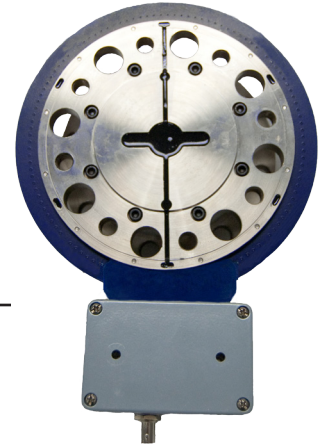


Model TMS 9250

DIN-Flange Torque Measurement System



DESCRIPTION

Honeywell's TMS 9250 torque measurement system provides a non-contact torque measurement through digital telemetry on rotating parts. The TMS 9250's fully digital, wireless design enables higher integrity of the torque data capture through higher resolution, higher sensitivity, faster response, and no mechanical interferences. The result is a more accurate indication of the actual torque being experienced, plus an increase in reliability. This digital wireless telemetry system also supplies excitation power to the rotating sensor across the gap, supports two-way communications, and supports virtually unlimited testing capabilities.

Honeywell's modular design can easily be adapted or customized to fit into many different types of test stands to meet specific test application requirements. The TMS 9250 is durable and compact in size to fit those tight installations and comes standard with quick attach wiring connectors for rapid commissioning. The TMS 9250 physically integrates rotor electronics and telemetry into one element. With no slip rings or bearings to replace, the TMS 9250 saves time with less routine maintenance.

FEATURES

- Digital telemetry, non-contact
- 0.05% full scale, total system accuracy
- DIN companion flange compatible
- High torsional stiffness
- Low rotating inertia
- Multiple, field selectable, analog outputs
- Scalable output "on the fly"
- Compact, modular design, ideal for customization
- Power supply adapter included (FCC compliant)
- Shunt calibration standard
- Remote shunt calibration option available
- Full software set-up
- No potentiometers or dip switches
- FCC and CE certified, meeting all EMC emission and susceptibility requirements

The TMS 9250's set-up is fully software driven; therefore, it is easily controlled through the computer software and its output type is selectable from the standard voltage, current, and frequency output selections. The TMS 9250 is a fully digital system with no dip-switches or potentiometers. The output can be scaled "on the fly" by the software.

Featuring "on-the-fly" edit capability, setup and operation of the rotating sensor can be controlled by the user at any time. Therefore, the parameters become real-time selectable allowing the user to make the necessary adjustments necessary to change their system without test interruption or affecting the calibration. Finally, all setup parameter and calibration information is stored in files and can be recalled on demand for repeat test conditions.

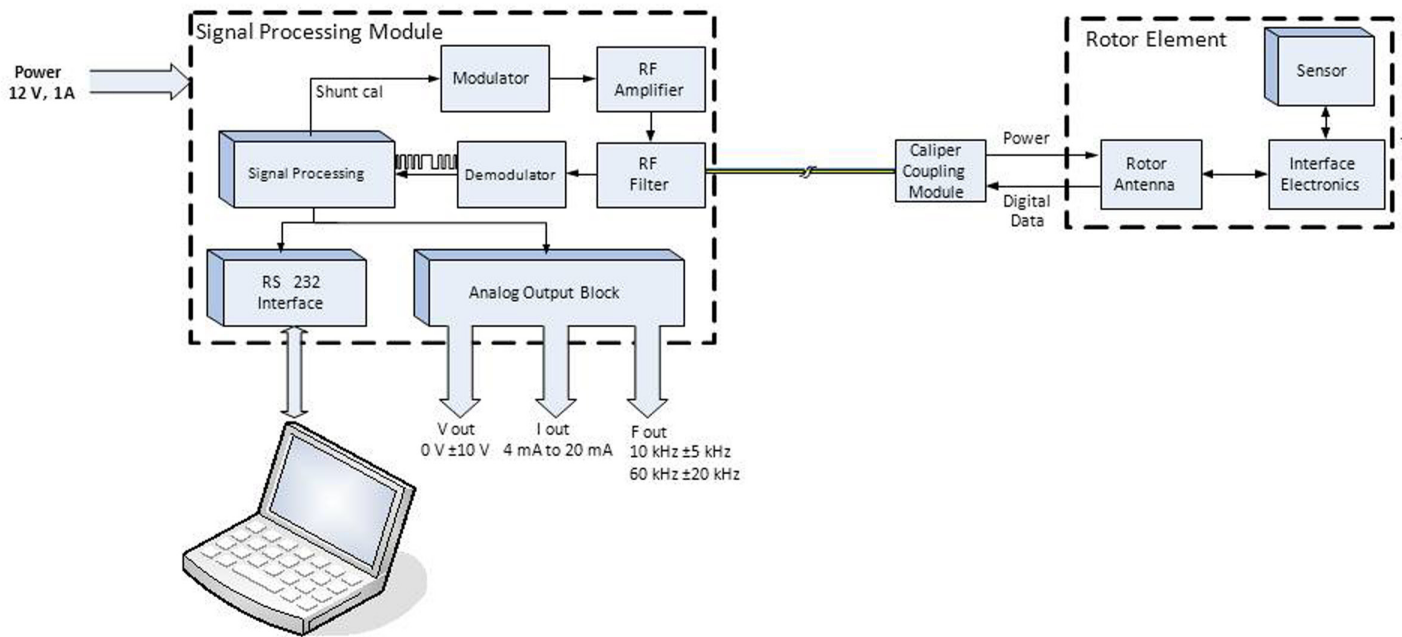
Honeywell's TMS 9250 is fully FCC, CE certified meeting all EMC emission and susceptibility requirements. This product will not cause RF interference with other equipment.

