



Smart encoders & actuators

AME95 Series Incremental Linear Encoders

Features

- Linear magnetic encoder for position and speed feedback
- Wide gap clearance up to 2.5mm
- Lika hi-flex sensor cable for drag cable chains
- 2m pigtail or 8-pin M12 male A-coded termination
- Diagnostics via error LED
- 10µm resolution
- 20 m/s max speed
- IP67 protection



AME95 Series Incremental Linear Encoders						
Part Number	Price	Description	Dimensional Drawing	Input Voltage	Cable	Output
<u>AME95-L1-010-I-L02B</u>	\$207.00	Lika Electronic AME95 series incremental (quadrature) linear magnetic encoder, 5 VDC, TTL (line driver differential) output, medium duty, 0.01mm/pulse, IP67, 6.5ft/2m cable length, pigtail.	<u>PDF</u>	5 VDC	2m pigtail	Line Driver (differential)
<u>AME95-L1-010-I-M02B</u>	\$239.00	Lika Electronic AME95 series incremental (quadrature) linear magnetic encoder, 5 VDC, TTL (line driver differential) output, medium duty, 0.01mm/pulse, IP67, 6.5ft/2m cable length, 8-pin M12 male A-coded.	<u>PDF</u>		2m 8-pin M12 male A-coded	
<u>AME95-YC2-010-I-L02B</u>	\$207.00	Lika Electronic AME95 series incremental (quadrature) linear magnetic encoder, 10–30 VDC, HTL (push-pull/totem) output, medium duty, 0.01mm/pulse, IP67, 6.5ft/2m cable length, pigtail.	<u>PDF</u>	10–30 VDC	2m pigtail	Push-Pull (totem)
<u>AME95-YC2-010-I-M02B</u>	\$239.00	Lika Electronic AME95 series incremental (quadrature) linear magnetic encoder, 10–30 VDC, HTL (push-pull/totem) output, medium duty, 0.01mm/pulse, IP67, 6.5ft/2m cable length, 8-pin M12 male A-coded.	<u>PDF</u>		2m 8-pin M12 male A-coded	

Accessories - AME95 Series

Accessories for AME95 Series Encoders		
Part Number	Price	Description
<u>ATI-0500-10-xxxx-10</u>	Varies	Lika Electronic encoder magnetic tape, 10mm wide, elastomer and stainless steel. For use with incremental linear magnetic encoders. Cover strip included. Please see ATI-0500 section for details and available lengths.
<u>KIT-LKM-1440</u>	\$11.00	Lika Electronic tape end clamps, 10mm, plastic. Package of 10. For use with Lika Electronic 10mm wide magnetic tape.
<u>KIT-LKM-1440-2</u>	\$4.00	Lika Electronic tape end clamps, 10mm, plastic. Package of 2. For use with Lika Electronic 10mm wide magnetic tape.
<u>EC-M12F8-LKM8-05</u>	\$54.00	Lika Electronic encoder cable, M12 axial female to pigtail, shielded, 16.4ft [5m] cable length. For use with Lika Electronic AR01 series measuring wheel encoder assemblies.
<u>EC-M12F8-LKM8-10</u>	\$75.00	Lika Electronic encoder cable, M12 axial female to pigtail, shielded, 32.8ft [10m] cable length. For use with Lika Electronic AR01 series measuring wheel encoder assemblies.



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Specifications - AME95 Series

Electrical Specifications	
Resolution	10µm
Sensor accuracy	±10 µm/m (up to 10m)
Repeat accuracy	± 1 increment
Output circuits	Line driver RS422, Push-Pull
Output signals	AB0, /AB0
Counting frequency	500 kHz
Power supply	L1 = 5 VDC ±5% YC2 = +10–30 VDC
Power consumption	65 mA max
Protection*	Reverse polarity and short circuit protection
EMC	According to EN 61000-6-2 level 3
Mechanical Specifications	
Electrical Connections	Lika hi-flex cable, 2m pigtail or 8-pin M12 male A-coded termination
Gap between sensor/tape (without cover strip)	0.1–2.5mm
Travel speed (mechanical)	Mechanical max 100 m/s, operational max 20 m/s
Measurement length	Tape length minus sensing head length minus 5mm each end
Weight	L02B: 70g M02B: 80g Note: Encoder weight only (does not include linear tape)
Materials	
Housing	Zinc die cast
Environmental Specifications	
Shock	250g, 6 ms acc. to CEI EN 60068-2-27
Vibrations	10g, 5–2000 Hz acc. to CEI EN 60068-2-6
Protection	IP67
Operating Temperature Range	-25 to +85 °C (-13 to +185 °F)
Storage Temperature Range	-40 to +100 °C (-40 to +212 °F)
Approvals	CE, UKCA, RoHS

* Short-circuit protection is intended to keep the encoder electronics safe from accidental and temporary connection of one or more outputs either to 0 VDC, to +VDC, or to each other, provided that the power voltage is connected properly.

