

## ATEX ABSOLUTE SSI SINGLE TURN ENCODER, CAUX RANGE

### ATEX certified Explosion-proof encoders according to Directive 94/9/CE

Explosion-proof rotary encoders for hazardous environments gas & dust  
Robust design for heavy-duty applications  
Hollow through shaft up to 30mm  
Application fields: explosive atmospheres except for firedamp mines

#### EC type examination certificate

Download from our website [www.beisensors.com](http://www.beisensors.com)

ICIE03 ATEX 6407/01

CE0081

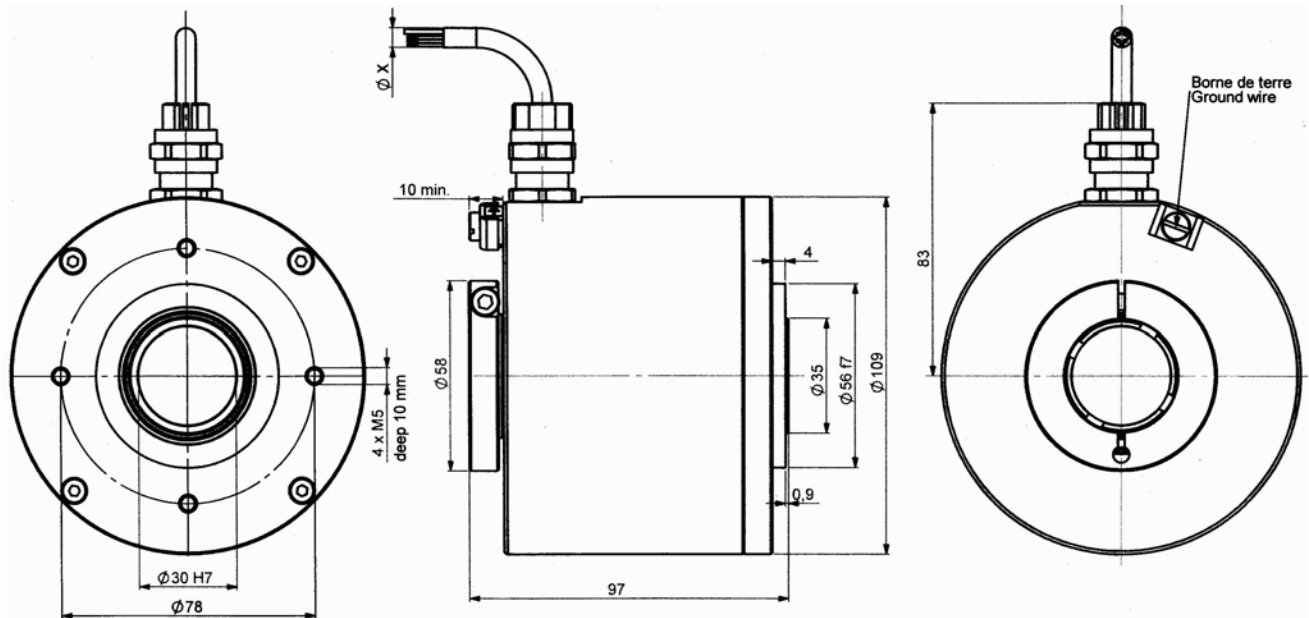
II 2 G/D

Ex d IIC T6, T5 or T4

Ex tD A21 IP6X T80°C T95°C T100°C



### CAUX\_30 connection C7R (radial cable output)



Material	Cover: aluminium
Stainless steel option	Body: aluminium
Shaft	Stainless steel
Bearings	6807 serie
Maximal load	Axial : 50 N
	Radial : 80 N
Shaft Inertia	$\leq 50 \cdot 10^{-6}$ kg.m <sup>2</sup>
Torque	$\leq 25 \cdot 10^{-3}$ N.m
Permissible max. speed	4 500 min <sup>-1</sup>
Continuous max speed	3 000 min <sup>-1</sup>
Shaft seal	Viton

Shock (EN60068-2-27)	$\leq 300$ m.s <sup>-2</sup> (during 6 ms)
Vibration (EN60068-2-6)	$\leq 100$ m.s <sup>-2</sup> (10 ... 500 Hz)
EMC	EN 50081-1, EN 61000-6-2
Isolation	1 000 V eff
Weight	2kg aluminium body & cover
	5kg stainless steel body & cover
Operating temperature	Cf here-under table (encoder T°)
Storage temperature	- 10... + 70 °C
Protection (EN 60529)	IP 65
Theoretical mechanical lifetime 10 <sup>9</sup> turns (F <sub>axial</sub> / F <sub>radial</sub> )	
25 N / 40 N : 140	50 N / 80 N : 17

