

**Sensor Model: 45E20S4**  
**Body Load Rating: 1300L6000**

**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>	1,300 lb	7,600 lb
F <sub>y</sub>	1,300 lb	7,600 lb
F <sub>z</sub>	2,600 lb	24,100 lb
M <sub>x</sub>	6,000 in-lb	20,700 in-lb
M <sub>y</sub>	6,000 in-lb	20,700 in-lb
M <sub>z</sub>	6,000 in-lb	17,000 in-lb

- Combined Loading:

Both equations must be satisfied at all times.

$$F_x / 7850 + F_y / 7600 + F_z / 24100 + M_x / 20700 + M_z / 17000 \leq 1$$

$$F_x / 7600 + F_y / 7850 + F_z / 24100 + M_y / 20700 + M_z / 17000 \leq 1$$

**II. Approximate Stiffnesses:**

Axis	Stiffness
F <sub>x,y</sub>	1.6e6 lb/in
F <sub>z</sub>	12.0e6 lb/in
M <sub>x,y</sub>	17.8e6 in-lb/rad
M <sub>z</sub>	6.0e6 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.