

HEAVY TRUCK ROAD LOAD MEASUREMENT

High accuracy and rugged durability in all testing conditions!



- Fits heavy and extra heavy trucks
- Easy mounting and quick setup, alignment, and calibration
- Superior temperature compensation for hard braking tests
- Light-weight Aluminum or high-strength Titanium flexures
- Slip Ring or Telemetry



Single Piece Flexure = High Accuracy + Unsurpassed Durability

With a rugged single piece flexure that mounts directly to the hub of the vehicle, the RS Technologies Wheel Force Transducers for Heavy Trucks (WFT-HT) provides highly accurate road load data measurement and superior performance in a durable water-resistant package.

These WFTs are designed for use on heavy trucks, semi-trucks and trailers, school bus chassis, etc. The flexure can be used for either a single front mounting or a rear tandem mounting. They can be fit with either slip-ring or telemetry signal transmission. With on-board signal conditioning and calibration circuitry for each channel of data measurement, their setup and use with the MOPS-TIU interface package can be accomplished in a few minutes per wheel. The MOPS-TIU can be used as a standalone data acquisition package or can be used to interface to existing data acquisition systems.

The WFT-HT come in two capacities, aluminum flexures (WFT-HT-XHA) for loads up to 140 kN (31,500 Lbs.) and 30 kNm (265,000 Lb-In), and titanium flexures (WFT-HT-TI) for loads up to 220 kN (49,000 Lbf) and 50 kNm (442,000 Lb-In). They mount directly to the vehicle hub and accept modified rims mounting standard sized tires such as 19.50 x 8.25. An extra heavy truck version is available for use on vehicles with larger 13.19 x 10 bolt pattern hubs and accepts modified rims mounting large sized tires such as 22.5 x 9.

Using the MOPS-TIU interface unit, the output signals can be sent to existing data acquisition systems, or the MOPS-TIU can be used as a stand-alone data acquisition system with many powerful data display features.

CAPACITIES

| AXIS | HEAVY TRUCK (HT-XHA) | HEAVY TRUCK (HT-TI) | EXTRA HEAVY TRUCK (HT-EXA) |
|---------------|--------------------------------------|--------------------------------------|-------------------------------------|
| FX | 140 kN (31.5 kLBF) | 220 kN (49 kLBF) | 140 kN (31.5 kLBF) |
| FZ | 140 kN (31.5 kLBF) | 220 kN (49 kLBF) | 140 kN (31.5 kLBF) |
| FY | 70 kN (15.7 kLBF) | 100 kN (22 kLBF) | 70 kN (15.7 kLBF) |
| MX | 30 kNm (265 kLb-IN) | 50 kNm (442 kLb-IN) | 30 kNm (265 kLb-IN) |
| MZ | 30 kNm (265 kLb-IN) | 50 kNm (442 kLb-IN) | 30 kNm (265 kLb-IN) |
| MY | 30 kNm (265 kLb-IN) | 50 kNm (442 kLb-IN) | 30 kNm (265 kLb-IN) |
| DIMENSIONS | 508 x 218 X 127 MM (20x 8.6 x 5 IN.) | 508 x 218 X 127 MM (20x 8.6 X 5 IN.) | 559 x 279 X 127 MM (22x 11 X 5 IN.) |
| WEIGHT | 27.2 KG. (60 LBS.) | 42.6 KG. (94 LBS.) | 34 KG. (75 LBS.) |
| MIN. RIM SIZE | 495 MM (19.5 IN.) | 495 MM (19.5 IN.) | 571 MM (22.5 IN.) |
| MAX. HUB DIA. | FITS 11.25 X 10 BOLT PATTERN | FITS 11.25 X 10 BOLT PATTERN | FITS 13.19 X 10 BOLT PATTERN |
| MATERIAL | ALUMINUM | TITANIUM | ALUMINUM |

GENERAL SPECIFICATIONS

Nonlinearity $\pm 0.5\%$ of rated output.
Non-repeatability $\pm 0.25\%$ of rated output.
Hysteresis $\pm 0.5\%$ of rated output.
Crosstalk $\pm 1\%$ typical, $\pm 3\%$ Full Scale, maximum.
Excitation ± 15 VDC
Output (all axes) 5.00 vdc $\pm 0.2\%$, nominal.
Temperature Range -25 to 150° C
Temperature Drift 0.005%/°C
Angle Encoder Sine/cosine resolver
Coordinates SAE Standard.
Resolution Depends on resolution of electronics and capacity of sensor, generally > 10 Nt for force axes; > 1 Nm for moment axes.

Bridge Resistance Fx & Fz 525 Ohms, Fy, Mx, My & Mz 1400 Ohms, nominal.
Isolation Resistance 2,000 M Ohms.
Overload Capacity 50% of Full Scale on all axes applied simultaneously, provided that the combined load on each axis does not exceed the overload rating for that axis.
Natural Frequency <300 Hz.
Acceleration Tolerance Shock 50 G's.
Environmental Dust-proof, water resistant, short-term submersible, corrosion resistant

Additional information on the WFT-HT sensors and MOPS-TIU is available from:

RS Technologies, Ltd., 24350 Indoplex Circle, Farmington Hills, MI 48335 USA
 Telephone: (248) 888-8260 * Fax: (248) 888-8266 * info@rstechltd.com * www.rstechltd.com