

# MHK515-LINK | SERIES

## POWERLINK ABSOLUTE MULTI-TURN ENCODERS



### MHK515-LINK, THE STANDARD Ø 58 MM ENCODER WITH POWERLINK TRANSMISSION

- Compact and robust design
- Ø 15 mm hollow shaft version (reduction sleeve available)
- Precision bearing with seal
- High performance in temperature range 0 °C to 60 °C
- Encoder disc made of durable unbreakable material
- Mechanical count of the number of revolutions per gear
- Resolution: 13-bit = 8,192 ppr (max. 16-bit)
- Number of revolutions: 12-bit = 4,096 revolutions
- Surge and reverse polarity protection
- Integrated SMC technology
- M12 connectors

## SPECIFICATIONS

### MECHANICAL SPECIFICATIONS

<b>Material (stainless steel option)</b>	Cover: Aluminum	<b>Shock resistance (EN 60068-2-27)</b>	≤ 100 g (half sine, 6 ms)
	Base: Aluminum		
	Shaft: Stainless steel	<b>Shock resistance (EN 60028-2-29)</b>	≤ 10 g (half sine, 16 ms)
<b>Maximum loads</b>	Axial: 40 N	<b>Vibrations (EN 60068-2-6)</b>	≤ 10 g (10 Hz...1,000 Hz)
	Radial: 110 N	<b>Weight (aluminum version)</b>	600 g
<b>Shaft inertia</b>	≤ 30 g.cm <sup>2</sup>	<b>Operating temperature</b>	0...60 °C
		<b>Storage temperature</b>	-40...+85 °C
<b>Torque</b>	≤ 3 N.cm	<b>Relative humidity</b>	98% non-condensing
<b>Speed (max. continuous)</b>	6,000 rpm	<b>Degree of protection</b>	Cover: IP65, Base: IP64

## ELECTRICAL SPECIFICATIONS

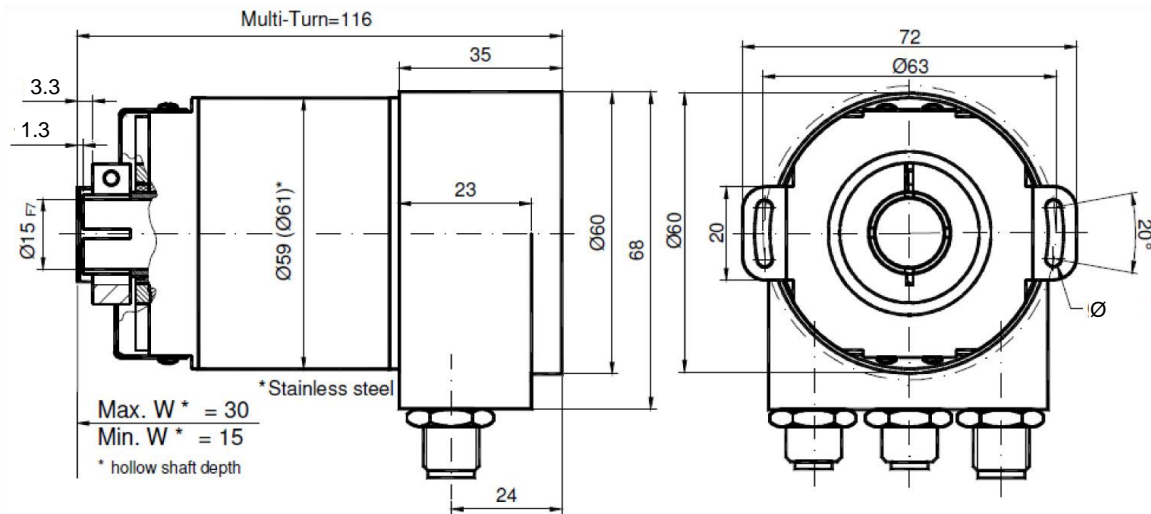
<b>Transmission</b>	100 Mbps	<b>Internal cycle time</b>	500 $\mu$ s
<b>IP addressing</b>	By rotary switches	<b>Frequency on the LSB</b>	800 kHz max. (valid code)
<b>Power supply</b>	10 – 30 VDC	<b>Accuracy</b>	+ 1/2 LSB
<b>Consumption</b>	100 mA max. (24 VDC)	<b>EMC</b>	EN 61000-6-4, EN 61000-6-2
<b>Power</b>	4 W max.	<b>Electrical lifetime</b>	> 10 <sup>5</sup> h

## PROTOCOLS

<b>TCP/UDP</b>	The TCP protocol ensures error-free data transmission. The UDP protocol can be used for improved real-time transmission.
<b>http</b>	A web browser can be used for reading, configuring, and diagnosing the encoder.
<b>smtp</b>	Encoder messages can be transmitted by email via the SMTP protocol.

