



| PHU9

ABSOLUTE MULTI-TURN ENCODER, PROFIBUS INTERFACE, PHU9 SERIE

Features:

- Profibus encoder - Ø30mm through shaft version
- PEEK or aluminum reduction hubs available : 10 to 28mm
- Robustness and excellent resistance to shocks / vibrations
- Double or triple mounting possibility (incremental – tachometer or absolute interfaces)
- High protection level IP65
- High performances in temperature -20°C to +80°C
- 5 to 30 Vdc power supply
- High resolution available: 8 192 points par revolution (13 bits resolution)
- Turns numerisation up to 65 536 (16 bits)
- DPV0, Class 2, encoder profile 3.062
- PHU9 also available with SSI, programmable SSI, RS232 & CANopen interface



MECHANICAL CHARACTERISTICS

Material	Cover : steel
	Body : aluminum
	Shaft : stainless steel
Bearings	6 807 serie
Maximum load	Axial : 50 N
	Radial : 80 N
Shaft inertia	$\leq 55.10^{-6}$ kg.m ²
Torque	$\leq 25.10^{-3}$ N.m
Permissible max. speed	6 000 min ⁻¹
Continuous max. speed	3 600 min ⁻¹
Shaft Seal	Viton
Shock (EN60068-2-27)	≤ 500 m.s ⁻² (during 6 ms)
Vibration (EN60068-2-6)	≤ 100 m.s ⁻² (10 ... 2 000 Hz)
EMC	EN 61000-6-4, EN 61000-6-2
Isolation	500V (1 min.)
Weight (approx.)	1,200 kg
Operating temperature	- 20 ... + 80 °C (encoder T°)
Storage temperature	- 20 ... + 80 °C
Protection(EN 60529)	IP 65
Torque (ring pressure screw)	nominal: 3N.m, break: 4N.m
Theoretical mechanical lifetime 10⁹ turns (F axial / F radial)	
25 N / 40 N : 140	50 N / 80 N : 17

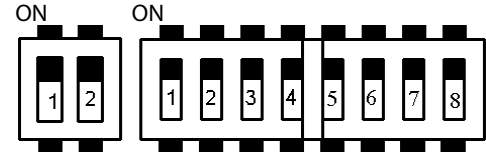
GENERALITY

Power supply : 5-30V Consumption <200 mA (160mA typ)

Transmission frequency : From 9.6Kbaud to 12Mbaud

Electronic interface : Opto-isolated RS 485

Address : Permits the addressing of each encoder in an installation (32 master stations or slaves stations per segment without repetition, 127 maximum with repetition)



Address : 0 to 126 (Binary code)

End line resistance termination: 1, 2 "ON" (Beginning or end line)

Switch - on "ON" =	1	2	3	4	5	6	7
	1	2	4	8	16	32	64

Switch 8 on "OFF".

Example: Address 5: Switch 1 & 3 on "ON", others on "OFF".

PARAMETERS PROGRAMMABLES

Direction : Permits the definition of the counting direction of the encoder (CW or CCW) following its mechanical position

Resolution : The number of points per turn can be between 0 and 8192

Global resolution (MAX RANGE) : Total number of codes of the encoder (2 to 536 870 912)

Reset : Defines the value of its actual position

Time base : Defines the base time for the speed calculation (10 ms , 100 ms, 1 s, speed in rpm)

