



ATEX TACHO-ENCODER, NAMX 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
Application fields: explosive atmospheres except for firedamp mines

EC type examination certificate

Download from our website www.bei-ideacod.com

LCIE 03 ATEX 6235/02

CE0081

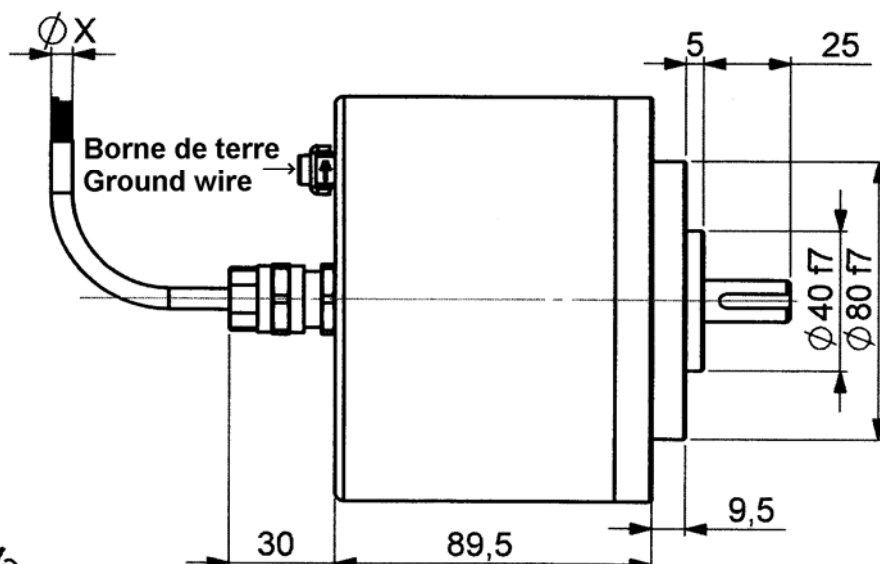
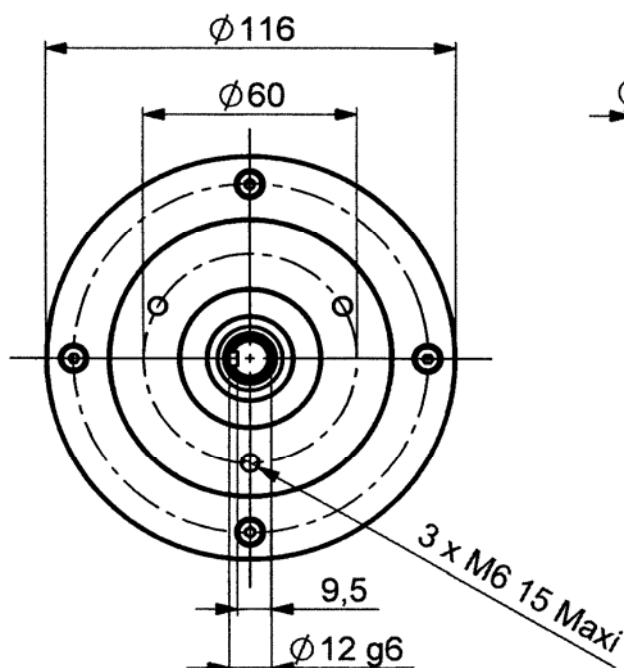
II 2 G/D

Ex d IIC T6, T5 or T4

Ex tD A21 IP6X T80°C T95°C T100°C



NAMX_12 connection TAA (axial cable)



Material	Cover : aluminium
Stainless steel option	Body: aluminium
Shaft	Stainless steel
Bearings	6001 serie
Maximal load	Axial : 50 N
	Radial : 100 N
Shaft inertia	$\leq 16 \cdot 10^{-6}$ kg.m ²
Torque	$\leq 15 \cdot 10^{-3}$ N.m
Permissible max.speed	9 000 min ⁻¹
Continuous max. speed	6 000 min ⁻¹
Shaft seal	Viton

Shock (EN60068-2-27)	≤ 500 m.s ⁻² (during 6ms)
Vibration (EN60068-2-6)	≤ 200 m.s ⁻² (10 ... 1 000 Hz)
CEM	EN 50081-1, EN 61000-6-2
Isolation	1 000 V eff
Weight	3,5kg aluminium body and cover
	7,2kg stainless steel body and cover
Operating temperature	Cf here-under table (encoder T ^o)
Storage temperature	- 30... + 80 °C
Protection(EN 60529)	IP 65
Theoretical mechanical lifetime 10 ⁹ turns (F _{axial} / F _{radial})	
20 N / 30 N : 360	50 N / 100 N : 18
	100 N / 200 N : 2,2

T _{amb}	Temperature class for gas atmosphere	Temperature class for dust atmosphere
-20°C ≤ Ta ≤ +40°C	T6	T80°C
-20°C ≤ Ta ≤ +55°C	T5	T95°C
-20°C ≤ Ta ≤ +60°C	T4	T100°C

