

Electro-optical Incremental Encoder

Miniature design

Model GIO 24

GIO 11045 EE

01 / 2012

- Contactless sensing device
- Model "H" with hollow shaft
- Model "K" with clamping flange
- Model "S" with synchro flange
- Resolutions: 4 up to 5000 counts per revolution
- Small mounting volume
- Large range of supply voltage
- Protected against short circuits and reverse polarization
- Protection grades IP 64 and IP 65



Construction

Flange in brass, case in steel, shaft in stainless steel - ball bearings with sealing - GaAlAs diode - photo-array with comparator and trigger circuits for long life stabilization - SMT layout.

Electrical data

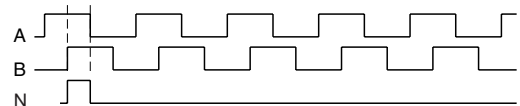
- Standard resolutions: 1000 and 1024
- Optional resolutions: 4, 11, 12, 15, 25, 30, 32, 36, 50, 60, 75, 90, 100, 125, 128, 150, 180, 200, 250, 256, 300, 360, 400, 500, 600, 2000, 2048, 3000, 3600, 5000
- Supply voltage V_S : 4.5 to 30 VDC
- Supply current I_B : 35 mA (w/o load)
- Output level ():
 - Low max. 375 mV at $I_{Low} = 10$ mA
 - High $V_S - 0.8$ V
- Signal current (I_A): 20 mA max.
- Output frequency: 200 kHz
- Pulse rate: 1:1 ± 10 %
- Phase shift: 90° ± 18°
- EMV: EN 50081-2, EN 50082-2

Mechanical data

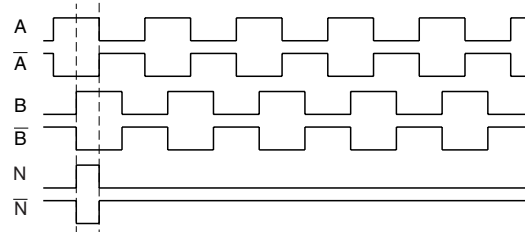
- Shaft diameter: 4 mm
 - options 3, 5, 6 and 6.35 mm
- Operating speed: 18,000 min⁻¹ max.
- Inertia of rotor: 0.8 gcm²
- Wind-up torque:
 - Model "K" < 0.05 Nm
 - Model "S" < 0.005 Nm
 - Model "H" < 0.005 Nm
- Permissible shaft load:
 - axial 20 N
 - radial 20 N
- Mass: 0.125 kg
- Lead: 8 wires, screened 0.05 mm²
1 m, w/o connector
- Lead exit: radial (axial as option)

Output signals

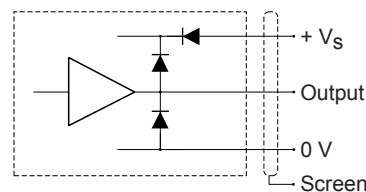
Variant VN



Variant XN



Output circuit (each channel)

