SIEMENS

Product data sheet 6FX2001-4QC50

Fig. similar

INCREM. ENCODER WITH HTL, 2500 P/R, OPERATING VOLTAGE 10-30V CLAMP FLANGE SHAFT 10 MM RADIAL FLANGE CONNECTOR

product brand name	Measuring systems
Design of the interface	HTL
Measuring method / for position feedback	Incremental
Operating voltage VP at the encoder / min.	10 V
Operating voltage VP at the encoder / max.	30 V
Scanning frequency	
• maximum	300 kHz
Current consumption without load	
• max.	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
Outputs protected against short circuit to 0 V	Yes
Switching time (10 … 90 %) for 1 m cable and recommended input circuit	
• note	Rise / fall time t+/t- <=

• max.	200 ns
Phase position signal A to B	90 °
Edge spacing at	
• 300 kHz / min.	0.45 µs
Length of cable to subsequent electronics	
• max.	300 m
LED failure monitoring	High impedance driver
Resolution	
• max.	2500
Precision	26 "
Speed / electric	
• max.	7200 1/min
Speed / mechanical / max.	12000 1/min
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.	10 N
• radially on shaft end, max.	20 N
• at n ≤ 6000 rpms	
• axially, max.	40 N
• radially on shaft end, max.	60 N
External diameter / of rotary encoder shaft	10 mm
Length of encoder shaft	20 mm
Angular acceleration / maximum	100000 rad/s²
Moment of inertia of the rotor	0.00000145 kg·m²
Vibration 55 to 2000 Hz according to DIN IEC 60068-2-6 / max.	300 m/s²
Shock according to EN 60068-2-27	
• 2ms, max.	2000 m/s²
• 6ms, max.	1000 m/s²
IP degree of protection	
• without shaft input	IP67
• with shaft input	IP64

Ambient temperature / during operation	
• with flange socket or fixed installation cable, at	
• Vp = 10 … 30 V, min.	-40 °C
• Vp = 10 … 30 V, max.	100 °C
• with flexible installation cable, at	
• Vp = 10 ... 30 V, min.	-10 °C
• Vp = 10 ... 30 V, max.	100 °C
Weight, approx.	0.3 kg
EMC	Tested according to the EMC guidelines 89/336/EEC and the rules of the EMC guidelines (generic standards)
Approval, accord. to	CE, cULus
Flange type	Clamping flange
Direction of connection opening	Radial
Design of the electrical connection	Flange socket

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: Apr 14, 2014