

Incremental encoders

Shaft with clamping or synchro flange

SIL2 standard

GI357



GI357 with clamping flange

Features

- Encoder with shaft $\varnothing 10$ mm or $\varnothing 6$ mm
- Resolution max. 5000 ppr
- Optical sensing
- Clamping or synchro flange
- High rotation speed max. 10000 rpm
- Compact design
- For safety-relevant applications in compliance with SIL2 (Safety Integrity Level 2)

Technical data - electrical ratings

Voltage supply	24 VDC +20/-50 %
Reverse polarity protection	Yes
Consumption w/o load	≤ 30 mA
Resolution (steps/turn)	5...5000
Sensing method	Optical
Output frequency	≤ 150 kHz
Output signals	A 90° B + inverted
Output circuit	Linedriver/RS422 Push-pull short-circuit proof
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4
Approvals	UL approval / E63076, SIL2 approval according to DIN EN 61508 (equivalent to PLd)
Safety operating figures	Encoder operating life: 20 years PFH: 1.16E-08 1/h SFF: >90 %

Technical data - mechanical design

Dimensions (flange)	$\varnothing 58$ mm
Shaft	$\varnothing 6$ mm (synchro flange) $\varnothing 10$ mm (clamping flange)
Shaft loading	≤ 20 N axial ≤ 40 N radial
Flange	Clamping or synchro flange
Protection DIN EN 60529	IP 54 (without shaft seal), IP 65 (with shaft seal)
Operating speed	≤ 10000 rpm
Starting torque	≤ 0.015 Nm (IP 54) ≤ 0.03 Nm (IP 65)
Rotor moment of inertia	14.5 gcm ²
Materials	Housing: aluminium Flange: aluminium
Operating temperature	-25...+85 °C
Relative humidity	95 % non-condensing
Resistance	DIN EN 60068-2-6 Vibration 10 g, 16-2000 Hz DIN EN 60068-2-27 Shock 100 g, 6 ms
Connection	Connector M12, 8-pin Connector M23, 12-pin
Weight approx.	250 g

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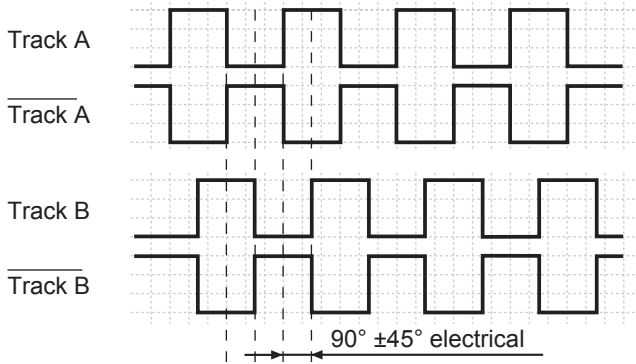
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Output signals

Clockwise rotating direction when looking at flange.



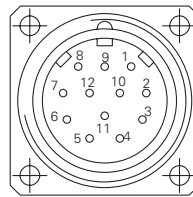
Pulse number 2500/1024/1000 - 360° mechanically



Terminal assignment

Connector M23

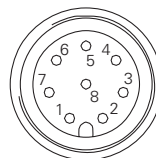
Connector	Assignment
Pin 1	Track B inv.
Pin 2	–
Pin 3	Test Out
Pin 4	–
Pin 5	Track A
Pin 6	Track A inv.
Pin 7	–
Pin 8	Track B
Pin 9	–
Pin 10	GNDB
Pin 11	–
Pin 12	UB



Please use cores twisted in pairs (for example track A / track A inv.) for extension cables.

Connector M12

Connector	Assignment
Pin 1	Track A
Pin 2	Track B
Pin 3	Track A inv.
Pin 4	Track B inv.
Pin 5	–
Pin 6	Test Out
Pin 7	GNDB
Pin 8	UB



Please use cores twisted in pairs (for example track A / track A inv.) for extension cables.