APPLICATIONS

- Powertrain testing: engine, engine diagnostics, cold engine, transmission, driveshaft, & rear axle differential
- Dynamometer
- Brakes
- Wheel hub
- Drive wheels
- Continuous track, heavy equipment
- Oil & water pump testing
- Jet engine/turbine testing
- Wind power gearbox and torsion blade testing; propeller testing
- Turn up/Turn down gear box testing
- Industrial motor / generator testing
- Auxiliary component efficiency testing



Model TMS 9250 - DIN



STANDARD DIN SIZES AVAILABLE

- TMS - DIN 65, Flange, 100Nm, 200Nm, 50lb-ft, 100lb-ft
- TMS - DIN 90, Flange, 300Nm, 500Nm, 250lb-ft, 500lb-ft
- TMS - DIN 120, Flange, 1KNm, 2KNm, 1Klb-ft
- TMS - DIN 150, Flange, 3KNm, 2Klb-ft, 3Klb-ft
- TMS - DIN 180, Flange, 5KNm, 4Klb-ft
- TMS - DIN 225, Flange, 10KNm, 8Klb-ft

DYNAMICS OF THE TMS 9250

- The rotor electronics module is encapsulated to enhance protection against vibration, G Force and chemicals
- The rotating antenna is peripherally or centrally mounted on the rotor
- Four layer construction ensures enhanced strength with no exposed tracks in the outer region
- Designed to resist dust and fluid contamination. Provides power transmission and signal recovery via tri-axial cable

ROTOR TRANSMITTER ELECTRONICS (RTE)

The RTE provides bridge excitation power for the torque sensor. Conditions the bridge output signal before transmitting a digitized signal to the SPM.

CALIPER COUPLING MODULE (CCM)

The CCM is a tuned antenna connected to the signal processing module (SPM) RF board through RF tri-axial cable. The CCM is used to wirelessly induce power to the rotor antenna and wirelessly receives the rotor electronics signals to collect torque event data. The antenna is stationary and enables communication between the rotating part and the SPM.

SIGNAL PROCESSING MODULE (SPM)

The SPM contains two separate microprocessors to share data processing and communications. Calibration is all digital characterization, via RS-232 link, eliminating zero and span adjustments, dip switches, and potentiometers. The durable unit has an external BNC connector for the tri-axial cable, internal 2-part plug and socket connectors for output signals, digital communication and dc power. The SPM external housing also features a "SHUNT CAL" button and LEDs to indicate "Power ON", "Rotor Active" and "SHUNT CAL Mode". Because of these enhanced technologies, the end result is a true advancement in telemetry-based torque systems.

SOFTWARE FEATURES

The toolkit software at the heart of the TMS 9250 system is designed to offer flexibility and adaptability. The software puts the operator fully in control and can be tailored to the test conditions required at the time. Standard or custom set ups can be saved to parameter files and recalled at any time. Selectable scaling creates an advantage for the user as it allows coverage of a greater set of applications and test conditions. The software-driven SPM (Signal Processing Module) is offered with eight selectable analog output settings of four settings and eight modes. The software includes zero offset correction, auto zero.

