

## ATEX ABSOLUTE CANOPEN 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)

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

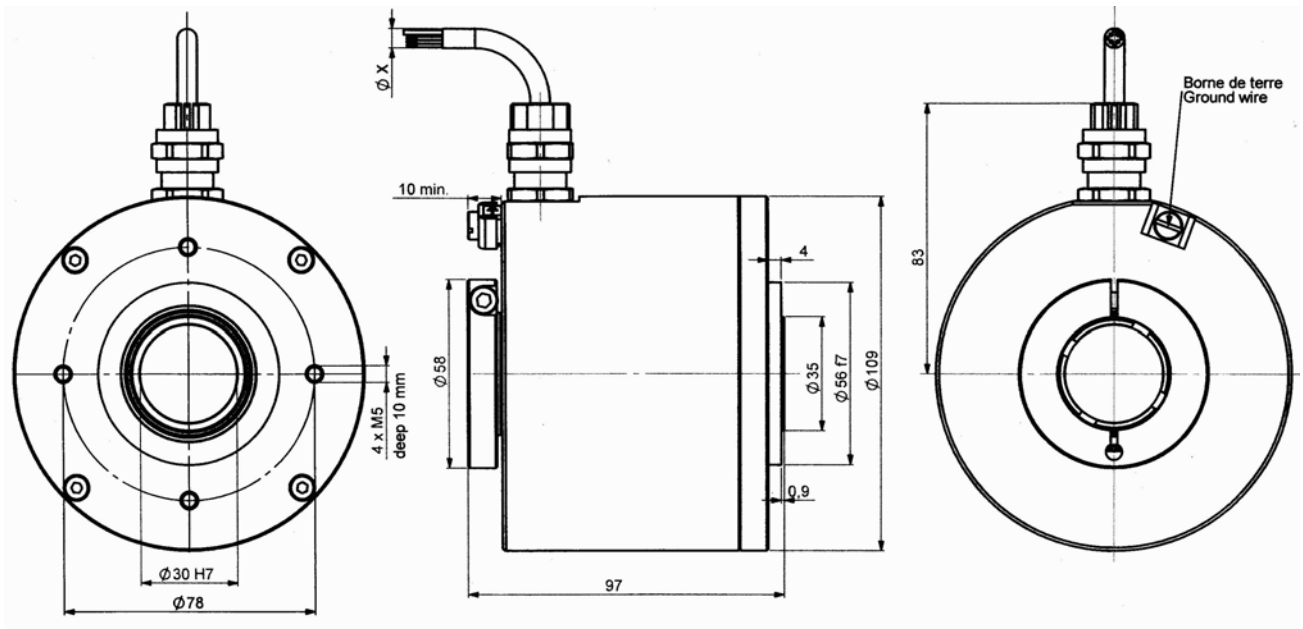
### CANopen

DS 301 V4.02

DS 406 V3.1



CAUX\_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 ( $F_{axial} / F_{radial}$ )	
25 N / 40 N : 140	50 N / 80 N : 17

$T_{amb}$	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

## ATEX ABSOLUTE CANOPEN SINGLE TURN ENCODER, CAUX RANGE

### Programmable Parameters

**Resolution:** defines the number of codes per revolution (0 - 8 192)

**Transmission speed:** configurable from 10kbaud (1 000m) to 1 Mbaud (40 m) ; default value: 20 Kbaud

**Address:** defines the position of the encoder on the bus (0 to 127, default value: id = 1)

**Direction of rotation:** Defines the direction of rotation of the encoder

**2 programmable markers:** one high marker and one low marker

**Reset to a value (X) :** defines the present position of the encoder (immobile shaft)

### The Communication Modes

The interrogation of the encoders could be done according to the following 3 modes :

**POOLING Mode:** The encoder answers the requests of the master. This mode makes it possible to program and request the encoders parameters and position

**CYCLICAL Mode:** The encoders transmits its position in asynchronous mode. The frequency of the emission is defined by the Cyclical Timer, programmable from 0 to 65 535 ms

**SYNCHRO Mode:** The encoders transmits its position to the master in a synchronous

### CANOPEN CONNECTION

Blue	Black	White	Red
CAN LOW	0V	CAN HIGH	11/30Vdc

### ORDERING CODE

	Shaft Ø	Supply	Output stage	Code	Resolution	Connexion	Connexion orientation
CEUX (stainless steel)	30: 30mm	P : 5-30Vdc	BB : CANopen	B: Binary	13 : 8192 codes per revolution (2 <sup>13</sup> )	B2 : PUR cable output	Exemple : R030 : 3m radial cable
CAUX (aluminium)							
CEUX	_ 30 //	P	BB	B //	13 //	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 SINGLE TURN 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 :

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

### 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 :

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

Date :

ATEX Certified Product Approved Person

