



# Absolute rotary encoders

Provide specific values for distance, speed, direction and position



## Interfaces available for SSI, Profibus and CANopen

- Provides a specific value as shaft makes complete rotation
- Single-turn models monitor up to 8,192 steps per revolution
- Multi-turn models monitor up to 8,192 steps and 4,096 number of revolutions
- Non-contact optical sensing technology offers wear-free position detection
- Absolute encoders offer a great price / performance value

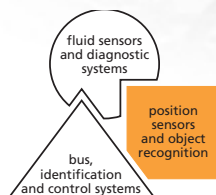
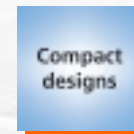
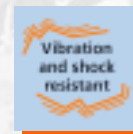
ifm introduces a family of absolute rotary encoders that provide a specific value for distance, speed, direction, and position in a variety of applications found in material handling, packaging, robotics, metalworking, printing, and the elevator / escalator markets.

Absolute encoders generate an absolute numerical value for linear or rotational movements. This value is available immediately after power is applied.

### Application examples include:


- Exact position of elevator doors
- Exact position of robotic arms
- Pallet and container positioning
- Conveyor speed, distance and position
- Absolute position of stacker and gantry cranes
- Forklift speeds and direction monitoring
- Exact cut-to-length measurements
- Roll diameter measurement and end-of-roll detection

The encoder's integrated setting options for the bus address, baud rate termination and zero reset button enable easy setup. The encoders withstand shock and vibration environments, offer high switching frequencies, and provide a great price / performance value.





Selection guide

Type	Flange	Solid shaft	Output	Resolution		Part No.	List Price (USD)
				single turn	multi turn		
<b>Single turn encoder with terminal chamber</b>							
	Servo	10	SSI	13 bit		<b>RN 6055</b>	<b>\$356.00</b>
	Servo	10	SSI	12 bit		<b>RN 6057</b>	<b>\$383.00</b>
	Servo	6	CANopen	13 bit		<b>RN 7003</b>	<b>\$608.00</b>
	Clamp	10	CANopen	13 bit		<b>RN 7004</b>	<b>\$608.00</b>
<b>Multi turn encoder with terminal chamber</b>							
	Servo	6	Profibus		25 bit	<b>RM 3001</b>	<b>\$832.00</b>
	Clamp	10	Profibus		25 bit	<b>RM 3005</b>	<b>\$832.00</b>
	Servo	6	SSI		24 bit	<b>RM 6001</b>	<b>\$914.00</b>
	Servo	6	SSI		25 bit	<b>RM 6101</b>	<b>\$591.00</b>
	Servo	10	SSI		25 bit	<b>RM 6104</b>	<b>\$591.00</b>
	Servo	6	CANopen		25 bit	<b>RM 7003</b>	<b>\$832.00</b>
	Clamp	10	CANopen		25 bit	<b>RM 7004</b>	<b>\$832.00</b>

Accessories

Type	Description	Part No.	List Price (USD)
	Angle bracket for servo flange, aluminum, black anodized	<b>E 60034</b>	<b>\$95.00</b>
	Angle bracket for clamp flange, aluminum, black anodized	<b>E 60035</b>	<b>\$81.00</b>
	Fastening clamp for servo flange, steel	<b>E 60041</b>	<b>\$4.00</b>
	Spring disc coupling, Ø 6 mm / Ø 6 mm, diecast zinc, PA	<b>E 60121</b>	<b>\$66.00</b>
	Spring disc coupling, Ø 6 mm / Ø 10 mm, diecast zinc, PA	<b>E 60117</b>	<b>\$66.00</b>
	Flexible coupling w/ clamp connection, Ø 6 mm / Ø 6 mm, aluminum	<b>E 60064</b>	<b>\$57.00</b>
	Flexible coupling w/ clamp connection, Ø 6 mm / Ø 10 mm, aluminum	<b>E 60066</b>	<b>\$62.00</b>

Technical data for CANopen and Profibus

Operating voltage	[V DC]	9...36
Current rating	[mA]	250
Accuracy		± 1 LSB
Ambient temperature	[°C]	-40...70
Protection rating at the shaft entry		IP 66 to IEC 60529
Protection rating at the housing		IP 67 to IEC 60529
Maximum mechanical rotational speed	[1/min]	6000
Maximum mechanical shaft load axial	[N]	10
Maximum mechanical shaft load radial	[N]	20
Starting torque	[Ncm]	< 1 at 20 °C
Shaft material		stainless steel (1.4101/316)
Housing material		aluminum
Vibration resistance	[g]	10 (55-2000 Hz) to IEC 60068-2-6
Shock resistance	[g]	100 (6 ms) to IEC 60068-2-27
Short circuit and overload protection		yes / yes
Type of code		binary
Maximum baud rate		1 Mbit
Baud rate, address		adjustable via DIP switch or software
Bus terminating resistor		adjustable via DIP switch
Programmable parameters		Scaling Preset value Baud rate Direction of rotation Address

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