

# BEI SENSORS



## POSITION SENSING SOLUTIONS FOR THE OIL AND GAS INDUSTRY





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- Drawworks
- Top Drives
- Coiled Tubing
- Mud Blending
- Drill Bit Control
- Downhole

### Performance, Reliability, and Adaptability

Few applications present a tougher challenge for sensors than those in the oil and gas industry. High temperature and pressure, potentially explosive environments, extreme vibration, shock, dirt and moisture are all part of the daily working environment. Position sensors are crucial components in oil and gas equipment and must operate reliably day in and day out. BEI Sensors is well aware of the unique requirements of the oil and gas industry and has designed products of uncompromising quality and performance. They are, in short, the most reliable position sensing solutions to be found anywhere.

For more than 30 years, BEI sensors have been at work worldwide in the harshest oil and gas applications. Field-proven BEI rotary encoders, rotary and linear potentiometers and rotary Hall effect sensors are available in virtually limitless array of standard configurations. Any products can be customized to meet specific requirements when a higher degree of adaptation is required.

### From A Company You Can Count On

BEI Sensors backs its products with an unparalleled level of customer service and technical support. Skilled application specialists and engineers are readily available to help you select the right product or troubleshoot an installation issue. Knowledgeable order specialists can quickly answer questions on pricing and availability, order status, or help specify a unit to meet your exact needs.

Problems do not take weekends off, and hours of downtime are at stake when issues occur outside of regular business hours. That is why BEI Sensors provides customers with an emergency contact number. A quick phone call during non-business hours will put you in touch with a trained member of our staff. They can assist with technical questions or other issues. It is an extra measure of service we are proud to provide to our valued customers.

### FEATURED PRODUCTS



#### HS52 Explosion-Proof Hollow Shaft Encoder

An industry first, BEI's HS52 is capable of working directly in Division 1 or Zone 1 environments and does not need an Intrinsic Safety barrier. This provides a simpler feedback system in explosion proof environments worldwide. Additionally, the compact hollow shaft design provides space saving advantages over traditional shafted encoders.



#### 700 Series Downhole Linear Position Sensors

Designed to operate reliably in extreme environments, these rugged linear potentiometers will withstand temperatures between -40° and +300°C, and pressures of up to 28,000 psi.



#### HS35 Drawworks Encoder

This heavy-duty rotary encoder features a unique through-shaft style for use as a winch-turns counter in the drawworks systems of oil rigs.



#### Intrinsic Safety Barrier

This unique electronic module provides power and signal isolation for an incremental encoder with differential quadrature outputs and an index.



#### SwiftComm Explosion-Proof Wireless Encoder Interface




This robust wireless interface eliminates the expense and constraints of a hard-wired system. The transmitter's explosion-proof housing allows installation in hazardous locations.

Contact BEI Sensors at **800-350-2727**  
or visit [www.beisensors.com](http://www.beisensors.com) to see how we can provide  
a solution for your unique position sensing requirements.

## Hazardous Area Products

BEI Sensors offers one of the largest selections of UL and ATEX certified position sensing products available. Certifications include UL Class I Division 1 and 2, and Class II Division 1 and 2, as well as ATEX Zone 1 and Zone 2. These selection tables provide the details of BEI Sensor product offerings by certification.



### North American "Explosion-Proof" & European "Flameproof" Approvals

Encoder Type	CENELEC/ATEX	 U.S./Canada Class I, Div 1, Group:	 U.S./Canada Class II, Div 1, Group:	 IECEx
H38 (Standard)		D		
H38 (w/ Labyrinth Seal)	II 2 G Ex d IIB T4	C, D	E, F, G	
H40		D		
HS52	II 2 G Ex d IIB T4 Gb	C, D (US only)		UL 11.0009X
CAMX, CAUX, CEMX, CEUX, GAMX, GAUX, GEMX, GEUX, PAUX, PEUX	II 2 G/D Ex d IIC T6			
DHM5, DH05, GHT5	II 3 D IP65 T135°C			

### Hazardous Environment Groups




Gas Groups		Dust Groups	
Class I		Class II	
Division 1 & 2	Zone 0, 1, 2	Division 1 & 2	Zone 20, 21, 22
A (acetylene)	IIC (acetylene & hydrogen)	E (metals) (Div 1 only)	metals, coal, grain
B (hydrogen)		F (coal)	
C (ethylene)	IIB (ethylene)	G (grain)	
D (propane)	IIA (propane)		

### North American & European "Nonincendive & Non-Sparking" Approvals

Encoder Type	 Division 2, Groups:	 CENELEC/ATEX Zone 2
H20, H25, HS25, HS20, HS35, HS45	A, B, C, D, F & G	Ex nA IIC T3/T4*
PHU9		Ex nA II T4

\* Certification available June 2013

### North American and European "Intrinsic Safety" Approvals

Encoder Type	 CENELEC/ATEX	 Class I, Group:	 Class II, Group:
H20, H25, H38, H40, HS20, HS25, HS35, HS45	Ex ia IIC T4	A, B, C, D	E, F, G
IBM5, IHM5, IH05, IB05, IHK5, IBK5, IHM9, IBM9	Ex ia IIC T4		
<b>Approved Associated Apparatus</b>			
Intrinsic Safety Barrier	II (1) G [Ex ia] IIC	A, B, C, D	

## Backed by Extensive International Resources

BEI Sensors is a brand of Custom Sensors & Technologies (CST). CST is a specialist in sensing, control and motion products.

Through its brands, BEI Kimco, BEI Sensors, BEI PSSC, Crouzet, Crydom, Kavlico, Newall and Systron Donner Inertial, CST offers customizable, reliable and efficient components for mission-critical systems in Aerospace & Defense, Transportation, Energy & Infrastructures, Commercial & Industrial OEMs, Medical, Food and Beverage and Building Equipment markets.

Focused on premium value offers and committed to excellence, CST, with 4,400 employees worldwide and sales of \$604M US in 2012, is the dependable and adaptable partner for the most demanding customers.

# BEI SENSORS

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