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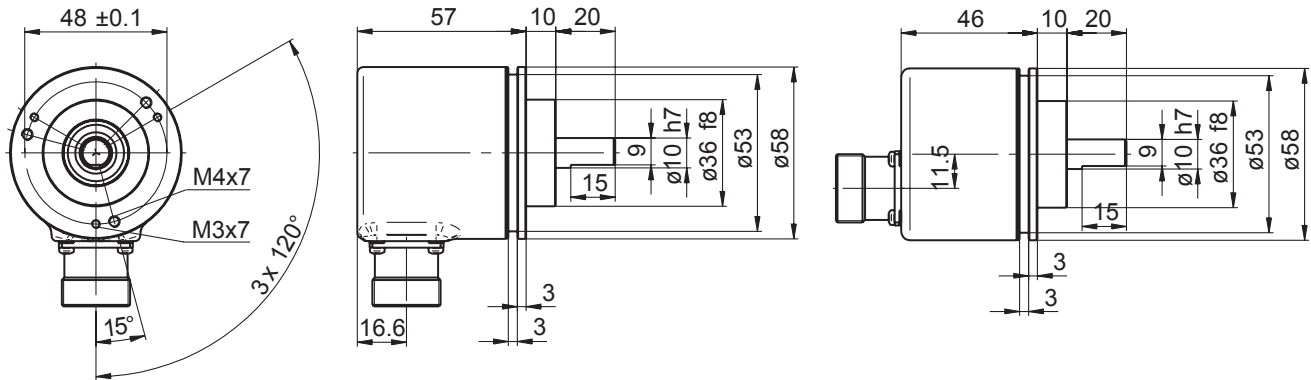
Shaft with clamping or synchro flange

SIL2 standard

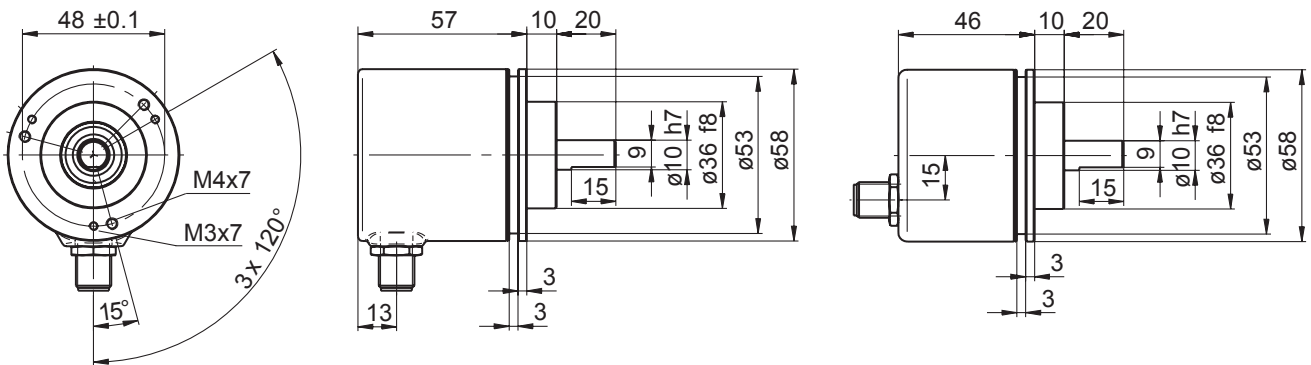
GI357

Dimensions

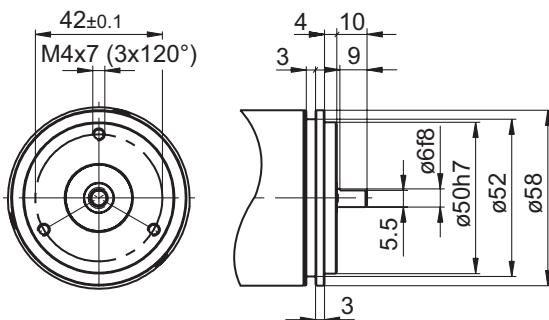
GI357 - clamping flange / connector M23



GI357 - clamping flange / connector M12



GI357 - synchro flange



GI357 - connector dimensions

