

AUTOMATIONDIRECT.com



JTEKT lika<sup>®</sup>  
Sure<sup>™</sup> step same sky

# Encoders

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# High-Quality, Rugged Encoders

## Why use an encoder?

Encoders are used in all types of motion sensing applications, including machine tooling, semiconductor positioning and multi-axis positioning. Our encoders feature a reinforced aluminum diecast casing and come equipped with a two-meter cable or built-in connector. Use the incremental encoders with our PLC high-speed counter modules for accurate position monitoring and control. Or use our absolute encoders to monitor position with Gray code and standard PLC DC inputs.

**JTEKT**  
Formerly Koyo Encoders



**JTEKT TRD-S(H)R Series**  
Excellent, low-cost encoder  
for light duty applications  
Starting at \$98.00

**lika**



**Lika A41 Series**  
Compact hollow/solid  
shaft encoders from  
100 to 4096PPR  
Starting at \$92.00

## Light-Duty Encoders

A light-duty encoder is a cost-effective encoder requiring minimal load on the shaft.

- Size 15 (1.5 inch or 38mm/40mm) diameter body
- Dust-proof (IP50) or splash-proof (IP64 and IP65) ratings
- 6 mm and 1/4" standard shafts, 8 mm and 3/8" hollow shafts
- Resolutions from 100 to 4096 pulses/revolution
- Open collector, line driver outputs or universal outputs
- Up to 200 kHz response frequency

## Medium-Duty Encoders

Medium-duty encoders are the most popular encoders and offer the greatest flexibility of choice, medium to high load ratings, and very competitive prices.

- Dust-proof (IP50) or splash-proof (IP64/IP65) ratings
- Solid or hollow shafts in a variety of sizes (with adapter bushings for even more flexibility)
- Incremental or absolute (Gray code) operation
- Incremental resolution from 1 to 16,384 pulses/revolution

- Absolute resolution from 32 to 1024 pulses/revolution
- Open collector, Totem-pole or line driver output versions
- Up to 500 kHz response frequency
- MS, M12 and M23 connector models available