DIN-Flange Torque Measurement System

SPECIFICATIONS - ELECTRICAL

| Characteristic | Measure | |
|---------------------------------|---|--|
| Power Supply Adapter* | Input | 90 Vac ~ 264 Vac; 47 Hz~ 63 Hz 20 W |
| | Output | 12 Vdc, 1 A |
| | Protection | Short circuit and over voltage protection for the power supply and SPM |
| Recommended System Warm-Up Time | 30-45 minutes | |
| Analog Outputs | Voltage (± 10 Vdc) | (zero torque = 0 Vdc) |
| | Voltage (± 10 Vdc) and Frequency 10 kHz ± 5 kHz | |
| | Voltage (± 10 Vdc) and Frequency 60 kHz ± 20 kHz | |
| | Frequency 10 kHz ± 5 kHz | (zero torque = 10 kHz) |
| | Frequency 60 kHz ± 20 kHz | (zero torque = 60 kHz) |
| | Current Loop (4 mA to 20 mA) | (zero torque = 12 mA) |
| | Current Loop (4 mA to 20 mA) and Frequency 10 kHz ± 5 kHz | |
| | Current Loop (4 mA to 20 mA) and Frequency 60 kHz ± 20 kHz | |
| Output Drive Capability | 4 mA to 20 mA output: 400 W max, including cable resistance ± 10 Vdc output: 2 kW min. Frequency output: 4 V p-p for 100 kW and 2.3 V p-p for min. load of 1 kW | |
| Digital Resolution | Analog to digital (A/D) frequency, 24-bit (0.01 %FS) Normal mode frequency, 16-bit (0.01 %FS) | |
| RF Carrier Frequency | 13.56 MHz | |
| Accuracy | System to read 0.05% FS typical | |
| Temperature Range | Operating, Sensor and CCM Only | -40° to 85° C (-40° to 185° F) |
| | Operating, SPM and Power Supply | 0° to 40° C (32° to 104° F) |
| | Compensated for sensor and CCM | -10° to +50° C (14° to 122° F) |
| Temperature effect, zero | ± 0.003 % full scale/°F | |
| Temperature effect, span | ± 0.003 % full scale/°F | |
| Frequency Response | Input sampling rate | 17,656 samples/sec |
| | Anti-aliasing filter fixed | 4.1 kHz |
| | Telemetry update rate | 8.828 kHz |
| | Fast mode data throughput rate | 8.828 kHz |
| | Normal mode data throughput rate | 1.104 kHz |
| | Group delay (typical, normal mode) | 2.5 ms |
| | Group delay (typical, fast mode) | 1.2ms |
| Digital Filtering | IIR mode | Recursive algorithm with selectable filter levels and filter steps |

* to be FCC/CE compliant, the use of a Honeywell power supply is required.

Model TMS 9250 - DIN

SPECIFICATIONS - MECHANICAL

| DIN Size | Rated Capacity | Torsional Stiffness | Rotating Inertia | Overload Protection | Speed Rating | Bending Limit | Axial Limit | Bending Stiffness |
|----------|----------------|---------------------|---------------------------|---------------------|--------------|---------------|-------------|-------------------|
| | (lb-ft) | (lb-in/rad) | (lb-in-sec ²) | (lb-ft) | (rpm) | (lb-in) | (lb) | (lb-in/deg) |
| 65 | 50 | 395000 | 0.001 | 100 | 20000 | 100 | 325 | 775000 |
| | 100 | 867000 | 0.002 | 200 | 20000 | 150 | 750 | 1460000 |
| 90 | 250 | 2750000 | 0.009 | 500 | 18000 | 325 | 1500 | 3800000 |
| | 500 | 5500000 | 0.009 | 1k | 18000 | 750 | 3000 | 8900000 |
| 120 | 1k | 13000000 | 0.05 | 2k | 16000 | 1500 | 6000 | 10000000 |
| 150 | 2k | 35000000 | 0.13 | 4k | 14000 | 3000 | 9000 | 18000000 |
| | 3k | 35000000 | 0.13 | 6k | 14000 | 3000 | 9000 | 18000000 |
| 180 | 4k | 80000000 | 0.26 | 8k | 12000 | 6000 | 18000 | 33000000 |
| 225 | 8k | 205000000 | 0.83 | 16k | 8000 | 12000 | 25000 | 47000000 |

