

INCREM. ENCODER DOUBLE TRACK ENCODER 9000/1024
PULSES/REV WITH RS422 SHAFT 6 MM; 2 AXIAL CABLE, 1M,
WITH CONNECTOR



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	5 %
Scanning frequency	160 kHz ... 1 MHz
Consumed current / without load / maximum	150 mA; Per track
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 $t_{+/-} \leq$
Pulse duration / with 1 m connecting cable / with recommended input circuit / maximum	100 ns
Phase displacement angle / between signal A and signal B	90°
Edge interval / between signal A and signal B <ul style="list-style-type: none"> • with scanning frequency 1 MHz / minimum • with scanning frequency 160 kHz / minimum 	0.125 μ s; Track 2 0.8 μ s; Track 1
Cable length <ul style="list-style-type: none"> • at 0 Hz ... 500 kHz / maximum • at 0 Hz ... 1 MHz / maximum 	100 m 50 m
Incremental resolution <ul style="list-style-type: none"> • for track 1 / per revolution / maximum • for track 2 / per revolution / maximum 	1 024 9 000

Measurement deviation angle of rotation / of the incremental encoder	
• for track 1	63"
• for track 2	12"
Speed	
• for track 1 / with electrical rotation transmission / maximum	9 000 1/min
• for track 2 / with electrical rotation transmission / maximum	6 500 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	10 N
Cantilever force / at shaft extension	
• with $n \leq 6000$ rpm / maximum	20 N
Outer diameter / of rotary encoder shaft	6 mm
Length / of rotary encoder shaft	15 mm
Angular acceleration / maximum	100 000 rad/s ²
Moment of inertia / of rotor	0.000002 kg·m ²
Resistance against vibration / at 55 Hz ... 2 kHz / acc. to IEC 60068-2-6	100 m/s ²
Shock acceleration	
• 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 5 V \pm 10% / with installed cable / during operation	-10 ... +70
• with supply voltage 5 V \pm 10% / with moving cable / during operation	-10 ... +70
Net weight	0.7 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	Axial
Type of electrical connection	cable 1m with connector

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/mcsmc-solutions/en/motion-control/support/technical-documentation/Pages/technical-documentation.aspx>

Industry Mall

<https://eb.automation.siemens.com/mall/en/WW/Cataog/Product/6FX20012UK00/all>

Industry Online Support

<http://support.automation.siemens.com/WW/view/en/6FX20012UK00/all>

last modified:

09.03.2015