

**Sensor Model: 160M50A3**  
**Body Load Rating: 250L1600**

**I. Overload Capabilities:**

All overload values are for no damage, no re-calibration required.

- Single Axis Loading:

Axis	Maximum Load (lb, in-lb)
F <sub>x</sub>	1,250 lb
F <sub>y</sub>	1,250 lb
F <sub>z</sub>	5,450 lb
M <sub>x</sub>	8,200 in-lb
M <sub>y</sub>	7,100 in-lb
M <sub>z</sub>	5,750 in-lb

- Combined Loading:  
**Both** equations must be satisfied at all times.

$$(1) \quad F_x/1250 \quad +F_y/1250 \quad +F_z/5450 \quad +M_x/8200 \quad +M_y/14200 \quad +M_z/5750 \quad \leq 1$$

$$(2) \quad F_x/1900 \quad +F_y/1550 \quad +F_z/5450 \quad +M_y/7100 \quad +M_z/5750 \quad \leq 1$$

**II. Approximate Stiffnesses (+/-20%):**

Axis	Stiffness
F <sub>x</sub>	330e3 lb/in
F <sub>y</sub>	330e3 lb/in
F <sub>z</sub>	2.67e6 lb/in
M <sub>x</sub>	9.10e6 in-lb/rad
M <sub>y</sub>	9.10e6 in-lb/rad
M <sub>z</sub>	3.05e6 in-lb/rad

**III. Notes:**

- When subjected to the above static loads, this sensor will not be damaged. However due to possible limitations on the ability of the mounting bolts to maintain frictional lock-up between the sensor and the surfaces to which it is mounted, sensor readings may exhibit a temporary shift in zero point and/or an increase in hysteresis.
- In determining safe dynamic or shock loads the total energy imparted into the sensor must be considered. Traveling stress waves may potentially combine to produce a maximum stress above the static maximum.