

# Honeywell

Disc Instruments Subsidiary

# PANELCODER™

MANUAL OPTICAL  
INCREMENTAL ENCODER

## PC SERIES

Designed specifically for applications requiring manual incrementing, the Panelcoder offers the engineer a digital alternative to the analog potentiometer. It replaces both the potentiometer and the analog-to-digital converter. Typical applications include transceivers, oscilloscopes, factory automated equipment, medical equipment, and CAD/CAM/CAE equipment. The Panelcoder employs LED light sources, an optical disc, and photodetectors. Available in a wide selection of reso-

lutions and several configuration options, including low current drain for battery operation, the Panelcoder is the digital solution for eliminating noise and wear problems while providing continuous isolation in either direction with no discontinuation. For further information, or if you have an unusual requirement that necessitates a special unit, contact our Sales Engineers or our factory direct.

## PC10C

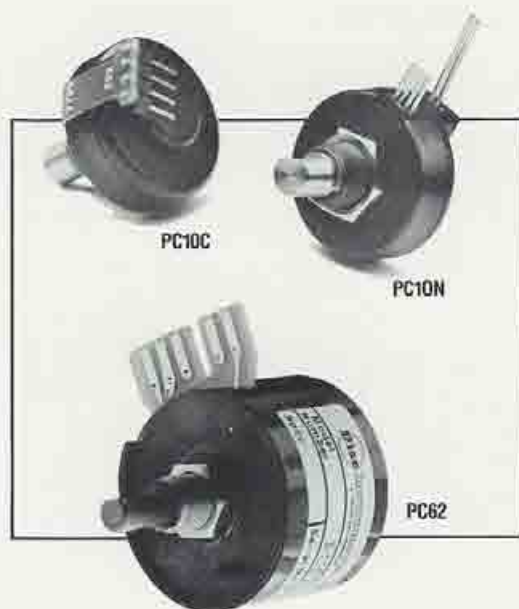
Designed specifically for applications where small size is important. The standard configuration corresponds to that of a typical 1.0" panel mounted potentiometer with a 1/4" diameter shaft. Available in standard resolutions of 5, 24, 64, 100, and 120 PPR.

## PC10N

Designed specifically for applications where a number of Panelcoders will be used in the same equipment. Similar to the PC10-C except that it does not include the internal resistor or capacitor used to provide power to the LED light source. This gives the design engineer the capability to select one current limiting resistor to provide current to LED light sources of a number of Panelcoders connected in series, thus conserving power consumption and minimizing component cost.

## PC62

Designed specifically for applications where a higher resolution Panelcoder is required. This unit employs LED light sources, a custom I.C. dual comparator, and push-pull phototransistor sensor pairs. The standard configuration corresponds to that of a typical 1.5" panel mounted potentiometer.



## PC10C/PC10N SPECIFICATIONS

### MECHANICAL

Weight	3 ounces maximum
Shaft Rotation	Continuous and reversible
Shaft	1/4" Diameter (flat standard)
Shaft Speed	100 RPM Maximum Continuous 300 RPM @ 10% duty cycle
Shaft Loading	Manually Operated, 1 pound maximum
Torque	1.2 in. oz. ± 7 in. oz.
Disc Material	Electroformed Nickel
Housing material	Polycarbonate

### ENVIRONMENTAL

Temperature Range	0° C to 55° C, Operating -40° C to +85° C, Storage
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### ELECTRICAL

Code	Incremental, quadrature
Resolution (PPR)	5, 24, 64, 100, 120
Edge Separation	36 degrees electrical, minimum
Output Signal	Square wave, CMOS/TTL Compatible
Logic "1"	VCC @ 10K OHMS
Logic "0"	0.5 Volts Max. @ 16 ma max.
Input Power	PC 10 C: +5 VDC ± 5% @ 70 ma max. PC 10 N: +4.5 to 16 V @ 50 ma max. (LED Current Set To 35 ma ± 10%)
Mating Connector (PC 10 C)	AMP 1-87175-0 or equivalent

### MOUNTING

2-3/32 mounting nuts and lock washer supplied, Mounting nut to be torqued to 100 in. oz. max. (approximately finger tight plus 1/4 turn).

