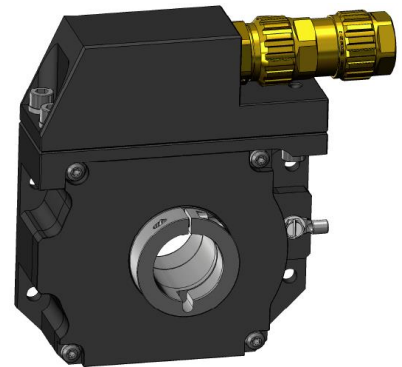


- Low profile package saves space
- Designed for use in hazardous areas
- Excellent resistance to shock and vibration
- 30mm standard through shaft, PEEK reduction hub available
- Hard anodized housing and high protection level of IP66
- High performance in temperatures from -40°C to +85°C
- Ruggedized HTL 11-30V push-pull
- Wiring fault tolerant output and overvoltage protection up to 60Vdc
- Long cables drive capability
- Resolutions from 1 to 10000 PPR



Certifications:

The LP35 Incremental Encoder is available with the following certifications*



CENELEC
Ex d IIC T6...T4 Gb
Ex tb IIIC T80°C, T95°C, T100°C
Db IP6X



Ex d IIC T6...T4 Gb
Ex tb IIIC T(*)°C Db



2004/108/CE

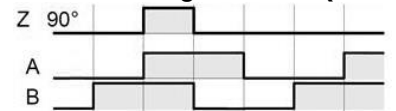


U.S. Standards Class I,
Group A,B,C & D
Class II Group E, F & G

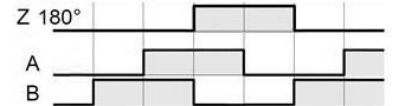
*Certifications Pending

Output Waveform:

Index calibration gated A & B (code 9)



Index calibration gated B (code B/US)



Waveform AA/ BB/ 00/ Channel B before A
Clockwise

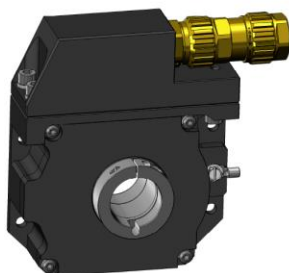
Mechanical Characteristics:

Material	Cover : Hard anodized aluminum	Shaft inertia	< 130 000 g.mm ²
	Body : Hard anodized aluminum	Static/Dynamic torque	30 / 300 mN.m
	Shaft : AISI 303 stainless steel	Permissible max. speed	6000 min ⁻¹
Ball bearings	6807 - Sealed	Continuous max. speed	4000 min ⁻¹
Maximum loads	Axial: 40 N	Theoretical mechanical lifetime L _{10h} *	> 18.10 ⁹ turns / 100000 hours
	Radial: 80 N	Encoder weight (approx.)	1.6 kg

* continuous max. speed – ½ max. load – ISO 281, L₁₀

Available mechanics – shaft options:

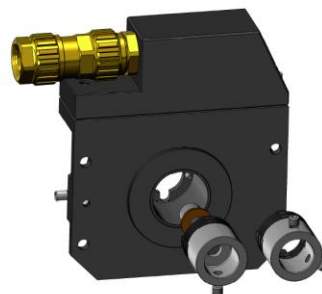
HHUX: Through Hollow Shaft



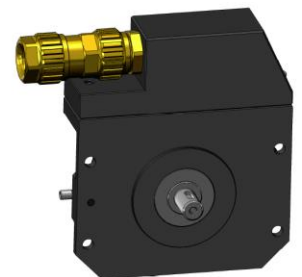
HHKX: Blind Hollow Shaft



HHAX: Shaft with Integrated coupling



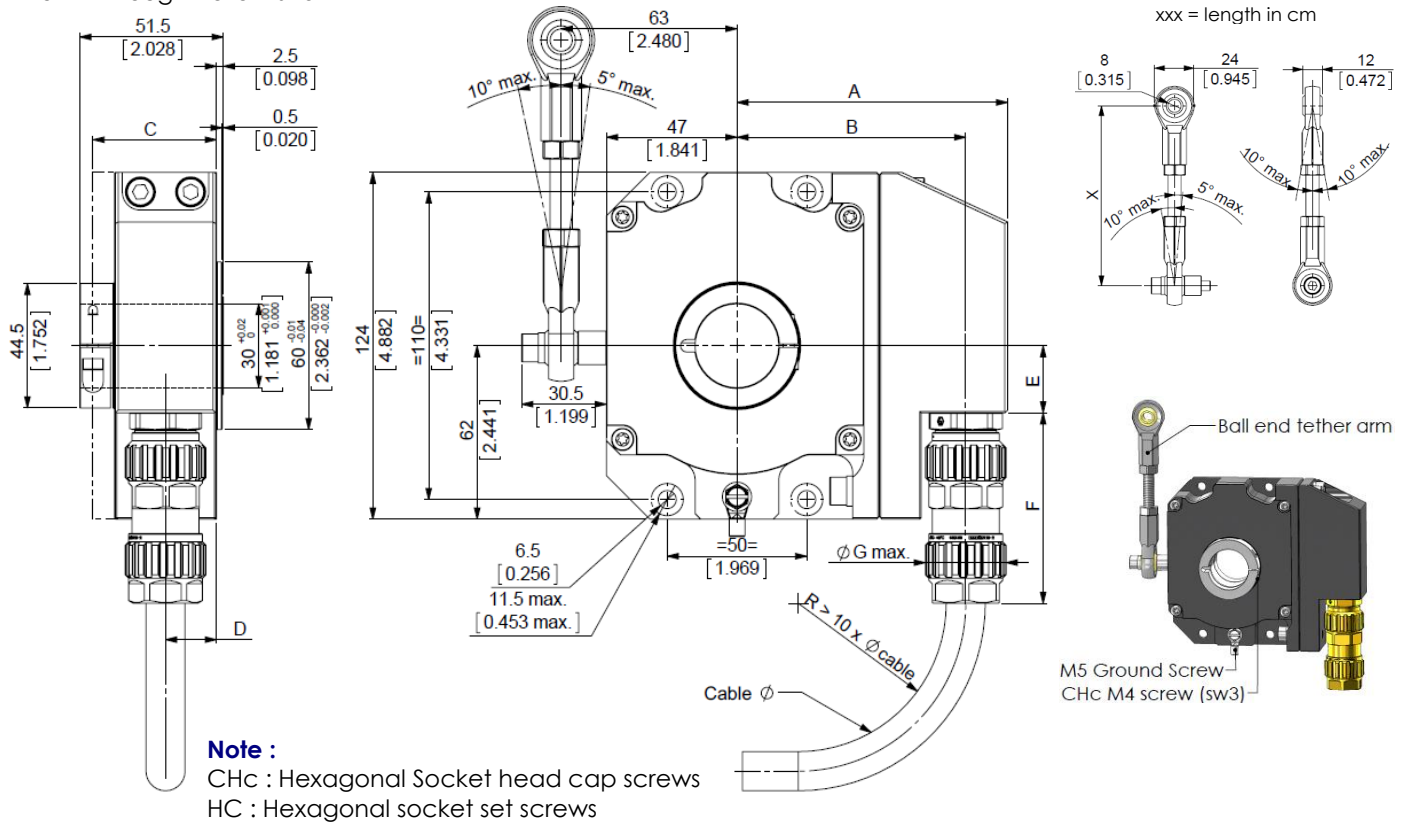
HHMx: Solid Shaft



Explosion-proof and Flameproof Incremental Encoder

