



Smart encoders &amp; actuators

# AR01 Series Incremental Rotary Measuring Wheel Encoders

## Features

- Measuring wheel encoder
- Metric & US/imperial wheel sizes
  - Standard 4" wheel (12.5" circumference)
  - Optional 80mm wheel (250mm circumference)
- Universal output circuit: 5-30 VDC Push-Pull (Totem Pole), or NPN/PNP open collector (HTL), or Line Driver (TTL)
- Quadrature output signals with index (AB, /AB)
- Spring loaded arm with up to 30mm deflection
- Conveyor speed control, cut-to-length, and object positioning applications
- IP65 environmental rating



## AR01 Series Incremental Measuring Wheel Encoders

Part Number	Price	Pulses per Revolution	Dimensional Drawing	Shaft Type	Wheel Circumference	Linear Resolution*		Input Voltage	Cable	Output
<a href="#"><u>AR01-0250-HM12-A</u></a>	\$06bzh:	250	<a href="#">PDF</a>	n/a (Wheel assembly)	12.5"	0.0125"/ct	80cts/inch	5-30 VDC	M12 male	Universal circuit: Push-Pull (Totem Pole), or NPN/PNP open collector (HTL), or Line Driver (TTL)
<a href="#"><u>AR01-1250-HM12-A</u></a>	\$-06bzi:	1250	<a href="#">PDF</a>			0.0025"/ct	400cts/inch			

\* Resolution = (quadrature PPR x 4) / (inches circumference)

## Accessories - AR01 Series

### Accessories for AR01 Series Encoders

Part Number	Price	Description
<a href="#"><u>AR01X-WHEEL-A</u></a>	\$6bzd:	Lika Electronic encoder measuring wheel, replacement, 4in diameter (12.5in circumference), 15mm shaft, metal. For use with Lika Electronic AR01 series measuring wheel encoder assemblies. 15mm shaft bore size. BR1-xx shaft reducers can be used to accommodate shaft sizes from 6mm to 1/2 inch.
<a href="#"><u>AR01X-WHEEL-B</u></a>	\$6bze:	Lika Electronic encoder measuring wheel, replacement, 80mm diameter (250mm circumference), 15mm shaft, metal. For use with Lika Electronic AR01 series measuring wheel encoder assemblies. 15mm shaft bore size. BR1-xx shaft reducers can be used to accommodate shaft sizes from 6mm to 1/2 inch.
<a href="#"><u>AR01X-0250-HM12</u></a>	\$06bys:	Lika Electronic AR01 series incremental (quadrature) rotary encoder, replacement, 5-30 VDC, universal (line driver or NPN/ PNP open collector) output, medium duty, 250 ppr, 15mm dual shaft, 58mm diameter body, IP65, radial exit, M12 male.
<a href="#"><u>AR01X-1250-HM12</u></a>	\$;06byt:	Lika Electronic AR01 series incremental (quadrature) rotary encoder, replacement, 5-30 VDC, universal (line driver or NPN/ PNP open collector) output, medium duty, 1250 ppr, 15mm dual shaft, 58mm diameter body, IP65, radial exit, M12 male.
<a href="#"><u>EC-M12F8-LKM8-05</u></a>	\$;6bxt:	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.
<a href="#"><u>EC-M12F8-LKM8-10</u></a>	\$6bxu:	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.



**AR01X-WHEEL-A**



**AR01X-0250-HM12**



**EC-M12F8-LKM8-05**



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## Specifications - AR01 Series

Electrical Specifications	
<b>Resolution (PPR)</b>	250, 1250
<b>Output Signals</b>	Quadrature output signals with index (AB, /AB)
<b>Counting Frequency</b>	50kHz maximum
<b>Output Circuits</b>	Universal circuit: Push-Pull (Totem Pole), or NPN/PNP open collector (HTL), or Line Driver (TTL)
<b>Power Supply</b>	+5VDC to +30VDC
<b>Consumption</b>	70mA (typical)
<b>Output Current (each channel)</b>	40mA maximum
<b>Protection</b>	Against inversion of polarity and short circuit
<b>EMC</b>	Electro-magnetic immunity according to EN61000-4-2 and EN61000-4-4
<b>Optoelectronic Life</b>	100,000 hours minimum
Mechanical Specifications	
<b>Wheel Circumference</b>	AR01-WHEEL-A: 317.6 mm (standard) AR01-WHEEL-B: 250mm (optional)
<b>Spring Arm Max Deflection</b>	30mm
<b>Shaft Max Rotational Speed</b>	2000rpm
<b>Shaft Loading (axial, radial)</b>	50N maximum
<b>Starting Torque (@20°C)</b>	1 Ncm (typical)
<b>Bearings Life</b>	10 <sup>9</sup> rev. min.
<b>Electrical Connections</b>	M12 8-pin plug
<b>Weight</b>	1.12 kg (2.50 lbs)
Materials	
<b>Flange</b>	Anodized aluminum, UNI EN AW-6082
<b>Housing</b>	Zamac die cast
<b>Bearings</b>	ABEC 5
<b>Shaft</b>	Stainless steel, non-magnetic, UNI EN 4305
Environmental Specifications	
<b>Shock</b>	250g, 6ms acc. to CEI EN 60068-2-27
<b>Vibrations</b>	10g, 5-2000 Hz acc. to CEI EN 60068-2-6
<b>Protection</b>	IP65
<b>Operating Temperature Range</b>	-25°C to 85°C (-13°F to 185°F)
<b>Storage Temperature Range</b>	-40°C to 100°C (-40°F to 212°F) (98% relative humidity without condensation)
<b>Approvals</b>	CE, RoHS, UKCA