

## Singleturn absolute encoder

### EVS58-IZ

- Industrial standard housing Ø58 mm
- EtherNet/IP
- Up to 16 Bit singleturn
- Servo or clamping flange
- Network loop through by means of integrated 2 port switch
- IP address resettable
- No DIP switches for address setting
- Compatible with Rockwell/ Allen Bradley/ Schneider control
- Mechanical compatibility with all major encoders with fieldbus interface
- Rotary axis functionality
- Status LEDs
- Ethernet IP declaration of conformity
- CIP encoder profile

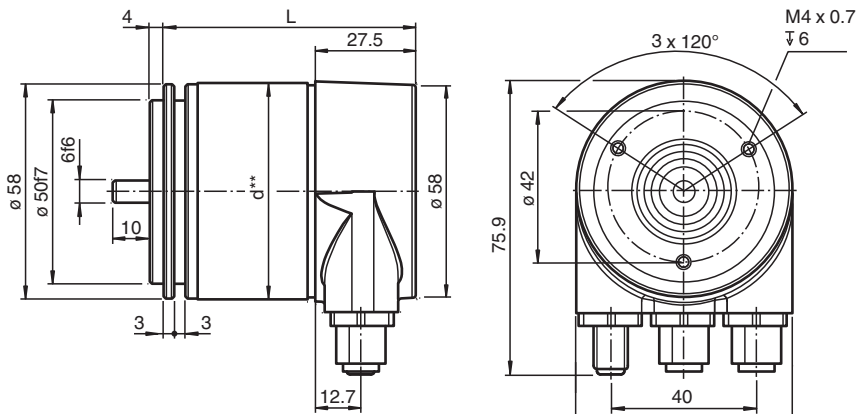


### Function

In addition to the CANopen-, DeviceNet-, PROFIBUS- and AS-Interface encoders, we have broadened our product line of bus-capable absolute encoders with the EVS58 for Ethernet.

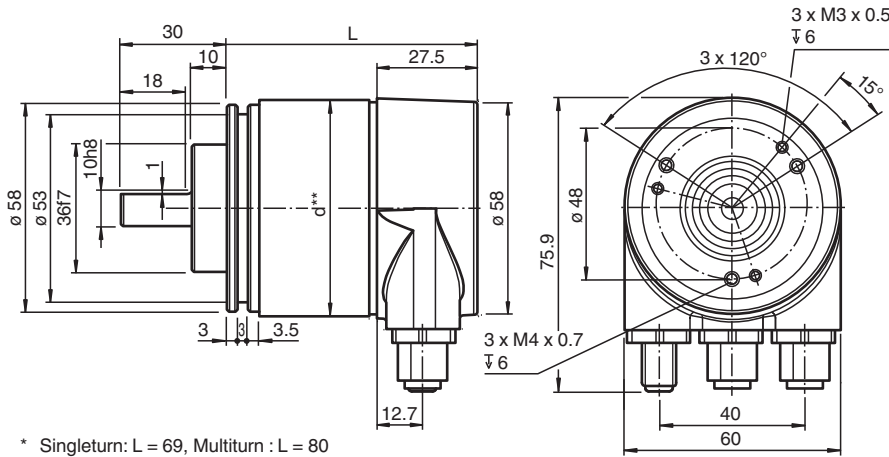
Absolute rotary encoders deliver an absolute step value for each angle setting. This device has a maximum basic resolution of 65536 steps per revolution (16 bits). The device is designed for shaft assembly and is available in servo flange or clamping flange design.

### Dimensions



- \* Singleturn: L = 69, Multiturn : L = 80
- \*\* Aluminum: d = 59, stainless steel: d = 61