| DIN Size | Rated Capacity | Torsional Stiffness | Rotating Inertia | Overload Protection | Speed Rating | Bending Limit | Axial Limit | Bending Stiffness |
|----------|----------------|---------------------|----------------------|---------------------|--------------|---------------|-------------|-------------------|
| | (Nm) | (kNm/rad) | (kg-m ²) | (Nm) | (rpm) | (Nm) | (kN) | (kNm/deg) |
| 65 | 100 | 98 | 0.0002 | 200 | 20000 | 17 | 3 | 165 |
| | 200 | 98 | 0.0002 | 400 | 20000 | 17 | 3 | 165 |
| 90 | 300 | 311 | 0.001 | 600 | 18000 | 37 | 7 | 430 |
| | 500 | 621 | 0.001 | 1k | 18000 | 85 | 13 | 1000 |
| 120 | 1k | 1470 | 0.006 | 2k | 16000 | 170 | 27 | 1130 |
| | 2k | 1470 | 0.006 | 4k | 16000 | 170 | 27 | 1130 |
| 150 | 3k | 3950 | 0.015 | 6k | 14000 | 340 | 40 | 2050 |
| 180 | 5k | 9000 | 0.029 | 10k | 12000 | 680 | 80 | 3750 |
| 225 | 10k | 23000 | 0.094 | 20k | 8000 | 1,360 | 110 | 5300 |

DIN-Flange Torque Measurement System

LISTINGS

| Order code | Description |
|------------------------------------|--|
| 92512-500FT-LBS,1AE,56J,61A | Model 92512 DIN 90, Flange, Digital Telemetry Torque Measurement System, 500 lbs-ft, 0.05 % accuracy, 5 °C to 75 °C [40 °F to 170 °F] temperature compensation, Voltage ±10 V output with sinusoidal frequency |
| 92513-1KFT-LBS,1AE,56J,61A | Model 92513 DIN 120, Flange, Digital Telemetry Torque Measurement System, 1K lbs-ft, 0.05 % accuracy, 5 °C to 75 °C [40 °F to 170 °F] temperature compensation, Voltage ±10 V output with sinusoidal frequency |
| 92514-3KFT-LBS,1AE,56J,61A | Model 92514 DIN 150, Flange, Digital Telemetry Torque Measurement System, 3K lbs-ft, 0.05 % accuracy, 5 °C to 75 °C [40 °F to 170 °F] temperature compensation, Voltage ±10 V output with sinusoidal frequency |
| 92512-500Nm,1AE,56J,61A | Model 92512 DIN 90, Flange, Digital Telemetry Torque Measurement System, 500 N-m, 0.05 % accuracy, 5 °C to 75 °C [40 °F to 170 °F] temperature compensation, Voltage ±10 V output with sinusoidal frequency |
| 92513-2KNm,1AE,56J,61A | Model 92513 DIN 120, Flange, Digital Telemetry Torque Measurement System, 2K N-m, 0.05 % accuracy, 5 °C to 75 °C [40 °F to 170 °F] temperature compensation, Voltage ±10 V output with sinusoidal frequency |
| 92514-5KNm,1AE,56J,61A | Model 92514 DIN 150, Flange, Digital Telemetry Torque Measurement System, 5K N-m, 0.05 % accuracy, 5 °C to 75 °C [40 °F to 170 °F] temperature compensation, Voltage ±10 V output with sinusoidal frequency |

ORDER CODE NOMENCLATURE

Combine the order code, range code, and options code. For example:

