

# ENCODER

Type: **IMG40H-.....-ABN-.....-K1-D3**

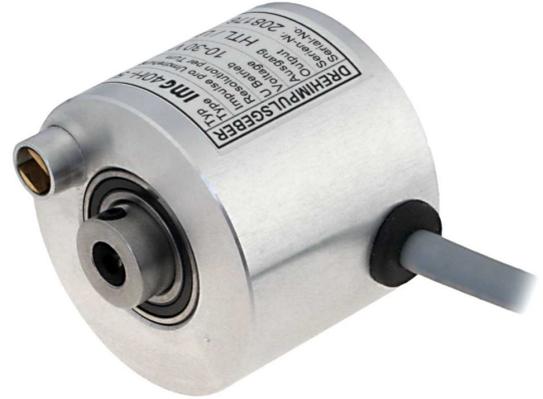


## Description

The **IMG40H** is a rugged rotary encoder with a hollow shaft for industrial use. The diameter inside the hollow shaft is 6 mm. The hollow shaft is fixed to the rotating machine shaft by two screws, which are staggered of an angle of 120 degrees. Its rotation prevent a cylindrical screw as torque plate. This screw is lying in a glide-fork in the flange of the encoder without tolerance.

The new developed optical electronics of this incremental encoder guarantees with differential scanning the code-disk a high technical reliability.

Beside different pulse numbers and pulse series (up to 3 are realisable in one device), and operating voltage (10 Volt at TTL-compatibility), the **IMG40H** will deliver with continuous or non-continuous hollow shaft.



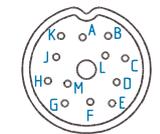
## Technical Data

Mechanical features:

Bearing flange with housing: Aluminium solid (high-grade steel on inquiry)  
 Shaft: Steel (stainless)  
 Diameter flange (outside): 40 mm  
 Diameter shaft (inside): 6 mm  
 Working temperature: 0 ÷ +80 °C (-30 ÷ +110 °C on inquiry)  
 Climate class (IEC 721-3-3): 3K3 Type B  
 Relative moisture: ≤ 75 % on average one year max. ≤ 85 %  
 Protection class (EN 60529): IP54  
 Mechanical speed: max. 5600 min<sup>-1</sup>  
 Offset of shaft: axial max. 0.2 mm  
 radial max. 0.2 mm  
 Starting torque: 0.15 Ncm (at 25 °C)  
 Vibration (IEC 68-2-6): ≤ 50 m/s<sup>2</sup> ≈ 5 g (at 10-2000 c/s)  
 Impact (IEC 68-2-27): ≤ 50 m/s<sup>2</sup> ≈ 5 g (during 6 ms)  
 Weight: 98 g

Electrical features:

Operating voltage:	5 Volt DC ±10% »IT«	10 ÷ 24 Volt DC ±10 % »TI«
Residual ripple:	50 mVss	100 mVss
Current input:	≤ 50 mA (unloaded)	≤ 50 mA (unloaded)
Output circuit:	TTL; RS422 compatible	HTL
Output load:	80 mA	80 mA
Output signals:	Channel A: 	Impulse duration T = vibration duration T = 2π = 360°. 90° Phase offset from channel B to channel A. Impulse tolerance ±20°. Impulse-break-proportion 1:1.
(With view on shaft and turn cw)	Channel B: 	
	Channel N: 	
Pulse numbers per turn:	Up to 5000 (other on inquiry)	
Output frequency:	max. 200 kc/s	
Type of connection:	Radial cable LIYCY (shielded)	

Function	Pin	Colour	Pin arrangement
+U <sub>B</sub>	4	brown	 <p>View on pin side</p>
0 Volt	2	white	
Channel A	3	green	
Channel A inv.	5	yellow	
Channel B	1	grey	
Channel B inv.	6	pink	
Channel N	7	blue	
Channel N inv.	8	red	

