SIEMENS

Data sheet for Incremental encoder



Figure similar

Article No. : 6FX2001-4FA50

Client order no. :
Order no. :
Offer no. :
Remarks :

Item no. :
Consignment no. :
Project :

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	500 S/R
Accuracy	130 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	6 mm
Shaft length	10 mm
Angular acceleration, max.	100,000 rad/s²
Rotor moment of inertia	0.00000145 kgm²
Vibration (55...2000 Hz), max.	300 m/s²
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	36,000 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/s²
6 ms	1,000 m/s²

Degree of protection

At housing	IP67
At shaft input	IP64

Subject to change. Calculated values may differ from nameplate ratings. © Copyright Siemens