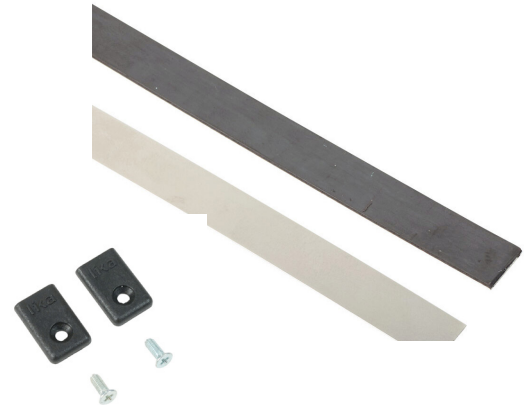


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Linear Encoder Accessories

Lika ATI-0500 Linear Encoder Tape

- Flexible magnetic tape with adhesive backing
- Incremental coding
- Stainless cover strip included
- Resistant to debris, liquids, and oils
- Standard rolls up to 20m
- 5mm pole pitch
- 10mm wide
- Plastic tape terminal end covers available



Linear Encoder Accessories				
Part Number	Price	Description	Length	Compatible With
<u>ATI-0500-10-00250-10</u>	\$71.00	Lika Electronic encoder magnetic tape, 10 x 250mm, elastomer and stainless steel. For use with incremental linear magnetic encoders. Cover strip included.	250mm	Lika AME95 incremental linear encoders
<u>ATI-0500-10-00500-10</u>	\$82.00	Lika Electronic encoder magnetic tape, 10 x 500mm, elastomer and stainless steel. For use with incremental linear magnetic encoders. Cover strip included.	500mm	
<u>ATI-0500-10-01000-10</u>	\$102.00	Lika Electronic encoder magnetic tape, 10 x 1000mm, elastomer and stainless steel. For use with incremental linear magnetic encoders. Cover strip included.	1m	
<u>ATI-0500-10-01500-10</u>	\$124.00	Lika Electronic encoder magnetic tape, 10 x 1500mm, elastomer and stainless steel. For use with incremental linear magnetic encoders. Cover strip included.	1.5m	
<u>ATI-0500-10-02000-10</u>	\$142.00	Lika Electronic encoder magnetic tape, 10 x 2000mm, elastomer and stainless steel. For use with incremental linear magnetic encoders. Cover strip included.	2m	
<u>ATI-0500-10-03000-10</u>	\$183.00	Lika Electronic encoder magnetic tape, 10 x 3000mm, elastomer and stainless steel. For use with incremental linear magnetic encoders. Cover strip included.	3m	
<u>ATI-0500-10-05000-10</u>	\$273.00	Lika Electronic encoder magnetic tape, 10 x 5000mm, elastomer and stainless steel. For use with incremental linear magnetic encoders. Cover strip included.	5m	
<u>ATI-0500-10-10000-10</u>	\$552.00	Lika Electronic encoder magnetic tape, 10 x 10000mm, elastomer and stainless steel. For use with incremental linear magnetic encoders. Cover strip included.	10m	
<u>ATI-0500-10-20000-10</u>	\$1,029.00	Lika Electronic encoder magnetic tape, 10 x 20000mm, elastomer and stainless steel. For use with incremental linear magnetic encoders. Cover strip included.	20m	
<u>KIT-LKM-1440</u>	\$11.00	Lika Electronic tape end clamps, 10mm, plastic. Package of 10. For use with Lika Electronic 10mm wide magnetic tape.	n/a	ATI-0500 encoder tape
<u>KIT-LKM-1440-2</u>	\$4.00	Lika Electronic tape end clamps, 10mm, plastic. Package of 2. For use with Lika Electronic 10mm wide magnetic tape.		