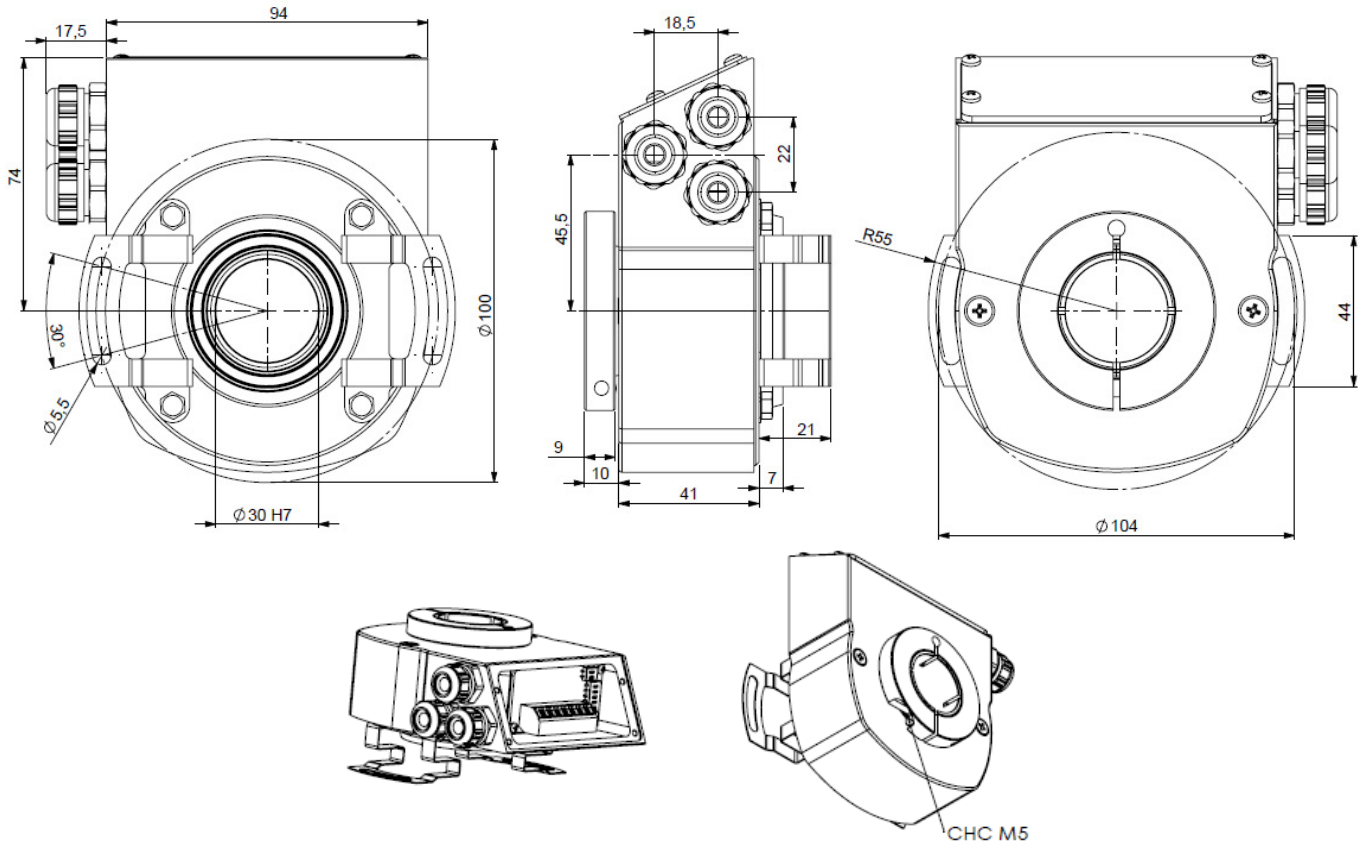
CONNECTION

Integrated terminal box on encoder – "push-in" connection – max 1,5mm².



DIMENSIONS

PHU9 Profibus connection BTR (Terminal box) - with DACs 9445/009* mounted on bearings housing



