

PRODUCT DATASHEET

ES-SN-C00-S005-V001

Industrial Sensing Component

Multidimensional Tactile Sensors | Elite Multidimensional Tactile Sensor Series

Product Overview

Industrial Sensing Component with measurement Accuracy 1%FS, operating Temperature 0-50 °C and dimensions 18 × 13 × 10 mm.

Key Specifications

| PARAMETER                       | VALUE                          | UNIT    |
|---------------------------------|--------------------------------|---------|
| Measurement Accuracy            | 1                              | %FS     |
| Operating Temperature           | 0-50                           | °C      |
| Dimensions                      | 18 × 13 × 10                   | mm      |
| Stray Magnetic Field Resistance | Chip-level magnetic resistance |         |
| Flame Retardancy Rating         | V-0 (UL94)                     |         |
| Force Signals in Array          | 31                             | signals |
| Ingress Protection Rating       | IP68                           |         |
| Maximum Operating Current       | 150                            | mA      |
| Maximum Output Frequency        | 1,000                          | Hz      |

## Technical Specifications

| PARAMETER                       | SPECIFICATION                                                       | UNIT     |
|---------------------------------|---------------------------------------------------------------------|----------|
| PERFORMANCE                     |                                                                     |          |
| Measurement Repeatability       | <0.5                                                                | %FS      |
| Spatial Resolution              | 0.1                                                                 | mm       |
| Minimum Detectable Force        | 0.01                                                                | N        |
| ELECTRICAL                      |                                                                     |          |
| Maximum Operating Current       | 150                                                                 | mA       |
| Force Signals in Array          | 31                                                                  | signals  |
| Measurement Sampling Frequency  | 1,000,000                                                           | Hz       |
| Measurement Output              | Triaxial force array, triaxial resultant force, and triaxial torque |          |
| Maximum Output Frequency        | 1,000                                                               | Hz       |
| Maximum Tactile Signal Channels | Up to 717                                                           | channels |
| Torque Sensing                  | Any-point rotation-axis sensing supported                           |          |
| MECHANICAL                      |                                                                     |          |
| Surface Coverage                | Front face and side curved edges                                    |          |
| INTERFACES                      |                                                                     |          |
| Measurement Accuracy            | 1                                                                   | %FS      |

## Technical Specifications

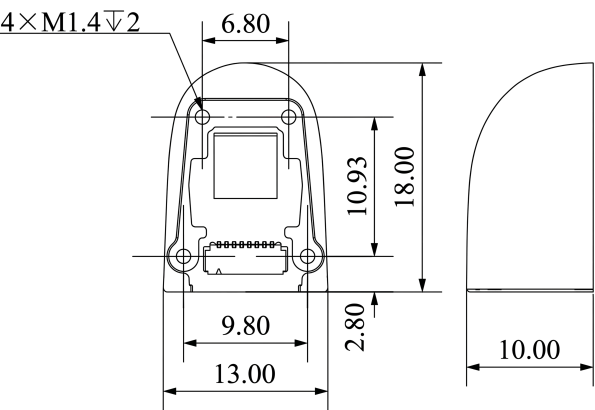
| PARAMETER                       | SPECIFICATION                  | UNIT   |
|---------------------------------|--------------------------------|--------|
| ENVIRONMENTAL                   |                                |        |
| Operating Temperature           | 0-50                           | °C     |
| Overload Temperature            | -20-120                        | °C     |
| Stray Magnetic Field Resistance | Chip-level magnetic resistance |        |
| Flame Retardancy Rating         | V-0 (UL94)                     |        |
| SAFETY                          |                                |        |
| Ingress Protection Rating       | IP68                           |        |
| RELIABILITY                     |                                |        |
| Mechanical Cycle Life           | >10 million measurement        | cycles |
| Shock Overload                  | 300                            | %      |
| Safe Load                       | 200                            | %      |
| CONFIGURATION                   |                                |        |
| Dimensions                      | 18 × 13 × 10                   | mm     |
| ADDITIONAL SPECIFICATIONS       |                                |        |
| Normal Force Range (Fz)         | 0-25                           | N      |
| Tangential Force Range (Fxy)    | ±10                            | N      |

# Dimensional & Integration Overview

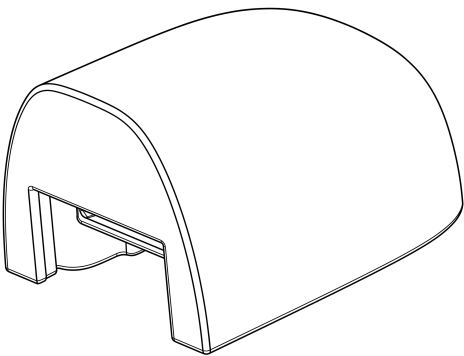
## Mechanical Overview

| PARAMETER        | VALUE                            | UNIT |
|------------------|----------------------------------|------|
| Surface Coverage | Front face and side curved edges |      |
| Dimensions       | 18 × 13 × 10                     | mm   |

## Dimensional Drawings



Mechanical View 1



Mechanical View 2

## 2D Drawing Dimensions & Callouts

| VIEW              | FIELD                          | VALUE                             |
|-------------------|--------------------------------|-----------------------------------|
| Mechanical View 1 | Mounting hole specification    | 4× M1.4 threaded holes, depth 2mm |
|                   | Mounting hole horizontal pitch | 6.80 mm                           |
|                   | Total connector height         | 18.00 mm                          |
|                   | Bottom mounting base height    | 2.80 mm                           |
|                   | Internal opening width         | 9.80 mm                           |
|                   | Cover width                    | 10.00 mm                          |
|                   | Bottom total width             | 13.00 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.