Data sheet for Incremental encoder

MLFB-Ordering data
6FX2001-4NB00

Figure similar

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

Item no. :
Consignment no.
Project :

| Electrical data |  |
| :---: | :---: |
| Operating voltage Up | DC $10 \ldots 30 \mathrm{~V}$ |
| Max. power consumption without | 150 mA |
| Signal level | $\begin{aligned} & U H>=21 \mathrm{~V} \text { at } \mathrm{IH}=20 \mathrm{~mA} \text { at } 24 \mathrm{~V} \text {; } \\ & \mathrm{UL}<=2,8 \mathrm{~V} \text { at } \mathrm{IL}=20 \mathrm{~mA} \text { at } 24 \mathrm{~V} \end{aligned}$ |
| Resolution | 1000 S/R |
| Accuracy | 65 rad |
| Sampling frequency, max. | 300 kHz |
| Switching time (10 ... $90 \%$ ) | $=200 \mathrm{~ns}$ |
|  | Rise / fall time $\mathrm{t}+$ / $\mathrm{t}-$ <= |
| Phase relation signal $A$ to $B$ | $90^{\circ}$ |
| Edge clearance at 300 kHz | $0.45 \mu \mathrm{~s}$ |
| LED failure monitoring | High impedance driver |
| Cable length |  |
| To the downstream electronics, | 300 m |

Ambient temp in operation

Fixed installation of flange outlet or cable

- At $\mathrm{Up}=10 \mathrm{~V} \ldots 30 \mathrm{~V} \quad-40 \ldots 100^{\circ} \mathrm{C}$
Flexible cable

| - At $U p=10 \mathrm{~V} \ldots 30 \mathrm{~V}$ |
| :--- |

Standards

| Compliance with standards | CE, cULus |
| :--- | :--- |
|  | Tested according to the EMC guidelines <br> EMC class filter |
| $89 / 336 / E E C$ and the rules of the EMC <br> guidelines (generic standards) |  |


| Mechanical data |  |
| :---: | :---: |
| Shaft diameter | 10 mm |
| Shaft length | 20 mm |
| Angular acceleration, max. | $100000 \mathrm{rad} / \mathrm{s}^{2}$ |
| Moment of inertia of rotor | $0.00000145 \mathrm{kgm}^{2}$ |
| Vibration ( $55 . . .2000 \mathrm{~Hz}$ ), max. | $300 \mathrm{~m} / \mathrm{s}^{2}$ |
| Friction torque (at $20^{\circ} \mathrm{C}$ ), max. | 0.01 Nm |
| Starting torque (at $20^{\circ} \mathrm{C}$ ), max. | 0.01 Nm |
| Net weight | 0.3 kg |
| Max. admissible speed |  |
| Electrical | 18000 rpm |
| Mechanical | 12000 rpm |
| Load capacity |  |
| $\mathrm{n}=6000 \mathrm{rpm}$ |  |
| - Axial | 10 N |
| - Radial at shaft end | 20 N |
| $\mathrm{n}>6000 \mathrm{rpm}$ |  |
| - Axial | 40 N |
| - Radial at shaft end | 60 N |
| Shock, max. |  |
| 2 ms | $2000 \mathrm{~m} / \mathrm{s}^{2}$ |
| 6 ms | $1000 \mathrm{~m} / \mathrm{s}^{2}$ |
| Degree of protection |  |
| Without shaft input | IP67 |
| With shaft input | IP64 |

