

Incremental encoders

Shaft and flange in inch dimensions

Resolution 5...6000 pulses

GI352



GI352 with square flange

Features

- Encoder with inch dimensions
- Resolution max. 6000 ppr
- Optical sensing
- Shaft $\varnothing 9.52$ mm
- Square flange 63.5 x 63.5 mm
- MIL connector 7-pin and 10-pin
- High rotation speed max. 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) |
| Resolution (steps/turn) | 5...6000 |
| Reference signal | Zero pulse, width 90° |
| Sensing method | Optical |
| Output frequency | ≤ 150 kHz |
| Output signals | A 90° B, N + inverted |
| Output circuit | 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

| | |
|-------------------------|--|
| Housing | $\varnothing 58$ mm |
| Shaft | $\varnothing 9.52$ mm |
| 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 IP 54 ≤ 0.03 Nm IP 65 |
| Rotor moment of inertia | 14.5 gcm ² |
| Admitted shaft load | ≤ 20 N axial ≤ 40 N radial |
| 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 |
| Weight approx. | 280 g |
| E-connection | Connector |

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Part number

GI352.

See part number (pulses)

E-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 / Shaft

- 1 Front panel 63.5 x 63.5 mm / 9.52 mm IP54
- B Front panel 63.5 x 63.5 mm / 9.52 mm IP65

Part number (pulses)

| | | | |
|----------|----------|-----------|-----------|
| 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 upon request.

Example: ordering key 23 = 1024 pulses

Incremental encoders

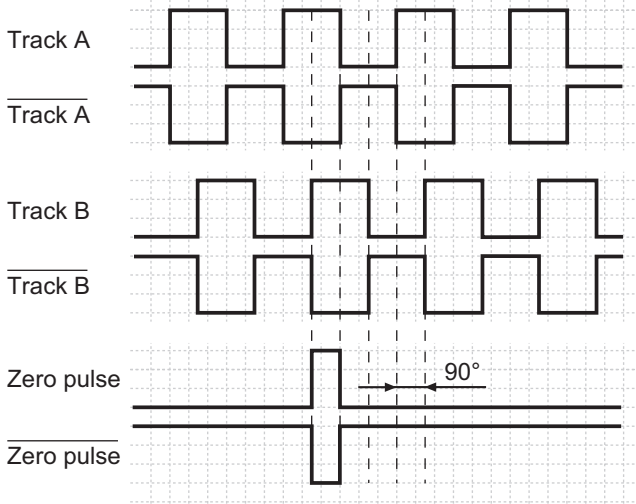
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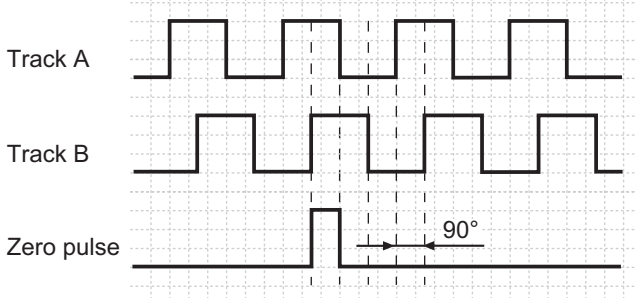
GI352

Output signals

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

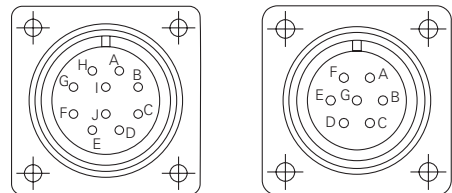


Track A, B, N



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 | <20 mA |
| Load 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 | <20 mA |
| Load Low | <20 mA |

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Dimensions

