

# Technical Data Sheet

## • Force Sensors



FSE1001

### Description

Variense FSE1001 is a unique uni-axial force sensor. Force sensors are robust mechanical devices that exhibit a variation in signal when force is exerted on the surface of the sensor. This sensory information can then be used to improve the user's control of electronic devices in industrial and robotics applications, such as automotive electronics and medical systems.

The new digital FSE1001 is a round sensor with a diameter of 60 mm, that can measure one component of force (tension and compression). It is based on capacitive technology, which is highly adaptive to various applications. Intelligent functionality, maximum sensitivity and ultimate compactness ensure that the sensor will fit your system properly. Custom sensors can be manufactured in sizes ranging from 30 mm to over 600 mm. You can also customize the protocols of communication to suit your needs.

### Features and Benefits

- Cost effective
- Ultra compact at just 60 mm in diameter
- Robust to surrounding noise
- User friendly and easy to integrate

### Potential Applications

#### Industrial

- Sense load and compression
- Detect obstacles and impact forces

#### Robotics

- Control force exertion
- Detect object weight while grasping

#### Rehabilitation

- Measure athletic performance
- Orthopedic research

#### Automotive

- Measure forces during crash testing or wind tunnel testing

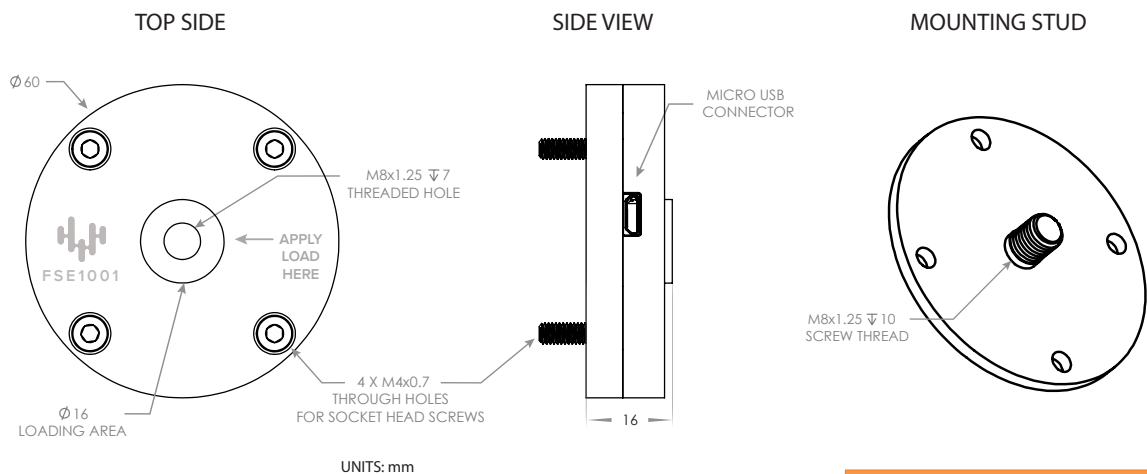
### Application Information

- Capacitive technology provides enhanced sensitivity without compromising signal integrity, resulting in low system noise and reducing measurement errors.
- USB interface minimizes space (plug and play). No conversion box needed.
- Return logged serial data with timestamp feature.
- Intuitive and flexible user interface provides easy-to-use display and calculation tools.

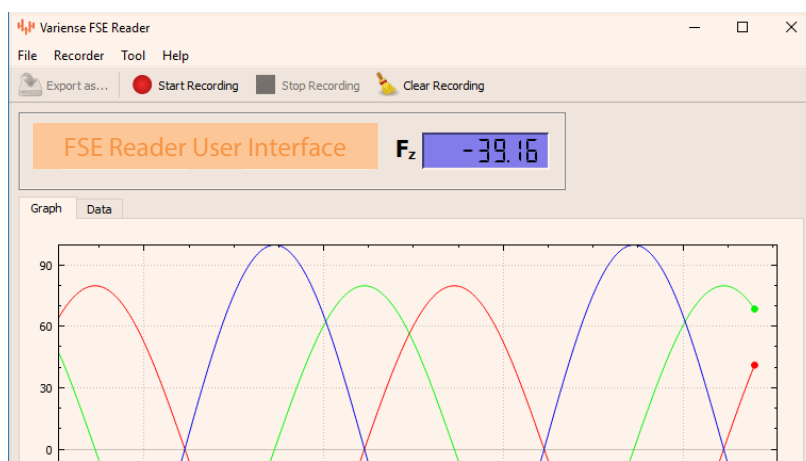
Feature	Condition	Value	Unit	Note
<b>Mechanical specifications</b>				
Diameter	Outer	60	mm	
Thickness		15	mm	
Weight		80	g	
Overload capacity	Fz	200	%	
<b>Signal specifications</b>				
Sensing range	+/- Fz	up to 1000	N	Tension & compression
Signal noise		< 1.2	%FS	
Drift		< 1	%FS	
Operating temperature		-15°C to 80°C		
<b>Electrical specifications</b>				
Supply volatge	DC	2.8-5.3	V	
Communication interface				USB
Acquisition Rate		200	Hz	low noise

Orders				
Custom calibration	250 N	500 N	750 N	1000 N
Reference	FSE251	FSE501	FSE751	FSE1001

### Sensor Mounting Dimensions



Orders	
Mounting stud	Tension mode
Reference	FSE1001-s



### CONTACT

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