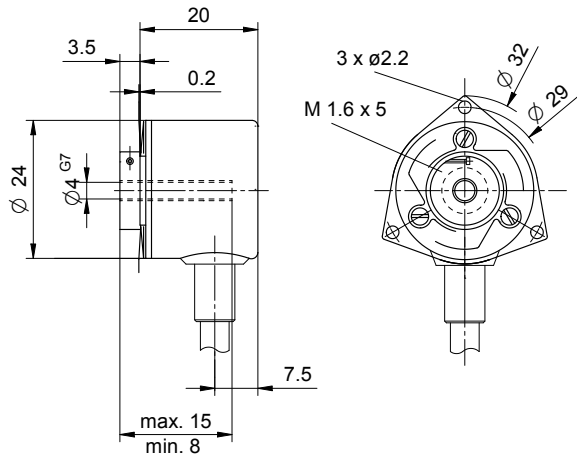


Environmental data

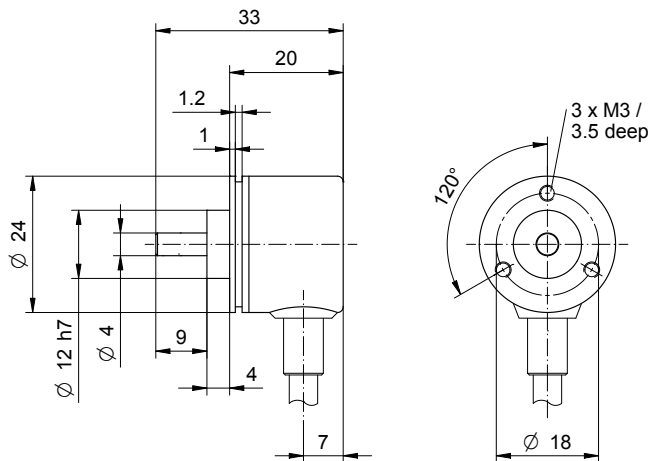
- Operating temperature range: - 40 °C to + 85 °C
- Storage temperature range: - 40 °C to + 85 °C
- Resistance to shock: 1000 m/s²; 11 ms (DIN IEC 68)
- Resistance to vibration: 10 Hz ... 2000 Hz ; 100 m/s² (DIN IEC 68)
- Protection grade (DIN 40 050)
 - GIO 24-H IP 64
 - GIO 24-S IP 64
 - GIO 24-K IP 65

Dimensions in mm

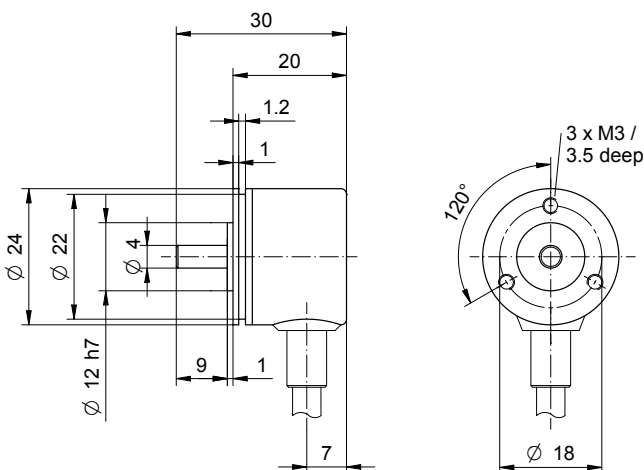
Model GIO 24-H



Model GIO 24-K

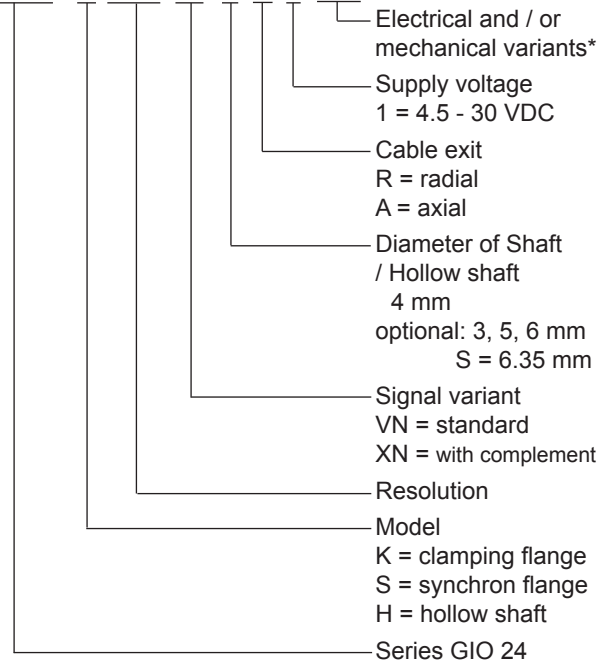


Model GIO 24-S



Order code format:

GIO 24 - K 1000 VN 4 R 1 A01

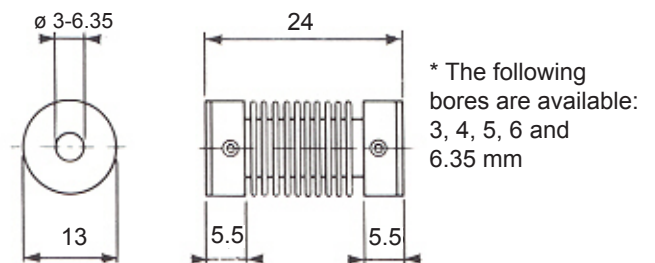


Electrical connections

Output	VN	XN
+V _S	brown	red
-V _S	white	blue
Channel A	green	pink
Channel A inv.	---	grey
Channel B	yellow	green
Channel B inv.	---	yellow
Zero	grey	white
Zero inv.	---	brown

Mounting accessories (to be ordered separately)

Coupling 420/4 (alternatively 413/4 Oldham type)



Fixing clamp RW