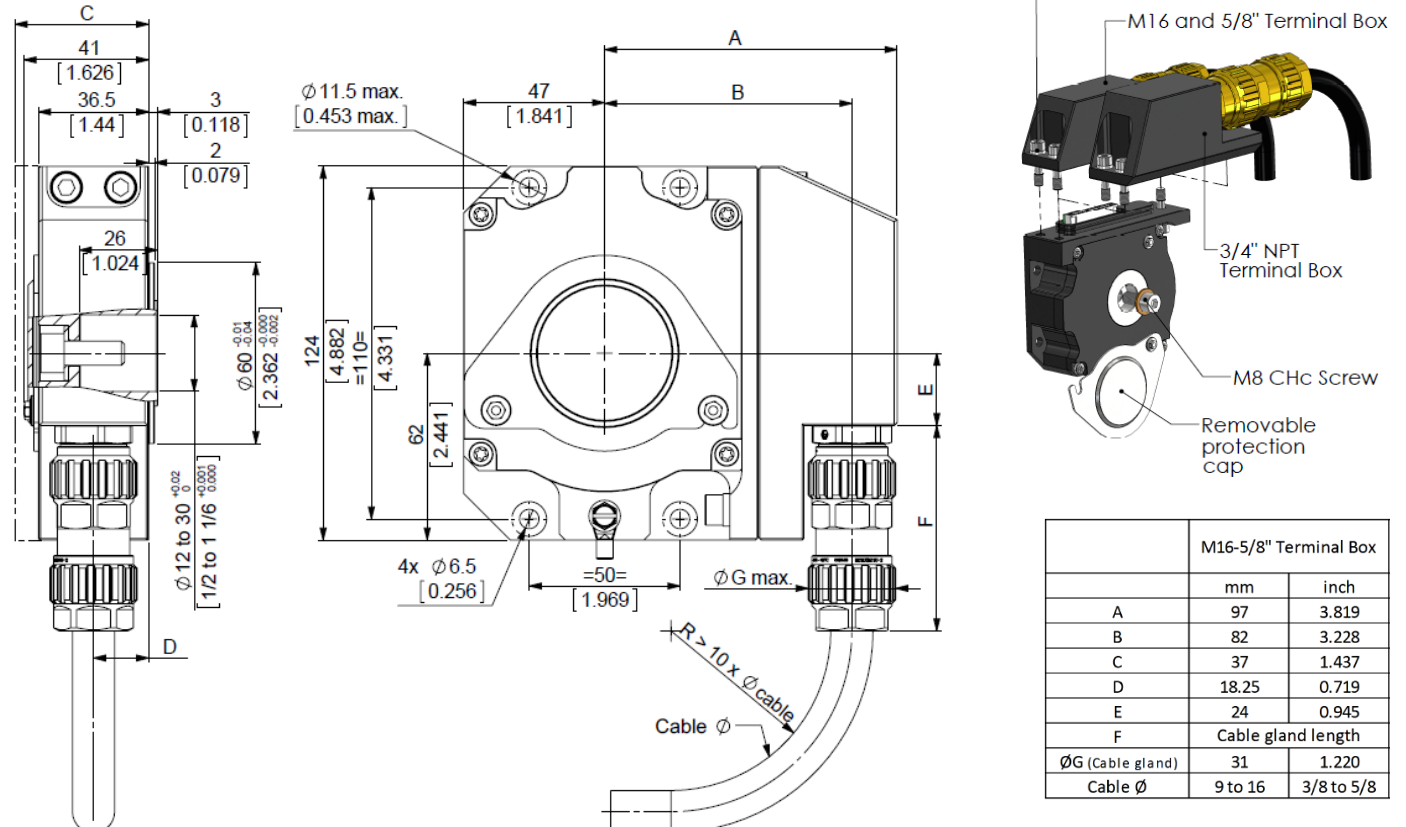
Dimensions

HHUX – Through hollow shaft



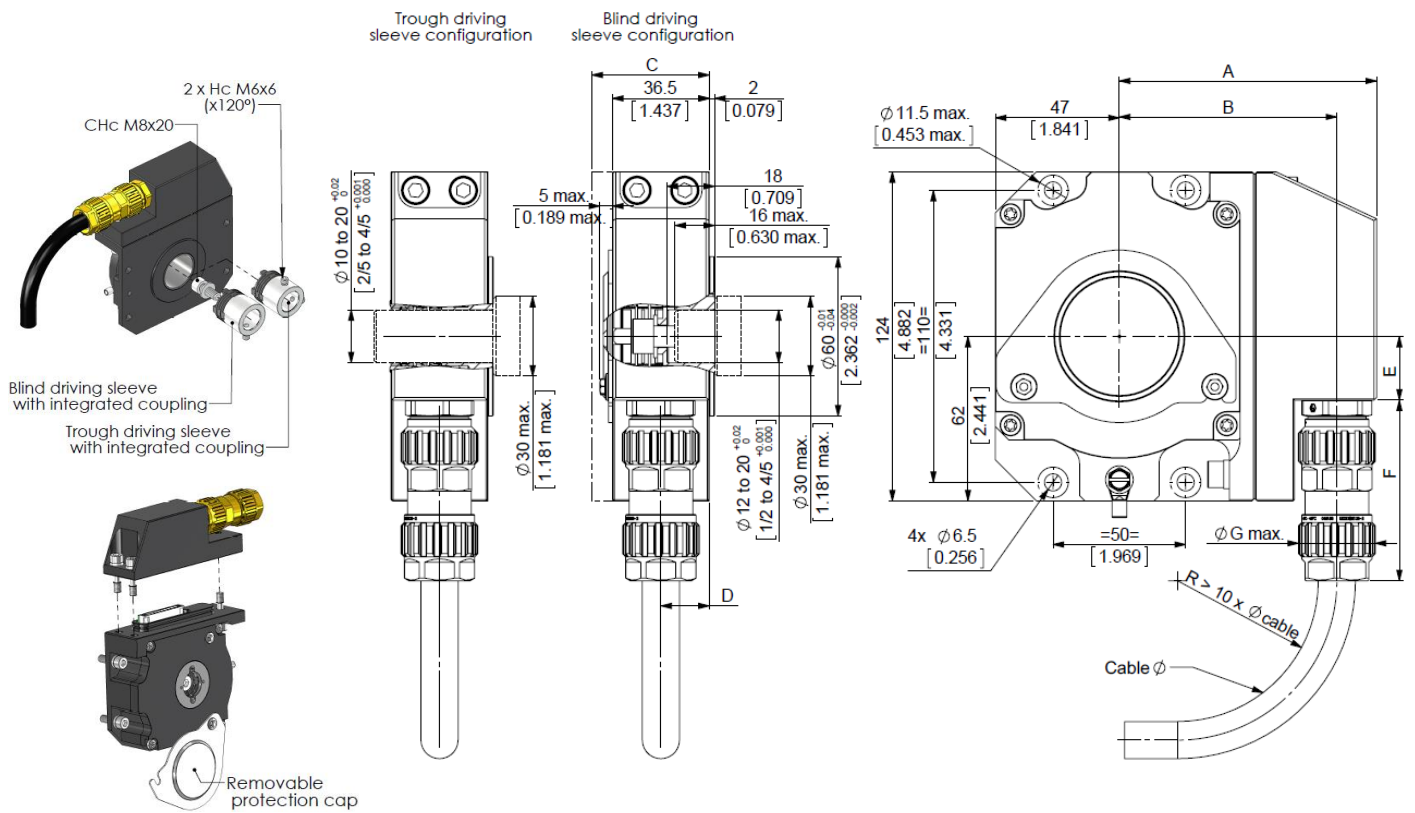
Dimensions

HHKX – Blind hollow shaft



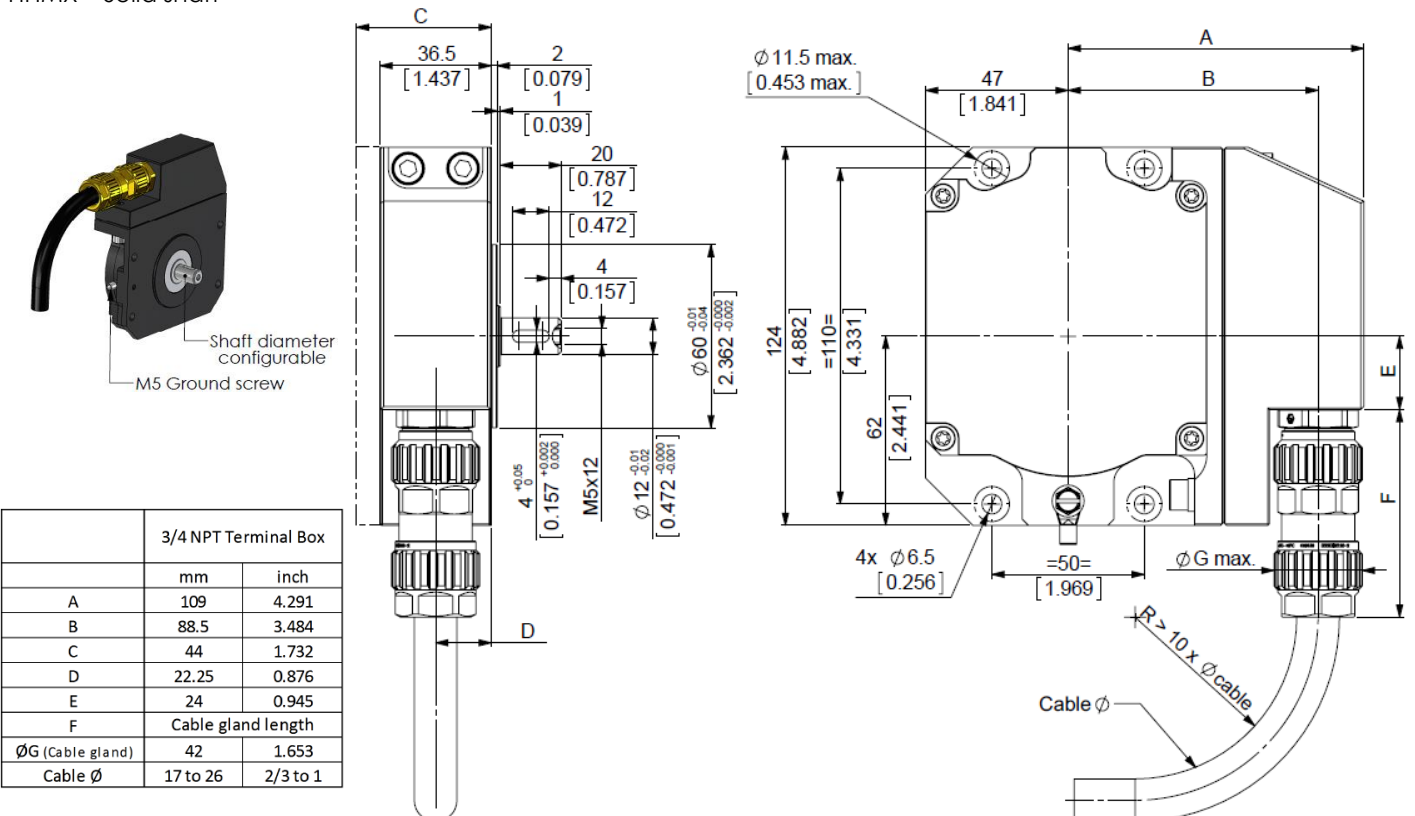
Dimensions

HHAX – Shaft with integrated coupling



Dimensions

HHMX – Solid shaft



Explosion-proof and Flameproof Incremental Encoder

Electrical Characteristics:

Version	Output signals	Resolution	Operating Voltage Vcl	Supply current (no loads)	Current per channel pair	Output Levels (Is=20mA)	Frequency capability	Short circuits proof	Reverse polarity tolerant	Wiring fault tolerant & Overvoltage protection	Temperature range
5GH	HTL	1 to 10 000	11-30V	125mA	75mA	Low max: 1.5V High min: Vcl - 3.5V	Up to 1MHz	Yes	Yes	Yes Up to 60Vdc	-40°C +85°C
PG5			5-30V	75mA	40mA	Low max: 0.5V High min: Vcl - 2.5V				Yes (except to Vcl)	
2G2	5V+/-5%		4.75-30V			4V		Low max: 0.5V			
RG2	TTL RS422			High min : 4V							

