



Smart encoders & 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



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Part Number	Price	Pulses per Revolution	Dimensional Drawing	Shaft Type	Wheel Circumference	Linear Resolution*		Input Voltage	Cable	Output
AR01-0250-HM12-A	\$299.00	250	PDF	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)
AR01-1250-HM12-A	\$299.00	1250	PDF			0.0025"/ct	400cts/inch			

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

Accessories - AR01 Series

Accessories for AR01 Series Encoders

Part Number	Price	Description
AR01X-WHEEL-A	\$45.00	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.
AR01X-WHEEL-B	\$75.00	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.
AR01X-0250-HM12	\$210.00	Lika Electronic AR01 series incremental (quadrature) rotary encoder, replacement, medium duty, 5-30 VDC, radial exit, universal (line driver or NPN/PNP open collector) output, 250 ppr, 15mm dual shaft, 58mm diameter body, IP65, M12 male.
AR01X-1250-HM12	\$210.00	Lika Electronic AR01 series incremental (quadrature) rotary encoder, replacement, medium duty, 5-30 VDC, radial exit, universal (line driver or NPN/PNP open collector) output, 1250ppr, 15mm dual shaft, 58mm diameter body, IP65, M12 male.
EC-M12F8-LKM8-05	\$40.00	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.
EC-M12F8-LKM8-10	\$56.00	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.



AR01X-WHEEL-A



AR01X-0250-HM12



EC-M12F8-LKM8-05



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Specifications - AR01 Series

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