

bf1 systems DW12 Front & Rear Push Rod Loadcells

The bf1systems DW12 Front & Rear Push Rod Loadcells are a direct replacement for the standard Dallara push rod top. They offer previously unseen levels of accuracy throughout the whole temperature range by incorporating our microprocessor controlled Intelligent Amplifier.

Testing has shown that the bf1systems replacement parts have a gain error of only $\pm 0.2\%$ over the entire operating temperature range, thanks to the microprocessor controlled Intelligent Amplifier, making these parts the first choice for high accuracy, reliable suspension load data from the DW12.

The bf1systems Intelligent Amplifier is mounted inside the loadcell, and measures the temperature of the strain gauges, then applies a correction at each temperature step for offset and span errors in the calibration. This produces an output that is far more accurate than even the best compensated gauges. This also allows all parts to have a generic calibration, which means that there is no need to enter part specific calibrations when changing push rod loadcells.

The DW12 push rod loadcells have been specifically designed to work as loadcells and offer repeatable, accurate data that is not affected by ride height or temperature changes.

Each part is individually calibrated in a computer-controlled oven over a full load and temperature range and retains its own unique calibration table. This allows each push rod to have the same gain and offset (within specified limits) meaning that no data logger calibration table changes are required when changing push rod loadcells.



Specification

Mechanical

- Front max safe load – 8,488lbs
- Rear max safe load – 11,684lbs

Electrical

- 7 - 18 Volt supply range
- Supply current <30mA
- 0 - 5V output
- 0.5V $\pm 0.1V$ no load offset
- Front gain – 2,125lbs/V $\pm 0.2\%$
- Rear gain – 2,925lbs/V $\pm 0.2\%$
- Combined non-linearity, hysteresis and repeatability <0.5% FSO
- Thermal zero shift over compensated range 0.1% FSO
- Thermal sensitivity shift over compensated range 0.2% FSO
- Internal 115Hz 2-pole low-pass Butterworth filter

Environmental

- Compensated temperature range 10°C to 100°C
- Operating temperature range 0°C to 125°C
- Sealed to IP65

Part Numbers

- Front – F1-100-1583-005
- Rear – F1-100-1583-006