

Incremental encoders

Solid shaft and flange in inch dimensions

5...6000 pulses per revolution

GI352



GI352 with square flange

Features

- Encoder with inch dimensions
- Max. 6000 pulses per revolution
- Optical sensing method
- Solid shaft $\varnothing 9.52$ mm
- Square flange 63.5 x 63.5 mm
- MIL connector 7-pin and 10-pin
- High rotation speed up to 10000 rpm
- High resistance to shock and vibrations

Technical data - electrical ratings

Voltage supply	5 VDC ± 10 % 4.75...30 VDC
Reverse polarity protection	Yes (4.75...30 VDC)
Consumption w/o load	≤ 30 mA (24 VDC) ≤ 60 mA (5 VDC)
Pulses per revolution	5...6000
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤ 150 kHz
Output signals	A 90° B, N + inverted
Output stages	Linedriver/RS422 Push-pull short-circuit proof
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4
Approval	UL approval / E63076

Technical data - mechanical design

Size (flange)	63.5 x 63.5 mm
Shaft type	$\varnothing 9.52$ mm solid shaft
Admitted shaft load	≤ 20 N axial ≤ 40 N radial
Flange	Clamping flange square 63.5 x 63.5 mm
Protection DIN EN 60529	IP 54 (without shaft seal), IP 65 (with shaft seal)
Operating speed	≤ 10000 rpm
Starting torque	≤ 0.015 Nm (+25 °C, IP 54) ≤ 0.03 Nm (+25 °C, IP 65)
Rotor moment of inertia	14.5 gcm ²
Materials	Housing: aluminium Flange: aluminium
Operating temperature	-25...+100 °C (5 VDC) -25...+85 °C (24 VDC)
Relative humidity	95 % non-condensing
Resistance	DIN EN 60068-2-6 Vibration 10 g, 16-2000 Hz DIN EN 60068-2-27 Shock 200 g, 6 ms
Connection	MIL-connector, 7-pin MIL-connector, 10-pin
Weight approx.	280 g

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Part number

GI352.

Pulse number - see table

Connection

- A0 MIL connector MS3102 R18-1P
10-pin, axial
- A1 MIL connector MS3102 R18-1P
10-pin, radial
- B0 MIL connector MS3102 R16S-1P
7-pin, axial
- B1 MIL connector MS3102 R16S-1P
7-pin, radial

Voltage supply / signals

- 21 5 VDC / linedriver RS422 / 7-pin
- 22 5 VDC / linedriver RS422 / 10-pin
- 70 4.75...30 VDC / push-pull / 10-pin
- 71 4.75...30 VDC / push-pull / 7-pin

Flange / Solid shaft

- 1 Front panel 63.5 x 63.5 mm / 9.52 mm, IP 54
- B Front panel 63.5 x 63.5 mm / 9.52 mm, IP 65

Accessories

Connectors and cables

11034303 MIL connector, 10-pin, 5 m cable (Z 172.005)

Part number (pulse number)

49 (5)	57 (128)	22 (1000)	30 (2500)
36 (10)	06 (200)	23 (1024)	31 (3600)
50 (25)	09 (250)	24 (1250)	34 (4096)
39 (50)	13 (360)	26 (1500)	35 (5000)
40 (60)	14 (400)	28 (2000)	48 (6000)
41 (100)	15 (500)	29 (2048)	

Other pulse numbers on request.

Example: part number 23 = 1024 pulses.

Incremental encoders

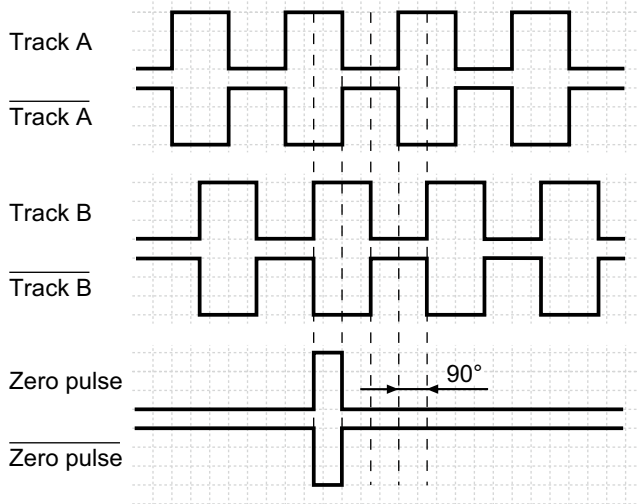
Solid shaft and flange in inch dimensions

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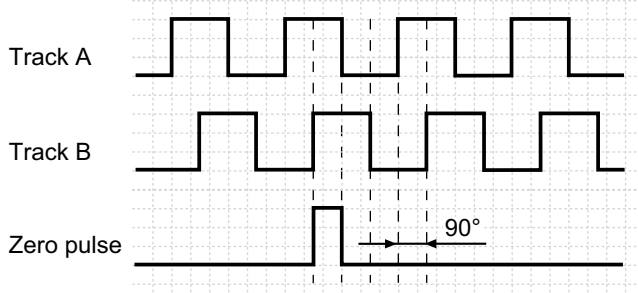
GI352

Output signals

Clockwise rotating direction when looking at flange.
Track A, B, N and inv.

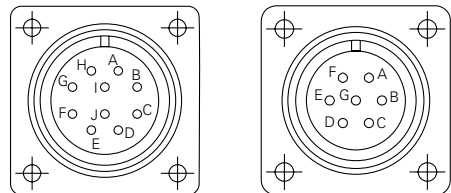


Track A, B, N



Terminal assignment

Connector	Assignment	10-pol. connector	7-pol. connector
Pin A	Track A	Track A	Track A
Pin B	Track B	Track B	Track B
Pin C	Track N (zero pulse)	Track N (zero pulse)	Track N (zero pulse)
Pin D	UB	UB	UB
Pin E	N.C.	N.C.	N.C.
Pin F	GND	GND	GND
Pin G	Shield	Shield	Shield
Pin H	Track A inv.	-	-
Pin I	Track B inv.	-	-
Pin J	Track N inv.	-	-



Please use cores twisted in pairs (for example track A / track A inv.) for extension cables of more than 10 m length.

Trigger level

Outputs	Linedriver RS422
Output level High	>2.5 V (I = -20 mA)
Output level Low	<0.5 V (I = 20 mA)
Load High / Low	<20 mA

Outputs	Push-pull short-circuit proof
Output level High	>UB -3 V (I = -20 mA)
Output level Low	<0.5 V (I = 20 mA)
Load High / Low	<20 mA

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Dimensions

