

# Incremental encoders

## With blind or through hollow shaft

### 1...65536 pulses per revolution programmable

#### EIL580P - hollow shaft



EIL580P with blind hollow shaft

#### Features

- Size  $\varnothing$ 58 mm
- Precise optical sensing
- Output signal level programmable (TTL or HTL)
- Blind hollow or through hollow shaft,  $\varnothing$ 8...15 mm
- Connection axial, radial or tangential
- Pulses per revolution 1...65536, programmable
- High protection up to IP67
- High resistance to shock and vibrations

#### Technical data - electrical ratings

Voltage supply	4.75...30 VDC
Reverse polarity protection	Yes
Short-circuit proof	Yes
Consumption w/o load	$\leq$ 70 mA
Initializing time	$\leq$ 30 ms after power on
Pulses per revolution	1...65536
Duty cycle	45...55 % typical at 2048 ppr
Reference signal	Zero pulse 90° or 180°
Sensing method	Optical
Output frequency	$\leq$ 300 kHz (TTL) $\leq$ 160 kHz (HTL)
Output signals	A+, B+, R+, A-, B-, R-
Output stage	TTL/RS422 HTL/push pull
Programmable parameters	Output level TTL/HTL Pulse number 1...65536 Zero pulse width 90°/180° Zero pulse position Signal sequence
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-3
Approval	UL 508 / CSA 22.2

#### Technical data - mechanical design

Size (flange)	$\varnothing$ 58 mm
Motor shaft tolerance	0.2 mm axial 0.03 mm radial
Protection DIN EN 60529	IP 65 (without shaft seal), IP 67 (with shaft seal)
Starting torque	$\leq$ 0.02 Nm (+20 °C, IP 65) $\leq$ 0.025 Nm (+20 °C, IP 67)
Materials	Housing: aluminium die-cast Flange: aluminium
Operating temperature	-40...+100 °C
Relative humidity	90 % non-condensing
Resistance	DIN EN 60068-2-6 Vibration 30 g, 10-2000 Hz DIN EN 60068-2-27 Shock 250 g, 6 ms
Connection	Flange connector M12, 8-pin Flange connector M23, 12-pin Cable
Weight approx.	300 g

#### EIL580P - blind hollow shaft

Shaft type	$\varnothing$ 8...15 mm (blind hollow shaft)
Operating speed	$\leq$ 6000 rpm (+20 °C, IP 67) $\leq$ 8000 rpm (+20 °C, IP 65)

#### EIL580P - through hollow shaft

Shaft type	$\varnothing$ 8...15 mm (through hollow shaft)
Operating speed	$\leq$ 3000 rpm (+20 °C, IP 67) $\leq$ 6000 rpm (+20 °C, IP 65)