

## PRODUCT DATASHEET

# ES-EN-C13-S017-B33

Industrial Sensing Component

Hollow Magnetic Encoders | 52 mm Compact-Profile Hollow Magnetic Encoder Series

## Product Overview

Industrial Sensing Component with accuracy 0.05°, axis count 1 and battery Mode Current 35 µA.

## Key Specifications

| PARAMETER                | VALUE                     | UNIT |
|--------------------------|---------------------------|------|
| Accuracy                 | 0.05                      | °    |
| Axis count               | 1                         |      |
| Battery Mode Current     | 35                        | µA   |
| Battery Supply           | 2.7 to +3.6               | V    |
| Bore diameter            | 33                        | mm   |
| Current Consumption      | 60                        | mA   |
| Installation Method      | Axial hollow              |      |
| Encoder Type             | Absolute Magnetic Encoder |      |
| FPC Connection Available | Yes / 1                   |      |

## Technical Specifications

| PARAMETER                  | SPECIFICATION | UNIT       |
|----------------------------|---------------|------------|
| PERFORMANCE                |               |            |
| Accuracy                   | 0.05          | °          |
| Documented speed threshold | 20000         | rpm        |
| Maximum Rotation Speed     | 20000         | rpm        |
| Temperature Drift          | 0.01          | ° per 3 °C |
| Update Frequency           | 27            | kHz        |
| Angle Resolution Options   | 16 or 17      | bit        |
| Repeatable Accuracy        | 0 to ±1       | bit        |
| ELECTRICAL                 |               |            |
| Battery Mode Current       | 35            | µA         |
| Current Consumption        | 60            | mA         |
| FPC Connection Available   | Yes / 1       |            |

## Technical Specifications

| PARAMETER                          | SPECIFICATION                                | UNIT     |
|------------------------------------|----------------------------------------------|----------|
| ELECTRICAL                         |                                              |          |
| Wire-to-Board Connection Available | No / false                                   |          |
| Battery Supply                     | 2.7 to +3.6                                  | V        |
| Startup Time                       | 15                                           | ms       |
| Supported Output Interfaces        | SSI; BiSS-C; RS485; RS422; T485; BUS; PERIOD |          |
| Power Supply                       | 4.5 to +5.5                                  | V        |
| MECHANICAL                         |                                              |          |
| Bore diameter                      | 33                                           | mm       |
| Mechanical profile                 | Compact Profile                              |          |
| Stator outside diameter            | 52                                           | mm       |
| Series Size                        | 35                                           | mm class |
| Rotor Inner Diameter               | 33                                           | mm       |

## Technical Specifications

| PARAMETER                      | SPECIFICATION                     | UNIT |
|--------------------------------|-----------------------------------|------|
| MECHANICAL                     |                                   |      |
| Stator Mounting Pitch Diameter | 48                                | mm   |
| Overall Thickness              | 7                                 | mm   |
| Stator Shield Outer Diameter   | 45                                | mm   |
| Mechanical Configuration       | Compact                           |      |
| Stator Outer Diameter          | 52                                | 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                  | 33              | mm       |
| Mechanical profile             | Compact Profile |          |
| Stator outside diameter        | 52              | mm       |
| Series Size                    | 35              | mm class |
| Rotor Inner Diameter           | 33              | mm       |
| Stator Mounting Pitch Diameter | 48              | mm       |

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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.