92513 -1KFTLBS, 1AE,56J,61A

Order code Range code Options code

| 92513 | 1KFTLBS | 1AE | | 56J | 61A | | |
|--|----------------|--|---|---|----------------------------|--|---|
| Order Code | Range | Temperature Compensation | Shunt Calibration Option | Output Signal Settings | Frequency Output | Speed Measurements | Mechanical Balance for Rated Speed |
| 92511 DIN 65, Flange, 100 Nm, 200 Nm, 50 lb-ft, 100 lb-ft, Digital Telemetry Torque Measurement System | 100 Nm | 1AE 5 °C to 75 °C [40 °F to 170 °F] | None | 56J Voltage ±10 V | 61A Sinusoidal wave | None | None |
| 92512 DIN 90, Flange, 300 Nm, 500 Nm, 250 lb-ft, 500 lb-ft, Digital Telemetry Torque Measurement System | 200 Nm | | 3D Remote buffered shunt calibration | 56K Voltage ±10 V Freq. 10 KHz ±5 KHz | 61B Square wave | 62A Zero velocity speed sensing | 63A Dynamic balance to ISO 1940 G2.5 |
| 92513 DIN 120, Flange, 1K Nm, 2K Nm, 1K lb-ft, Digital Telemetry Torque Measurement System | 300 Nm | | | 56L Voltage ±10 V Freq. 60 KHz ±20 KHz | | | |
| 92514 DIN 150, Flange, 3K Nm, 2K lb-ft, 3K lb-ft, Digital Telemetry Torque Measurement System | 500 Nm | | | 56M Freq. 10 KHz ±5 KHz | | | |
| 92515 DIN 180, Flange, 5K Nm, 4K lb-ft, Digital Telemetry Torque Measurement System | 1K Nm | | | 56N Freq. 60 KHz ±20 KHz | | | |
| 92516 DIN 225, Flange, 10K Nm, 8K lb-ft, Digital Telemetry Torque Measurement System | 2K Nm | | | 56P Current loop 4 mA to 20 mA | | | |
| | 3K Nm | | | 56R Current loop 4 mA to 20 mA Freq. 10 KHz ±5 KHz | | | |
| | 5K Nm | | | 56S Current loop 4 mA to 20 mA Freq. 60 KHz ±20 KHz | | | |
| | 10K Nm | | | | | | |
| | 50 FTLBS | | | | | | |
| | 100 FTLBS | | | | | | |
| | 250 FTLBS | | | | | | |
| | 500 FTLBS | | | | | | |
| | 1K FTLBS | | | | | | |
| | 2K FTLBS | | | | | | |
| | 3K FTLBS | | | | | | |
| | 4K FTLBS | | | | | | |
| | 8K FTLBS | | | | | | |



SPECIAL REQUIREMENTS (CONSULT FACTORY)

Need a special modification or complete custom design to meet your unique requirements? Consult our factory by calling +1 614-850-5000 (800-848-6564) or visit us online at <http://measurementsensors.honeywell.com>.

Model TMS 9250 - DIN

ORDER CODES

| Order code | Description |
|--------------|---|
| 92511 | DIN 65, Flange, 100 Nm, 200 Nm, 50 lb-ft, 100 lb-ft, Digital Telemetry Torque Measurement System |
| 92512 | DIN 90, Flange, 300 Nm, 500 Nm, 250 lb-ft, 500 lb-ft, Digital Telemetry Torque Measurement System |
| 92513 | DIN 120, Flange, 1K Nm, 2K Nm, 1K lb-ft, Digital Telemetry Torque Measurement System |
| 92514 | DIN 150, Flange, 3K Nm, 2K lb-ft, 3K lb-ft, Digital Telemetry Torque Measurement System |
| 92515 | DIN 180, Flange, 5K Nm, 4K lb-ft, Digital Telemetry Torque Measurement System |
| 92516 | DIN 225, Flange, 10K Nm, 8K lb-ft, Digital Telemetry Torque Measurement System |

RANGE CODES

| Range Code | Available ranges |
|------------------|------------------|
| -100 NM | 100 Nm |
| -200 NM | 200 Nm |
| -300 NM | 300 Nm |
| -500 NM | 500 Nm |
| -1K NM | 1K Nm |
| -2K NM | 2K Nm |
| -3K NM | 3K Nm |
| -5K NM | 5K Nm |
| -10K NM | 10K Nm |
| 50 FTLBS | 50 ft-lb |
| 100 FTLBS | 100 ft-lb |
| 250 FTLBS | 250 ft-lb |
| 500 FTLBS | 500 ft-lb |
| 1K FTLBS | 1K ft-lb |
| 2K FTLBS | 2K ft-lb |
| 3K FTLBS | 3K ft-lb |
| 4K FTLBS | 4K ft-lb |
| 8K FTLBS | 8K ft-lb |

