

## Data sheet for Incremental encoder

Article No. : 6FX2001-4QA10



Figure similar

Client order no. :  
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### Electrical data

Operating voltage Up	DC 10 ...30 V
Max. power consumption without load	150 mA
Signal level	UH >= 21 V at IH = 20 mA at 24 V; UL <= 2,8 V at IL = 20 mA at 24 V
Resolution	100 S/R
Accuracy	648 rad
Sampling frequency, max.	300 kHz
Switching time (10 ... 90 %)	≤ 200 ns
	Rise / fall time t+/t- <=
Phase relation signal A to B	90 °
Edge clearance at 300 kHz	0.45 μs
LED failure monitoring	High impedance driver

### Cable length

To the downstream electronics, max. 300 m

### Ambient temp in operation

#### Fixed installation of flange outlet or cable

- At Up = 10V ... 30V -40 ... 100 °C

#### Flexible cable

- At Up = 10V ... 30V -10 ... 100 °C

### Standards

Compliance with standards	CE, cULus
EMC class filter	Tested according to the EMC guidelines 89/336/EEC and the rules of the EMC guidelines (generic standards)

### Mechanical data

Shaft diameter	10 mm
Shaft length	20 mm
Angular acceleration, max.	100,000 rad/s <sup>2</sup>
Rotor moment of inertia	0.00000145 kgm <sup>2</sup>
Vibration (55...2000 Hz), max.	300 m/s <sup>2</sup>
Friction torque (at 20°C)	0.01 Nm
Starting torque (at 20°C)	0.01 Nm
Net weight	0.3 kg

### Max. admissible speed

Electrical	180,000 rpm
Mechanical	12,000 rpm

### Load capacity

#### n ≤ 6000 rpm

- Axial 40 N

- Radial at shaft end 60 N

#### n > 6000 rpm

- Axial 10 N

- Radial at shaft end 20 N

### Shock, max.

2 ms 2,000 m/s<sup>2</sup>

6 ms 1,000 m/s<sup>2</sup>

### Degree of protection

At housing IP67

At shaft input IP64