SIEMENS

# Data sheet for Incremental encoder



Figure similar

**Article No. :** **6FX2001-4QA10**

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 | 100 S/R |
| Accuracy | 648 rad |
| Sampling frequency, max. | 300 kHz |
| Switching time (10 ... 90 %) | ≤ 200 ns<br>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/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 | 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/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