# PC62 SPECIFICATIONS

## MECHANICAL

Weight .....	3 ounces maximum
Shaft Rotation .....	Continuous and reversible
Shaft .....	1/4" Diameter with flat
Shaft Speed .....	100 RPM max. cont.
	300 RPM @ 10% duty cycle
Shaft Loading .....	Manually Operated, 1 lb max.
Torque .....	2 ± 1 in. oz. with brake, less than 0.5 in. oz. without brake
Disc .....	Etched metal
Housing .....	Polycarbonate

## ENVIRONMENTAL

Temperature Range	
Operating .....	0°C to +55°C
Storage .....	-40°C to +85°C

## ELECTRICAL

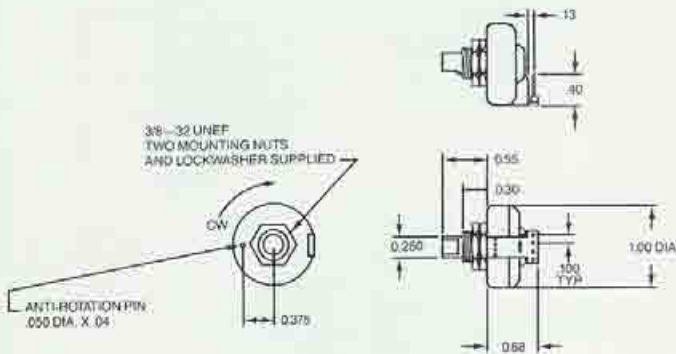
Code .....	Incremental, quadrature
Resolution (PPR) .....	Standard: 10, 40, 60, 100, 120, 127, 180, 200, 250, 256 (max.)
	Consult factory for special PPRs
Edge Separation .....	45 degrees electrical, minimum
Accuracy .....	±10 arc minutes
Output Signal .....	Square wave, CMOS/TTL compatible
Logic "1" .....	3 volts min. @ 3 ma. source
Logic "0" .....	0.5 volts max. @ 16 ma. sink
Input Power .....	+5 VDC ±5% @ 60 ma. max. standard; +5 VDC ±5% @ 10 ma. max. for low current drain option.
Termination .....	Card edge, contacts on 0.156" centers.
Mating Connector .....	CINCH 50-6A-20 or equivalent

## MOUNTING

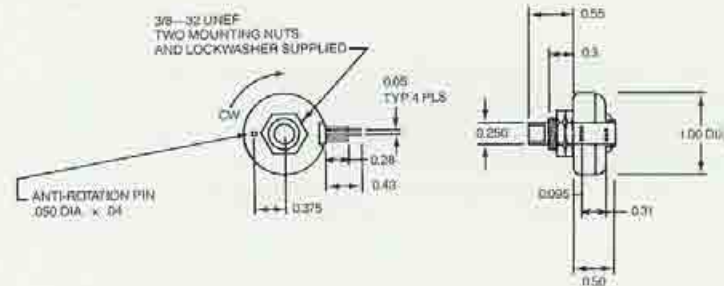
3/8-32 UNEF mounting nut supplied.  
Max torque to mounting nut is  
300 inch ounces.

