Sensor Model: Mechanical Load Rating:	30E12A4 10 lb	30E12A4 25 lb	30E12A4 50 lb
Diameter (in)	3.0	3.0	3.0
Thickness (in)	1.25	1.25	1.25
Material	AL 2024	AL 2024	AL 2024
Weight, approximate (lb)	0.62	0.62	0.62
Nominal Accuracy, all axes (% measuring range)	±0.25	±0.25	±0.25
Operating Temp. Range, non-condensing (°F)	-40 to +150	-40 to +150	-40 to +150
F_x, F_y			
Standard Measurement Range (lb)	±10	±25	±50
Digital Resolution (lb)	0.0013	0.0031	0.0063
Stiffness (lb/in)	0.012e6	0.030e6	0.051e6
Single-axis Overload (lb)	95	210	330
Multi-axis Overload Coefficient, a (lb)	95	210	330
Multi-axis Overload Coefficient, b (lb)	100	270	490
F_z			
Standard Measurement Range (lb)	±20	±50	±100
Digital Resolution (lb)	0.0025	0.0063	0.013
Stiffness (lb/in)	0.12e6	0.30e6	0.55e6
Single-axis Overload (lb)	285	700	1200
Multi-axis Overload Coefficient, c (lb)	285	700	1200
M_x, M_y			
Standard Measurement Range (in-lb)	±30	±75	±150
Digital Resolution (in-lb)	0.0038	0.0094	0.019
Stiffness (in-lb/rad)	0.089e6	0.22e6	0.41e6
Single-axis Overload (in-lb)	175	430	740
Multi-axis Overload Coefficient, d (in-lb)	175	430	740
M_z			
Standard Measurement Range (in-lb)	±30	±75	±150
Digital Resolution (in-lb)	0.0038	0.0094	0.019
Stiffness (in-lb/rad)	0.019e6	0.059e6	0.12e6
Single-axis Overload (in-lb)	125	340	620
Multi-axis Overload Coefficient, e (in-lb)	125	340	620

Standard Measurement Range

- This is the range of loads that each sensor model is ideally suited to measure. Factory adjustments to internal or external electronics allow custom measurement ranges to meet application-specific needs.

Bolt Patterns

- The 30E12A4 sensors are available standard with the ISO 9409-1 ∅40mm bolt pattern.

- Alternate and custom bolt patterns are also available.

Multi-axis Overloads

- *Insert your estimated applied loads and the coefficients from the above table into the equations below to determine safe loading:*

$$F_x/a + F_y/b + F_z/c + M_x/d + M_z/e \leq 1$$
and

$$F_x/b + F_y/a + F_z/c + M_y/d + M_z/e \leq 1$$

Both equations must be satisfied to avoid damage.

- If additional overload capability is desired we recommend using a higher-rated sensor with its measuring ranges electronically lowered.