T <sub>amb</sub>	Temperature class for gas atmosphere	Temperature class for dust atmosphere
-20°C ≤ T <sub>a</sub> ≤ +40°C	T6	T80°C
-20°C ≤ T <sub>a</sub> ≤ +55°C	T5	T95°C
-20°C ≤ T <sub>a</sub> ≤ +60°C	T4	T100°C



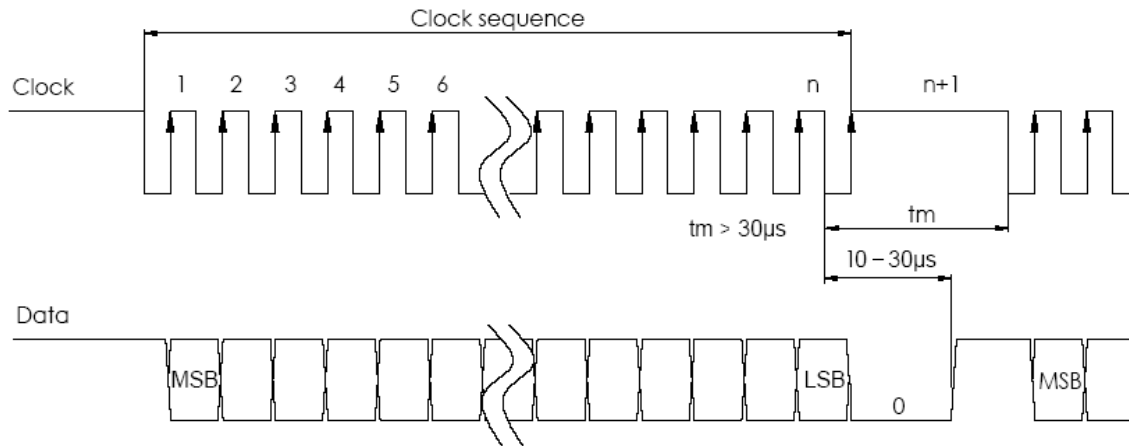
## ATEX ABSOLUTE SSI SINGLE TURN ENCODER, CAUX RANGE

### ELECTRICAL CHARACTERISTIC

Input signal clock CLK	per opto-coupleur
Output signal DATA	line - driver RS422
Clock frequency CLK	100kHz – 1MHz
Precision	+ ½ LSB (13 bits)

Power supply	11 – 30Vdc
Introduction	< 1 s
Consumption without load	100mA max

### SSI TRANSMISSION



Transmission	Transmission up to 400m at 100kHz in function of cable characteristics
Cable	High security of transmission by using shielded cable and twisted pairs

### STANDARD SSI CONNECTION

Type	VDC	Gnd	Clk+	Data+	Data-	Clk-	DIRECTION
C7	BN brown	WH white	GN green	GY grey	PK pink	YE yellow	RD red

DIRECTION entry:

- CW increasing code: DIRECTION to 0V

- CCW increasing code : DIRECTION to +Vcc

### ORDERING CODE

	Shaft Ø	Supply	Output stage	Code	Resolution	Connections	Connection orientation
<b>CELX</b> (stainless steel)	30:30mm	5 : 11 - 30Vdc	<b>CS</b> : SSI without parity <b>CP</b> : SSI with even parity <b>CI</b> : SSI with odd parity	<b>B</b> Binary <b>G</b> : Gray	13 : 13bits	<b>C7</b> : cable gland + SSI cable	Example : <b>R030</b> : radial cable 2m
<b>CAUX</b> (aluminium)							
<b>CELX</b>	<b>30</b> //	<b>5</b>	<b>CS</b>	<b>G</b> //	<b>13</b> //	<b>C7</b>	<b>R030</b>