## OUTLINE DRAWINGS

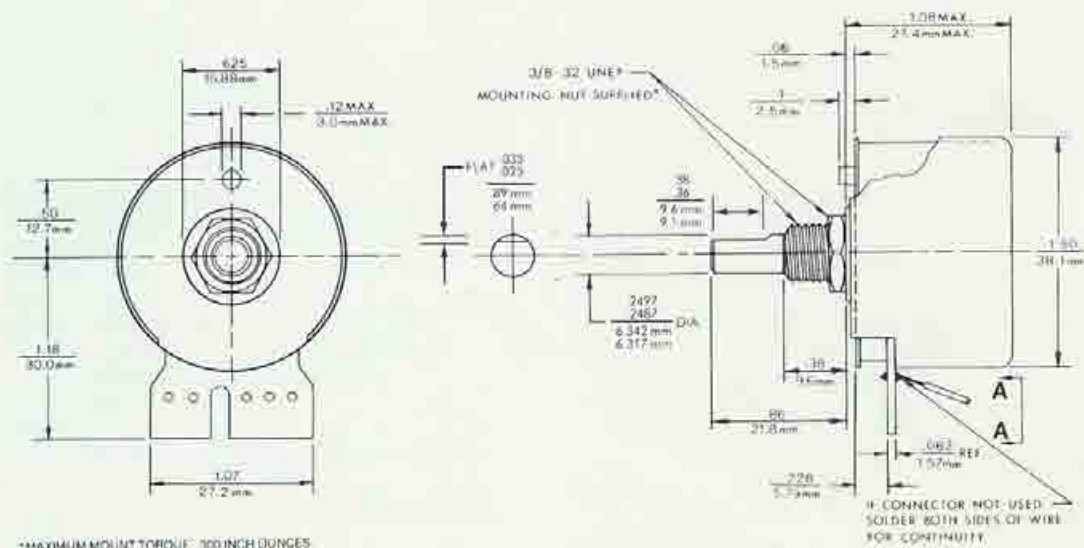
PC10C



PC10N

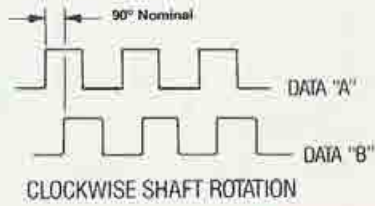


PC62



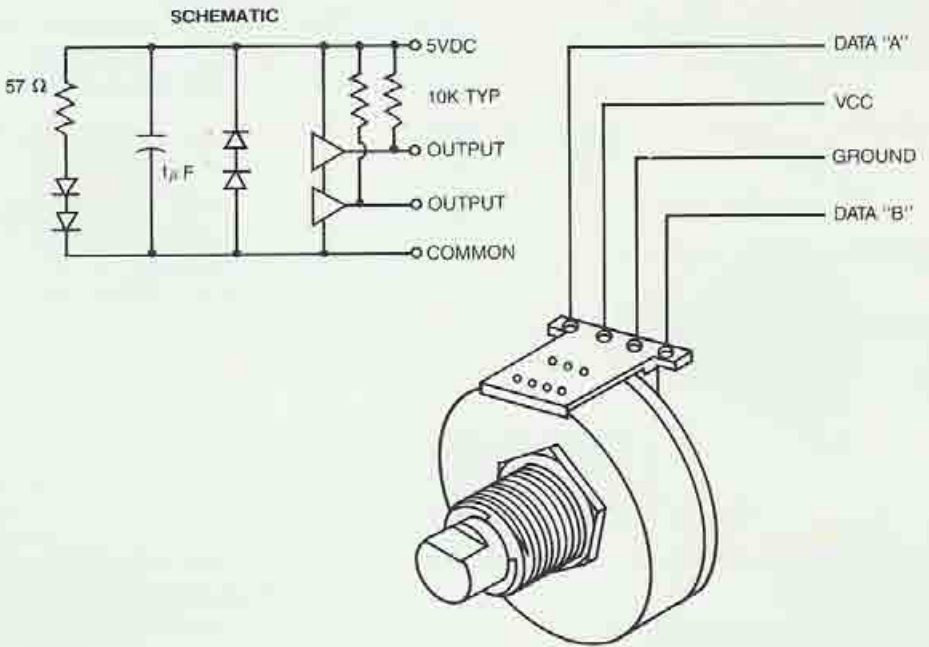
\*MAXIMUM MOUNT TORQUE: 300 INCH OUNCES

# OUTPUT WAVE FORMS (PC10C, PC10N, PC62)

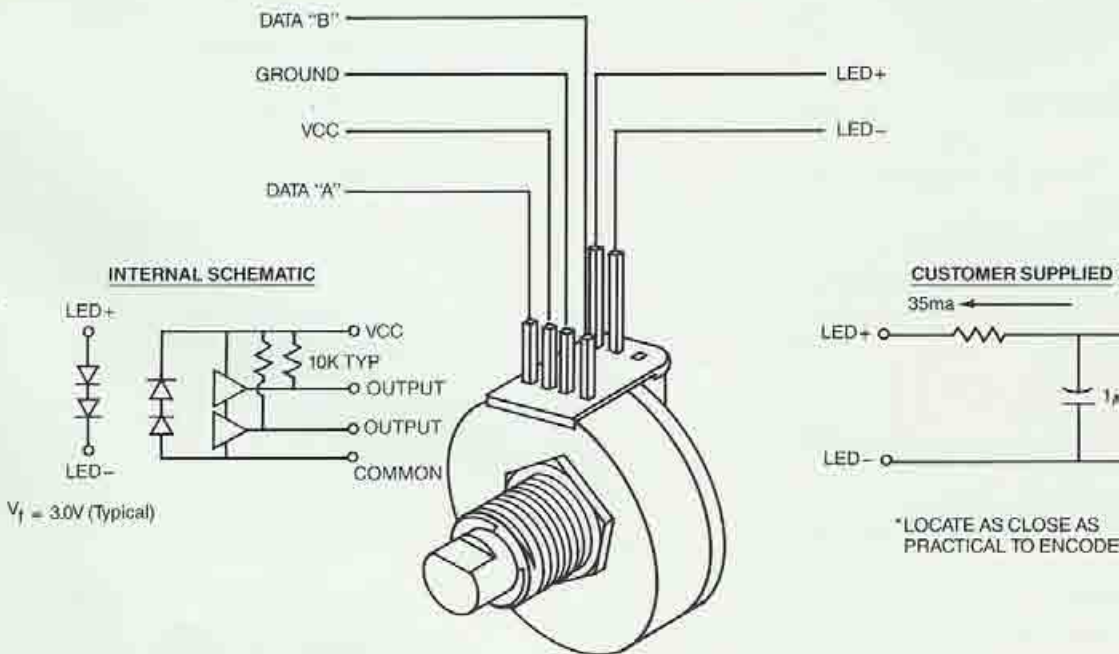


## ELECTRICAL CONNECTIONS AND SCHEMATICS

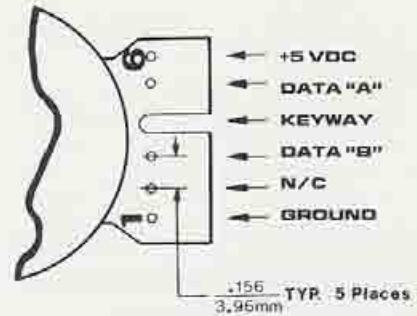
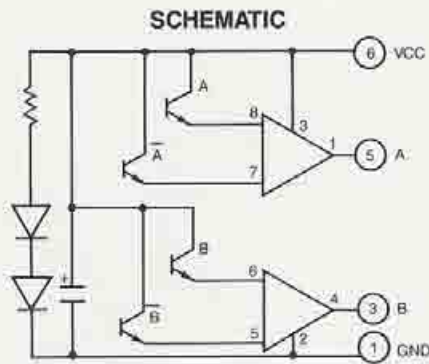
