

## Model 1102

### Low Capacity Torque Sensor



#### DESCRIPTION

A line of low capacity rotary slip ring torque sensors primarily designed for fractional horsepower motor test applications. Instrumental in monitoring start up, running, and stall torque levels during development and qualification of these motors. Capacity range from 50 in-oz to 1000 in-oz for small shaft mounting configurations.

#### FEATURES

- 50 in-oz to 1000 in-oz capacity range
- 0.1 % non-linearity and hysteresis
- Integral foot mount (standard)
- Lower cost for general “in-line” applications
- Can be used with almost all existing dc and ac signal conditioning equipment

# Model 1102

## PERFORMANCE SPECIFICATIONS

Characteristic	Measure
Torque range	50, 100, 200, 500, 1000 oz-in
Non-linearity	±0.1 % of rated output
Hysteresis	±0.1 % of rated output
Repeatability	±0.05 % of rated output
Output @ rated capacity	±2 mV/V (nominal)

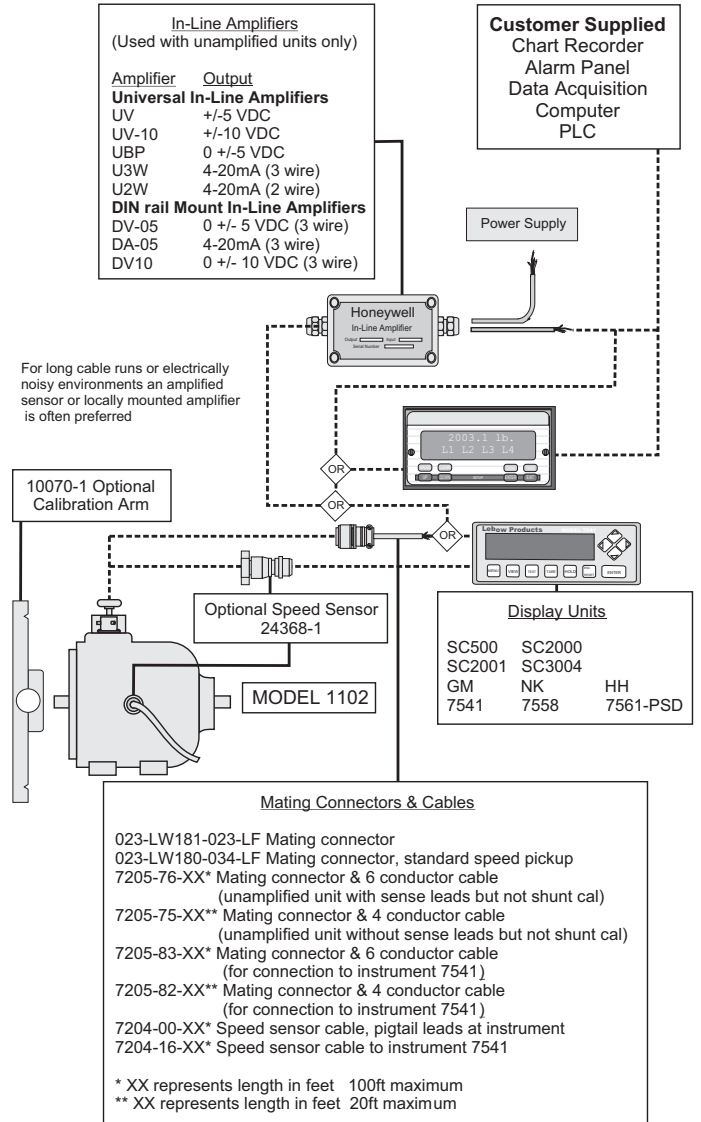
## ENVIRONMENTAL SPECIFICATIONS

Characteristic	Measure
Temperature, operating	-29 °C to 93 °C [-20 °F to 200 °F]
Temperature, compensated	21 °C to 77 °C [70 °F to 170 °F]
Temperature effect, zero	±0.002 % of rated output/°F
Temperature effect, output	±0.002 % of reading/°F

## ELECTRICAL SPECIFICATIONS

Characteristic	Measure
Excitation (maximum)	20 Vdc or Vac RMS
Insulation resistance	> 5000 mOhm @ 50 Vdc
Bridge resistance	350 ohm (nominal)
Number of bridges	1
Zero balance	±1.0 % of rated output
Electrical termination	PT02E-10-6P

## TYPICAL SYSTEM DIAGRAM



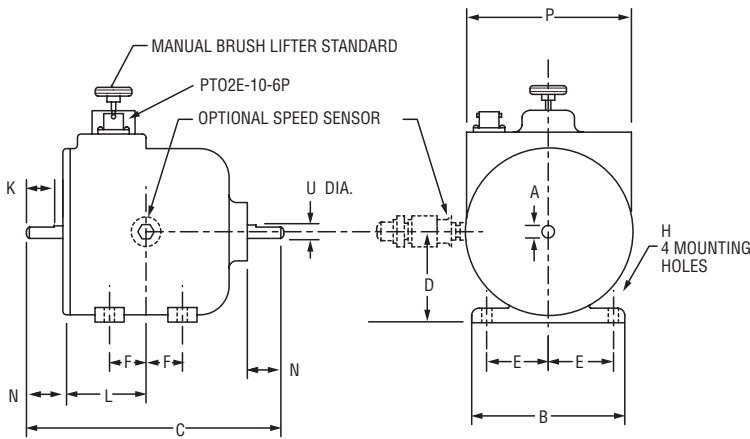
## Low Capacity Torque Sensor

### MECHANICAL SPECIFICATIONS

oz-in	N-m	Max speed RPM	Overload capacity (% of nominal capacity)	Torsional stiffness lb-in/rad	Rotating inertia lb-in sec <sup>2</sup>	Weight (lb)
50	0.35	20000	150	665	$1.75 \times 10^{-3}$	2
100	0.70	20000	150	1070	$1.75 \times 10^{-3}$	2
200	1.50	20000	150	1790	$1.76 \times 10^{-3}$	2
500	3.50	20000	150	3480	$1.77 \times 10^{-3}$	2
1000	7.00	20000	150	4850	$1.78 \times 10^{-3}$	2

### MOUNTING DIMENSIONS

C cm [in]	L cm [in]	N cm [in]	P cm [in]	U cm [in]	K cm [in]	A cm [in]	B cm [in]	D cm [in]	E cm [in]	F cm [in]	H cm [in]
16,50 [6.50]	5,70 [2.25]	2,50 [1.00]	8,90 [3.50]	0,95 [0.37]	1,90 flat [0.75 flat]	0,86 [0.34]	10,50 [4.13]	4,44 [1.75]	4,44 [1.75]	2,50 [1.00]	0,50 [0.20]



For reference only

**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.

## **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.**

### **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](mailto:info.tm@honeywell.com)**

Sensing and Control  
Honeywell  
1985 Douglas Drive North  
Golden Valley, MN 55422 USA  
**[honeywell.com](http://honeywell.com)**

# Honeywell