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JTEKT lika

Sure 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 $103.00

lika

Lika A41 Series
Compact hollow/solid shaft encoders from 100 to 4096PPR
Starting at $101.00

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 $168.00

JTEKT TRD-NA Series
Absolute encoder (gray code output)
Starting at $384.00

JTEKT
Formerly Koyo Encoders

JTEKT TRDA-25 Series
Encoders with 2.5" mounting flange & MS connector
Starting at $260.00

JTEKT TRDA-20 Series
Encoder with 2" mounting face
Starting at $162.00

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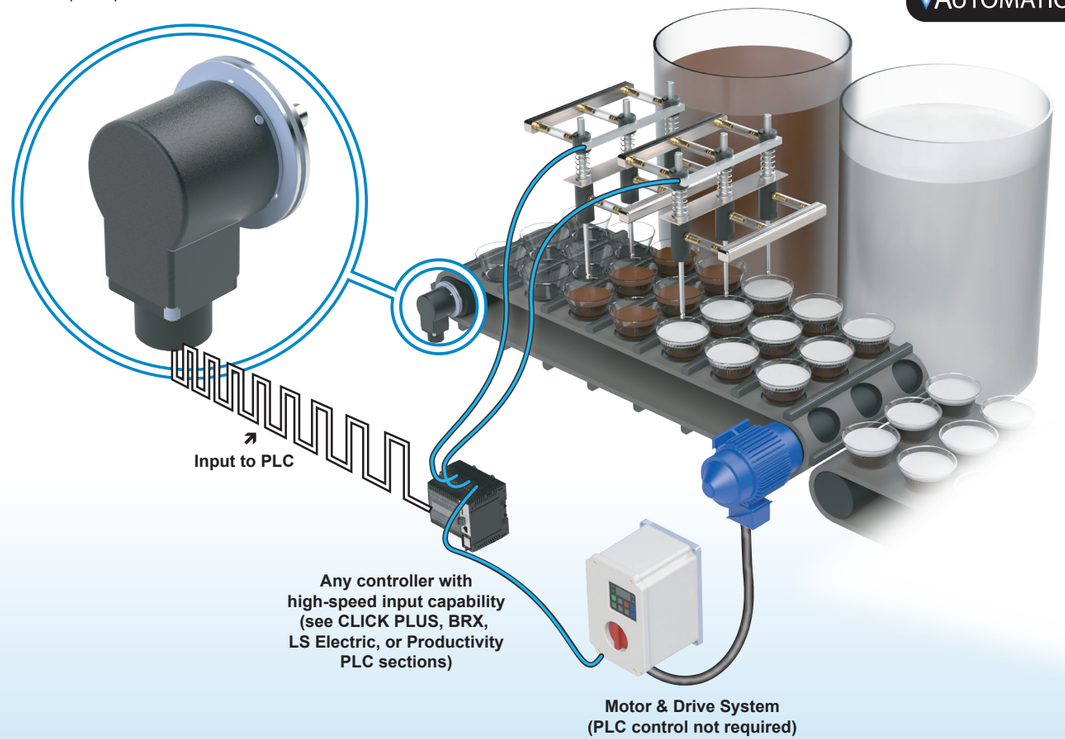
Lika A50 Series
High-temp hollow shaft encoders from 360 to 2048PPR
Starting at $116.00

Lika AQ5x Series
Programmable resolution up to 16,384PPR
Starting at $160.00

Lika A80 Series
Designed for large AC motors
Starting at $164.00

For the latest prices, please check AutomationDirect.com.



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 $335.00

Sure step®

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.

Draw Wire Encoders

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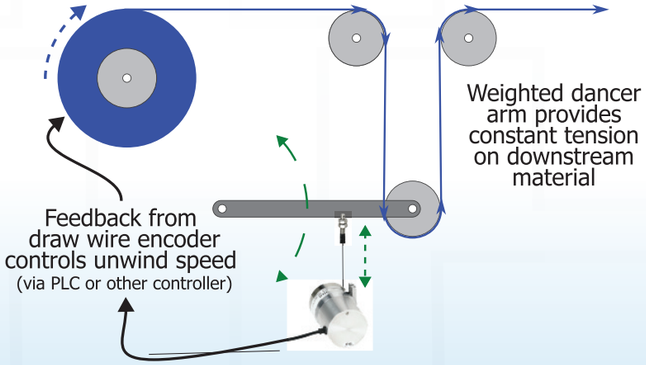
Smart Encoders and Actuators



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.

