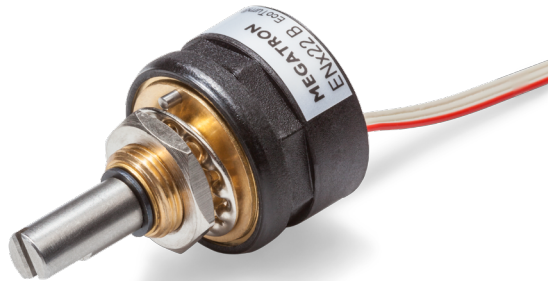


# Data Sheet for Angle Sensors

## Hall-Effect Single-Turn Rotary Encoder with Incremental Output

Series ENI22 B



- Optional read out of the absolute position
- Up to 1024 pulses per revolution
- With high or low torque
- Life expectancy > 100 x 10<sup>6</sup> shaft revolutions
- Potted electronics

Besides the use as a sensor, the encoder series ENI22 B with high torque is also for manual setpoint. The bushing enables a simple and space-saving installation.

### Electrical Data

Output signal	TTL	Open Collector
Number of pulses	1...128; 256; 512; 1024 pulses per revolution	
Limit frequency	500 kHz	
Supply voltage	5 VDC ± 10 %	8-30 VDC
Power consumption (no load)	≤ 20 mA	
Insulation voltage 1.)	1000 VAC @ 50 Hz, 1 min	
Insulation resistance 1.)	2 MOhm @ 500 VDC, 1 min	

### Mechanical Date, Environmental Conditions, Miscellaneous

Lifetime 2.)	
Standard	> 10 x 10 <sup>6</sup> rotations
Option P	> 100 x 10 <sup>6</sup> rotations
	<small>Depending on the application - values determined at room temperature +20 °C, with a radial load of 1 N without sealing ring</small>
Bearing	Sleeve bearing
Max. operational speed	
Standard	800 rpm
Option P	4000 rpm
Starting torque @ ambient temperature 1.) 2.)	
Option LT and P LT	< 0,3 Ncm
Option HT and D (sealing ring)	> 1 Ncm
Operating temperature range	-40..+85 °C (fixed cable, extended temperature range on request)
Storage temperature range	
Standard	-40..+105 °C
Option P	-40..+90 °C
Protection grade (IEC 60529)	IP65
Sealing shaft / bearing	
Standard	no sealing (IP40)
Option D	O-sealing ring (IP55S)
Vibration (IEC 68-2-6, Test Fc)	±1,5 mm / 20 g / 10 bis 2000 Hz / 16 frequency cycles (3x4 h)
Shock (IEC 68-2-27, Test Ea)	50 g / 11 ms / halfsine (3x6 shocks)
max. radial load	1 N
Mass	approx. 22 g
Fastening parts included in delivery	Hex nut wrench size 14, tooth washer
Fastening torque mounting nut	<1 Nm
Material shaft	stainless steel
Material housing	plastic

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Hall-Effect Single-Turn Rotary Encoder with Incremental Output

Series ENI22 B

## Emission / Immunity

EN 55011 Emission AC/DC power	Class B
EN 55011 Emission housing	Class B
EN 61000-4-2 Immunity housing ESD	Class B
EN 61000-4-3 Immunity RF sine wave	Class A
EN 61000-4-4 Immunity DC power, I/O cable: Burst	Class B
EN 61000-4-5 Immunity DC power, I/O cable: Surge	Class B
EN 61000-4-6 Immunity DC power, I/O cable: Conducted sine wave	Class A

1.) According IEC 60393

2.) Determined by climatic conditions according to IEC 68-1, para. 5.3.1 without load collectives

## Order code

Description	Options						
<b>Series ENI22</b>	<b>ENI22</b>						
<b>Shaft diameter / bushing thread</b> <b>Ø 6 mm / M10</b>	<b>B1</b>						
<b>Number of pulses [pulses per revolution]</b> <b>1024</b> 512 (*) 256 (*) 2...128 free of choice (*)		<b>1024</b> 512 (*) 256 (*) 2...128 (*)					
<b>Supply voltage / Output signal</b> <b>5 V / TTL</b> <b>5 V / Open Collector</b> <b>24 V / Open Collector</b>				<b>05 BZ TTL</b> <b>05 BZ OC</b> <b>24 BZ OC</b>			
Zero point alignment of the index pulse Flattening against the anti-rotation-pin (*)					<b>N (*)</b>		
<b>Polymerbearing + low torque</b> <b>Low torque + sealing ring</b> <b>High torque + sealing ring</b>						<b>P LT</b> <b>LT D</b> <b>HT D</b>	
Other shaft length [mm] (*)							<b>Axx (*)</b>
Other cable length [m] (*)							<b>CVxx (*)</b>

short-term stock types can be found on: <http://www.megatron.de/en/stocklists/angle-sensors/lagerliste.html>

bold print = standard option

(\*) = on request available for projects

## For higher quantities or on-going demand, additional options are available as described below

For example:

