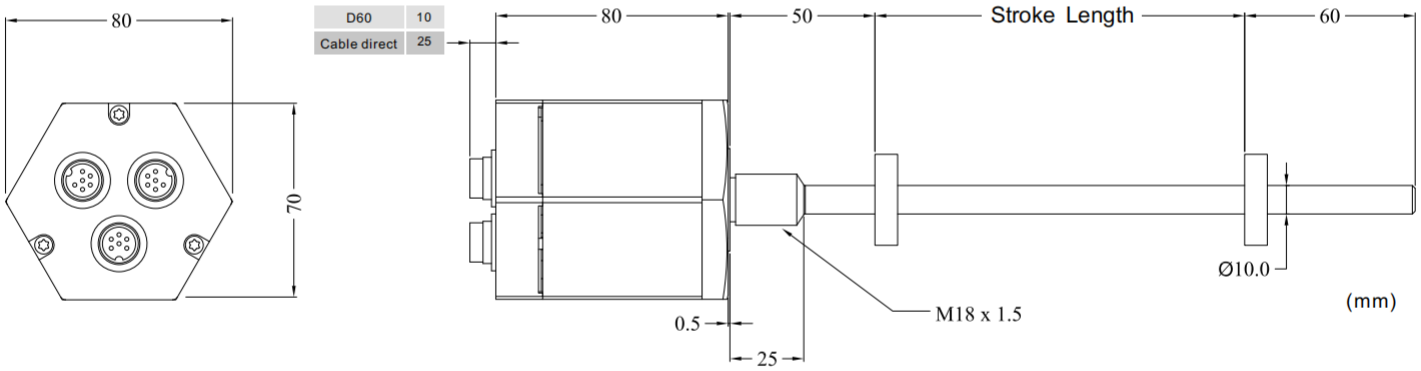
Ship propulsion systems, power plants and tilt technology for trains are challenging application for high safety and effective functioning. For those applications, the redundancy position transducer for mutual monitoring is needed to fulfill superior safety requirement and guarantee non-stop operation. This unique product features multiple individual measurement systems which are housed in a single protective tube. The magnets simultaneously act on both measurement systems to generate two separated position output.

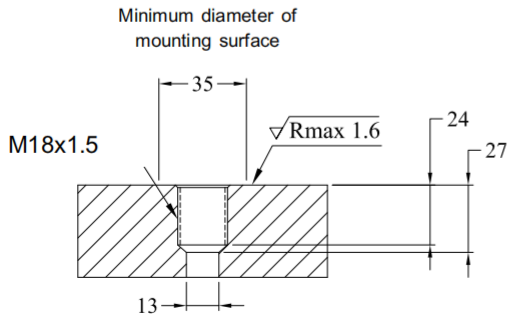
Sensing elements are protected by fully enclosed stainless steel case with IP68 protection rating. It is completely dust proof and resistant to harsh salty air, flooding and powerful water jetting. The core of 16R/T series adopts the non-contact magnetrostrictive measuring technology for precise, accurate, and absolute measurement.

>> Multiple Individual Position Sensing Systems in one sensor

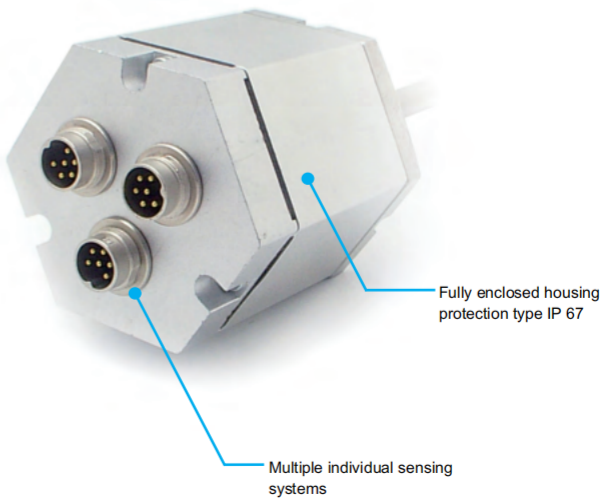
Installation



Mounting surface requirement



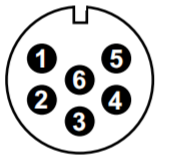
Installation hole must be perpendicular with mounting surface and center with sensor rod.



Specifications

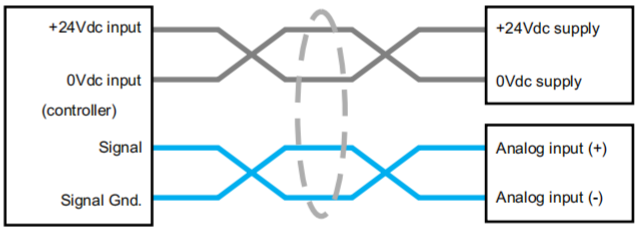
Order Code	160	161
Output	Voltage	Current
Measurement Type	Linear displacement	
Resolution	16 Bit D/A, 0.0015% (minimum 1µm)	
Repeatability	< ±0.001% of full scale (minimum ±2.5µm)	
Non-Linearity	< ±0.01% of full scale (minimum ±40µm)	
Update Time	0.5 ms up to 1200 mm / 1.0 ms up to 2400 mm / 2.0 ms up to 3000 mm	
Input Voltage	+24Vdc (20.4 - 28.8Vdc)	
Input Protection	Polarity protection up to -30Vdc, Over voltage protection up to 36Vdc	
Power Consumption	100mA (stroke range dependent)	
Dielectric Strength	500Vdc (DC ground to machine ground)	
Connector Type	Cable Outlet	
Pressure Rating	350 bar / 600 bar peak	
Operation Temp.	-40 to 75°C, Humility 90% non-condensing	
Sealing	IP 67	
Vibration Rating	15g / 10-2000Hz / IEC standard 68-2-6	
Shock Rating	100g single hit per IEC standard 68-2-27	
EMC	Emission EN 68000-6-3, Immunity EN 61000-6-2, EN 61000-4-2/3/4/6	