OPTION CODES

| | |
|---|--|
| Available Ranges | 100 Nm, 200 Nm, 300 Nm, 500 Nm, 1K Nm, 2K Nm, 3K Nm, 5K Nm, 10K Nm, 50 ft-lb, 100 ft-lb, 250 ft-lb, 500 ft-lb, 1K ft-lb, 2K ft-lb, 3K ft-lb, 4K ft-lb, 8K ft-lb |
| Temperature Compensation | 5 °C to 75 °C [40 °F to 170 °F] |
| Shunt Calibration | 3D. Remote buffered shunt calibration |
| Output Signal Settings | 56J. Voltage ± 10 V 56K. Voltage ± 10 V; Freq. 10 KHz ± 5 KHz 56L. Voltage ± 10 V; Freq. 60 KHz ± 20 KHz 56M. Freq. 10 KHz ± 5 KHz 56N. Freq. 60 KHz ± 20 KHz 56P. Current loop, 4 mA to 20 mA 56R. Current loop 4 mA to 20 mA; Freq. 10 KHz ± 5 KHz 56S. Current loop 4 mA to 20 mA; Freq. 60 KHz ± 20 KHz |
| Frequency Output | 61A. Sinusoidal wave 61B. Square wave |
| Speed and Measurements | 62A. Zero velocity speed sensing |
| Mechanical Balance for Rated Speed | 63A. Dynamic balance to ISO 1940 G2.5 |

DIN-Flange Torque Measurement System

DIMENSIONS IN MILLIMETERS

| DIN Size | Measuring Range | A1 | A2 | A3 | A4 | A5 | A6 | B | C |
|----------|-----------------|------|-----|------|-----|------|-----|-------|-----|
| 65 | 100 & 200 Nm | 21.1 | 1.8 | 43.9 | 1.5 | 9.9 | 7.1 | 45° | 90° |
| 90 | 300 & 500 Nm | 17 | 2.5 | 43.9 | 2 | 9.9 | 7.1 | 22.5° | 45° |
| 120 | 1k & 2k Nm | 12.7 | 2.8 | 63.5 | 2 | 15.2 | 7.1 | 22.5° | 45° |
| 150 | 3k Nm | 12.7 | 3.3 | 63.5 | 2 | 15.2 | 7.4 | 22.5° | 45° |
| 180 | 5k Nm | 15.2 | 3.8 | 63.5 | 2 | 20.3 | 7.4 | 22.5° | 45° |
| 225 | 10k Nm | 15.2 | 5.3 | 63.5 | 2 | 20.3 | 7.4 | 22.5° | 45° |

| DIN Size | Measuring Range | D1 | D2 | D3 (H7) | D4 (g6) | D5 | D6 | E | F | G |
|----------|-----------------|-------|-------|---------|---------|-------|-------|----------|----------|---------|
| 65 | 100 & 200 Nm | 65 | 106.7 | 35 | 35 | 65 | 52 | 4 X 6.9 | 4 X 11.2 | 4 x M6 |
| 90 | 300 & 500 Nm | 89.9 | 132.1 | 47 | 47 | 89.9 | 74.5 | 8 X 8.9 | 8 X 14.2 | 8 x M8 |
| 120 | 1k & 2k Nm | 119.6 | 162.6 | 75 | 75 | 119.6 | 101.5 | 8 X 10.7 | 8 X 17.3 | 8 x M10 |
| 150 | 3k Nm | 149.6 | 190.5 | 90 | 90 | 149.6 | 130 | 8 X 12.7 | 8 X 19.3 | 8 x M12 |
| 180 | 5k Nm | 179.6 | 221 | 110 | 110 | 179.6 | 155.5 | 8 X 14.7 | 8 X 22.6 | 8 x M14 |
| 225 | 10k Nm | 224.5 | 266.7 | 140 | 140 | 224.5 | 196 | 8 X 16.8 | 8 X 22.6 | 8 x M16 |

