1-800-633-0405

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AQ5x Series Programmable Incremental Encoders

Features

- Programmable incremental encoder
- Configurable resolution from 1 to 16,384 PPR (1024 default)
- Selectable index length of 90 or 180°
- Counting direction programmable CW or CCW
- 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)
- Programmable via USB cable and LIKA-IP-IQ software (free download at AutomationDirect on the AQ58S and AQ59H store pages)
- IP65 environmental rating

AQ5x Series Medium Duty Incremental (Quadrature) Encoders							
Part Number	Price	Pulses per Revolution	Dimensional Drawing	Shaft Type	Body Diameter	Input Voltage	Cable	Output
AQ58S-PRG-HZCP9-M12	$145.00	Up to 16,384 (14-bit)	PDF	3/8" solid	58mm	5-30 VDC	M12 male	Universal circuit: Push-Pull (Totem Pole), or NPN/PNP open collector (HTL), or Line Driver (TTL)
AQ59H-PRG-HZC15-M12	$145.00		PDF	6 to 15 mm hollow	59mm			

Configurable Hollow Shaft Sizing

The AQ59H encoder features a hollow shaft that can be resized using removable bushings. The images below show the installation of a BR1-12 bushing. See the "Accessories - AQ5x Series" on page tECD-9 for all available options.

How to Configure your Encoder

Use one of the following cable(s) to configure the encoder:

- KIT-IP/IQ58-USB-M12 programming cable
- Combination of KIT-IP/IQ58 and EC-IP/IQ58-M12
- Combination of KIT-IP/IQ58 and EC-M12F12-LKT12-05 or EC-M12F12-LKT12-10
- Download the software from the AQ58S-PRG-HZCP9-M12 or AQ59H-PRG-HZC15-M12 store page

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Accessories - AQ5x Series

Accessories for AQ5x Series Encoders		
Part Number	**Price**	**Description**
BR1-6	$7.00	Lika Electronic reducer bushing, 15mm to 6mm, metal. For use with Lika Electronic AQ59 series encoders.
BR1-6.35	$7.00	Lika Electronic reducer bushing, 15mm to 1/4in, metal. For use with Lika Electronic AQ59 series encoders.
BR1-8	$7.00	Lika Electronic reducer bushing, 15mm to 8mm, metal. For use with Lika Electronic AQ59 series encoders.
BR1-9.52	$7.00	Lika Electronic reducer bushing, 15mm to 3/8in, metal. For use with Lika Electronic AQ59 series encoders.
BR1-10	$7.00	Lika Electronic reducer bushing, 15mm to 10mm, metal. For use with Lika Electronic AQ59 series encoders.
BR1-11	$7.00	Lika Electronic reducer bushing, 15mm to 11mm, metal. For use with Lika Electronic AQ59 series encoders.
BR1-12	$7.00	Lika Electronic reducer bushing, 15mm to 12mm, metal. For use with Lika Electronic AQ59 series encoders.
BR1-12.7	$7.00	Lika Electronic reducer bushing, 15mm to 1/2in, metal. For use with Lika Electronic AQ59 series encoders.
PF4256	$35.00	Lika Electronic round mounting flange, 61mm bolt hole circle, metal. For use with Lika Electronic AQ58 series encoders. Mounting hardware included.
PF0408	$129.00	Lika Electronic spring-loaded encoder mount, metal. For use with Lika Electronic AQ58 series encoders. Mounting hardware included.
PF4257	$19.00	Lika Electronic right angle bracket, metal. For use with Lika Electronic AQ58 series encoders. Mounting hardware included.
PF4259	$22.00	Lika Electronic square mounting flange, 92mm bolt hole circle, metal. For use with Lika Electronic AQ58 series encoders. Mounting hardware included.
PF4274	$99.00	Lika Electronic round mounting flange, 70mm bolt hole circle, metal. For use with Lika Electronic AQ58 series encoders. Mounting hardware included.
PF4258	$19.00	Lika Electronic round mounting flange, 75mm and 100mm bolt hole circle, metal. For use with Lika Electronic AQ58 series encoders. Mounting hardware included.
PF5000-A	$16.00	Lika Electronic square mounting flange, 70mm bolt hole circle, metal. For use with Lika Electronic AQ58 series encoders. Mounting hardware included.
LKM-386	$9.00	Lika Electronic servo mount clamp, metal. For use with Lika Electronic AQ58 and A41 series encoders. Mounting hardware included.
KIT-XX59	$9.00	Lika Electronic servo mount clamp, metal. For use with Lika Electronic AQ58 and AQ59 series encoders. Mounting hardware included.
KIT-IP/IQ58	$139.00	Lika Electronic programming cable, USB A to 4-position terminal block, 4.9ft/1.5m cable length. For use with Lika Electronic AQ58 and AQ59 series encoders. Requires Lika Electronic EC-IP/IQ58-M12 programming or EC-M12F12-LKT12-xx encoder cable.
EC-IP/IQ58-M12	$29.00	Lika Electronic programming cable, M12 axial female to pigtail, 2ft cable length. For use with Lika Electronic AQ58 and AQ59 series encoders. Requires Lika Electronic KIT-IP/IQ58 programming cable.
KIT-IP/IQ58-USB-M12	$99.00	Lika Electronic programming cable, USB A to M12 axial female, 1.6ft/0.5m cable length. For use with Lika Electronic AQ58 and AQ59 series encoders.
EC-M12F12-LKT12-05	$55.00	Lika Electronic encoder cable, M12 axial female to pigtail, shielded, 16.4ft/5m cable length. For use with Lika Electronic AQ58 and AQ59 series encoders.
EC-M12F12-LKT12-10	$75.00	Lika Electronic encoder cable, M12 axial female to pigtail, shielded, 32.8ft/10m cable length. For use with Lika Electronic AQ58 and AQ59 series encoders.