**JTEKT TRD-N(H) Series**  
28 fixed resolution options  
to 5000PPR  
Starting at \$160.00



**JTEKT TRD-NA Series**  
Absolute encoder  
(gray code output)  
Starting at \$366.00

**JTEKT**  
Formerly Koyo Encoders



**JTEKT TRDA-25 Series**  
Encoders with 2.5" mounting  
flange & MS connector  
Starting at \$248.00



**JTEKT TRDA-20 Series**  
Encoder with 2" mounting face  
Starting at \$154.00

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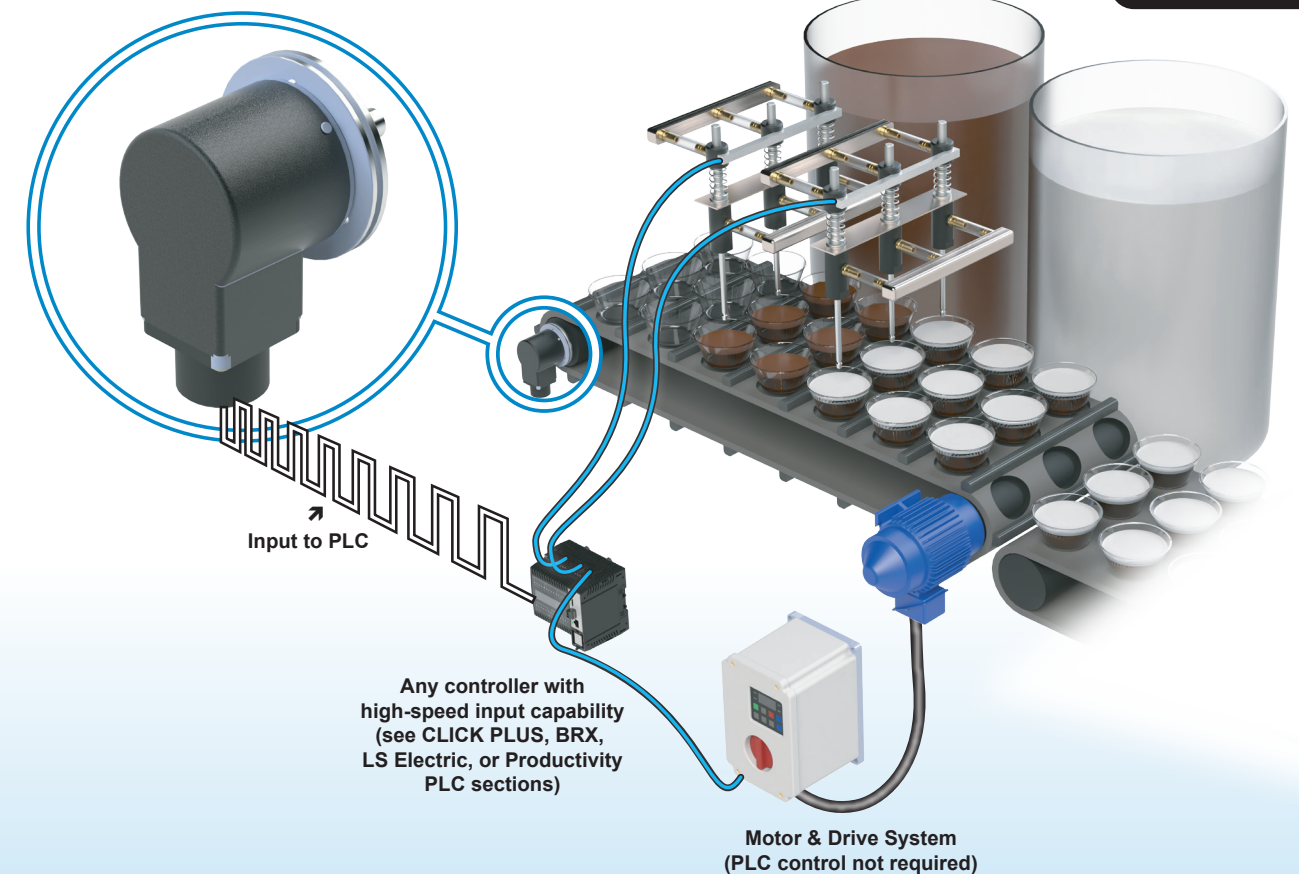
**Lika A50 Series**  
High-temp hollow shaft encoders  
from 360 to 2048PPR  
Starting at \$105.00



**Lika AQ5x Series**  
Programmable resolution  
up to 16,384PPR  
Starting at \$145.00



**Lika A80 Series**  
Designed for large  
AC motors  
Starting at \$149.00



## Heavy-Duty Encoders

These heavy-duty encoders are the most rugged encoders you can buy. Top-of-the-line bearings provide max load ratings and ensure a service life of 12 billion revolutions.

- Rugged size 30 (3.0 inch or 78mm) diameter body
- Splash-proof (IP65) rating
- 10 mm standard shaft
- Incremental operation from 30 to 5000 pulses/revolution
- Totem-pole output
- Up to 100 kHz response frequency

**JTEKT**  
Formerly Koyo Encoders



**JTEKT TRD-GK Series**  
Service life of 12 billion revolutions  
Starting at \$319.00

**SureStep**



**MTRA Series**  
Replacement and upgrade  
encoders for SureStep motors  
Starting at \$90.00

**same sky**



**AMT Series**  
Programmable bolt-on  
encoders for stepper motors  
Starting at \$25.00

## Modular Kit Encoders

Modular encoders from SureStep and Same Sky (formerly CUI Devices) are bolt-on options for SureStep dual-shaft stepper motors and standard integrated motor/drives.

- Capacitive and optical technologies
- Compatibility with NEMA 14 to NEMA 42 stepper motors
- Line driver, NPN open-collector, or push-pull outputs
- Fixed or configurable resolutions up to 4096 ppr

## Encoder Accessories

Plus a full selection of accessories, including: shaft adapters, cables, couplings, mounting brackets, and flanges.