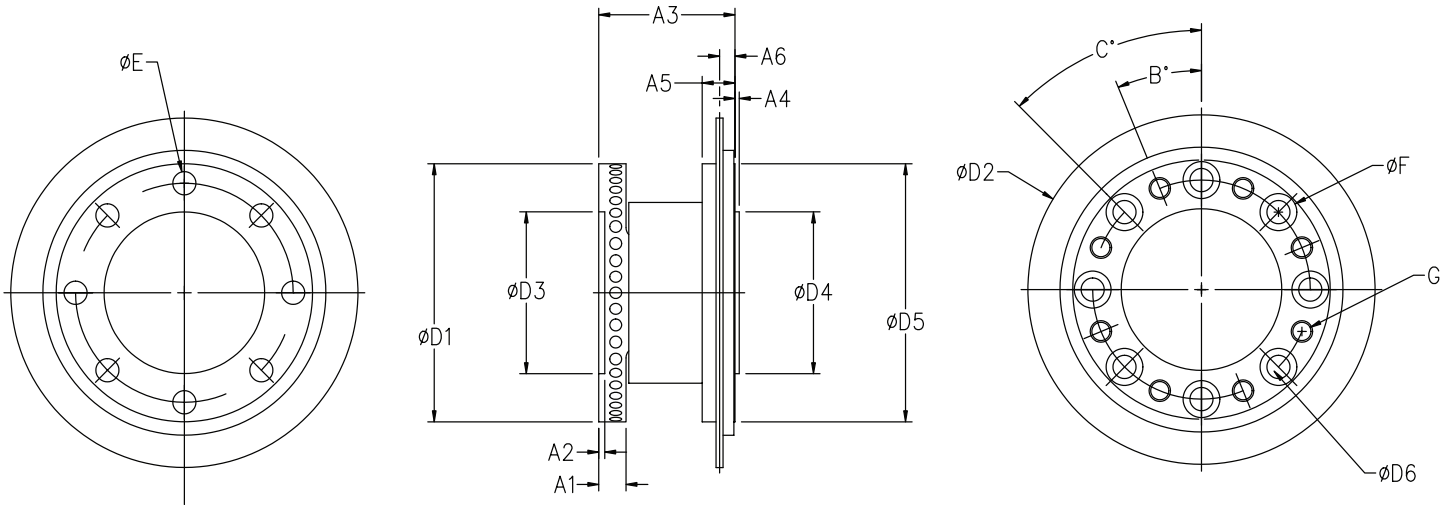
DIMENSIONS IN INCHES

| DIN Size | Measuring Range | A1 | A2 | A3 | A4 | A5 | A6 | B | C |
|----------|-----------------|------|------|------|------|------|------|-------|-----|
| 65 | 50 & 100 Lb-Ft | 0.83 | 0.07 | 1.73 | 0.06 | 0.39 | 0.28 | 45° | 90° |
| 90 | 250 & 500 Lb-Ft | 0.67 | 0.1 | 1.73 | 0.08 | 0.39 | 0.28 | 22.5° | 45° |
| 120 | 1000 Lb-Ft | 0.5 | 0.11 | 2.5 | 0.08 | 0.6 | 0.28 | 22.5° | 45° |
| 150 | 2000 Lb-Ft | 0.5 | 0.13 | 2.5 | 0.08 | 0.6 | 0.29 | 22.5° | 45° |
| 180 | 4000 Lb-Ft | 0.6 | 0.15 | 2.5 | 0.08 | 0.8 | 0.29 | 22.5° | 45° |
| 225 | 8000 Lb-Ft | 0.6 | 0.21 | 2.5 | 0.08 | 0.8 | 0.29 | 22.5° | 45° |

| DIN Size | Measuring Range | D1 | D2 | D3 (H7) | D4 (g6) | D5 | D6 | E | F | G |
|----------|-----------------|------|------|---------|---------|------|-------|---------|---------|---------|
| 65 | 50 & 100 Lb-Ft | 2.56 | 4.2 | 1.378 | 1.378 | 2.56 | 2.047 | 4 x .27 | 4 x .44 | 4 x M6 |
| 90 | 250 & 500 Lb-Ft | 3.54 | 5.2 | 1.8504 | 1.8504 | 3.54 | 2.933 | 8 x .35 | 8 x .56 | 8 x M8 |
| 120 | 1000 Lb-Ft | 4.71 | 6.4 | 2.9528 | 2.9528 | 4.71 | 3.996 | 8 x .42 | 8 x .68 | 8 x M10 |
| 150 | 2000 Lb-Ft | 5.89 | 7.5 | 3.5433 | 3.5433 | 5.89 | 5.118 | 8 x .50 | 8 x .76 | 8 x M12 |
| 180 | 4000 Lb-Ft | 7.07 | 8.7 | 4.3307 | 4.3307 | 7.07 | 6.122 | 8 x .58 | 8 x .89 | 8 x M14 |
| 225 | 8000 Lb-Ft | 8.84 | 10.5 | 5.5118 | 5.5118 | 8.84 | 7.716 | 8 x .66 | 8 x .89 | 8 x M16 |

