

Linear Feedback Encoders for Newall Digital Readout Systems

Consistent accuracy and reliability, even under the harshest shop conditions.

Designed to work exclusively with Newall's digital readouts, the **Spherosyn** and **Microsyn** encoders embody a truly innovative design in which all of the electronics and measuring components are sealed and protected. The encoders carry an IP67 environmental rating and will continue to provide accurate, reliable readings even when fully submersed in water, oil or coolant. No other linear encoder matches the durability and reliability of Newall's reader heads and scales.



Encoder Benefits

- IP67 rating (completely sealed)
- Withstands dust, dirt, oil and other harsh environmental conditions
- No mechanical wear characteristics
- No more broken or scratched glass scale
- Requires no cleaning or maintenance
- No air purge required
- Tolerant to shock, vibration and magnetic interference
- Easy installation, no machined surface or backer bar needed

	SPHEROSYN™	MICROSYN 10™	MICROSYN 5™
Output Signal	2.0V ±0.5ms, 1kHz phase analogue, 360°/ 12.7mm	2.0V ±0.5ms, 1kHz phase analogue, 360°/ 12.7mm	
Accuracy (µm/m)	±0.0004" (±10µm)		±0.0002" (±5µm)
Repeatability	Within 1 (one) resolution count		
Resolutions	0.0005" / 0.0002" (0.01mm / 0.005mm)	0.0005" / 0.0002" / 0.0001" / 0.00005" (0.01mm / 0.005mm / 0.002mm / 0.0001mm)	
Maximum Traverse Rate	4,800" (120m) / minute	1,800" (45m) / minute	
Power Supply	12VDC ±5% <180mA		
Shock (11ms)	100g / 980ms ² (IEC 69-2-6)		
Vibration (55-2000Hz)	30g / 294ms ² (IEC 68-2-27)		
Scale Travels	2" to 462" (51mm to 11.7m)	2" to 40" (51mm to 1,016mm)	
Environmental Rating	IP67 (completely sealed - fully submersible) (IEC 529) - NEMA 6		
Operating Temperature	32 to 131°F (0 to 55°C)		
Coefficient of Expansion	12 x 10 ⁻⁶ K (12ppm/degree Kelvin)		
Scale Material	316 grade stainless steel	Carbon Fiber	
Scale Diameter (O.D.)	0.601" (15.25mm)	0.257" (6.5mm)	
Overall Scale Length	Scale travel length + 10.2" (258mm)	Scale travel length + 7.4" (187mm)	
Encoder Dimensions	2.04"H x 5.16"L x 1.10"D (52 x 131 x 28mm)	1.38"H x 2.95"L x 0.98"D (35 x 75 x 24mm)	
Standard Cable	9-core, 11.5' (3.5m) stainless steel armored		
Maximum Cable Length	65' (20m)		
Standard Connector	9 pin 'D' type		
EMC Compliance	BS EN 50081-2 and BS EN 61000-6-2		

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