



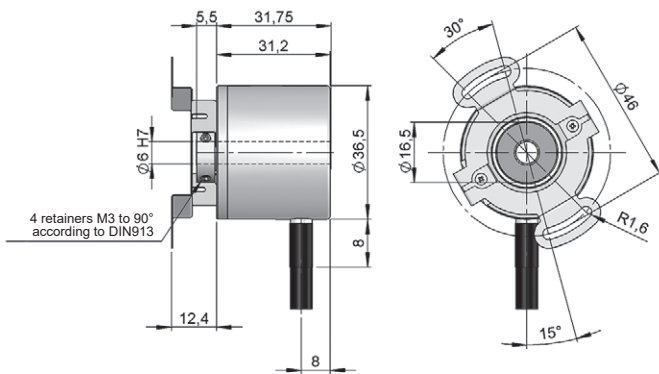
# SERIE 22H

## MINIATURE HOLLOW SHAFT INCREMENTAL ENCODER FOR INDUSTRIAL APPLICATIONS

- Resolution up to 3.600 pulses per turn
- External diameter 36,5 mm
- Hollow shaft  $\varnothing$  6 or 8 mm
- Protection class IP50 according to DIN EN 60529
- Shaft fixing through setscrew
- Anti-rotation system through flexible flange or pin torque support
- Connection by cable (other cable length available) or industrial connector M12
- Female connector included

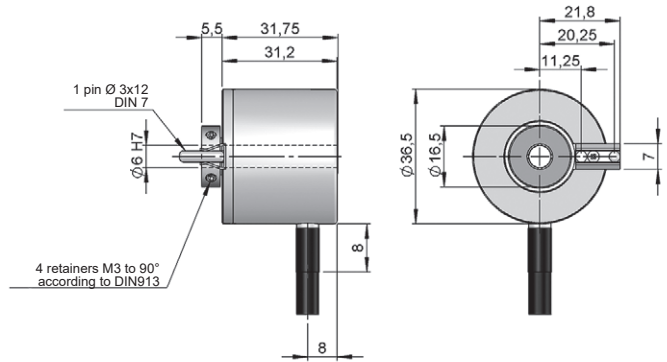


### Flexible flange (90.1037)



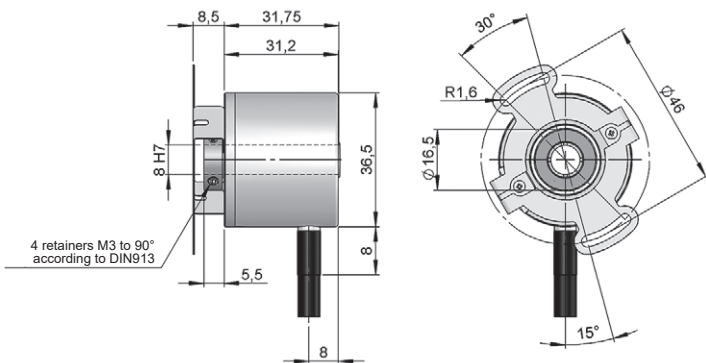
Drawing connection type 2, hollow shaft type 1, anti-rotation system type 1

### Anti-rotation pin (93.0108204)



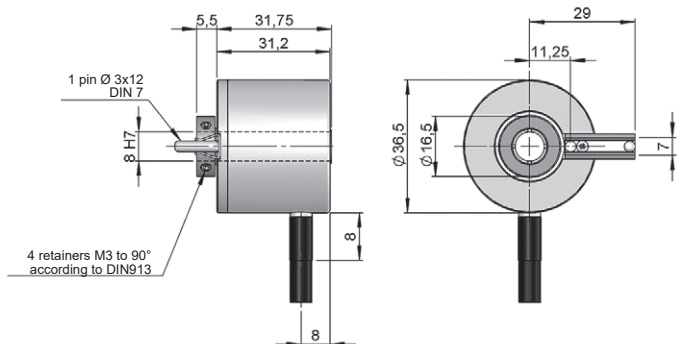
Drawing connection type 2, hollow shaft type 1, anti-rotation system type 2