### PC10C



### PC10N

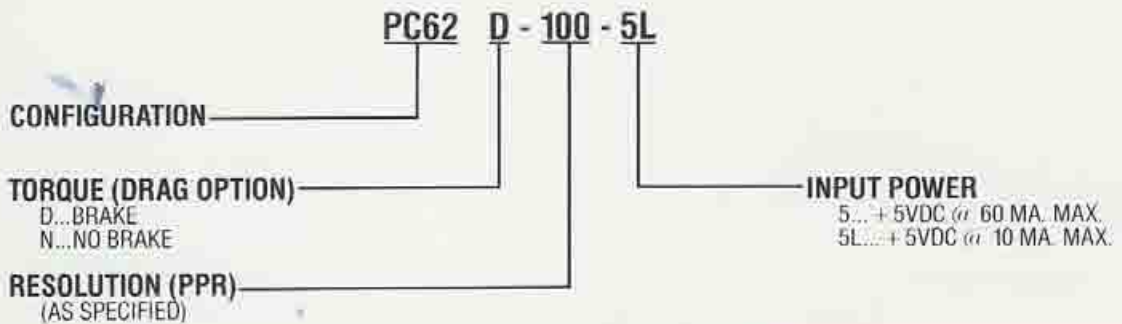
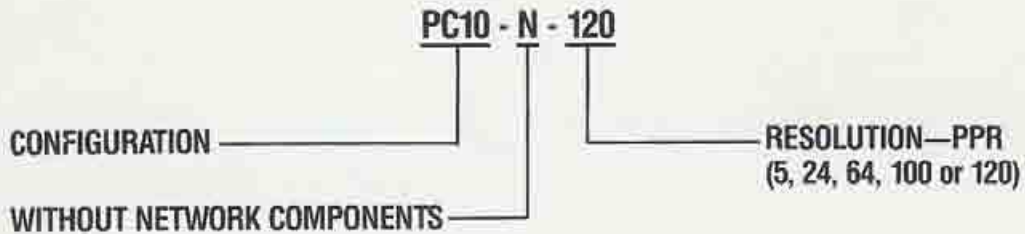
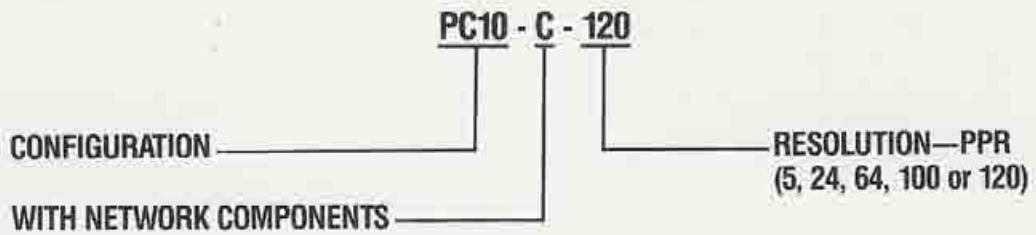






TERMINAL IDENTIFICATION

**MODEL NUMBER DESIGNATION**



# Honeywell

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Manufacturer reserves the right to make product changes without prior notice.

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