- Read out of the absolute position
- Changed signal edges
- Special housing
- Special shaft
- Mu-Metal shielding against disturbing magnetic fields
- Other operational torques

**For technical advice, projects, samples, questions about pricing, delivery times and availability please contact us**

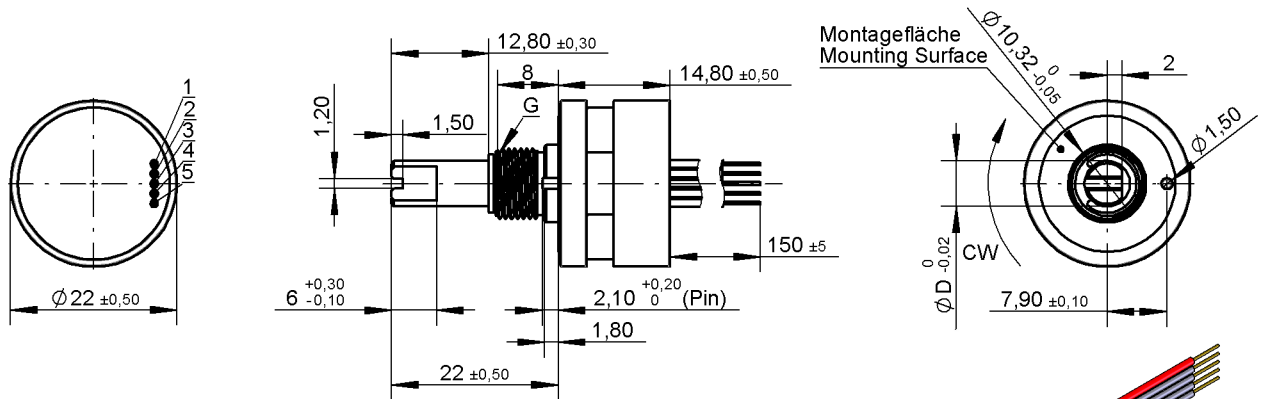
Tel.: +49 89 46094-500  
export@megatron.de

# Data Sheet for Angle Sensors

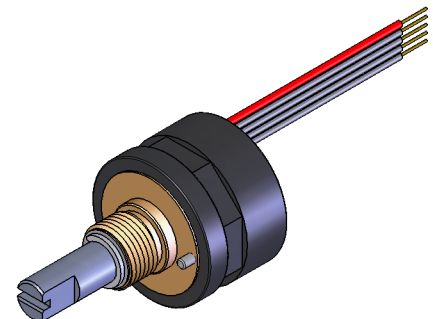
Hall-Effect Single-Turn Rotary Encoder with Incremental Output

Series ENI22 B

## Drawing



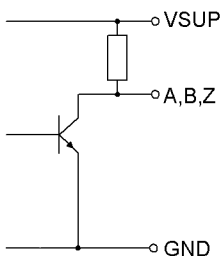
Cable assignment	
VSUP (red)	1
Z	2
B	3
A	4
GND	5



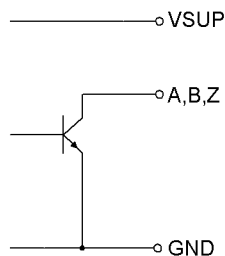
Option	Dimension D	Dimension G
B1	6 mm	M10

### Internal connection

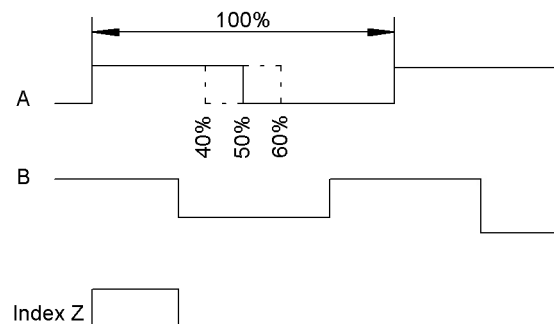
TTL:



Open Collector:



### Signal edges



08.11.2012