# Extensive Rotary Encoder Selection at Great Prices

	Duty	Series	Encoder Diameter	Shaft Diameter	Shaft Type	Operating Voltage (VDC) and Electrical Output	IP Rating	Cable	Max Radial Load (N)	Max Axial Load (N)	Available Resolutions (PPR)	Brand
Incremental	Modular/Kit	AMT	28mm, 42mm	2, 3, 4, 5, 6, 8mm, 3/16, 1/4, 3/8, 1/2, 5/8 inch	hollow	5V Line Driver (TTL) or 5V Push-Pull (Totem Pole)	IP20	purchase custom cables separately	NA*	NA*	Programmable Up to 4096	same sky
		MTRA	31mm	5mm, 1/4", 3/8"	hollow	5V Line Driver (TTL) or 5V Push-Pull (Totem Pole)	IP20	purchase custom cables separately	NA*	NA*	400, 1000	Sure-step
	Light Duty	TRD-S(H)R	38 or 40mm	8mm	solid or hollow (H)	5V Line Driver (TTL) or 5-26V NPN/PNP open collector (HTL)	IP50 or IP65	integral 2m pigtail cable	20	10	100, 200, 360, 500, 600, 1000, 1024, 2000, 2500	JTEKT
		A41	41mm	1/4"	solid or hollow	5-30VDC Universal output circuit: Push-Pull (Totem Pole), or NPN/PNP open collector (HTL), or Line Driver (TTL)	IP64	integral 2m pigtail cable	20	20	100, 200, 360, 500, 1000, 1024, 200, 2048, 3600, 4096	lika
	Medium Duty	A50	50mm	1/4", 3/8"	hollow		IP65	purchase M12 cables separately	20	20	360, 1000, 1024, 2048	
		A80	80mm	30mm (reducer bushings available for 19, & 20 mm; 5/8, 7/8, 1, & 1 1/8 inch)	hollow		IP64	purchase M23 cables separately	30	30	1024	
		AQ58/59	58 or 59mm	3/8" solid, 15mm hollow (reducer bushings available for 6, 8, 10, 11, 12mm; 1/4, 3/8, 1/2 inch)	solid or hollow		IP65	purchase M12 cables separately	100	100	Programmable from 1 to 16,384 (default 1024)	
		AR01	58mm	15mm	solid dual-shaft		IP65	purchase M12 cables separately	50	50	250 (linear res: 0.36 deg/cts) 1250 (linear res: 0.072 deg/cts)	
		TRDA-20	2"	3/8"	solid	5VDC Line Driver (TTL) or 5-30VDC Push-Pull (Totem Pole)	IP50	integral 2m pigtail cable	50	30	100, 360, 500, 1000, 1024, 2500	JTEKT
		TRDA-25	2.5" flange (w/ 2.0" body)	3/8"	solid	5VDC Line Driver (TTL) or 5-30VDC Push-Pull (Totem Pole)	IP65	purchase Military Spec (MS) cables separately	50	30	100, 360, 500, 1000, 1024, 2500	
		TRD-N(H)	50mm	8mm	solid or hollow (H)	5VDC Line Driver (TTL) or 5-30VDC Push-Pull (Totem Pole)	IP65	integral 2m pigtail cable	50	30	3, 4, 5, 10, 30, 40, 50, 60, 100, 120, 200, 240, 250, 300, 360, 400, 480, 500, 600, 750, 1000, 1024, 1200, 2000, 2500	
		TRD-GK	78mm	10mm	solid	10-30VDC Push-Pull (Totem Pole)	IP65	integral 2m pigtail cable	100	50	30, 100, 120, 200, 240, 250, 300, 360, 400, 500, 600, 1000, 1200, 2000, 2500, 3600, 5000	
	Heavy Duty											
Absolute	Medium Duty	TRD-NA	50mm	8mm	solid	10-30V NPN/PNP open collector (HTL)	IP65	integral 2m pigtail cable	50	30	32, 64, 128, 180, 256, 360, 512, 720, 1024 (gray code)	

\* Modular/Kit encoders are direct mount, there are no load ratings

## Company Profiles




Formerly Koyo Encoders

JTEKT was founded in 1955 as a manufacturer of portable radios. Their offering has expanded greatly over the years, with the addition of rotary encoders starting in 1967. Formerly known as Koyo Encoders, this division of the company has been a leader in industrial encoder technology and high-quality encoder manufacturing for half a century. AutomationDirect has carried a full line of JTEKT/Koyo encoders for over 25 years.