Pin Assignments



(View toward sensor pins)

	Cable	D60 Pin
1	Black	Signal
2	White	Signal Gnd
3	Yellow	N.C.
4	Green	N.C.
5	Red	+24 Vdc
6	Blue	0 Vdc



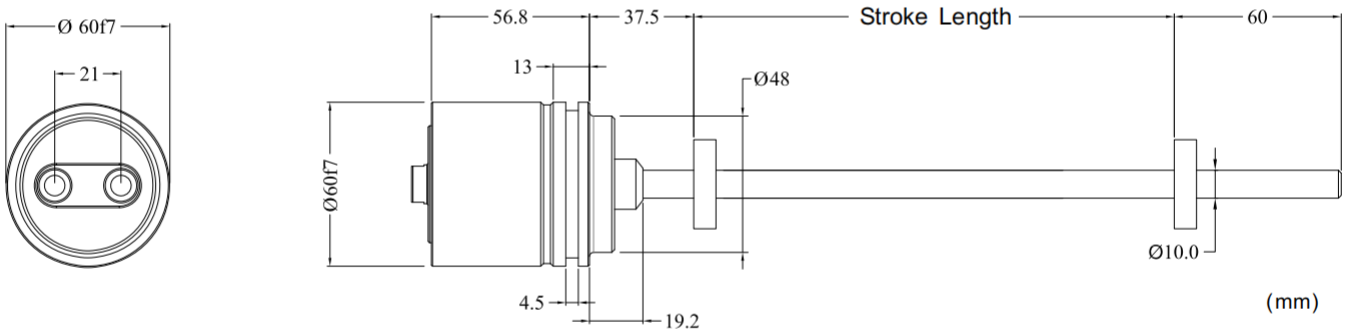
16E series is design for use in extreme harsh environments with high contamination and presence of dust. Sensing element is protected by fully enclosed stainless steel case with IP68 protection rating. It is completely dustproof and resistant to harsh salty air, flooding and powerful water jetting. This unique product is perfect for use in harsh indoor applications and severe outdoor environments.

The core of 16E series adopts the non-contact magnetrostrictive measuring technology for precise, accurate, and absolute measurement. The non-contact feature provides exceptional ease of installation and guarantees almost unlimited mechanical life expectancy.

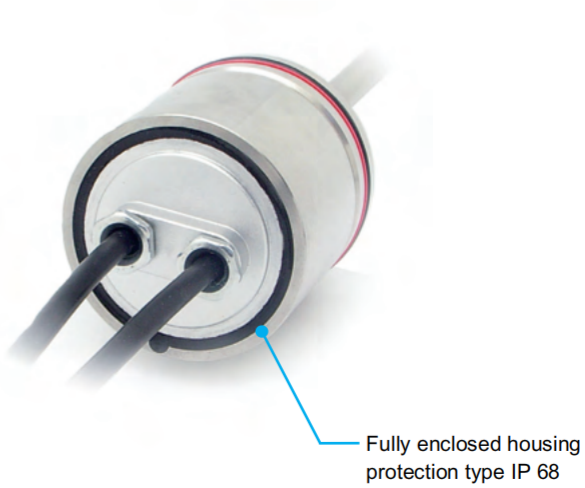
IP68

- For Harsh Environment
- IP 68 Protection
- Compact Design

Installation



Mounting surface requirement



Specifications

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Non-Linearity	< ±0.01% of full scale (minimum ±40µm)	
Update Time	0.5 ms up to 1200 mm / 1.0 ms up to 2400 mm	
	2.0 ms up to 4800 mm / 5.0 ms up to 7600 mm	
Input Voltage	+24Vdc (20.4 - 28.8Vdc)	
Input Protection	Polarity protection up to -30Vdc, Over voltage protection up to 36Vdc	
Power Consumption	100mA (stroke range dependent)	
Dielectric Strength	500Vdc (DC ground to machine ground)	
Connector Type	Cable Outlet	
Pressure Rating	350 bar / 600 bar peak	
Operation Temp.	-40 to 75°C, Humility 90% non-condensing	
Sealing	IP 68	
Vibration Rating	15g / 10-2000Hz / IEC standard 68-2-6	
Shock Rating	100g single hit per IEC standard 68-2-27	
EMC	Emission EN 68000-6-3, Immunity EN 61000-6-2, EN 61000-4-2/3/4/6	

Pin Assignments

Output	Cable
Signal	Black
Signal Gnd	White
N.C.	Yellow
N.C.	Green
+24 Vdc	Red
0 Vdc	Blue