

SIEMENS

Product data sheet

6FX2001-5QS12

product brand name

Measuring systems

ABSOLUTE VALUE ENCODER SINGLETURN 13 BIT
WITH SSI,
OPERAT. VOLT. 10-30 V STRIP FLANGE SHAFT
10MM RADIAL FLANGE SOCKET



Fig. similar

Measuring procedure / for position feedback	Absolute
Operating principle of absolute encoder	Singleturn
Operating voltage VP at the encoder / min.	10 V
Operating voltage VP at the encoder / max.	30 V
Consumed current / typical	160 mA
Design of the interface	SSI
Clock input	Differential line receiver according to EIA Standard RS 485
Data output	Differential line driver according to EIA Standard RS 485
Short-circuit strength	Yes
Clock frequency	100 kHz ... 1 MHz
Speed	
• electrical	

• with ± 1 bit accuracy / max. • with ± 100 bit accuracy / max. • mechanical / max.	5000 1/min 10000 1/min 12000 1/min
Length of cable to subsequent electronics • up to 1 MHz, max. • up to 100 kHz, max. • up to 300 kHz, max.	50 m 400 m 100 m
Digital resolution • Note	13 bit (8192 increments)
Telegram • note	13 bit Without parity
Code type • Sampling • Transfer	Gray Gray, fir-tree format
Parameterization capability • Preset • Preset • Counting direction	Yes Set to zero Yes
Accuracy • note	79 " (with 8192 increments)
Friction torque at 20°C / max.	0.01 N·m
Starting torque at 20 °C / max.	0.01 N·m
Shaft load capacity • at $n > 6000$ rpms • axially, max. • radially on shaft end, max. • at $n \leq 6000$ rpms • axially, max. • radially on shaft end, max.	10 N 20 N 40 N 60 N
Length / of rotary encoder shaft	20 mm
Angular acceleration / maximum	100000 rad/s ²
Moment of inertia of rotor • Solid shaft	0.00000145 kg·m ²
Vibration 55 to 2000 Hz according to DIN IEC 60068-2-6 / max.	300 m/s ²

Shock according to EN 60068-2-27	
• 2ms, max.	2000 m/s ²
• 6ms, max.	1000 m/s ²
Protection class IP	
• without shaft input	IP67
• with shaft input	IP64
Ambient temperature	
• during operation	-40 ... +85 °C
Net weight	0.35 kg
EMC	Tested to DIN EN 50081 and EN 50082
Certificate of suitability	CE, cULus
Design of the electrical connection	Flange socket
Direction of connection opening	Radial
Flange type	Clamping flange
Rotary encoder shaft version	Solid shaft

Further information

[Information and download center for Industry Automation and Drives](#)

[Technical documentation \(Motion Control\)](#)

[Industry Mall \(online ordering system\)](#)

[Service & Support \(FAQs, manuals, operating instructions, certificates, characteristics, ...\)](#)

last change:

Dec 1, 2014