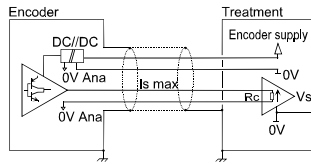


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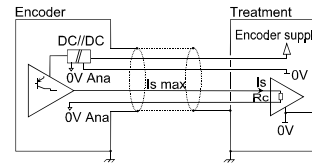
ANALOG OUTPUT CIRCUIT / SUPPLY

- 2Na : power supply 5 Vdc – driver 0...10 Vdc
- 3Nc : power supply 15-30 Vdc – driver 0...10 Vdc
- 2Nj : power supply 5 Vdc – driver -10 Vdc ... +10 Vdc
- 3NI : power supply 15-30 Vdc – driver -10 Vdc ... +10 Vdc

- 2Nd : power supply 5 Vdc – driver 0...20 mA
- 2Ng : power supply 5 Vdc – driver 4...20 mA
- 2Nm : power supply 5 Vdc – driver -20 mA ... +20 mA
- 3Nf : power supply 15-30 Vdc – driver 0...20 mA
- 3Ni : power supply 15-30 Vdc – driver 4...20 mA
- 3No : power supply 15-30 Vdc – driver -20 mA ... +20 mA



Rc min	1 kOhms
Rc advised	1,5 kOhms
Rc max	/

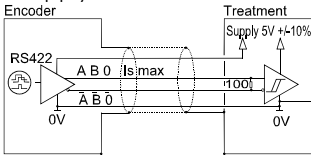


Rc min	25 Ohms
Rc advised	150 Ohms
Rc max	500 Ohms

Nota : Current loop output also available
Both versions, voltage and current output are protected against inversion of polarity and excess voltage up to 33Vdc

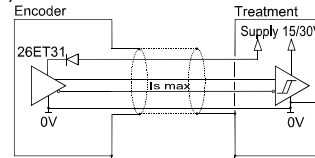
DIGITAL OUTPUT CIRCUIT / SUPPLY

Electronic type 2Na, 2Nd, 2Ng, 2Nj and 2Nm :
Power supply 5 Vdc – Driver 5 Vdc RS422



Power supply 5 Vdc +/- 10%
Current output : 40 mA
Level "1" min : Voh = 2,5 Vdc
Level "0" max : Vol = 0,5 Vdc

Electronic type 3Nc, 3Nf, 3Ni, NI and No :
Power supply 15 to 30 Vdc – Driver Push Pull 15 to 30 Vdc



Power supply 15 to 30 Vdc
Current output : 50 mA
Level "1" min : Voh = VCC – 2,5 Vdc
Level "0" max : Vol = 1,5 Vdc

Nota : regulated 12Vdc output also available

The products are equipped with a total galvanic isolation (1kV) between the analog output circuits and the rest of the electronic
Consumption without load , protection against short circuits for the electronic type 3Nc, 3Nf, 3Ni, NI and No

STANDARD CONNECTION

		-	+	A	B	0	A/	B/	0/	0V ana	Out ana	Ground
T8	PUR cable 10 wires	BK Black	RD Red	GN Green	YE Yellow	VT Violet	BR Brown	OR Orange	BU Blue	GY Grey	WH White	General shield

ORDERING REFERENCE

	Shaft Ø	Available electronic		Channel	Resolution	Speed	Connection	Orientation			
NAMX Alu body & cover	12 : 12mm	2Na, 2Nd, 2Ng, 3Nc, 3Nf & 3Ni		9 : A,A/,B,B/,0,0/ (0, A&B gated)	10 000 max	example : D10 : 10rpm C20 : 200rpm M30 : 3000rpm	T8 : PUR cable 10 wires	Example : A030 : 3m axial cable			
		Supply	Output stage								
NEMX Stainless steel cover and body	12 : 12mm	2 : 5Vdc	Na:0..10Vdc+RS422 Nc:0..10Vdc+push-pull Nd:0..20mA+RS422	A : A,A/,B,B/,0,0/ (0, A gated)							
		3 : 15 to 30Vdc	Nf:0..20mA+push-pull Ng:4..20mA+RS422 Ni:4..20mA+push-pull	N : A,A/,B,B/,0,0/ (0 ungated)							
Ex: NAMX	12	//	3	Nc	9	//	5000	M30	//	T8	A030

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 TACHO-ENCODER, NAMX RANGE**

1) Déclaration de conformité CE

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

GAMX, CAMX, NAMX, GEMX, CEMX, NEMX

3) Avec les inscriptions suivantes :

CE 0081  II 2 G/D, Ex d II C T6, T5 or 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 6235/02

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, CEI61000-4-4, 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

GAMX, CAMX, NAMX, GEMX, CEMX, NEMX

3) With the following inscriptions :

CE 0081  II 2 G/D, EEx 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 6235/02

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, CEI61000-4-4, 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

Numéro d'identification : 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