Bore Reducers

Mounting Flanges

PF0408

LKM-386

PF4257

KIT-IP/IQ58

EC-IP/IQ58-M12

KIT-IP/IQ58-USB-M12

EC-M12F12-LKT12-05

KIT-XX59

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AQ5x Series Programmable Incremental Encoders

Specifications - AQ5x Series

Electrical Specifications	
Resolution (PPR)	Programmable from 1 to 16,384 (default 1024 PPR)
Accuracy	± 0.15°
Output Signals	Quadrature output signals with index (ABZ, /ABZ)
Counting Frequency	500kHz 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	60mA (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
Mechanical Specifications	
Shaft Diameter	Ø 9.52 mm (3/8")
Hollow Shaft Diameter	Ø 15mm (available bore reducer sleeves for 6mm, 1/4", 8mm, 3/8", 10mm, 11mm, 12mm, 1/2")
Shaft Loading (axial, radial)	100N maximum
Shaft Rotational Speed	Typical 6000 rpm, temporary 12000 rpm maximum
Starting Torque (@20°C)	AQ58: 0.15 Ncm AQ59: 0.4 Ncm
Bearings Life	400×10^6 rev. min (10^9 rev. min. with shaft loading limited to 20N)
Electrical Connections	M12
Weight	200g (7 oz)
Materials	
Flange	Anticorodal, UNI EN AW-6082
Housing	Anticorodal, UNI EN AW-6082
Bearings	ABEC 5
Shaft	Stainless steel, non-magnetic, UNI EN 4305
Environmental Specifications	
Shock	100g, 6ms acc.
Vibrations	10g, 5-2000 Hz acc.
Protection	IP65
Operating Temperature Range	-40°C to 85°C (-40°F to 185°F)
Storage Temperature Range	-40°C to 100°C (-40°F to 212°F) (98% relative humidity without condensation)
Approvals	CE, UKCA, $_c$UR$_{us}$, RoHS

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Windows Configuration Software

Lika Configuration Software

AQ58S and AQ59H programmable incremental encoders can use software expressly developed and released by Lika Electronic to easily program and configure the device.

This software is for use with the AQ58S and AQ59H programmable encoders only.

Use one of the following methods to configure the AQ58S or AQ59H encoder:
- KIT-IP/IQ58-USB-M12 programming cable.
- Combination of KIT-IP/IQ58 and EC-IP/IQ58-M12 programming kit.
- Combination of KIT-IP/IQ58 and EC-M12F12-LKT12-xx cable.

Lika Electronic Windows Configuration Software			
Part Number	**Price**	**Requires**	**Use With**
LIKA-IP-IQ	$0.00	KIT-IP/IQ58-USB-M12 or KIT-IP/IQ58 programming cable	AQ58 and AQ59 series Lika encoders.