## **SIEMENS**

## **Data sheet for Incremental encoder**

**MLFB-Ordering data** 

6FX2001-4HA10



Client order no. : Item no. :
Order no. : Consignment no. :
Offer no. : Project :
Remarks :

Electrical data		Mechanical data	
Operating voltage Up	DC 10 30 V	Shaft diameter	6 mm
Max. power consumption withou	t 150 mA	Shaft length	10 mm
		Angular acceleration, max.	100000 rad/s²
Signal level	UH >= 21 V at IH = 20 mA at 24 V; UL <= $2.8$ V at IL = 20 mA at 24 V	Moment of inertia of rotor	0.00000145 kgm²
		Vibration (552000 Hz), max.	300 m/s <sup>2</sup>
Resolution	100 S/R	Friction torque (at 20°C), max.	0.01 Nm
Accuracy	648 rad	Starting torque (at 20°C), max.	0.01 Nm
Sampling frequency, max.	300 kHz	Net weight	0.3 kg
Switching time (10 90 %)	= 200 ns	Max. admissible speed	
	Rise / fall time t+/t- <=	Electrical	180000 rpm
Phase relation signal A to B	90°	Mechanical	12000 rpm
Edge clearance at 300 kHz	0.45 μs	Load capacity	
LED failure monitoring	High impedance driver	n <= 6000 rpm	
Cable length		- Axial	40 N
To the downstream electronics,	300 m	- Radial at shaft end	60 N
		n > 6000 rpm	
Ambient temp in operation		- Axial	10 N
Fixed installation of flange outlet or cable		- Radial at shaft end	20 N
- At Up = 10V 30V	-40 100 °C	Shock, max.	
Flexible cable		2 ms	2000 m/s²
- At Up = 10V 30V	-10 100 °C	6 ms	1000 m/s <sup>2</sup>
Standards		Degree of protection	1000 1113
Compliance with standards	CE, cULus	Without shaft input	IP67
EMC class filter	Tested according to the EMC guidelines 89/336/EEC and the rules of the EMC guidelines (generic standards)	With shaft input	IP64