MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS

6FX2001-2EF00

TTL/RS422 INCREMENTAL ROTARY ENCODER

Used with the applicable Siemens measuring systems configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Siemens technical documentation for 6FX2001-2EF00

SIEMENS

Data sheet 6FX2001-2EF00



Figure similar

product brand name	Measuring systems
Design of the interface	TTL / RS 422
Measuring procedure / for position feedback	Incremental
Operating voltage / of the rotary encoder / for DC	5 V
Relative symmetrical tolerance / of the operating voltage / of the rotary encoder / for DC	10 %
Scanning frequency / maximum	300 kHz
Consumed current / without load / maximum	150 mA
Standard for interfaces	TTL (RS 422)
Property of the output / Short-circuit proof against 0 V	Yes
Pulse duration / with 1 m connecting cable / with recommended input circuit / maximum / Note	Rise / fall time t+/t- <=
Pulse duration / with 1 m connecting cable / with recommended input circuit / maximum	50 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 µs
Cable length	
• maximum	100 m
Failure monitoring type / for LED	High impedance driver
Incremental resolution	
• per revolution / maximum	5 000
Measurement deviation angle of rotation / of the incremental encoder	13"
Speed	

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• with electrical rotation transmission / maximum	3 600 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 ≤ 6000 rpm / maximum	40 N
• with n > 6000 rpm / maximum	10 N
Cantilever force / at shaft extension	
• with n ≤ 6000 rpm / maximum	60 N
• with n > 6000 rpm / maximum	20 N
Outer diameter / of rotary encoder shaft	6 mm
Length / of rotary encoder shaft	10 mm
Angular acceleration / maximum	100 000 rad/s²
Moment of inertia / of rotor	0.0000015 kg·m²
Resistance against vibration / at 55 Hz ... 2 kHz / acc. to IEC 60068-2-6	300 m/s²
Shock acceleration	
• limited to 2 ms / acc. to IEC 60068-2-27	2 000 m/s²
• limited to 6 ms / acc. to IEC 60068-2-27	1 000 m/s²
Protection class IP	
• without shaft input	IP67
• with shaft input	IP64
Ambient temperature	
• with supply voltage 5 V ± 10% / with installed cable / during operation	-40 ... +100
• with supply voltage 5 V ± 10% / 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	Synchro flange
Direction of connection opening	Radial
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/6FX20012EF00/all

Industry Online Support
http://support.automation.siemens.com/WW/view/en/6FX20012EF00/all

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