



Smart encoders &amp; actuators

# A80 Series Medium Duty Incremental Encoders

## Features

- Feedback encoder for large motors
- Precise optical sensing
- Very flat design
- Hollow shafts up to 30mm diameter
- Bore reducing sleeves of 5/8", 19mm, 20mm, 7/8", 1", 1 1/8"
- 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 (ABZ, /ABZ)
- Diecast housing with IP64 environmental rating (dustproof, splashproof)



A80H with M23 Connector



A80H with Pigtail Cable

A80 Series Medium Duty Incremental (Quadrature) Encoders								
Part Number	Price	Pulses per Revolution	Dimensional Drawing	Shaft Type	Body Diameter	Input Voltage	Cable	Output
<a href="#"><u>A80H-1024-HZC30-M23</u></a>	\$06byp:	1024	<a href="#"><u>PDF</u></a>	Multiple hollow shafts between 5/8" and 30mm	80	5–30 VDC	M23 male	Universal circuit: Push-Pull (Totem Pole), or NPN/ PNP open collector (HTL), or Line Driver (TTL)
<a href="#"><u>A80H-1024-HZC30-RL2</u></a>	\$06byq:		<a href="#"><u>PDF</u></a>				2m (6.5 ft) pigtail	

### Configurable Hollow Shaft Sizing

The A80H encoder features a hollow shaft that can be resized using removable bushings. The images below show the installation of a BR2-25.4 bushing to an [A80H-1024-HZC30-M23](#). See "Accessories - A80 Series" on page tECD-12 for all available options.





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## Accessories - A80 Series

Accessories for A80 Series Encoders		
Part Number	Price	Description
<a href="#"><u>BR2-15.875</u></a>	\$6byy:	Lika Electronic reducer bushing, 30mm to 5/8in, metal. For use with Lika Electronic A80 series encoders. Mounting hardware included.
<a href="#"><u>BR2-19</u></a>	\$6byz:	Lika Electronic reducer bushing, 30mm to 19mm, metal. For use with Lika Electronic A80 series encoders. Mounting hardware included.
<a href="#"><u>BR2-20</u></a>	\$6by[:	Lika Electronic reducer bushing, 30mm to 20mm, metal. For use with Lika Electronic A80 series encoders. Mounting hardware included.
<a href="#"><u>BR2-7/8</u></a>	\$6by_:	Lika Electronic reducer bushing, 30mm to 7/8in, metal. For use with Lika Electronic A80 series encoders. Mounting hardware included.
<a href="#"><u>BR2-25.4</u></a>	\$6by#:	Lika Electronic reducer bushing, 30mm to 1in, metal. For use with Lika Electronic A80 series encoders. Mounting hardware included.
<a href="#"><u>BR2-1-1/8</u></a>	\$6by!:	Lika Electronic reducer bushing, 30mm to 1 1/8in, metal. For use with Lika Electronic A80 series encoders. Mounting hardware included.
<a href="#"><u>EC-C12F-LK18-05</u></a>	\$6bxq:	Lika Electronic encoder cable, M23 axial female to pigtail, shielded, 16.4ft/5m cable length. For use with Lika Electronic A80 series encoders.
<a href="#"><u>EC-C12F-LK18-10</u></a>	\$6bxs:	Lika Electronic encoder cable, M23 axial female to pigtail, shielded, 32.8ft/10m cable length. For use with Lika Electronic A80 series encoders.
<a href="#"><u>E-PFL121</u></a>	\$6bxp:	M23 connector, 24 AWG, accepts cable diameter size 5mm. For use with Lika Electronic A80 series encoders.
<a href="#"><u>KIT-C80</u></a>	\$6bzc:	Lika Electronic encoder mounting plate, replacement, metal. For use with Lika Electronic A80 series encoders. Mounting hardware included.

**[BR2-20](#)****[BR2-25.4](#)****[KIT-C80](#)****[EC-C12F-LK18-05](#)****[E-PFL121](#)**



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## Specifications - A80 Series

Electrical Specifications	
<b>Resolution (PPR)</b>	1024
<b>Output Signals</b>	Quadrature output signals with index (ABZ, /ABZ)
<b>Counting Frequency</b>	300kHz 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
Mechanical Specifications	
<b>Shaft Diameter</b>	Ø 30 mm
<b>Reducing Sleeves</b>	Ø 5/8" (15.875), 19, 20, 7/8", 1" (25.4), 1 1/8"
<b>Shaft Loading (axial, radial)</b>	30N maximum
<b>Shaft Rotational Speed</b>	6000 rpm maximum
<b>Starting Torque (@20°C)</b>	≤ 1.5 Ncm (typical)
<b>Bearings Life</b>	400 x 10 <sup>6</sup> rev. min (10 <sup>9</sup> rev. min. with shaft loading limited to 20N)
<b>Electrical Connections</b>	M23 12-pin plug or cable output 2m (6.5 ft)
<b>Weight</b>	300g (10.6 oz)
Materials	
<b>Flange</b>	Die cast aluminum, UNI EN-AC-46100
<b>Housing</b>	Die cast aluminum, UNI EN-AC-46100
<b>Bearings</b>	ABEC 5
<b>Shaft</b>	Stainless steel, non-magnetic, 1.4305 (UNI EN 10088-1)
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>	IP64
<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, UKCA, <sub>c</sub> UR <sub>us</sub> , RoHS