

## Model 1388-102

### Sprocket/Pulley Torque Sensor



#### DESCRIPTION

Originally designed for a precision feedback control loop on textile machinery, the Model 1388 Sprocket/Pulley Torque Sensor is an accurate method to measure processing torques. Coupled to any belt or chain driven stub shaft and monitored by a closed

electrical circuit, machinery speeds and material feed rates can be precisely controlled. Used in an automation application to increase productivity and decrease power consumption. Rotary transformer with encoder option available.

#### FEATURES

- 500 in-lb and 1000 in-lb capacities (standard)
- 0.1 % non-linearity and hysteresis
- Reduced sensitivity to belt/chain tension loads on torque readings not to exceed maximum overhung moment
- Elimination of torque error due to bearing losses in jack-shaft assembly
- Measurements of torque “at the source”
- Rotary transformer with encoder option available

# Model 1388-102

## PERFORMANCE SPECIFICATIONS

Characteristic	Measure
Torque range	500, 1000 lb-in
Non-linearity	±0.1 % of rated output
Hysteresis	±0.1 % of rated output
Repeatability	±0.15 % of rated output
Output @ rated capacity	2.0 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	0.004 % of rated output/°F
Temperature effect, output	0.004 % of reading/°F

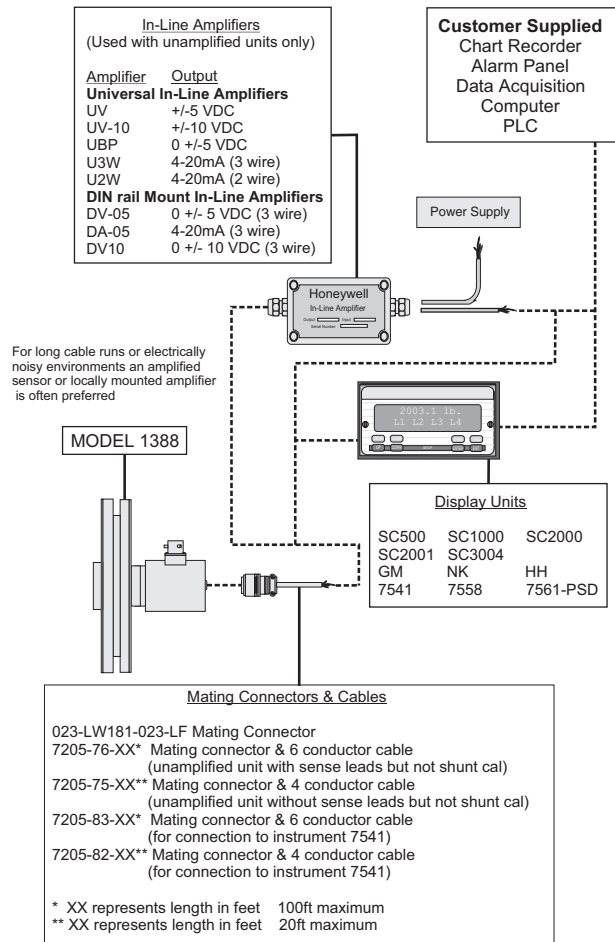
## ELECTRICAL SPECIFICATIONS

Characteristic	Measure
Excitation (maximum)	20 Vdc or Vac RMS
Insulation resistance	> 5000 mOhm @ 50 Vdc
Bridge resistance	360 ohm (nominal)
Zero balance	≤1.0 % of rated output
Electrical termination	PT02H-10-6P

## MECHANICAL SPECIFICATIONS

Characteristic	Measure
RPM (max.)	5000

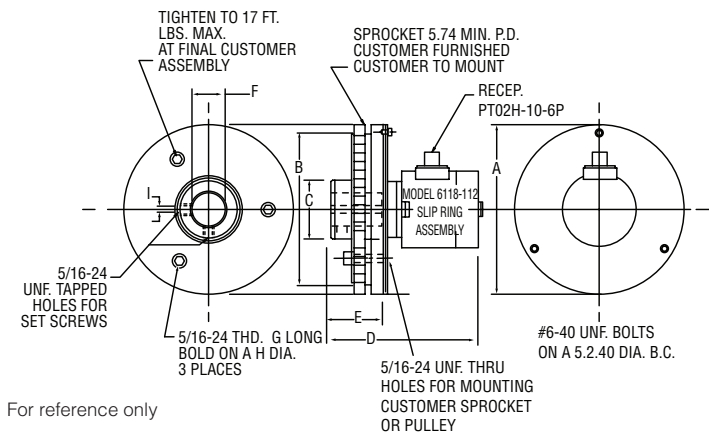
## TYPICAL SYSTEM DIAGRAM



## Sprocket/Pulley Torque Sensor

### MOUNTING DIMENSIONS

A cm [in]	B cm [in]	C cm [in]	D cm [in]	E cm [in]	F cm [in]	G cm [in]	H cm [in]	I cm [in]
14,67 [5.78]	13,170/13,172 [5.185/5.186]	5,08 [2]	13,02 [5.13]	4,45 [1.75]	2,858/2,863 [1.125/1.127]	2,54 [1.50]	9,53 [3.75]	0,64 [0.25]




**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 **[www.honeywell.com/sensotec](http://www.honeywell.com/sensotec)**, 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  
**[www.honeywell.com](http://www.honeywell.com)**

# Honeywell