### flexible flange (90.1111)



Drawing connection type 2, hollow shaft type 2, anti-rotation system type 3

### Anti-rotation pin (93.0108208)



Drawing connection type 2, hollow shaft type 2, anti-rotation system type 4



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### REFERENCE

Reference example : 22H-11721-500

Serie	Anti-rotation system	Hollow shaft	Output signals	Connection	Power Supply / Electronic output	Pulses number	Special customer
22H -	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> -	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	<ol style="list-style-type: none"> <li>1. Flexible flange (90.1037)</li> <li>2. Anti-rotation pin (93.0108204)</li> <li>3. Flexible flange (90.1111)</li> <li>4. Anti-rotation pin (93.0108208)</li> </ol>	<ol style="list-style-type: none"> <li>1. Ø 6 mm</li> <li>2. Ø 8 mm</li> </ol>	<ol style="list-style-type: none"> <li>2. A+B</li> <li>3. A+B+0</li> <li>7. A<math>\tilde{A}</math>+B<math>\tilde{B}</math>+0<math>\tilde{0}</math></li> <li>8. A<math>\tilde{A}</math>+B<math>\tilde{B}</math></li> </ol>	<ol style="list-style-type: none"> <li>2. Radial cable</li> <li>3. Radial 90.9508</li> </ol>	<ol style="list-style-type: none"> <li>0. 11...30 VDC / NPN Open collector 11..30 VDC</li> <li>1. 11..30 VDC /Line driver differential Push-Pull 11..30 VDC</li> <li>2. 5 VDC / RS422 5 VDC (compatible TTL)</li> </ol>		PT00. -40°C  <b>Order your reference Step file 3D</b> <a href="mailto:info@encoderhohner.com">info@encoderhohner.com</a> <i>service available in 24 h</i>

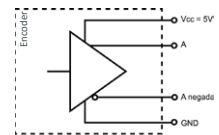
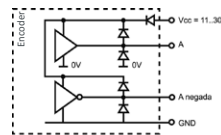
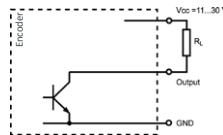
### MECHANICAL SPECIFICATIONS

Materials	Cover: Aluminium Housing: Aluminium Shaft: Brass
Bearings	Ballraces
Bearings lifetime	1x10 <sup>10</sup> rev.
Housing fixing	Anti-rotation pin or flexible flange (included)
Permitted misalignment	±0.3 mm axial, ±0.1 mm radial (90.0108204, 90.0108208) ±0.3 mm axial, ±0.2 mm radial (90.1037) ±0.2 mm axial, ±0.1 mm radial (90.1111)
Shaft fixing	Setscrew
Hollow shaft diameter	6 or 8 mm
Maximum number of revolutions permitted mechanically	6000 rpm
Protection against dust and splashes according to DIN EN 60529	IP50
Rotor inertia moment	2 gcm <sup>2</sup>
Starting torque at 20°C (68°F)	≤ 0,01 Nm
Maximum load permitted on axial shaft	20 N
Maximum load permitted on radial shaft	40 N
Weight aprox.	0,1 Kg
Operating temperature range	-20°C to +80°C - Standard -40°C to +80°C - Special Customer PT00
Vibration according to DIN EN 60068-2-6	100 m/s <sup>2</sup> (10Hz...2000Hz)
Shock according to DIN EN 60068-2-27	1000 m/s <sup>2</sup> (6ms)
Maximum pulses per turn	3.600
Radial connection	2 meters cable or industrial connector M12 (other cable lengths available on order) <b>Female connector included</b>

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### OUTPUT SIGNALS



OUTPUT CIRCUIT	NPN Open Collector	Push-Pull Differential	RS422 (TTL compatible)
Reference code	0	1	2
Power supply	11...30 VDC	11...30 VDC	5 VDC ±5%
Output voltage	11...30 VDC	11...30 VDC	5 VDC
Consumption	40 mA	Typical: 45 mA Max: 150 mA	Typical: 70 mA Max: 150 mA
Max. load capability / channel	40 mA	±30 mA	±20 mA
Length of cable allowed	50 m (24 VDC)	100 m	1200 m
"Low" signal level	VOL < 0.4 VDC (24 VDC)	VOL < 2.5 VDC	VOL < 0.5 VDC
"High" signal level	VOH > 22 VDC (24 VDC)	VOH > VCC – 3 VDC	VOH > 2.5 VDC
Frequency	100 kHz	200 kHz	300 kHz
Short circuit protection	Not permanent	Yes	Yes
Protection polarity inversion	Yes	Yes	No

Channel A leads (90° electric) channel B, view from the shaft, shaft rotating clockwise

### CONNECTION



	95.0008051 (* Cable 5x0,14)	95.0008052 (* Cable 8x0,14)	90.9508 M12 8p CCW
GND	White	White	1
VCC	Brown	Brown	2
A	Green	Green	3
B	Yellow	Grey	4
Ã		Yellow	5
Ã		Pink	6
0 (reference)	Grey	Blue	7
0	Grey	Red	8

(\* For lengths over 2 meters standard cable, we recommend the use of twisted pair cable 2x2x0,14+1x0,14 (95.0008002) or 3x2x0,14+2x0,34 (95.0008003). Request the final cable length required to avoid junctions.

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## CONNECTION DIMENSIONS

Female connector included

**Connection 3**  
Radial 90.9508

**90.9508**  
M12 8p  
male panel  
counter clockwise

