

**Sensor Model: 45E15S4**  
**Body Load Rating: 650L3000**

**I. Overload Capabilities:**

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

- Single Axis Loading:

Axis	Full Scale Load (lb, in-lb)	Max. Safe Load (lb, in-lb)
F <sub>x</sub>	650 lb	4,100 lb
F <sub>y</sub>	650 lb	4,100 lb
F <sub>z</sub>	1,300 lb	12,500 lb
M <sub>x</sub>	3,000 in-lb	11,600 in-lb
M <sub>y</sub>	3,000 in-lb	11,600 in-lb
M <sub>z</sub>	3,000 in-lb	9,900 in-lb

- Combined Loading:

Both equations must be satisfied at all times.

$$F_x / 4400 + F_y / 4100 + F_z / 12500 + M_x / 11600 + M_z / 9900 \leq 1$$

$$F_x / 4100 + F_y / 4400 + F_z / 12500 + M_y / 11600 + M_z / 9900 \leq 1$$

**II. Approximate Stiffnesses:**

Axis	Stiffness
F <sub>x,y</sub>	0.98e6 lb/in
F <sub>z</sub>	7.6e6 lb/in
M <sub>x,y</sub>	13.0e6 in-lb/rad
M <sub>z</sub>	4.0e6 in-lb/rad

**III. Notes:**

- When subjected to the above static loads, this sensor should not be damaged. However due to possible limitations on the ability of the mounting bolts to maintain frictional lock-up between the sensor and 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.