

## Description

The PC3 provides single-ended, open collector outputs and includes a switching power regulator that accepts a power supply from 9.5 to 32 volts. The PC3 is intended for applications where 5VDC is not available to power the encoder, or a higher voltage output from the encoder channel is needed. To achieve the desired output voltage range, add external pull-up resistors to the PC3 open collector outputs. The PC3 provides the added benefit of being a single-ended cable driver for cables up to 500 feet in length.

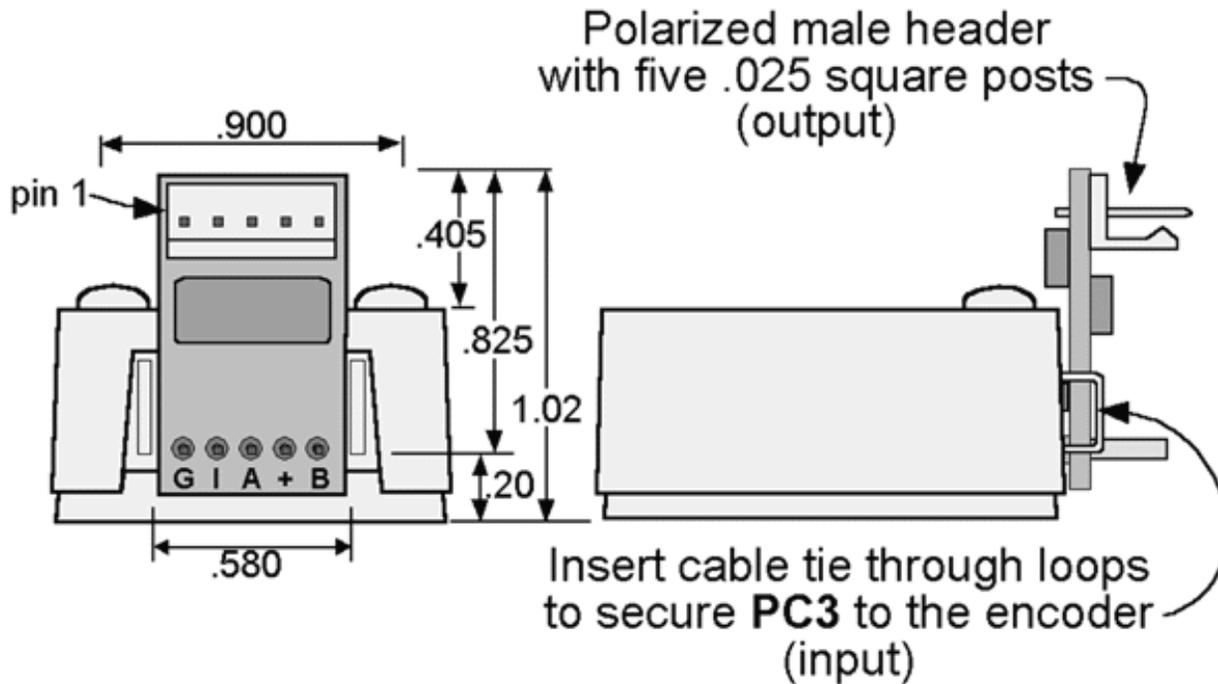
Two versions of the PC3 are offered, a "header" version and an "inline" version. The header version (option H5) has connector pins on the board that plug directly into the encoder. The inline version (options C5, FC5, LC5, and W5) connects to the encoder with a short cable.

Compatibility with US Digital products:

- ▶ PC3-H5 header version is used with the E2 and H1. This is the version pictured above, with connector pins that attach to an encoder module, and a white header for output.
- ▶ PC3-C5 and PC3-LC5 inline versions can be used with S1, S2, E2, E3, H1, and H3 encoders, and with the HEDS and EM1/EM2 optical encoder modules. These versions both have the white header pictured above, but the connector pins have been replaced with either a red right angle connector (C5) or a black locking connector (LC5).
- ▶ PC3-FC5 inline version can be used with the "S" (single-ended) output versions of the E5, E6, H5, H6, HB5M, and HB6M encoders. In this version the connector pins have been replaced with wires terminating in a female latching connector that plugs into the listed encoders, and the output is a male right angle latching receptacle.
- ▶ PC3-W5 inline version has the white header for output and the input connector pins have been replaced 12" long discrete wires.



## Mechanical Drawing



### Environmental

Parameter	Min.	Max.	Units
Operating Temperature	-40	85	C

### Electrical Characteristics

Parameter	Min.	Typ.	Max.	Units	Notes
Supply Voltage (PWR)	9.5	-	32	Volts	-
Supply Current (PWR)	-	4	-	mA	12V input, no load
+5V Output Supply Current	-	-	75	mA	-
Conversion Efficiency	-	85	-	%	12V input
Output Voltage Low	-	-	0.4	Volts	100mA

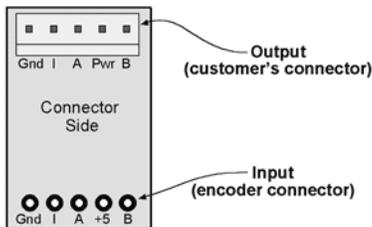
### Pin Description

Input Connector Pin

	Name	Description
1	GND	Ground
2	I	Index
3	A	A channel
4	+5VOUT	+9.5 to +32VDC converted to +5VDC for encoder
5	B	B channel

Output Connector Pin

Pin	Name	Description
1	GND	Ground
2	I	Open collector Index output
3	A	Open collector A channel output
4	PWR	+9.5 to +32VDC
5	B	Open collector B channel output



Ordering Information

PC3 -

**Connector**

H5 =

C5 =

FC5 =

LC5 =

W5 =

**Notes**

- Cables and connectors are not included and must be ordered separately.
- US Digital® warrants its products against defects in materials and workmanship for two years. See complete warranty for details.