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 ø9.52 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	ø58 mm
Shaft	ø9.52 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 gcm²
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

GI352

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

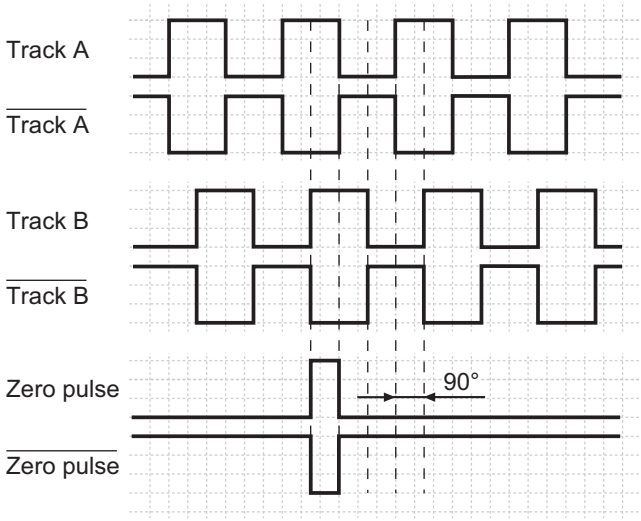
Shaft and flange in inch dimensions

Resolution 5...6000 pulses

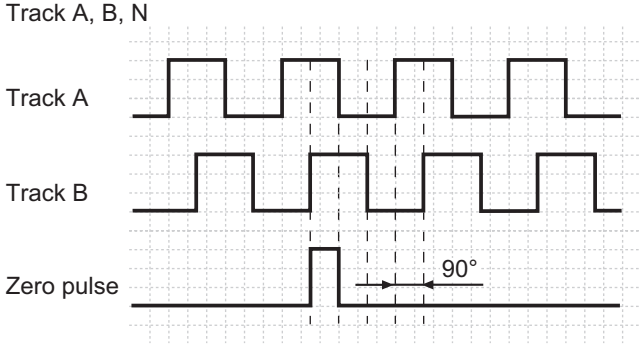
GI352

Output signals

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

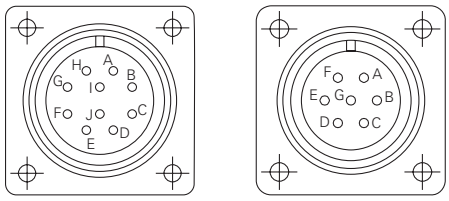


Track A, B, N



Terminal assignment

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

GI352

Dimensions