

LOAD CELLS

Model JP

The JP is a precision load cell that responds to both compression and tension loading—ranges reach from 0-10 lbs. to 0-2000 lbs. It uses germanium strain gages to produce high level outputs (150 mV FSO) which can greatly simplify supportive circuitry.

The JP has unusually low deflection (maximum FS deflection = 0.002 in.) and finds particular usage in situations where deflections must be kept to a minimum.

Model SC

The SC is a medium precision load cell utilizing four active silicon strain gages to provide a direct output of 1.7 volts without amplification.

The SC has an extremely low deflection which allows for its direct insertion in mechanical systems without introducing additional "play." This stiffness, together with the high output, has led to its widespread use as a force feedback element in flight simulators.



FEATURES

Model JP

- $\pm 0.15\%$ accuracy
- Very low deflection/high natural frequency
- Unaffected by barometric change
- Small size
- Tension and compression loading

Model SC

- 1.7 full scale output
- Very low deflection/high natural frequency
- Tension and compression loading
- Unaffected by barometric changes

BENEFITS

- Precision measurement in tension and compression loading
- Responds to dynamic inputs over wider frequency ranges
- Increases accuracy
- Ease of installation
- Allows use in "push-pull" systems

- Eliminates amplifier
- Responds to dynamic inputs over wider frequency range
- Allows use in "push-pull" systems
- Increased accuracy

LOAD CELLS

TECHNICAL SPECIFICATIONS

RANGE

| | JP | SC |
|--|--|--------------------------|
| | 0 ± 10, 25, 50, 100, 200, 500, 1000, and 2000 lbs. | 0 ± 500, 1000, 2000 lbs. |
| | (0 ± 4.5, 11, 23, 45, 90, 227, 454, 907, kg) | (0 ± 227, 454, 907 kg) |
| | (kg values are approximate) | |

PHYSICAL

| | Up to 150% of rated capacity | Up to 200% of rated capacity |
|---|---|------------------------------|
| Overload | Structural failure will not occur at loads below 300% of capacity. | |
| Nominal Full Scale Deflection (values listed are for each range shown above) | 0.0009, 0.0006, 0.0008, 0.0008, 0.0010, 0.0010, 0.0015, 0.0020 in | 0.0010, 0.0015, 0.0020 in |
| | (0.0229, 0.0152, 0.0203, 0.0203, 0.0254, 0.02254, 0.0381, 0.0508 mm) | (0.054, 0.0381, 0.0508 mm) |
| Weight (excluding cable and load button) | 1.75 oz (40 gm)- 10-50 lb ranges 7 oz (198 gm)- 100-200 lb ranges 14 oz (397 gm)- 500-2000 lb ranges | 14 oz (397 gm) |

ELECTRICAL

| | | |
|------------------------------|---|--|
| Excitation Voltage | 5 Vdc or Vac rms (6 V max) | 24 Vdc or Vac rms |
| Sensitivity | 30 mV/V (min) | 70 mV/V (min) |
| Zero Balance | ± 2% FSO | ± 1.5% FSO |
| Bridge Resistance | | |
| Input | 125 ± 25 @ 25° | 1000 ± 200 @ 25° C |
| Output | 125 ± 25 @ 25° | 1000 ± 200 @ 25° C |
| Electrical Connection | MS3106B-14S-5P mtd at end of 10 ft (3m) cable-mating connector supplied | MS3100A-14S-5P connector mtd at end of 1 ft (0.3m) cable |

PERFORMANCE

| | | |
|--------------------------------------|--|--|
| Accuracy | Within ± 0.15% FSO including end point nonlinearity and hysteresis | Within ± 1.25% FSO including end point nonlinearity and hysteresis |
| Repeatability | Within 0.05% FSO | Within 0.1% FSO |
| Operating Temperature Range | -54° to 93° C (-65° to 200° F) | |
| Compensated Temperature Range | -1° to 54° C (30° to 130° F) | -12° to 49° C (10° to 120° F) |
| Thermal Effect on Zero | Less than ± 0.5% FSO within compensated range | |
| Thermal Effect on Sensitivity | Less than ± 0.5% of reading within compensated range | Less than ± 1.0% of reading within compensated range |
| Sideloading Capacity | No damage up to rated capacity | No damage up to 25% of rated capacity |

Note:

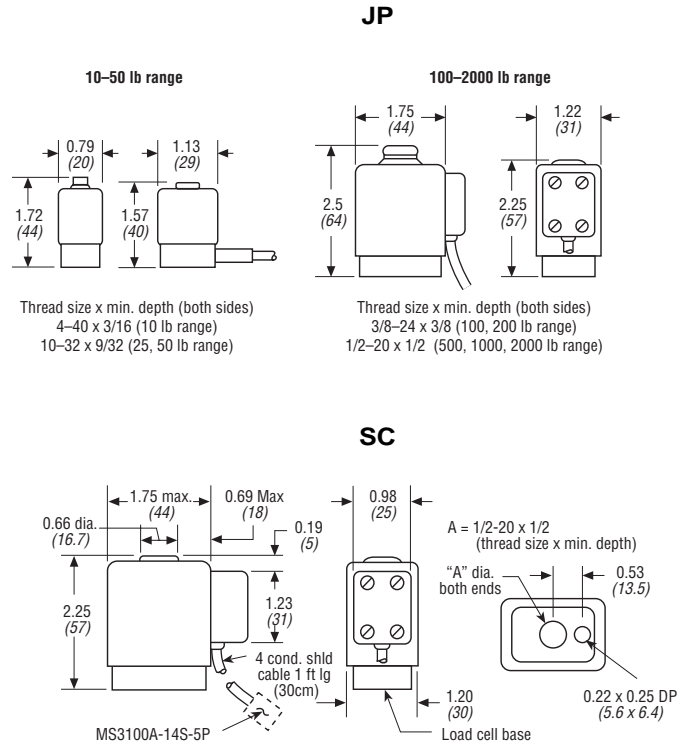
- All specifications are measured at 25°C and rated excitation unless otherwise stated

ACCESSORY

Load Button (available for all ranges)

DIMENSIONS

xx.xx = inches
(xx.x) = mm



PIN CODES

| Pin Code | Function |
|----------|---|
| A | + Excitation |
| B | + Signal (in tension), - Signal (in compression) |
| C | - Signal (in tension), + Signal (in compression) |
| D | - Excitation |
| E | Shield (drain) |