Model TMS 9250 - DIN

MOUNTING FOR TMS 9250 DIN



| Measuring Range | | A1 | A2 | A3 | A4 | A5 | A6 | B | C |
|-----------------|---------------|------|------|------|------|------|------|-------|-----|
| 50 & 100 Lb-Ft | 100 & 200 N-m | 0.83 | 0.07 | 1.73 | 0.06 | 0.39 | 0.28 | 45° | 90° |
| 250 & 500 Lb-Ft | 300 & 500 N-m | 0.67 | 0.10 | 1.73 | 0.08 | 0.39 | 0.28 | 22.5° | 45° |
| 1000 Lb-Ft | 1k & 2k N-m | 0.50 | 0.11 | 2.50 | 0.08 | 0.60 | 0.28 | 22.5° | 45° |
| 2000 Lb-Ft | 3k N-m | 0.50 | 0.13 | 2.50 | 0.08 | 0.60 | 0.29 | 22.5° | 45° |
| 4000 Lb-Ft | 5k N-m | 0.60 | 0.15 | 2.50 | 0.08 | 0.80 | 0.29 | 22.5° | 45° |
| 8000 Lb-Ft | 10k N-m | 0.60 | 0.21 | 2.50 | 0.08 | 0.80 | 0.29 | 22.5° | 45° |

| Measuring Range | | D1 | D2 | D3 (H7) | D4 (g6) | D5 | D6 | E | F | G |
|-----------------|---------------|------|------|---------|---------|------|-------|---------|---------|---------|
| 50 & 100 Lb-Ft | 100 & 200 N-m | 2.56 | 4.2 | 1.3780 | 1.3780 | 2.56 | 2.047 | 4 x .27 | 4 x .44 | 4 x M6 |
| 250 & 500 Lb-Ft | 300 & 500 N-m | 3.54 | 5.2 | 1.8504 | 1.8504 | 3.54 | 2.933 | 8 x .35 | 8 x .56 | 8 x M8 |
| 1000 Lb-Ft | 1k & 2k N-m | 4.71 | 6.4 | 2.9528 | 2.9528 | 4.71 | 3.996 | 8 x .42 | 8 x .68 | 8 x M10 |
| 2000 Lb-Ft | 3k N-m | 5.89 | 7.5 | 3.5433 | 3.5433 | 5.89 | 5.118 | 8 x .50 | 8 x .76 | 8 x M12 |
| 4000 Lb-Ft | 5k N-m | 7.07 | 8.7 | 4.3307 | 4.3307 | 7.07 | 6.122 | 8 x .58 | 8 x .89 | 8 x M14 |
| 8000 Lb-Ft | 10k N-m | 8.84 | 10.5 | 5.5118 | 5.5118 | 8.84 | 7.716 | 8 x .66 | 8 x .89 | 8 x M16 |

Model TMS 9250 - DIN

NOTES

- * To be FCC/CE compliant, the use of a Honeywell power supply is required.

Find out more

Honeywell serves its customers through a worldwide network of sales offices, representatives and distributors. For application assistance, current specifications, pricing or name of the nearest Authorized Distributor, contact your local sales office. To learn more about Honeywell's test and measurement products, call **+1-614-850-5000**, visit **<http://measurementsensors.honeywell.com>**, or e-mail inquiries to **info.tm@honeywell.com**

Sensing and Control
Honeywell
1985 Douglas Drive North
Golden Valley, MN 55422
www.honeywell.com

DIN-Flange Torque Measurement System

Warranty. Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. **The foregoing is buyer's sole remedy and is in lieu of all warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

WARNING

PERSONAL INJURY

- DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

Failure to comply with these instructions could result in death or serious injury.

WARNING

MISUSE OF DOCUMENTATION

- The information presented in this datasheet is for reference only. DO NOT USE this document as product installation information.
- Complete installation, operation and maintenance information is provided in the instructions supplied with each product.

Failure to comply with these instructions could result in death or serious injury.

Honeywell