

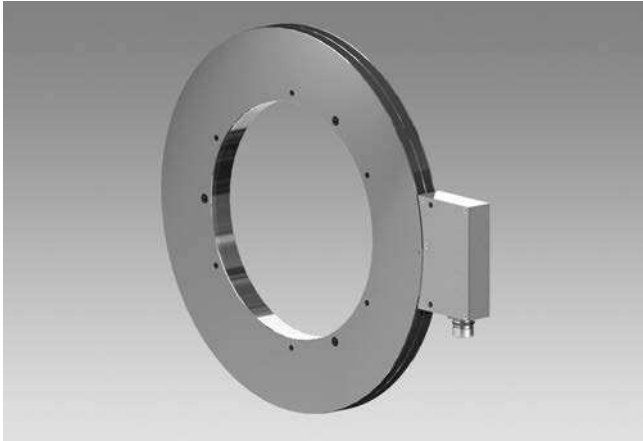
Encoders without bearings - incremental

Sensor head with integrated FPGA signal processing, magnetic sensing

256...524288 pulses or 256...32768 sinewave cycles per turn

Through hollow shaft max. \varnothing 340 mm

MHGP 400 - HDmag



MHGP 400 - Version for axial screw mounting

Technical data - electrical ratings

Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Approval	CE

Technical data - electrical ratings (square-wave)

Voltage supply	4.5...30 VDC
Consumption w/o load	\leq 160 mA
Pulses per revolution	256...524288
Phase shift	90° \pm 10°
Scan ratio	40...60 %
Reference signal	Zero pulse, width 90°
Sensing method	Magnetic
Output frequency	\leq 2 MHz
Output signals	A+, B+, R+, A-, B-, R-
Output stages	HTL TTL/RS422

Technical data - electrical ratings (SinCos)

Voltage supply	4.5...30 VDC
Consumption w/o load	\leq 160 mA
Sinewave cycles per turn	256...32768
Phase shift	90° \pm 5°
Reference signal	Zero pulse, width 90°
Sensing method	Magnetic
Output signals	A+, B+, R+, A-, B-, R-
Output stages	SinCos 1 Vpp
Difference of SinCos amplitude	\leq 20 mV
Harmonics typ.	-40 dB
DC offset	\leq 20 mV
Bandwidth	400 kHz (-3 dB)

Features

- Sinewave or square-wave signals
- Robust and wearless
- Electronics is fully encapsulated, high protection
- Large tolerances: axial \pm 3 mm, radial max. 2.2 mm
- Very compact dimensions
- Simple mounting, easy adaptation
- Several mounting possibilities
- Sensor head with integrated FPGA signal processing

Optional

- Triple-bandage (increased operating speed)

Technical data - mechanical design

Sensor head	FPGA signal processing
Size (flange)	\varnothing 405.4 mm
Axial tolerance	\pm 3 mm (wheel/head)
Radial tolerance	0.1...2.2 mm (wheel/head)
Shaft type	\varnothing 70...340 mm (through hollow shaft)
Protection DIN EN 60529	IP 67 (head), IP 68 (wheel)
Operating temperature	-20...+85 °C
Operating speed	\leq 2000 rpm
Resistance	IEC 60068-2-6 Vibration 30 g, 55-2000 Hz IEC 60068-2-27 Shock 300 g, 2 ms
Accuracy of magnetic measure	\pm 75 "
Connection	Flange connector M23, 12-pin

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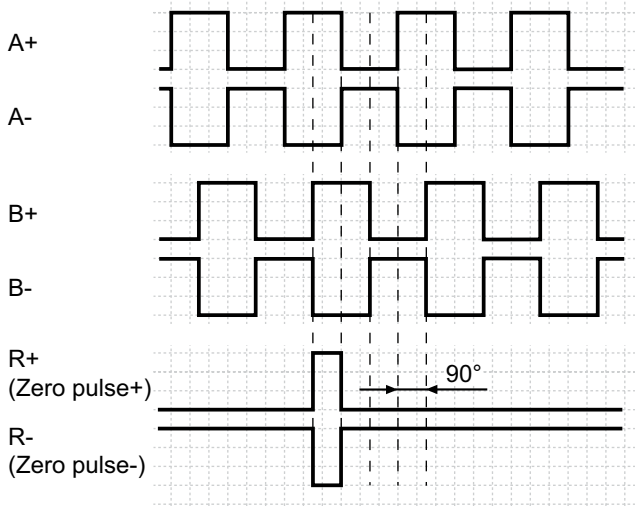
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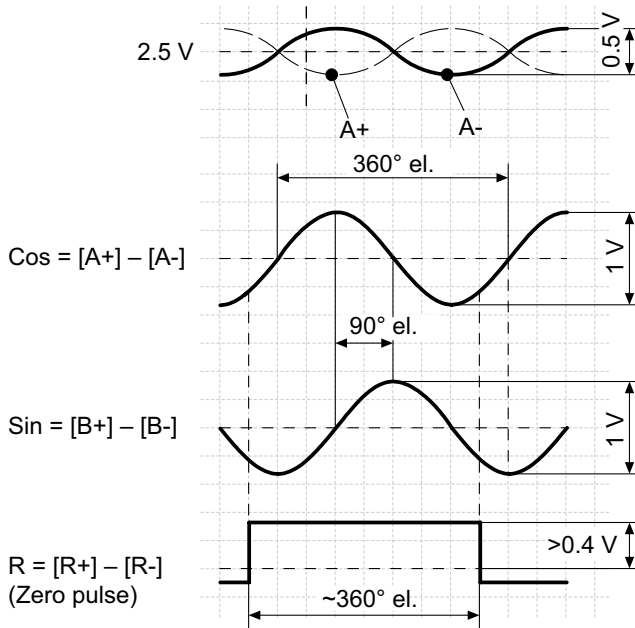
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Output signals

