

# Model QWLC-8M

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## Miniature Reaction Torque Transducer



### DESCRIPTION

Model QWLC-8M miniature reaction torque transducer is engineered for minimum size and to achieve 0.1% maximum non-linearity. Four bonded strain gages are positioned on a special machined portion of the transducer to effectively measure even slight torque motion. These models operate and are calibrated

in both directions. A modular, stainless steel construction and no moving parts provide excellent durability under harsh industrial conditions. Potential miniature reaction torque transducer applications include motor dynamometer, tire braking, twist measurement, and friction-skid test measurements.

### FEATURES

- 25 in-oz to 300 in-lbs
- 0.1 % non-linearity and hysteresis
- Compact size
- High frequency response
- Stainless steel construction
- Integral cable standard

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## PERFORMANCE SPECIFICATIONS

Characteristic	Measure
Range	25, 100, 250 in-oz; 50, 100, 300 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 (5 Vdc if torque range <= 100 in-oz)
Bridge resistance	350 ohm
Electrical termination	Teflon cable (1.5 m [5 ft])

## RANGE CODES

Range Code	Available ranges
<b>TB</b>	25 in-oz
<b>TD</b>	100 in-oz
<b>TF</b>	250 in-oz
<b>TH</b>	50 in-lb
<b>TJ</b>	100 in-lb
<b>TL</b>	300 in-lb

## OPTION CODES

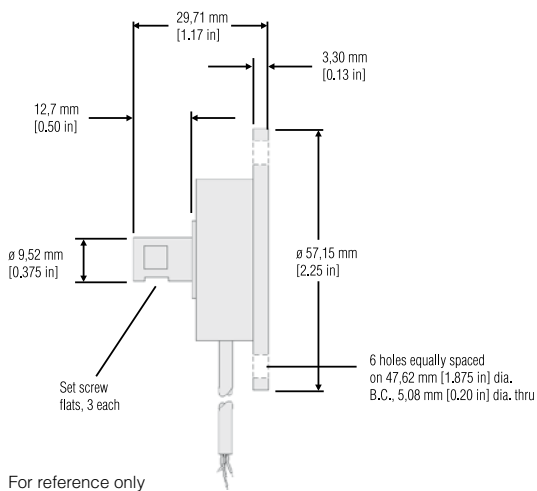
Range Code	Many range/option combinations are available in our quick-ship and fast-track manufacture programs. Please see <a href="http://sensing.honeywell.com/TMsensor-ship">http://sensing.honeywell.com/TMsensor-ship</a> for updated listings.
<b>Torque range</b>	25, 100, 250 in-oz; 50, 100, 300 in-lb
<b>Temperature compensation</b>	<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]
<b>Internal amplifiers</b>	<b>2u.</b> Unamplified, mV/V output
<b>Electrical termination</b>	<b>6e.</b> Integral cable: Teflon
<b>Interfaces</b>	<b>53e.</b> Signature calibration <b>53t.</b> T.E.D.S. IEEE 1451.4 module

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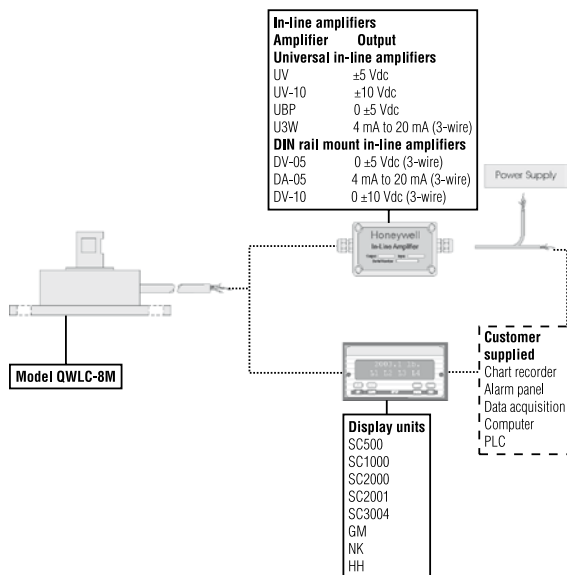
## MECHANICAL SPECIFICATIONS

Characteristic	Measure
Static overload capacity	50 % over capacity
Case material	Stainless steel
Deflection torsional, 25 in-oz to 50 in-lb	0.0027 radians
Deflection torsional, 100 in-lb to 300 in-lb	0.00255 radians

## MOUNTING DIMENSIONS



## TYPICAL SYSTEM DIAGRAM



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**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 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.**

ALTHEN reserves the right to vary the foregoing details without prior notice



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