

Comparison of 4 encoder technologies

What features should you look for in your choice of technology? Use this infographic to compare capacitive, optical, inductive and magnetic (MR) encoders.

	Capacitive encoders	Optical encoders	Inductive encoders	Magnetic (MR) encoders
Resolution	+	++	∅	∅
Repeat accuracy	+	++	∅	∅
Formfactor	+	+	+	∅
Thermal drift	-	-	++	∅
Ease of installation	++	∅	--	∅
Vibration resistant	++	∅	∅	∅
Dust, oil, light sensitivity	++	--	++	++
Moisture/condensation sensitivity	-	-	+	+
Magnetic immunity	++	++	∅	--
Temp sensitive vacuum compatibility	+	++	∅	-
Cable free read head ¹	++	-	-	-

¹ only applies to FREEe and μFREE encoders, [see whitepaper](#) about capacitive linear encoders (page 9)