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

Need a Measuring Wheel Encoder?

AR01 Series (Priced at $329.00)

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

For the latest prices, please check AutomationDirect.com.

Multi-turn Absolute Communications Encoders

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Smart Encoders and Actuators

What are communications encoders?

Often referred to as 'comms encoders', these medium duty, multi-turn absolute encoders have a communications interface built in. They are high resolution 13-bit (8192 ppr) encoders that know their position at all times, and are also multi-turn devices, with the ability to track up to 16384 revolutions (14 bit). Choose a hollow or solid shaft version with any one of four communication protocols: EtherNet/IP, EtherCAT, Modbus TCP, or Modbus RTU.

Why use comms encoders?

With incremental encoders, your controller must constantly keep track of incoming pulses, and Gray code absolute encoders require up to 11, or more input points on the controller for their interface. On the other hand, comms encoders sit on your preferred communication channel independently tracking pulses and standing by to provide position information when you need it. And they are programmable – set zero (home) to be any location and set the direction (or center) for the multi-turn feature to suit your application needs. Resolution, IP address, subnet masking and similar settings are also fully programmable.

Additionally, these encoders use energy harvesting technology to maintain and update position information indefinitely without needing a battery or capacitor. This form of energy harvesting uses the Wiegand effect, a phenomenon where a specific type of wire, called a Wiegand wire, generates electrical pulses from mechanical motion or changes in a magnetic field. With these encoders, you might never have to "home" your machine again!

Ethernet Absolute Encoders (AM5-Series)

- Choose model based on Ethernet protocol:
  - EtherNet/IP
  - EtherCAT
  - Modbus TCP
- Programmable resolution:
  - up to 8192 ppr (13 bit)
  - up to 16384 turns (14-bit)
- 6000 RPM max shaft speed
- 5-30 VDC operation (2W)
- 3/8" solid shaft or 0.59" hollow shaft models
- Hollow shaft reducers for many shaft sizes
- IP65 Ingress protection
- Axial cable exit

Hollow shaft option

Rear view of connectors, DIP switch access and LEDs

Modus RTU Absolute Encoders (AM5-Series)

- Programmable resolution:
  - up to 8192 ppr (13 bit)
  - up to 16384 turns (14-bit)
- 12000 RPM max shaft speed (9000 RPM continuous)
- 10-30 VDC operation (1W)
- 3/8" solid shaft or 0.59" hollow shaft models
- Hollow shaft reducers for many shaft sizes
- IP65 Ingress protection
- Bus termination set via DIP switches
- Radial cable exit

Free RTU Configuration Software
(Modbus RTU models only)

The Lika Modbus RTU Configuration Software was developed by Lika Electronic to easily program and configure the Modbus RTU encoders. It allows the user to set working parameters and monitor device functionality.

Download from the software section of the website, or link from the encoder item page.

For the latest prices, please check AutomationDirect.com.

Extensive Rotary Encoder Selection at Great Prices

	Duty	Series	Encoder Diameter	Shaft Diameter	Shaft Type	Operating Voltage and Electrical Output or Comm Protocol	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	Custom cables sold separately	N/A	N/A	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	Custom cables sold separately	N/A	N/A	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	M12 cables sold 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	M12 cables sold 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	M12 cables sold separately	100	100	Programmable from 1 to 16,384 (default 1024)	
		AR01	58mm	15mm	solid dual-shaft		IP65	M12 cables sold 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	Military Spec (MS) cables sold 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, 3000, 2600, 5000	
	Heavy Duty	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	
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)	
		AM5	58mm	3/8" solid, 15mm hollow (reducer bushings available for 6, 8, 10, 11, 12mm; 1/4, 3/8, 1/2 inch)	solid or hollow	5-30 VDC EtherNet/IP, EtherCAT, Modbus TCP 10-30 VDC Modbus RTU	IP65	M12 cables sold separately	40	40	Programmable up to 8192 (13 bit) Multi-turn up to 16384 turns (14 bit)	lika®

Company Profiles

JTEKT
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.

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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

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