

Incremental encoders

Hollow shaft max. $\varnothing 12$ mm, stainless steel housing

Resolution 5...6000 pulses

GE333



GE333 with hollow shaft

Features

- Encoder with hollow shaft $\varnothing 12$ mm
- Stainless steel design
- Optical sensing
- Resolution max. 6000 ppr
- Clamping ring on housing
- Temperature range $-25...+100$ °C (5 VDC)

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

Dimensions (flange)	$\varnothing 58$ mm
Shaft	$\varnothing 12$ mm hollow shaft
Protection DIN EN 60529	IP 54
Operating speed	≤ 6000 rpm
Starting torque	≤ 0.03 Nm
Rotor moment of inertia	14.5 gcm ²
Materials	Housing: stainless steel 1.4305 Flange: stainless steel 1.4305
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	Cable 1 m
Weight approx.	500 g

Incremental encoders

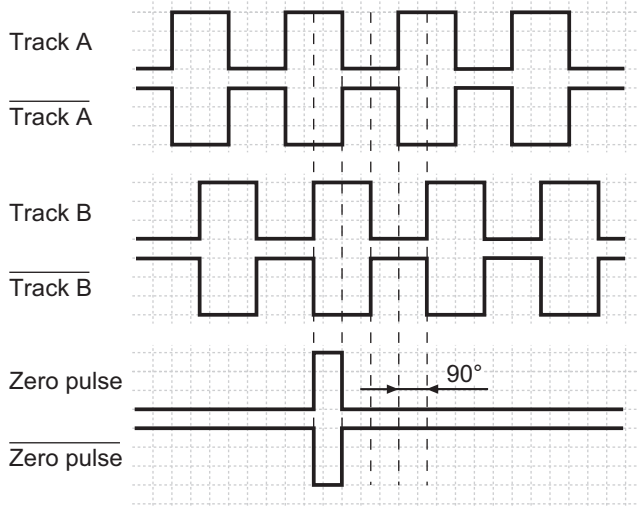
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Output signals

Clockwise rotating direction when looking at flange.



Terminal assignment

Core colour	Assignment
pink	Track B inv.
blue	UB-Sense
red	Track N (zero pulse)
black	Track N inv. (zero pulse inv.)
brown	Track A
green	Track A inv.
–	–
grey	Track B
–	–
white/green	GND
white	GND-Sense
brown/green	UB

UB-Sense and GND-Sense are directly connected to UB resp. GND.

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

