

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS SINAMICS

6FX2001-5FN13

SINGLE-TURN PROFINET ABSOLUTE ENCODER

Used with the applicable SINAMICS motion feedback systems configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Siemens 6FX2001-5FN13 absolute encoder technical data sheet

MLFB-Ordering data

6FX2001-5FN13



Figure similar

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Electrical data		Mechanical data	
Operating voltage Up	DC 10 ... 30 V	Shaft version	Solid shaft
Max. power consumption	130 ... 400 mA (< 4 W)	Shaft diameter	6 mm
Interface	PROFINET IO with RT / IRT	Shaft length	10 mm
Clock input	2 ports IRT	Angular acceleration, max.	100000 rad/s ²
Data output	2 ports IRT	Moment of inertia of rotor	0.00000301 kgm ²
Short-circuit strength	Yes	Vibration (55...2000 Hz), max.	100 m/s ²
Transmission rate	100 Mbit/s	Friction torque (at 20°C)	<= 0.01 Nm
LED for diagnostics	Yes (green/red/yellow)	Starting torque (at 20°C)	<= 0.01 Nm
Connection type	2 x connector M12, 4-pin for PROFINET / EtherNet/IP Ports, 1 x connector M12, 4-pin for operating voltageRadial	Net weight	0.4 kg
Resolution	13 bit (8192 increments)	Speed max.	
Telegram	According to PNO cncoder profile V4.1 Class1, Class 2, Class 3, Class 4, standard telegrams 81/82/83/84, Siemens telegram 860	With ± 1 bit accuracy	5800 rpm
Code type		Max. permissible speed (mech.)	12000 rpm
Sampling	Gray	Load capacity	
Transmission	binary, PROFINET / EtherNet/IP	n = 6000 rpm	
Cable length up to the subsequent electronics, max.		- Axial	10 N
Up to 12 Mbit/s	100 m	- Radial at shaft end	20 N
		n > 6000 rpm	
		- Axial	40 N
		- Radial at shaft end	110 N
		Shock, max.	
		2 ms	2000 m/s ²
		6 ms	1000 m/s ²
		Degree of protection	
		Without shaft input	IP67
		With shaft input	IP64

MLFB-Ordering data

6FX2001-5FN13



Figure similar

Electrical data		Ambient temperature	
Parameterizability		During operation	-40 ... 85 °C
Preset	Yes	Standards	
Counting direction	Yes	Compliance with standards	CE, cULus
Resolution per revolution	Any 1 ... 8192	EMC class filter	Tested to DIN EN 50081 and EN 50082
Total resolution	Any 1 ... 8192		
Speed signal	Yes		
Limit switch	No		
Clock synchronism	Yes		
Slave-to-slave communication	No		
Accuracy	± 79 " with 8192 increments (± 1/2 LSB)		