Version with square-wave signals HTL oder TTL at positive rotating direction



Version with SinCos signals at positive rotating direction

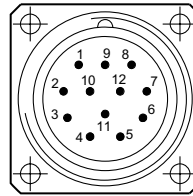


Terminal assignment

View A

Flange connector M23, 12-pin, male contacts, CCW

Pin	Assignment
1	B-
2	Do not use
3	R+ (Zero pulse)
4	R- (Zero pulse inv.)
5	A+
6	A-
7	Do not use
8	B+
9	Do not use
10	⊥
11	Do not use
12	+UB



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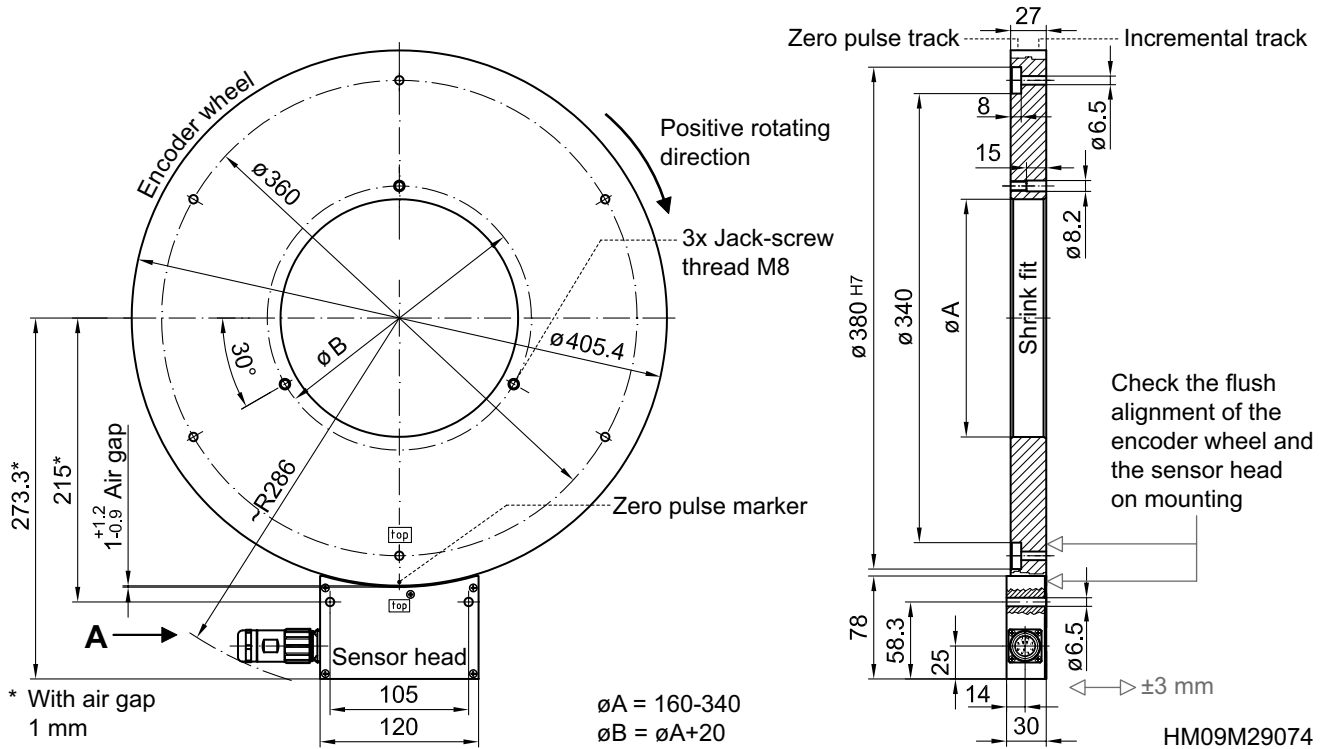
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Dimensions

Version for shrink fit mounting



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