**Dimensions**



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**Technical Data**




<b>General specifications</b>	
Detection type	photoelectric sampling
Device type	Singleturn absolute encoder
<b>Functional safety related parameters</b>	
MTTF <sub>d</sub>	130 a
Mission Time (T <sub>M</sub> )	20 a
L <sub>10h</sub>	1.9 E+11 at 6000 rpm and 20/40 N axial/radial shaft load
Diagnostic Coverage (DC)	0 %
<b>Electrical specifications</b>	
Operating voltage	U <sub>B</sub> 10 ... 30 V DC
Power consumption	P <sub>0</sub> max. 4 W
Linearity	± 0.5 LSB (12 Bit) ,
Output code	binary code
Code course (counting direction)	programmable, cw ascending (clockwise rotation, code course ascending) cw descending (clockwise rotation, code course descending)
<b>Interface</b>	
Interface type	EtherNet/IP
Resolution	
Single turn	up to 16 Bit
Overall resolution	up to 16 Bit
Physical	Ethernet
Transfer rate	100 MBit/s
<b>Connection</b>	
Connector	Ethernet: 2 sockets M12 x 1, 4-pin, D-coded Supply: 1 plug M12 x 1, 4-pin, A-coded
<b>Standard conformity</b>	
Degree of protection	DIN EN 60529, shaft side: IP64 (without shaft seal)/IP66 (with shaft seal) housing side: IP65 Stainless steel version (INOX): completely IP67
Climatic testing	DIN EN 60068-2-3, no moisture condensation
Emitted interference	EN 61000-6-4:2007
Noise immunity	EN 61000-6-2:2005
Shock resistance	DIN EN 60068-2-27, 100 g, 6 ms
Vibration resistance	DIN EN 60068-2-6, 10 g, 10 ... 2000 Hz
<b>Approvals and certificates</b>	
UL approval	cULus Listed, General Purpose, Class 2 Power Source

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## Technical Data

Ambient conditions	
Operating temperature	-40 ... 85 °C (-40 ... 185 °F)
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)
Mechanical specifications	
Material	housing: powder coated aluminum flange: aluminum shaft: stainless steel
Combination 1	housing: powder coated aluminum flange: aluminum shaft: stainless steel
Combination 2 (Inox)	housing: stainless steel 1.4305 / AISI 303 flange: stainless steel 1.4301 / AISI 304 shaft: stainless steel 1.4305 / AISI 303
Mass	approx. 370 g (combination 1) approx. 840 g (combination 2)
Rotational speed	max. 12000 min <sup>-1</sup>
Moment of inertia	30 gcm <sup>2</sup>
Starting torque	≤ 3 Ncm (version without shaft seal)
Shaft load	
Axial	40 N
Radial	110 N

## Accessories

	<b>9203</b>	Angled flange
	<b>9300</b>	Mounting bracket for servo flange
	<b>MBT-36ALS</b>	Spring-loaded mounting bracket with a diameter of 36 mm

**Connection**

Pin	Male connector M12 x 1, 4-pin, A-coded	Female connector M12 x 1, 4-pin, D-coded
1	Supply voltage +U <sub>B</sub>	Tx +
2	-	Rx +
3	0 V	Tx -
4	-	Rx -

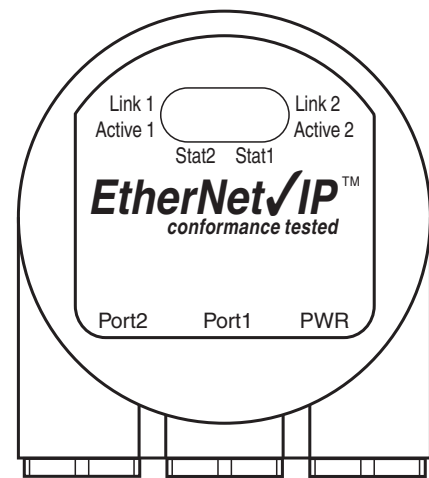
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**Indication**

**Diagnostic LEDs**

LED	Color	Description for LED = ON
Active1	Yellow	Incoming and outgoing data traffic for port 1
Link1*	Green	Connection to other Ethernet devices on port 1
Active2	Yellow	Incoming and outgoing data traffic for port 2
Link2*	Green	Connection to other Ethernet devices on port 2
Stat1	Green	Status 1, details see table below
Stat2	Red	Status 2, details see table below

\* flashes with 2 Hz if engineering identification call is activated and link connection is available



Stat1 (green)	Stat2 (red) bus failure	Meaning	Cause
off	off	No power	
on	on	No connection to another device Criteria: no data exchange	<ul style="list-style-type: none"> <li>• bus disconnected</li> <li>• Master not available / switched off</li> </ul>
on	flashes <sup>1)</sup>	Parameterization fault, no data exchange Criteria: data exchange correct. However, the slave did not switch to the data exchange mode.	<ul style="list-style-type: none"> <li>• Slave not configured yet or wrong configuration</li> <li>• Wrong station address assigned (but not outside the permitted range)</li> <li>• Actual configuration of the slave differs from the nominal configuration</li> </ul>
on	off	Data exchange. Slave and operation ok.	