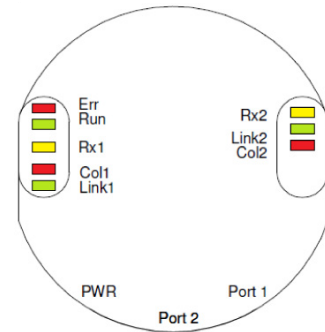
## DIMENSIONS

MHK515-LINK — M12 connectors



## DIAGNOSIS VIA LEDS

LED	Color	Description of LED on
Rx1	Yellow	Inbound and outbound traffic – port 1
Link 1*	Green	Connected to another Ethernet component – port 1
Collision 1*	Red	Ethernet collision - port 1
Rx2+*	Yellow	Inbound and outbound traffic – port 2
Link 2*	Green	Connected to another Ethernet component – port 2
Collision 2*	Red	Ethernet collision - port 2
Error*	Red	-
Run*	Green	-



\* A1 versions only

## PROGRAMMABLE SETTINGS

<b>Direction of code change</b>	Used to set whether the code increases with a clockwise turn and decreases with a counterclockwise turn, or vice versa.
<b>Resolution (number of positions per revolution)</b>	The resolution parameter is used to program the desired number of steps per revolution. Any value between 1 and the physical resolution of the encoder (8,192 as standard) is programmable.
<b>Global resolution "Max-Range"</b>	This is the total resolution required on the measurement scale. This value should not exceed the maximum encoder resolution (25-bit: 33.554.432).
<b>Reset to value X</b>	The preset value represents the desired position value at any position on the axis. This parameter is used to set the desired value at the desired location.

## INTERFACE

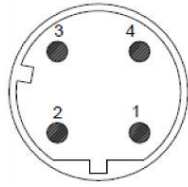
The node number is configured using 2 rotary switches (between 1 and 239).

### Ethernet Powerlink

4-pin female, D-coded

Pin	Signal
1	Tx+
2	Rx+
3	Tx-
4	Rx-

Encoder view

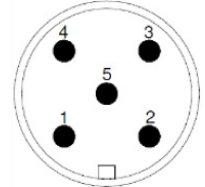


### Power supply

5-pin male, A-coded

Pin	Signal
1	VS (10-30 VDC)
2	VS (10-30 VDC)
3	0 V
4	0 V
5	PE

Encoder view



## REFERENCE

(Special versions available on request, e.g. special flange/electronics/connections, etc.)

MHK5	E1: EPL V1 E2: EPL V2	A1	B	12	13	B	15	0	PRM
Absolute multi-turn encoder	Powerlink version	Version	Code: Binary	Number of revolutions: 2 <sup>12</sup> (4,096)	Resolution in the revolution: 2 <sup>13</sup> (8,192)	Standard hollow shaft	Shaft diameter: 15 mm	Without mechanical option	M12 connector

Made in France

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Mailing Address: Sensata Technologies, Inc., 529 Pleasant Street, Attleboro, MA 02703, USA

## CONTACT US

### Amicos

Phone: +1 (800) 350 2727

E-mail: [sales.beisensors@sensata.com](mailto:sales.beisensors@sensata.com)

### Europe, Middle East & Africa

Phone: +33 (3) 88 20 8080

E-mail: [position-info.eu@sensata.com](mailto:position-info.eu@sensata.com)

### Asia Pacific

Phone:

China +86 (21) 2306 1500

Japan +81 (45) 277 7117

Korea +82 (31) 601 2004

India +91 (80) 67920890

Rest of Asia +886 (2) 27602006 ext 2808

E-mail: [sales.isasia@iist.sensata.com](mailto:sales.isasia@iist.sensata.com)