



## ATEX ABSOLUTE CANOPEN MULTITURN ENCODER, SAUX 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.bei-ideacod.com](http://www.bei-ideacod.com)

LCIE 03 ATEX 6407/01

CE0081

II 2 G/D

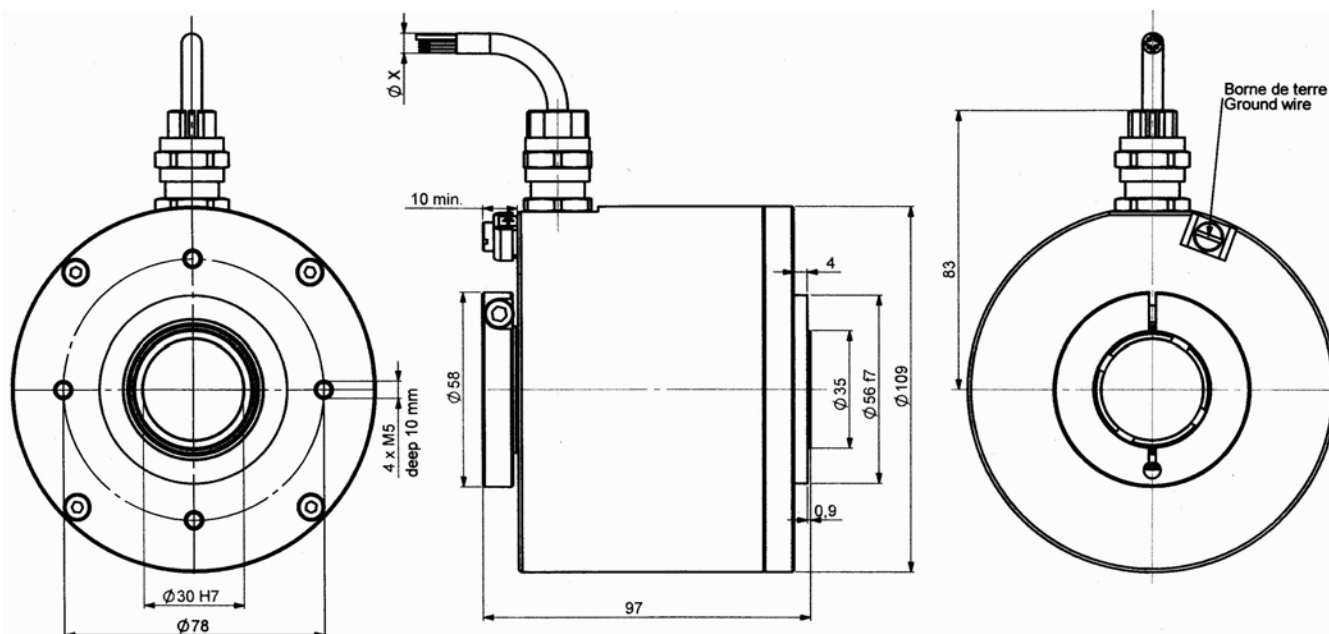
Ex d IIC T6, T5 or T4

Ex tD A21 IP6X T80°C T95°C T100°C

CanOPEN



SAUX\_30 connection B2R (radial cable)



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

Shock (EN60068-2-27)	$\leq 300 \text{ m} \cdot \text{s}^{-2}$ (during 6 ms)
Vibration (EN60068-2-6)	$\leq 100 \text{ m} \cdot \text{s}^{-2}$ (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 $10^9$ turns ( $F_{\text{axial}} / F_{\text{radial}}$ )	
25 N / 40 N : 140	50 N / 80 N : 17

$T_{\text{amb}}$	Temperature class for gas atmosphere	Temperature class for dust atmosphere
$-20^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$	T6	T80°C
$-20^{\circ}\text{C} \leq T_a \leq +55^{\circ}\text{C}$	T5	T95°C
$-20^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$	T4	T100°C



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## CanOPEN

## Programmable parameters

**Resolution:** defines the resolution per revolution (0 to 8 192)

**Global resolution (MAX RANGE) :** total amount of codes for the encoder (2 to 536 870 911)

**Transmission speed :** programmable from 10kbaud (1000m) to 1 Mbaud (40 m) ; value per default: 20 Kbaud

**Address:** define the software address of the encoder on the bus (1 to 127, value by default: id = 1)

**Direction :** define the direction of count of the encoder

**2 programmable markers** a high marker and a low marker

**RAX :** defines the value of its preset position (non turning shaft)

## Communication modes

3 modes are available to interrogate the encoder :

**POLLING mode:** the encoder transmits the position on the demand of the master. This mode permits the programming and the interrogation of the parameters of the encoder as well as its position

**CYCLIC mode:** the encoder transmits its position in an asynchronous manner. The frequency of the transmission is defined by the programmable cyclical timer register from 0 to 65 535 ms

**SYNCHRO mode:** the encoder transmits its position on a synchronous demand by the master

## CONNECTIQUE CANOPEN

Blue BU	Black BK	White WH	Red RD
CAN LOW	0V	CAN HIGH	11/30Vdc

Nota : Refer to the bus standards for the maximal derivation length

## ORDERING CODE

	Shaft Ø	Supply	Output stage	Code	Resolution	Number of turns	Connection	Orientation connection	
SEUX (stainless steel)	30: 30mm	5 : 11 to 30Vdc	BB : CANopen	B: Binary	13 : 8192 codes per revolution (2 <sup>13</sup> )	B16 : 65 536 turns (2 <sup>16</sup> )	B2: cable gland with CanOpen PUR cable	Example : R030 : radial 3m cable	
SAUX (aluminium)									
SEUX	_	30 //	5	BB	B //	13	B16 //	B2	R030

## 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 ABSOLUTE CANOPEN MULTITURN ENCODER, SAUX RANGE**

## 1) Déclaration de conformité CE

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

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

3) Avec les inscriptions suivantes :

CE 0081  II 2 G/D, Ex d II C T6, T5 ou T4  
Ex tD A21 IP6X T80°C T95°C T100°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 obtenu 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 :

**LCIE 03 ATEX 6407/01**

et une notification :

**LCIE 03 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 :

## 1) Declaration of conformity EC

2) Us, BEI-IDEACOD, let us certify that this material : sensor explosion-proof standard

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

3) With the following inscriptions :

CE 0081  II 2 G/D, Ex d II C T6, T5 or T4  
Ex tD A21 IP6X T80°C T95°C T100°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 :

**LCIE 03 ATEX 6407/01**

and a notification :

**LCIE 03 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

Dominique MALLET  
Directeur Général