.

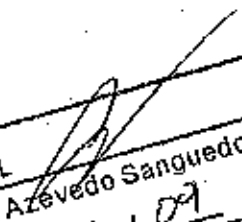

Carlos Azevedo Sanguedo
Certification Responsible


CERT-26138/2008

Page 2 / 2

CERT	LISTA DE DOCUMENTOS	CEPEL-EX-1717/08X FOLHA: 01/12
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Código	Descrição	Revisão	Data
	Name Plate	01	08/11/2008
WN-1434-INMETRO	Coil label for FPJB Hor. Cable entry "INMETRO"	00	22/10/2008
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11-DNV-10402	Technical data for IS Coil With Circuit Enclosure: Ex d	00	27/03/2005


 CEPEL
 Carlos Azevedo Sanguedo
 Data: 21/02/09