



Figure similar

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|---|-------------------------------------|
| 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 $t_{+}/t_{-} \leq$ |
| 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 <ul style="list-style-type: none"> • with scanning frequency 300 kHz / minimum | 0.45 μ s |
| Cable length <ul style="list-style-type: none"> • maximum | 100 m |
| Failure monitoring type / for LED | High impedance driver |
| Incremental resolution <ul style="list-style-type: none"> • per revolution / maximum | 1 250 |
| Measurement deviation angle of rotation / of the incremental encoder | 52" |
| Speed | |

| | |
|---|---|
| <ul style="list-style-type: none"> • with electrical rotation transmission / maximum • maximum | 14 400 1/min 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 <ul style="list-style-type: none"> • with n ≤ 6000 rpm / maximum • with n > 6000 rpm / maximum | 40 N 10 N |
| Cantilever force / at shaft extension <ul style="list-style-type: none"> • with n ≤ 6000 rpm / maximum • with n > 6000 rpm / maximum | 60 N 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 |
| Resistance against vibration / at 55 Hz ... 2 kHz / acc. to IEC 60068-2-6 | 300 m/s ² |
| Shock acceleration <ul style="list-style-type: none"> • limited to 2 ms / acc. to IEC 60068-2-27 • limited to 6 ms / acc. to IEC 60068-2-27 | 2 000 m/s ² 1 000 m/s ² |
| Protection class IP <ul style="list-style-type: none"> • without shaft input • with shaft input | IP67 IP64 |
| Ambient temperature <ul style="list-style-type: none"> • with supply voltage 5 V ± 10% / with installed cable / during operation • with supply voltage 5 V ± 10% / with moving cable / during operation | -40 ... +100 -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/Catagog/Product/6FX20012RB25/all>

Industry Online Support

<http://support.automation.siemens.com/WW/view/en/6FX20012RB25/all>

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