

PRODUCT DATASHEET

ES-EN-C13-S026-B10-TH-F

Industrial Sensing Component

Hollow Magnetic Encoders | 20 mm Ultra-Compact 24-Bit Hollow Magnetic Encoder Series

Product Overview

Industrial Sensing Component with accuracy 0.01°, axis count 1 and battery Mode Current 6 µA.

Key Specifications

| PARAMETER            | VALUE                   | UNIT |
|----------------------|-------------------------|------|
| Accuracy             | 0.01                    | °    |
| Axis count           | 1                       |      |
| Battery Mode Current | 6                       | µA   |
| Battery Supply       | 2.7 to +3.6             | V    |
| Bore diameter        | 10                      | mm   |
| Connection           | Wire-to-Board Connector |      |
| Connector Model      | SM06B-XSRS-ETB          |      |
| Current Consumption  | 100                     | mA   |
| Installation Method  | Axial hollow            |      |

## Technical Specifications

| PARAMETER                   | SPECIFICATION | UNIT          |
|-----------------------------|---------------|---------------|
| PERFORMANCE                 |               |               |
| Accuracy                    | 0.01          | °             |
| Documented speed threshold  | 8000          | rpm           |
| Maximum Rotation Speed      | 8000          | rpm           |
| Update Frequency            | 50            | kHz           |
| Repeatable Accuracy         | 0 to $\pm 1$  | bit           |
| Angle Resolution            | 24            | bit           |
| ELECTRICAL                  |               |               |
| Battery Mode Current        | 6             | $\mu\text{A}$ |
| Current Consumption         | 100           | mA            |
| ESD Resistance, CDM Maximum | 1             | kV            |
| ESD Resistance, HBM Maximum | 2             | kV            |

# Technical Specifications

| PARAMETER                   | SPECIFICATION                                | UNIT |
|-----------------------------|----------------------------------------------|------|
| ELECTRICAL                  |                                              |      |
| Battery Supply              | 2.7 to +3.6                                  | V    |
| Connector Model             | SM06B-XSRS-ETB                               |      |
| Startup Time                | 15                                           | ms   |
| Connection                  | Wire-to-Board Connector                      |      |
| Supported Output Interfaces | SSI; BiSS-C; RS485; RS422; T485; BUS; PERIOD |      |
| Power Supply                | 4.5 to +5.5                                  | V    |
| MECHANICAL                  |                                              |      |
| Bore diameter               | 10                                           | mm   |
| Mechanical profile          | Ultra-compact                                |      |
| Rotor retention             | Threaded                                     |      |
| Stator installation         | Front                                        |      |

## Technical Specifications

| PARAMETER                      | SPECIFICATION                     | UNIT     |
|--------------------------------|-----------------------------------|----------|
| MECHANICAL                     |                                   |          |
| Stator outside diameter        | 20                                | mm       |
| Series Size                    | 10                                | mm class |
| Stator Mounting Pitch Diameter | 16.6                              | mm       |
| Stator Material                | Aluminum alloy                    |          |
| Rotor Material                 | Stainless steel                   |          |
| Stator Fit Outer Diameter      | 20                                | mm       |
| ENVIRONMENTAL                  |                                   |          |
| Operating Temperature Options  | -40 to 85; -40 to 105; -40 to 125 | °C       |
| CONFIGURATION                  |                                   |          |
| Installation Method            | Axial hollow                      |          |
| Encoder Type                   | Absolute Magnetic Encoder         |          |
| ADDITIONAL SPECIFICATIONS      |                                   |          |
| Axis count                     | 1                                 |          |

## Dimensional & Integration Overview

### Mechanical Overview

| PARAMETER               | VALUE         | UNIT     |
|-------------------------|---------------|----------|
| Bore diameter           | 10            | mm       |
| Mechanical profile      | Ultra-compact |          |
| Rotor retention         | Threaded      |          |
| Stator installation     | Front         |          |
| Stator outside diameter | 20            | mm       |
| Series Size             | 10            | mm class |

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**01** Specifications are subject to change without notice. Verify the current product configuration before final design release.

**02** 2D drawings, CAD files and integration documentation are controlled documents and are supplied separately on request.