



Severe Duty Encoder for 8.5" C-Face Mount with Flameproof and Explosion Proof Ratings

Explosion Proof Bearingless Encoder

- | No Barrier or Isolator Needed
- | No Intrinsic Safety Ground Required
- |  Class I Div 1 Groups C, D Listed
 - | AEx Zone 1 Certified
- |  Zone 1 & 2 Certified
 - | Fits Shafts Up to 4.5" [115mm]
- | Fully Protected Against Shorts and Wiring Errors
- | Adapters available to fit GEB20, 22, 28, GE 752 Motors
- | Wide Sensor-Rotor Gap: No Shimming
 - | Up 100000 PPR
 - | -50°C to +85°C Operation
 - | 2 Year No-Hassle Warranty

XPH8

XPH8 SMARTSafe™ encoders are the world's first explosion-proof encoders with removable electronics and no external barrier! They are cULus, ATEX, AEx & IECEx certified and offer incredibly reliable no-bearing construction! SMARTSafe XPH8 encoders can be used in ATEX/IECEx, cUL AEX, and UL gas hazardous environments. Also available: no-bearing modular sensors ([XP5](#)), as well as intrinsically safe models ([XR5](#), [XR12](#), [XR56](#), [XR125](#), [XR485](#), [XR685](#), [XR850](#)) and hollow shaft models [M6C](#).

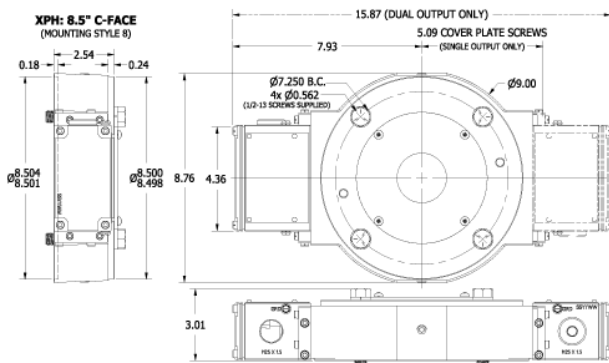
For applications requiring ATEX/IECEx Zone 1 or 2 or cULus Class I, Division 1 or 2, Groups C & D use the XPH8 directly in your application with no barrier or isolator required.

Unlike the competition, Avtron SMARTSafe encoder systems are protected against short circuits, power-to-output wiring, and output-to-ground faults. They feature full diagnostics: it's easy to determine that signal quality is good-just look for the green LED. Worried about wiring short circuits and errors? XPH8 will indicate any short circuit conditions with an orange LED and will survive this condition!

No encoder bearing failures, no more sealing problems. Mount XPH8 directly on your motor. Top drives, draw works, coil tubing, paint lines...so many applications benefit from a more reliable no-bearing encoder. Vibration, shock, liquids, dust and dirt won't harm SMARTSafe XPH8 encoders!

Eliminate the biggest cause of hazardous duty encoder failure--eliminate the bearings with XPH8 hazardous duty encoders.

OUTLINE DRAWING



MORE XPH8 ADVANTAGES

- ✓ All-digital design, no trim pots or adjustments for longer life
- ✓ Superior line drivers withstand short circuits and reverse voltage wiring errors
- ✓ Fully potted electronics
- ✓ SMARTSafe sensors find problems before they cause failure
- ✓ Mix and match any PPRs with any rotor
- ✓ Allows gland or conduit connections
- ✓ Full protection against motor shaft currents

XPH8 SPECIFICATIONS

Operating Power: Volts: 5-24VDC in/out; Current: 400mA max @ 5V; 200mA max @ 12V; 100mA max @ 24V (plus cable load)

Output Format: A Quad B with marker (A/A, B/B, Z/Z)

Frequency Range: 0 to 250 KHz

PPR: 8-100000

Speed: 6000 RPM Max. (contact factory for higher speeds)

Maximum Cable Length: 1000 ft (305m) (contact factory for longer distances)

Rotor Positioning: Up to +/-0.100" [±2.54mm] movement/misalignment

Sensor-Rotor Gap: 0.040", +0.015/-0.030" [1mm+0.38/-0.76]

Temperature: -50°C to 85°C

(rotor -50°C to 100°C continuous, +135°C intermittent)

Environmental: IP65 fully potted sensors

Vibration: 5-2000Hz, 18G; 100G Shock

Weight: 10-14 lbs. [4.5-6.4kg]

Certifications:

Class I Div 1, Groups C and D

Class I Zone 1, Ex db ia IIB T4 Gb

Class I Zone 1, AEx db ia IIB T4 Gb

Ex db ia IIB T4 Gb (ATEX/IECEX)



*See installation drawings for Warnings and Limitation

Check out our website for more detailed specifications, drawings, and installation instructions. www.avtronencoders.com

SELECTION GUIDE

XPH8 Encoder Part Numbers							
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Model	Rotor Style/Bore	Cover	Output	PPR		Connection Options Terminal Box	Modifications
XPH8- 8.5" C-Face mount	XX- No Rotor	X- No Cover F- Flat Cover T- Thru Shaft Cover (No Seals)	8- 5-24V in/ 5-24V out (Hx)	Left PPR	Right PPR	<div>Left ExitRight ExitPhasing</div>	000- none
	US Metric	XX- NoneXX- None					
	CB- 0.625 DB- 14mm	BC- 50BC- 50		A- M25 ThreadBlanking Plug	A->B		
	CA- 0.750 DE- 19mm	AF- 60AF- 60					
	CC- 0.875 DF- 30mm	AK- 80AK- 80		B- Blanking PlugM25 Thread	A->B		
	CE- 1.000 DJ- 42mm	AG- 100AG- 100					
	CF- 1.125 DP- 60mm	AH- 120AH- 120					
	CG- 1.250 DS- 70mm	AA- 128AA- 128					
	CH- 1.375 DY- 80mm	AM- 200AM- 200					
	C8- 1.500 D2- 90mm	AL- 240AL- 240					
	CJ- 1.625 M4- 95mm	AN- 256AN- 256					
	CK- 1.750 M5- 100mm	AP- 300AP- 300					
	CL- 1.875	AE- 360AE- 360					
	CM- 2.000	AC- 400AC- 400					
	CN- 2.125	AB- 480AB- 480					
	CQ- 2.250	AQ- 500AQ- 500					
	CP- 2.375	AR- 512AR- 512					
	CR- 2.500	AS- 600AS- 600					
	CT- 2.625	AV- 900AV- 900					
	C2- 2.875	AJ- 960AJ- 960					
	C4- 3.000	AW- 1000AW- 1000					
	CW- 3.250	AY- 1024AY- 1024					
	C3- 3.500	AZ- 1200AZ- 1200					
	TD- 3.625	CX- 1500CX- 1500					
	TG- 3.750	A3- 2000A3- 2000					
	T4- 3.875	A4- 2048A4- 2048					
	T5- 4.125	A5- 2500A5- 2500					
	T7- 4.250	AD- 4096AD- 4096					
	T6- 4.500	A8- 4800A8- 4800					
		A9- 5000A9- 5000					
		00- Special00- Special					



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All other trademarks and registered trademarks are the property of their respective owners. Nidec Industrial Solutions' standard warranty applies.
All dimensions approximate.