Terminal Box Connection:

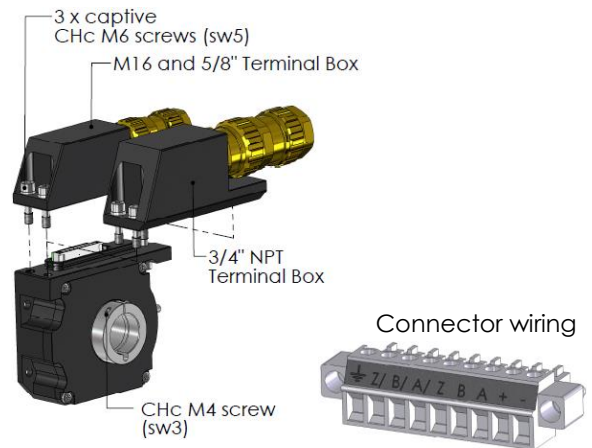
-	+	A	B	Z	A/	B/	Z/	Ground
1	2	3	4	5	6	7	8	9

Available Terminal Box versions:
 - E0R: M16 without cable-gland
 - E5R: 5/8" without cable-gland
 - E6R: 3/4" without cable-gland

Available resolutions:

Standard: 32 64 100 128 250 256 360 500 512 600 720 1000 1024 1200 1250 1500 2000 2048 2500 3600 4096 5000 7200 8192 10000

For non-standard and resolutions above 10000 ppr, please contact factory



LP35 Incremental Ordering Options

Use this diagram, working from left to right to construct your model number (Example : **HHAX_E6//5GHV/US/01024//E6R//U6******)

HH__	__	//	---	-	//	-----	//	---	---	//	--	__**
TYPE:	SHAFT BORE:		VOLTAGE/ OUTPUT:	CHANNEL S:		CYCLES PER TURN:		OUTPUT TERMINATION:	CABLE LENGTH:		HUB:	TETHER:
HHUX = hollow shaft	E5 = 5/8" E6 = 3/4" E8 = 1" 30 = 30mm		2G2 = 5V voltage and RS422 output 5GH = 11-30V voltage and reinforced Push-Pull output	9 = AA/ BB/ ZZ/ B before A Z gated A&B		(Enter Cycles) See available resolutions above		G3R = M16 cable-gland with PVC cable GPR = M16 cable-gland with PUR cable E0R = M16 radial terminal box (without cable-gland) E5R = 5/8" radial terminal box (without cable-gland) E6R = 3/4" radial terminal box (without cable-gland)	xxx = cable length ex. 020 = 2meters Blank = No cable		U3 = With insulated sleeve U5 = Blind sleeve U6 = Through sleeve ** = no sleeve	BX** = M9230-03/xxx Ball end tether arm xxx = length in cm **** = No tether
HHKX = blind shaft			PG5 = 5-30V voltage and push-pull output	V/US = AA/BB/ZZ/ B before A Z gated on B								
HHAX = hollow shaft with integrated coupling	E6 = 3/4" 14 = 14mm 20 = 20mm		RG2 = 4.75-30V voltage and RS422 output									
HHMX = solid shaft	E3 = 3/4" 12 = 12mm											

Stainless steel option available.

Europe

9, rue de Copenhague
 Espace Européen de l'Entreprise-Schiltigheim
 BP 70044 - 67013 STRASBOURG Cedex France
 Tel: +33 (0)3-88-20-80-80 | Fax: +33 (0)3-88-20-87-87
 email: info@beisensors.com

North America

7230 Hollister Avenue | Goleta, CA 93117 USA
 Tel: 800-350-2727 or 805-968-0782
 Fax: 800-960-2726 or 805-968-3154
 email: beisales@beisensors.com
 www.beisensors.com

