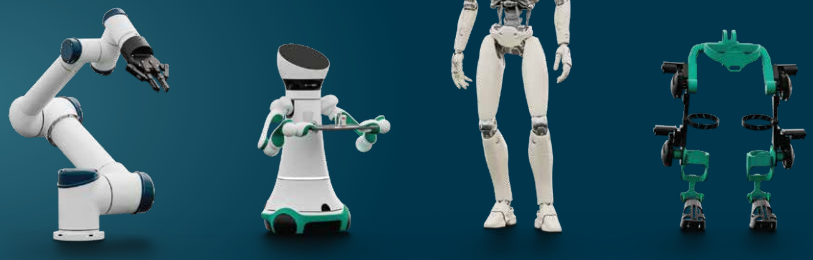
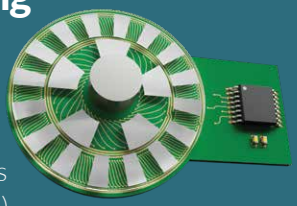
ENCODERS & RESOLVERS FOR ROBOT JOINTS

Optimize robot joint performance with Melexis' high-speed motor control encoders/resolvers and high-resolution positioning encoders. Our unique offering of both magnetic (high tolerances) and inductive (real-time, stray field immune) technologies ensures unmatched versatility



High-resolution
for application positioning



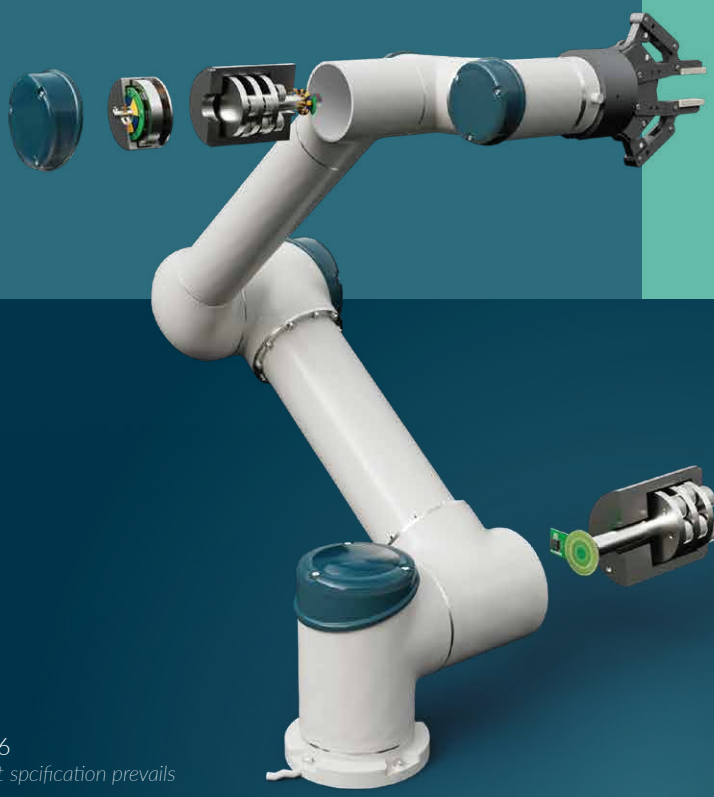
Inductive encoder
MLX90514 & MLX90520

- Small (<2 cm) & large (<20 cm) joints
- Resolution up to 16-bit (MLX90514)
  22-bit (MLX90520)
- Sensing end of shaft or throuh shaft
- Air gap <2 mm, thin sensor assembly < 3mm
- Stray field immune
- Outputs: SPI, SSI

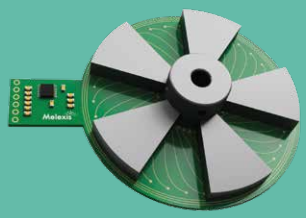


Magnetic encoder
MLX90384

- Small (<2 cm) joints
- Resolution up to 18-bit
- Sensing end of shaft or through shaft
- Air gap <1.5 mm, ±0.5 mm placement tolerances
- One IC fits all magnet (pole pitch independant)
- Outputs: SPI, SSI

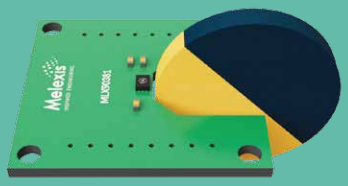


High-speed
for motor control



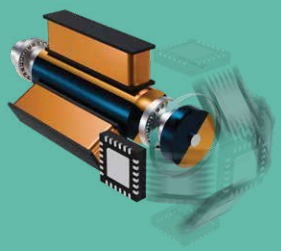
Inductive resolver
MLX90510

- Tracking up to 240'000 e-rpm (<±0.36° el accuracy)
- Sensing end of shaft, side of shaft, through shaft
- Stray field immune
- Outputs: differential sine / cosine



Magnetic resolver
MLX90381

- Tracking up to 50'000 e-rpm
- Sensing end of shaft or through shaft
- Tiny package 2 x 2.5 mm²
- Outputs: sine / cosine



Magnetic encoder
MLX90382

- Tracking up to 200'000 e-rpm
- Sensing end of shaft, side of shaft, through shaft
- Stray field immunity
- Outputs: SPI/SSI, PWM, ABI & UVW

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robotics

V3 01-2026
The datasheet spcification prevails

Melexis