

Data sheet

6FX2001-4SA50

INCREM. ENCODER 6FX2001-4SA50 WITH HTL, 500 P/R,
OPERATING VOLTAGE 10-30V CLAMP FLANGE SHAFT 10 MM
AXIAL FLANGE CONNECTOR



Figure similar

product brand name	Measuring systems
Design of the interface	HTL
Measuring procedure / for position feedback	Incremental
Operating voltage / of the rotary encoder / at DC	10 ... 30
Scanning frequency / maximum	300 kHz
Consumed current / without load / maximum	150 mA
Standard for interfaces	UH $\geq$ 21 V at IH = 20 mA at 24 V; UL $\leq$ 2,8 V at IL = 20 mA at 24 V
Property of the output / Short-circuit proof against 0 V	Yes
Pulse duration / at 1 m connecting cable / with recommended input circuit / maximum / Note	Rise / fall time $t_{+/-} \leq$
Pulse duration / at 1 m connecting cable / with recommended input circuit / maximum	200 ns
Phase displacement angle / between signal A and signal B	90°
Edge interval / between signal A and signal B • with scanning frequency 300 kHz / minimum	0.45 μ s
Wire length	

• maximum	300 m
Failure monitoring type / for LED	High impedance driver
Incremental resolution	
• per revolution / maximum	500
Measurement deviation angle of rotation / of the incremental encoder	130"
Speed	
• with electrical rotation transmission / maximum	36 000 1/min
• maximum	12 000 1/min
Friction torque / at 20 °C / maximum	0.01 N·m
Starting torque / at 20 °C / maximum	0.01 N·m
Axial force / at shaft	
• with $n \leq 6000$ rpm / maximum	40 N
• with $n > 6000$ rpm / maximum	10 N
Cantilever force / at shaft extension	
• with $n \leq 6000$ rpm / maximum	60 N
• with $n > 6000$ rpm / maximum	20 N
Outer diameter / of rotary encoder shaft	10 mm
Length / of rotary encoder shaft	20 mm
Angular acceleration / maximum	100 000 rad/s ²
Moment of inertia / of rotor	0.0000015 kg·m ²
Vibrational acceleration / at 55 Hz ... 2 kHz / acc. to IEC 60068-2-6	300 m/s ²
Shock acceleration	
• limited to 2 ms / acc. to IEC 60068-2-27	2 000 m/s ²
• limited to 6 ms / acc. to IEC 60068-2-27	1 000 m/s ²
Protection class IP	
• without shaft input	IP67
• with shaft input	IP64
Ambient temperature	
• with supply voltage 10 V ... 30 V / with installed cable / during operation	-40 ... +100
• with supply voltage 10 V ... 30 V / with moving cable / during operation	-10 ... +100
Net weight	0.3 kg
EMI immunity	Tested according to the EMC guidelines 89/336/EEC and the rules of the EMC guidelines (generic standards)
Certificate of suitability	CE, cULus
Flange type	Clamping flange
Direction of connection opening	Axial
Type of electrical connection	Flange socket

Further information

Information und Download Center

https://www.automation.siemens.com/mcms/infocenter/content/en/Pages/order_form.aspx

Technical documentation

<http://w3.siemens.com/mcms/mc-solutions/en/motion-control/support/technical-documentation/Pages/technical-documentation.aspx>

Industry Mall

<https://eb.automation.siemens.com/mall/en/WW/Cataog/Product/6FX2001-4SA50/all>

Industry Online Support

<http://support.automation.siemens.com/WW/view/en/6FX2001-4SA50/all>

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