

# Incremental encoder IG09

Hollow shaft

IG09 – the universal one! A practical solution, either as a single hollow-shaft incremental encoder or for supplementing the worldwide best-selling DA09S digital position indicator.

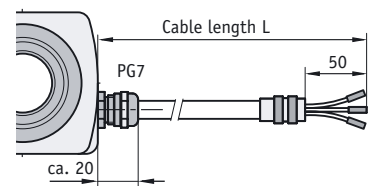
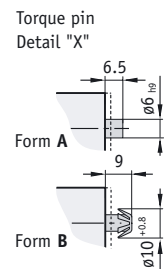
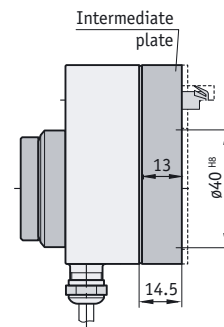
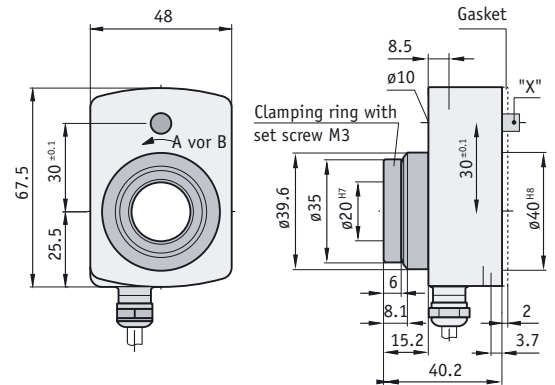


## Features:

- resolution max. 1024 pulses/revolution
- PP, OP, LD output circuits
- same installation dimensions as DA09S; can, therefore, also be assembled in combination with IG09 + DA09S (see "Digital Position Indicators" brochure )
- small installation depth
- through hollow shaft up to diam. 20 mm

## Options:

- Customer-specific versions are available on request



Feature	Order text	Technical data	Additional information
Output signals	AXX <b>A</b>	ABX, ABO, ABI, AX0, AXI	AB0/ABI max. 500 pulses/revolution
Pulses/revolution	... <b>B</b>	2, 5, 10, 20, 25, 28, 47, 50, 60, 70, 100, 117, 125, 160, 200, 250, 300, 360, 400, 500, 512, 600, 800, 1000, 1024 others on request	
Connection type	E1 <b>C</b> E4X E6	stripped cable ends circular plug coupling in cable with stripped cable ends	
Cable length L [m]	2.0 <b>D</b> OK	0.3 ... 10.0, max. 20 without cable	from 0.3 ... 10.0 in 0.1 steps
Cable length L2 [m] (only for E6)	2.0 <b>E</b>	0.3 ... 10.0, max. 30	from 0.3 ... 10.0 in 0.1 steps
Torque support (form)	A <b>F</b> B	A type B type	
Output circuit	PP <b>G</b> OC LD	push-pull open collector (NPN) current-sinking RS422, 5 V DC operating voltage	
Shaft design	W01 <b>H</b> W02	slide bearing ball bearing	only ABX, AX0, AXI
Hollow shaft diam. [mm]	20 <b>I</b>	15, 14, 12, 10	
Type of protection	IP53 <b>K</b> IP63		
Operating voltage	1 <b>L</b> 2	5 V DC ±5% (LD) 10 ... 30 V DC (PP, OC)	
Intermediate plate	0 <b>M</b> 1	without with	
<b>Mechanical data</b>			
Max. speed		600 min <sup>-1</sup> 100% ED (W01), 3000 min <sup>-1</sup> (W02)	
Rotor moment of inertia		125 J/diam. 20, 163 J/diam. 14	
Starting torque (20 °C)		≤ 7 Ncm (W01), ≤ 2 Ncm (W02)	
Load capacity of shaft		radial 20N, axial 10N (W01)	radial 500N, axial 200N (W02)
Weight		approx. 0.2 kg	
Operating temperature		5 °C ... +50 °C	
Shaft		burnished steel	
Cable sheath		PVC	
Shock resistance		200 g/6 ms	according to DIN-IEC 68-2-27
Vibration resistance		10 g/50 Hz	according to DIN-IEC 68-2-6
<b>Electrical data</b>			
Phase position		90 ° ± 30 °	90 ° ± 30 °
Operating voltage		10 ... 30 V DC	5 V DC ±%5
Power cons. without load (typ.)		40 mA	70 mA
Permitted load/channel (max.)		40 mA*	40 mA
Pulse frequency (max.)		80 kHz	50 kHz
Signal level high (min.)		UB - 2 V	RS422-compatible
Signal level low (max.)		1 V	RS422-compatible
Polarity protection on UB		yes	no
<b>Other data</b>			
Housing		plastic	
Test mark		CE	

\* short-circuit proof

Your order data:  -  -  -  -  -  -  -  -  -  -  -  -