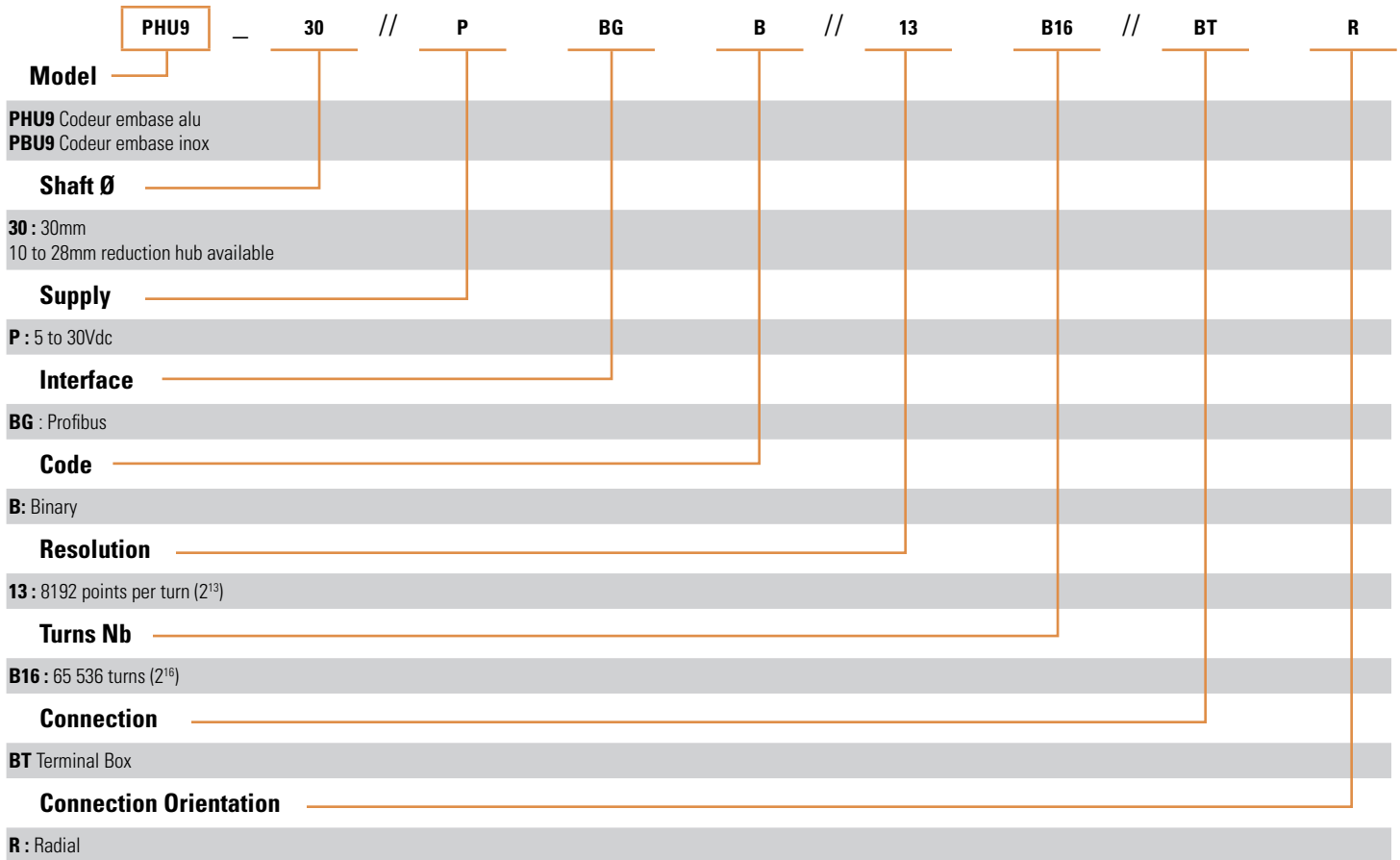
* : accessory to be ordered separately.



ORDERING OPTIONS

Example : PHU9_30 // PBGB // 13B16 // BTR

(Special versions upon request, for ex. special flanges/electronics/connections...)



AGENCY APPROVALS & CERTIFICATES



1) Déclaration UE de conformité

2) Nous, société BEI Sensors, certifions que ce matériel :
capteurs ATEX, type
PHU9, PBU9

3) Avec les inscriptions suivantes :
CE II 3G
Ex nA IIC T6 Gc

A été conçu et fabriqué conformément aux directives applicables suivantes :
ATEX : 2014/34/UE
CEM : 2014/30/UE

4) La certification a été obtenue grâce à l'application des normes suivantes :
ATEX: EN 60079-0 :2012+A11:2013, EN 60079-15 :2010, EN60079-31 :2014

Une étude comparative des normes EN 60079-0 (2012 et A11 2013), et EN 60079-31 (2009 et 2014) montre que le matériel n'est pas concerné par les modifications substantielles.

5) Une attestation d'examen CE de type a été obtenu :
LCIE 14 ATEX 1024X
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) La société chargée de la certification **CEM** est nommée ci-après :
GRME, Cellule CEM, B.P.8, 68840 Pulversheim

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

Date: ATEX Certified Product Approved Person Jean-Marc HUBSCH

1) EU declaration of conformity

2) We, BEI Sensors, certify that this material : ATEX sensor,
type
PHU9, PBU9

3) With the following inscriptions :
CE II 3G
Ex nA IIC T6 Gc

Conceived and manufactured has the directive applicable following :
ATEX : 2014/34/EU
EMC: 2014/30/EU

4) Certification to summer obtained thanks to the application of the standards :
ATEX: EN 60079-0 :2012+A11:2013, EN 60079-15 :2010, EN60079-31 :2014

A comparative study of the standards EN 60079-0 (2012 and A11 2013) and EN 60079-31 (2009 and 2014) shows that the product is not concerned by the substantial modifications.

5) EC type examination certificate was obtained :
LCIE 14 ATEX 1024X
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 company in charge of certification **CEM** is named :
GRME, Cellule CEM, B.P.8, 68840 Pulversheim

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



Made In France

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