### ASSEMBLY CAUTION

#### NEVER OPEN THE ENCODER

#### NEVER CONNECT/DISCONNECT UNDER POWER SUPPLY/ IN PRESENCE OF DUSTS ATMOSPHERE

The customer obliges to take up and to use our products, according to our specifications and to the manners of the profession. Our company would not be responsible for any defect resulting from a defective or erroneous assembly. From a use superior to the standard, or in abnormal conditions. The breakdowns resultant of shocks, bad electric supply, put in low capacity or overcapacity of the product, the environment of bad conditions (humidity, projection, dust, etc) cannot be imputed to us. The converter doesn't require any maintenance. Any encoder presenting a dysfunction will have to be the object of immediate return for control in our facilities. The encoder mustn't be open in any case (cable gland and/or cover)

An earth situated on the cover must be linked with the ground of the installation

Made in FRANCE


## ATEX ABSOLUESSI SINGIETURN ENCODER, CAUX RANGE

### 1) Déclaration de conformité CE

2) Nous, société BEI Sensors, certifions que ce matériel :  
capteurs antidéflagrants, type

**GAUX, CAUX, SAUX, GEUX, CEUX, SEUX**

3) Avec les inscriptions suivantes :

**CE0081**  **II 2 G/D, Ex d IIC T<sub>B</sub>, T<sub>B</sub> ou T<sub>A</sub>  
Ex t DA21 IP6X T<sub>80</sub>°C T<sub>85</sub>°C T<sub>100</sub>°C**

A été conçu et fabriqué conformément à la directive applicable suivante :

**ATEX directive 94/9/CE**

**Directive CEM 89/336/CEE**

4) La certification a été obtenue grâce à l'application des normes suivantes :

EN 60079-0 (2006), EN 60079-1 (2004), EN 61241-0 (2004) et EN 61241-1 (2004)

5) Une attestation d'examen CE de type a été obtenu :

**LCIE03 ATEX 6407/01**

et une notification :

**LCIE03 ATEX Q8060**

6) L'application des normes suivantes a participé à l'obtention de la certification :

EN 60-529, NFC 23-520, NFC 23-539, EN 50081-1, EN 55022 classe B, EN 55014, EN 61000-6-2, CEI 61000-4-2, CEI 61000-4-3, CEI 61000-4-4, CEI 61000-4-5, CEI 61000-4-6, CEI 61000-4-8, CEI 61000-4-11

7) L'organisme notifié responsable du suivi de la directive **ATEX** est le

LCIE, B.P. 8, F92260 Fontenay-aux-Roses

Numéro d'identification : 0081

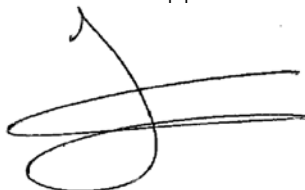
8) La société chargée de la certification **CEM** est nommée ci-après :

GRME, Cellule CEM, B.P. 8, 68840 Pulversheim

9) Nous certifions que nos produits désignés ci-dessus sont conformes à la directive et aux normes spécifiées

Date :

ATEX Certified Product Approved Person




### 1) Declaration of conformity EC

2) We, BEI Sensors, certify that this material :  
sensor explosion-proof standard

**GAUX, CAUX, SAUX, GEUX, CEUX, SEUX**

3) With the following inscriptions :

**CE0081**  **II 2 G/D, Ex d IIC T<sub>B</sub>, T<sub>B</sub> or T<sub>A</sub>  
Ex t DA21 IP6X T<sub>80</sub>°C T<sub>85</sub>°C T<sub>100</sub>°C**

Conceived and manufactured has the directive applicable following :

**ATEX directive 94/9/CE**

**Directive CEM 89/336/CEE**

4) Certification to summer obtained thanks to the application of the standards :

EN 60079-0 (2006), EN 60079-1 (2004), EN 61241-0 (2004) and EN 61241-1 (2004)

5) EC type examination certificate was obtained :

**LCIE03 ATEX 6407/01**

and a notification :

**LCIE03 ATEX Q8060**

6) The application of the following standards took part in obtaining certification :

EN 60-529, NFC 23-520, NFC 23-539, EN 50081-1, EN 55022 classe B, EN 55014, EN 61000-6-2, CEI 61000-4-2, CEI 61000-4-3, CEI 61000-4-4, CEI 61000-4-5, CEI 61000-4-6, CEI 61000-4-8, CEI 61000-4-11

7) The notified organization responsible for the follow-up of the directive **ATEX** is the

LCIE, B.P. 8, F92260 Fontenay-aux-Roses

Identification number : 0081

8) The company in charge of certification **CEM** is named :

GRME, Cellule CEM, B.P. 8, 68840 Pulversheim

9) We certify that our indicated products so above are in conformity with the directive and the specified standards