

INCREM. ENCODER WITH RS 422 (TTL), 2500 P/R, SYNCHRO-FLANGE SHAFT 6MM OPERATING VOLTAGE: 5 V UNIVERSAL CABLE OUTLET AXIAL / RADIAL 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  | 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 <ul style="list-style-type: none"> <li>• with scanning frequency 300 kHz / minimum</li> </ul> | 0.45 µs                   |
| Cable length <ul style="list-style-type: none"> <li>• maximum</li> </ul>  | 100 m                     |
| Failure monitoring type / for LED   | High impedance driver     |
| Incremental resolution <ul style="list-style-type: none"> <li>• per revolution / maximum</li> </ul>   | 2 500                     |
| Measurement deviation angle of rotation / of the incremental encoder  | 26"                       |
| Speed   |                           |

|   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• with electrical rotation transmission / maximum</li> <li>• maximum</li> </ul>  | 7 200 1/min<br>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"> <li>• with n ≤ 6000 rpm / maximum</li> <li>• with n &gt; 6000 rpm / maximum</li> </ul>  | 40 N<br>10 N  |
| Cantilever force / at shaft extension <ul style="list-style-type: none"> <li>• with n ≤ 6000 rpm / maximum</li> <li>• with n &gt; 6000 rpm / maximum</li> </ul>   | 60 N<br>20 N  |
| Outer diameter / of rotary encoder shaft  | 6 mm  |
| Length / of rotary encoder shaft  | 10 mm   |
| Angular acceleration / maximum  | 100 000 rad/s <sup>2</sup>  |
| Moment of inertia / of rotor  | 0.0000015 kg·m <sup>2</sup>   |
| Resistance against vibration / at 55 Hz ... 2 kHz / acc. to IEC 60068-2-6   | 300 m/s <sup>2</sup>  |
| Shock acceleration <ul style="list-style-type: none"> <li>• limited to 2 ms / acc. to IEC 60068-2-27</li> <li>• limited to 6 ms / acc. to IEC 60068-2-27</li> </ul>   | 2 000 m/s <sup>2</sup><br>1 000 m/s <sup>2</sup>  |
| Protection class IP <ul style="list-style-type: none"> <li>• without shaft input</li> <li>• with shaft input</li> </ul>   | IP67<br>IP64  |
| Ambient temperature <ul style="list-style-type: none"> <li>• with supply voltage 5 V ± 10% / with installed cable / during operation</li> <li>• with supply voltage 5 V ± 10% / with moving cable / during operation</li> </ul> | -40 ... +100<br>-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   | Universal   |
| 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](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/6FX20012CC50/all>

##### Industry Online Support

<http://support.automation.siemens.com/WW/view/en/6FX20012CC50/all>

last modified:

09.03.2015