

# 5100 SERIES HIGH CAPACITY COMPRESSION COLUMN FORCE TRANSDUCERS

## FEATURES

- Compact Design
- .15% Accuracy
- Special Capacities to 2 Million lbf.
- 5pt Compression Calibration
- Proprietary Modulus Compensated Strain Gages
- Metric Capacities Available - Consult Factory

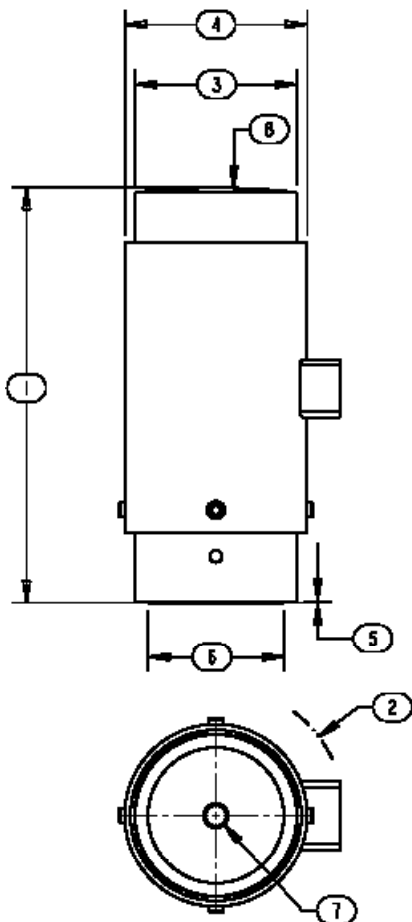


## SPECIFICATIONS

| Model                                 | 5130                        | 5135        | 5140        | 5160        | 5180        |
|---------------------------------------|-----------------------------|-------------|-------------|-------------|-------------|
| Capacity U.S. lbf.                    | 100K                        | 200K        | 300, 400K   | 500K, 600K  | 750K, 1000K |
| <b>PARAMETERS</b>                     |                             |             |             |             |             |
| <b>ACCURACY</b>                       |                             |             |             |             |             |
| Static Error Band, % Rated Output     | +/-0.150                    | +/-0.150    | +/-0.150    | +/-0.150    | +/-0.150    |
| Nonlinearity, % Rated Output          | +/-0.150                    | +/-0.150    | +/-0.150    | +/-0.150    | +/-0.150    |
| Hysteresis, % Rated Output            | +/-0.150                    | +/-0.150    | +/-0.150    | +/-0.150    | +/-0.150    |
| Nonrepeatability, % Rated Output      | +/-0.010                    | +/-0.010    | +/-0.010    | +/-0.010    | +/-0.010    |
| Creep, % in 20 minutes                | +/-0.025                    | +/-0.025    | +/-0.025    | +/-0.025    | +/-0.025    |
| Zero Balance, % Rated Output          | +/-1.0                      | +/-1.0      | +/-1.0      | +/-1.0      | +/-1.0      |
| <b>TEMPERATURE</b>                    |                             |             |             |             |             |
| Range, Compensated, °F                | +15 to +115                 | +15 to +115 | +15 to +115 | +15 to +115 | +15 to +115 |
| Range, Compensated, °C                | -10 to +45                  | -10 to +45  | -10 to +45  | -10 to +45  | -10 to +45  |
| Range, Operating, °F                  | -30 to +200                 | -30 to +200 | -30 to +200 | -30 to +200 | -30 to +200 |
| Range, Operating, °C                  | -34 to +90                  | -34 to +90  | -34 to +90  | -34 to +90  | -34 to +90  |
| Effect on Sensitivity, % Rdg/ °F      | +/-0.003                    | +/-0.003    | +/-0.003    | +/-0.003    | +/-0.003    |
| Effect on Sensitivity, % Rdg/ °C      | +/-0.006                    | +/-0.006    | +/-0.006    | +/-0.006    | +/-0.006    |
| Effect on Zero, % Rated Output/ ° F   | +/-0.003                    | +/-0.003    | +/-0.003    | +/-0.003    | +/-0.003    |
| Effect on Zero, % Rated Output/ ° C   | +/-0.006                    | +/-0.006    | +/-0.006    | +/-0.006    | +/-0.006    |
| <b>ELECTRICAL</b>                     |                             |             |             |             |             |
| Rated Output, mV/V, Nominal           | 2                           | 2           | 2           | 2           | 2           |
| Excitation Voltage, VDC Maximum       | 15                          | 15          | 15          | 15          | 15          |
| Input Resistance, Ohms                | 350                         | 350         | 350         | 350         | 350         |
| Output Resistance, Ohms               | 350                         | 350         | 350         | 350         | 350         |
| Insulation Resistance, Megohm         | 5000                        | 5000        | 5000        | 5000        | 5000        |
| Bayonet Connector                     | PT02E-10-6P (MS3112E-10-6P) |             |             |             |             |
| <b>MECHANICAL</b>                     |                             |             |             |             |             |
| Safe Overload Range, % Rated Capacity | 150                         | 150         | 150         | 150         | 150         |
| Weight lb                             | 5                           | 13          | 25          | 45, 46      | 96          |
| Flexure Material                      | Steel                       | Steel       | Steel       | Steel       | Steel       |

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| <b>DIMENSIONS</b> |                      |                      |                              |                    |                     |
|-------------------|----------------------|----------------------|------------------------------|--------------------|---------------------|
| Model             | 5130                 | 5135                 | 5140                         | 5160               | 5180                |
| Capacity          | 100K lbf             | 200K lbf             | 300K,<br>400K lbf            | 500K, 600K<br>lbf  | 750K,<br>1000K lbf  |
| Dimensions        | inch                 | inch                 | inch                         | inch               | inch                |
| 1.                | 5.00                 | 7.00                 | 9.00                         | 10.00              | 12.00               |
| 2.                | R 1.99, 2.26         | R 2.33               | R 2.78- 300K<br>R 3.00- 400K | R 3.29             | R 4.02              |
| 3.                | 2.00                 | 3.00                 | 3.50-300K<br>3.70-400K       | 4.50               | 6.00                |
| 4.                | 2.38                 | 3.25                 | 3.95                         | 5.00               | 6.50                |
| 5.                | .03                  | .03                  | .03                          | .03                | .03                 |
| 6.                | 1.68                 | 2.37                 | 2.94-300K<br>3.50-400K       | 3.89               | 5.02                |
| 7.                | 3/8 - 24<br>.50 Deep | 1/2 - 20<br>.50 Deep | 1/2 - 20<br>.75 Deep.        | 1 - 14<br>.75 Deep | 1 - 14<br>1.00 Deep |
| 8.                | R 12                 | R 12                 | R 15-300K<br>R 16-400K       | R 20               | R 20                |



## OPTIONS

- Additional bridges
- Output adjustment to standard
- Compression overload protection
- Integral cable
- Custom connectors
- Connector Protectors

## ACCESSORIES

- Mating connector
- Loading fixtures
- Interconnect cable
- Shunt calibration resistor
- Instrumentation