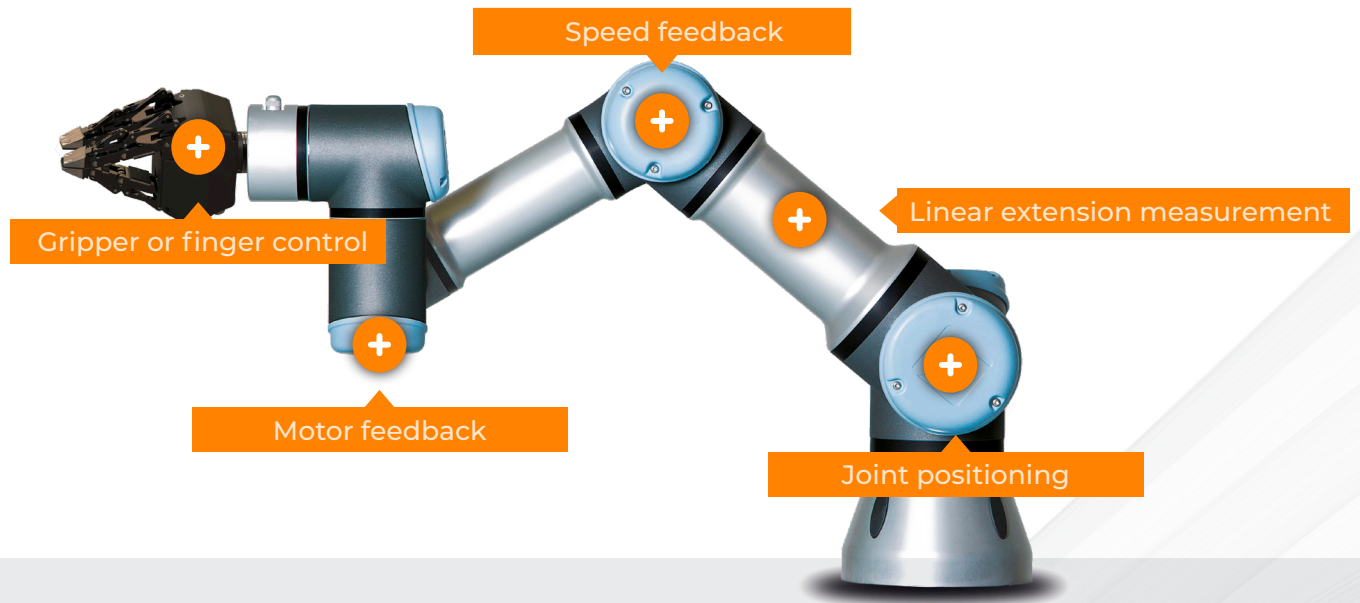


Magnetic encoders for robots



Why choose RLS magnetic encoders?

FEATURES:

- ✓ Excellent price vs. performance
- ✓ Wide range of sizes and technologies available
- ✓ Wide range of resolutions
- ✓ Industry standard absolute or incremental output options
- ✓ High dynamic response

BENEFITS:

- ✓ Motor position feedback
- ✓ Joint position control
- ✓ Linear extension measurement
- ✓ Gripper/finger feedback
- ✓ Force feedback
- ✓ Miniature closed-loop position control
- ✓ Speed feedback

Top 5 magnetic encoders for use in robotic applications

PRODUCT				
AksIM-2™ & AksIM-4™ rotary absolute encoders	Orbis™ rotary absolute encoder	RM08 super small rotary encoder	LA11 linear absolute encoder	RLC21C miniature incremental encoder module
				
READING TYPE				
Rotary, axial	Rotary, axial	Rotary	Linear	Rotary/Linear
ENCODER TYPE				
True absolute	True absolute	Incremental and absolute	True absolute	Incremental
MAXIMUM RESOLUTION				
21 bits	14 bits	12 bits	13 bits	13 bits
ACCURACY				
±0.004°	±0.25°	±0.3°	±30 µm/m	±10 µm/m
MAXIMUM SPEED				
10,000 rpm	12,000 rpm	30,000 rpm	Up to 7 m/s	Up to 80 m/s**
DIMENSIONS				
For shaft sizes: 8 mm to 125 mm	For shaft sizes: 6 mm to 30 mm	Encoder: Ø8 mm Magnet: Ø4 mm	Max. measuring length: 16.3 m	For shaft sizes: 12 mm to 280 mm
POWER SUPPLY				
3.3 V or 5 V	4.5 V to 5.5 V	3.3 V or 5 V	4.75 V to 5.75 V or 8 V to 30 V	4.75 V to 5.25 V
CURRENT CONSUMPTION				
Typ. 130 mA	Typ. 65 mA	Typ. 26 mA	150 mA at 5 V	30 mA
AVAILABLE COMMUNICATION INTERFACES				
BiSS, UART, SPI, SSI, PWM	BiSS, UART, SPI, SSI, PWM	Analogue sin/cos, incremental*, SSI*, linear voltage	SSI, SPI, BiSS + parallel incremental or 1 V _{pp}	Incremental ABZ, TTL or RS422
CONNECTION TYPE				
Connector or soldering pads	Connector or soldering pads	Wires	Cable	Pins, flex cable
IP PROTECTION				
None (conformal coating available)	None (conformal coating available)	IP68	IP67	None
OPERATING TEMPERATURE				
-40 °C to +105 °C	-40 °C to +105 °C	-40 °C to +85 °C	0 °C to +55 °C	-40 °C to +125 °C

* Differential output available with accessory.
** Refer to the speed calculator.

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