

# Model QSFK-9

## Shaft Reaction Torque Transducer



### DESCRIPTION

Model QSFK-9 shaft reaction torque transducer is designed for installation between test pieces such as motors, switches, axles or shafts and their mounting plate. These models operate and are calibrated in both directions. Stainless steel construction enhances durability in harsh, industrial environments. These mod-

els have no moving parts and utilize four bonded strain gages on a special machined portion of the transducer to achieve a maximum non-linearity of 0.1% over a wide dynamic range. Typical applications include tire braking, motor dynamometers, friction-skid testing, and twist measurement.

### FEATURES

- 100 in-lb to 24000 in-lb
- 0.1 % non-linearity and hysteresis
- Wide dynamic range
- High frequency response
- Stainless steel

# Model QSFK-9

## PERFORMANCE SPECIFICATIONS

Characteristic	Measure
Range	100 in-lb to 24000 in-lb
System accuracy	±0.1 % full scale
Linearity	±0.1 % full scale
Hysteresis	±0.1 % full scale
Non-repeatability	±0.03 % full scale
Output	2 mV/V nominal
Resolution	Infinite

## ENVIRONMENTAL SPECIFICATIONS

Characteristic	Measure
Temperature, operating	-54 °C to 107 °C [-65 °F to 225 °F]
Temperature, compensated	16 °C to 71 °C [60 °F to 160 °F]
Temperature effect, zero	0.005 % full scale/ °F
Temperature effect, span	0.005 % reading/ °F

## ELECTRICAL SPECIFICATIONS

Characteristic	Measure
Strain gage type	Bonded foil
Excitation	10 Vdc
Bridge resistance	350 ohm
Electrical termination	MS3102A-14S-6P or equivalent
Mating connector	MS3106A-14S-6S or equivalent (not included)

## RANGE CODES

Range Code	Available ranges
TJ	100 in-lb
TL	300 in-lb
TN	600 in-lb
TP	1200 in-lb
TR	3000 in-lb
TT	6000 in-lb
TV	12000 in-lb
TW	24000 in-lb

## OPTION CODES

Range Code	Many range/option combinations are available in our quick-ship and fast-track manufacture programs. Please see <a href="http://sensing.honeywell.com/TMsensor-ship">http://sensing.honeywell.com/TMsensor-ship</a> for updated listings.
Torque range	100, 300, 600, 1200, 3000, 6000, 12000, 24000 in-lb
Temperature compensation	<b>1a.</b> 16 °C to 71 °C [60 °F to 160 °F] <b>1b.</b> -1 °C to 54 °C [30 °F to 130 °F] <b>1c.</b> -18 °C to 85 °C [0 °F to 185 °F] <b>1d.</b> -29 °C to 54 °C [-20 °F to 130 °F] <b>1e.</b> -29 °C to 93 °C [-20 °F to 200 °F] <b>1f.</b> 21 °C to 121 °C [70 °F to 250 °F]
Internal amplifiers	<b>2u.</b> Unamplified, mV/V output
Electrical termination	<b>6a.</b> Bendix PTIH-10-6P - 6-pin (max. 121 °C [250 °F]) <b>6b.</b> MS connector MS3102E-14S-6P (mates with MS3106E-14S-6S, max 160 °F) <b>6e.</b> Integral cable: Teflon <b>6f.</b> Integral cable: PVC <b>6g.</b> Integral cable: Neoprene <b>6h.</b> Integral cable: Silicone
Interfaces	<b>53e.</b> Signature calibration <b>53t.</b> T.E.D.S. IEEE 1451.4 module

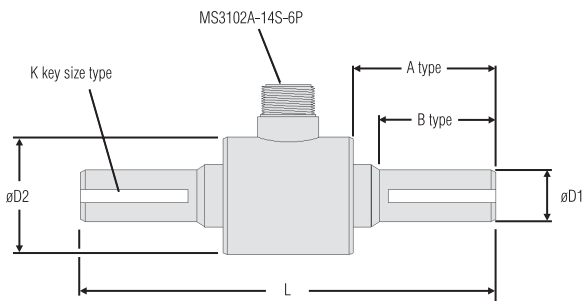
# Shaft Type Reaction Torque Transducer

## MECHANICAL SPECIFICATIONS

Characteristic	Measure
Static overload capacity	50 % over capacity
Case material	Stainless steel

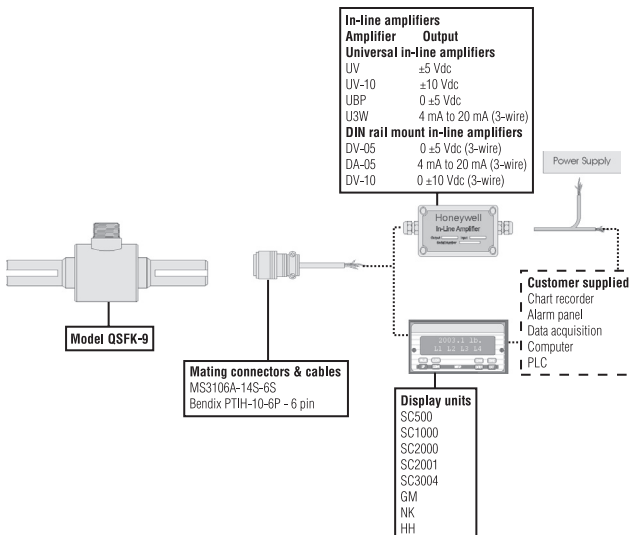
## MOUNTING DIMENSIONS

Range (in-lb)	ØD1 mm [in]	ØD2 mm [in]	K key size	A mm [in]	B mm [in]	L mm [in]
100	19.05 mm [0.75 in]	57,15 mm [2.25 in]	3/16	69,85 mm [2.75 in]	57,15 mm [2.25 in]	203,2 mm [8.00 in]
600, 1200	25,4 mm [1.00 in]	57,15 mm [2.25 in]	1/4	69,85 mm [2.75 in]	57,15 mm [2.25 in]	203,2 mm [8.00 in]
3000, 6000, 12000	38,1 mm [1.50 in]	88,9 mm [3.50 in]	3/8	95,25 mm [3.75 in]	76,2 mm [3.00 in]	279,4 mm [11.00 in]
24000	69,85 mm [2.75 in]	101,6 mm [4.00 in]	5/8	129,54 mm [5.10 in]	101,6 mm [4.00 in]	330,2 mm [13.00 in]



For reference only

## TYPICAL SYSTEM DIAGRAM



# Model QSFK-9

# Shaft Type Reaction Torque Transducer

**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.**

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Email inquiries to [info.sc@honeywell.com](mailto:info.sc@honeywell.com)

 **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 catalogue 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.**

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