Mechanical Specifications	
Accuracy class	±8 µm/m (up to 10m)
Material	Elastomer and stainless steel
Thermal expansion coefficient	16 x 10 ⁻⁶ /K
Pole pitch	5.0mm
Environmental Specifications	
Operating Temperature Range	-25 to +85 °C (-13 to +185 °F)
Storage Temperature Range	-40 to +100 °C (-40 to +212 °F)

Chemical Resistance Information			
Acetone	..	Mineral / Motor oil	•
Acetylene	..	Petrol	..
Antifreeze (Glacial acetic acid)	•	Seawater	..
Benzene	...	Steam heat	•
Heptane	...	Thinner	...
Kerosene	•	Turpentine	..
Ketone	...		
• No effect or low effect .. Low to medium effect ... Strong effect			

Encoder Selection Guide

SAE Dimension Encoders & Metric Dimension Encoders

Rotary Encoder Selection Guide												
Type	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, 8 mm 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	SureStep
	Light Duty	TRD-S(H)R	38mm, 40mm	8mm	Solid or Hollow	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	5-30 VDC 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 & 20mm, 5/8", 7/8", 1, and 1 1/8")	Hollow		IP64	M23 cables sold separately	30	30	1024	
		AQ58/59	58mm, 59mm	3/8" solid, 15mm hollow (reducer bushings available for 6, 8, 10, 11, 12 mm; 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 5-30 VDC 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		IP65	Military Spec (MS) cables sold separately	50	30	100, 360, 500, 1000, 1024, 2500	
		TRD-N(H)	50mm	8mm	Solid or Hollow		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	
	Heavy Duty	WDGI 36J	36mm	10mm	Solid	4.75-30 VDC Universal (HTL or TTL, single-ended or differential)	IP69K	8-pin M12 A-coded cable	300	300	60, 100, 360, 500, 1000, 1024, 2000, 2500, 4096, 5000	Wachendorff
		WDG 58V	58mm	10mm	Solid	5-30 VDC universal (HTL or TTL, single-ended or differential) or 4.75-5.5 VDC Line Driver (Differential) or 10-30 VDC Push-Pull (Totem)	IP69K	Integral 5m pigtail	100	100	60, 100, 360, 500, 1000, 1024, 2000, 2500, 4096, 5000	
		TRD-GK	78mm	10mm	Solid	10-30 VDC 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	JTEKT
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)	
		AM5x ¹	58mm	6-15mm, 3/8"	Solid or Hollow	5-30 VDC, 10-30 VDC	IP65	M12 cables sold separately	40	40	Programmable up to 8192 ppr (13 bit), up to 16384 turns (14 bit)	Lika

1 - AM5x encoders have different versions supporting 4 different outputs - Ethernet/IP, Modbus TCP, EtherCAT, and Modbus RTU (RS485).

Encoder Selection Guide

SAE Dimension Encoders & Metric Dimension Encoders

Linear Encoder Selection Guide											
Type	Duty	Sensing Technology	Series	Available Lengths	Tracking Width	Operating Voltage (VDC) and Electrical Output	IP Rating	Cable	Max Speed	Available Resolutions	Brand
Rotary Encoder + Wheel	Medium Duty	Optical	AR01	Unlimited	88mm (two wheels)	5–30 VDC Universal output circuit: Push-Pull (Totem Pole), or NPN/ PNP Open Collector (HTL), or Line Driver (TTL)	IP65	M12 cables sold separately	With 12.5in wheels: 34 ft/s With 250mm wheels: 8.3 m/s	250 PPR (linear res: 0.36 deg/cts) 1250 PPR (linear res: 0.072 deg/cts)	Lika
Linear Encoder + Tape (non-contact)		Magnetic	AME95	Up to 20m (tape can cut in field)	10mm tape	5 VDC Line Driver (Differential) or 10–30 VDC Push-Pull (Totem Pole)	IP67	2m pigtail or 2m 8-pin M12 male A-coded	20 m/s	10µm (x4 quadrature=2.5µm/ct)	
Linear Encoder + Rail (captured)	Heavy Duty	Magnetic	AMIG	Fixed lengths: 195, 220, 240, 300, 370, or 650 mm	25mm rail		IP65		1 m/s	50µm (x4 quadrature=12.5µm/ct)	