Starting in 1982 as a family-owned business, Lika Electronic has grown to become a forward thinking, innovative, and global company. Over the years, they have become one of the leading manufacturers of optical encoders and magnetic measurement systems in Europe and worldwide, providing a widespread and efficient global distribution network with unrivaled technical support and excellent customer service.

### Learn more about encoders



What is?



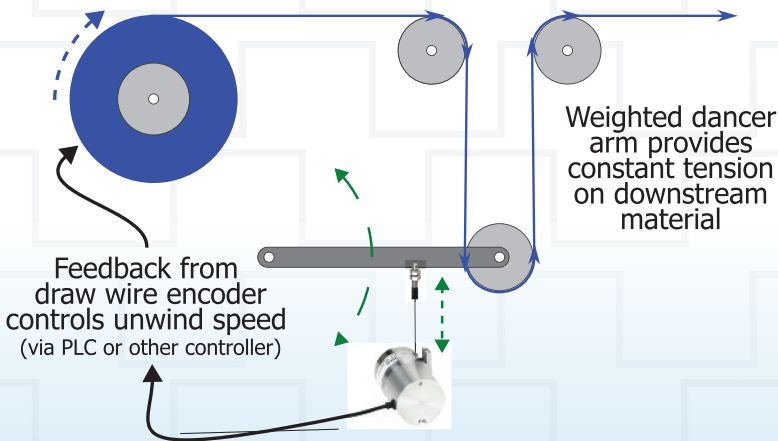
Encoder

Click above or go to <http://go2adc.com/encoder> to view

# Draw Wire Encoders

**lika**<sup>®</sup>

Smart Encoders and Actuators



## High Value, Low Cost Encoder Version (DWI-Series)

- Encoder (quadrature) output 0.025--0.050 mm/count resolution
- Miniature size (DWI-2M), robust and space saving construction
- Universal electrical output (line driver, open collector, etc.)
- Stainless steel draw wire
- Measuring lengths of 2000mm, 5000mm, and 10000mm
- Light duty IP64 and medium duty IP65 models available, with 2m pigtail connection



## Potentiometer Version (DWP-Series)

- Analog voltage or current output: 0-10 V or 4-20 mA
- Robust design
- Smooth, stepless analog incrementing (potentiometer-based)
- Stainless steel draw wire
- Measuring lengths of 2000mm
- IP64 housing with 2m pigtail connection



## Programmable Version (DWA-Series)

- Programmable analog output: 0-10 V or 4-20 mA
  - Scale the output to the specific application travel
  - Utilize maximum resolution (with any travel length)
- Easy to use Teach Mode
  - Via pushbuttons on the back of the encoder
  - Or use digital inputs
  - Change scaling programmatically (for recipe or other dynamic machine changes)
- Status LEDs
- Alarm notification if wire is pulled outside the Teach limits
- Stainless steel draw wire
- Max measuring lengths of 5000mm and 10000mm
- IP65 housing with M12 cable connection



## What are draw wire encoders?

Also known as string encoders or string potentiometers, these linear measurement devices use a steel cable wrapped on a spring-loaded reel to measure distance. The reel is connected to a rotary encoder or potentiometer that can provide very accurate feedback of how far the steel cable has been extended. Lika draw wire encoders provide encoder (quadrature) and analog (0-10V, 4-20mA) outputs and are available in pull-lengths from 2 to 10 meters.

## Why use draw wire measuring?

They are a good solution when the operational space is constricted, or the environmental conditions are severe. The encoder body can be mounted in a safe place, easily accessible, and adequately protected. While the measuring wire requires minimum space and can be subjected to harsher conditions. They can even replace standard encoders in some cases.

Typical applications include linear measuring, vertical lift measurement, cylinder stroke measurement, or any application where accurate, inexpensive, and easy to install measurement of a linear distance is required.

## Need a Measuring Wheel Encoder?



### AR01 Series (Priced at \$299.00)

Medium-duty measuring wheels ride directly on the product (above or below) or a conveyor to measure or provide speed control feedback. These can also be used for cut-to-length and positioning applications.

- Metric and US/imperial wheel sizes
  - Standard 4" wheel (12.5" circumference)
  - Optional 80mm wheel (250mm circumference)
- Spring loaded arm with up to 30mm deflection
- IP65 environmental rating