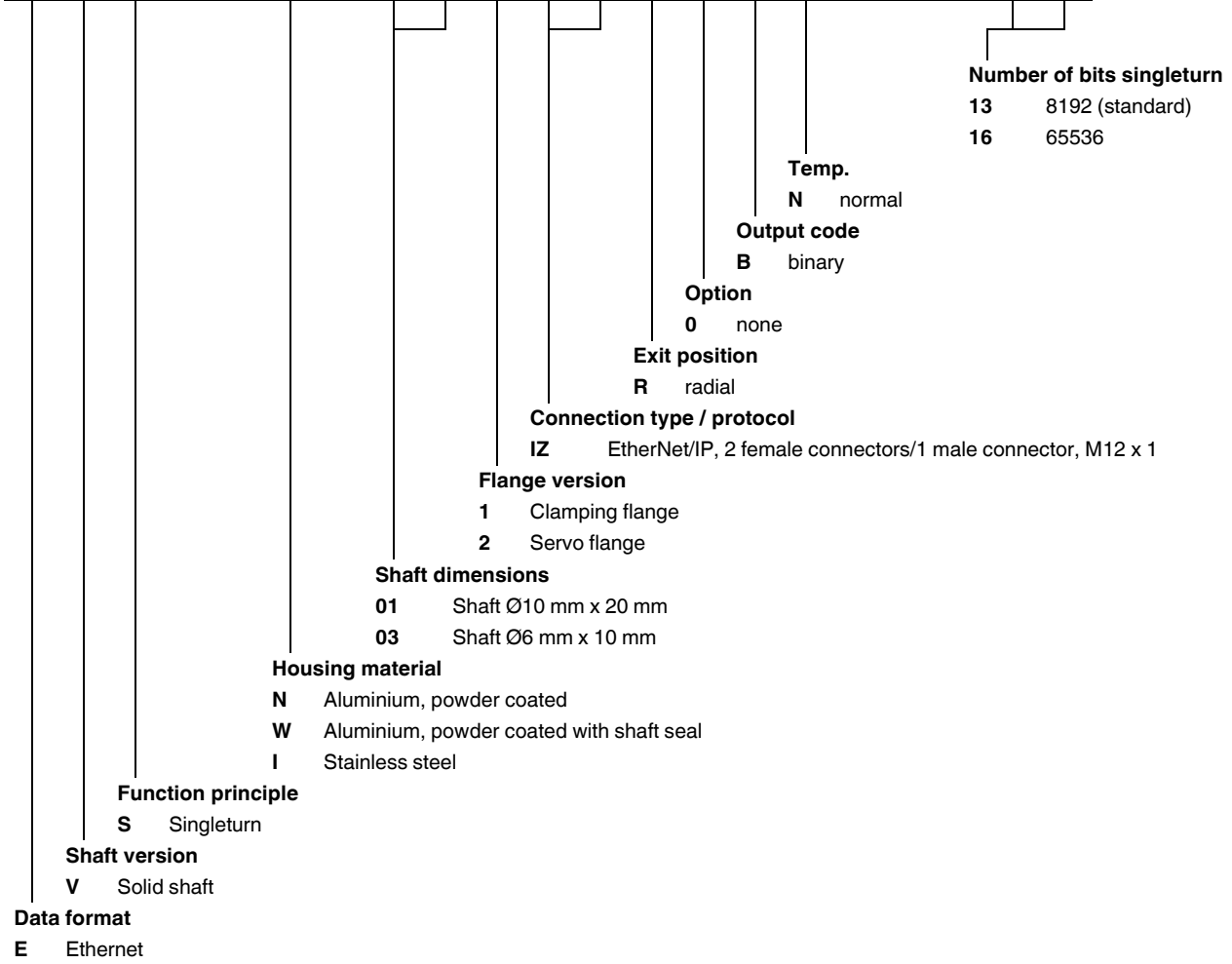
1) flashing frequency 0.5 Hz for at least 3 seconds

**Type Code**

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Order code

E V S 5 8 N - I Z R 0 B N - 0 0



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