

## Description

The PC3 provides single-ended, open collector outputs and includes a miniature 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 hollow 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.

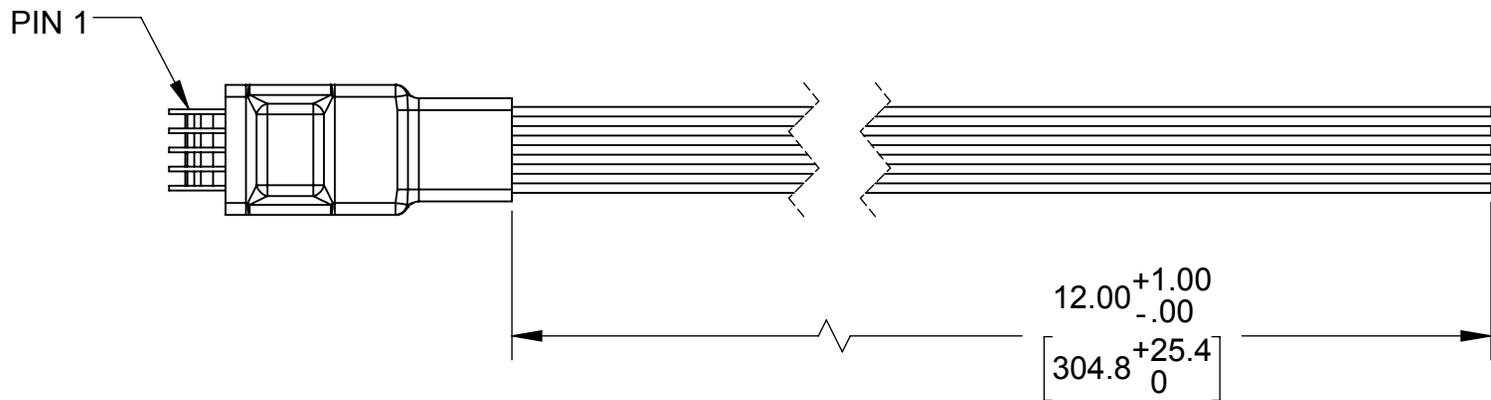
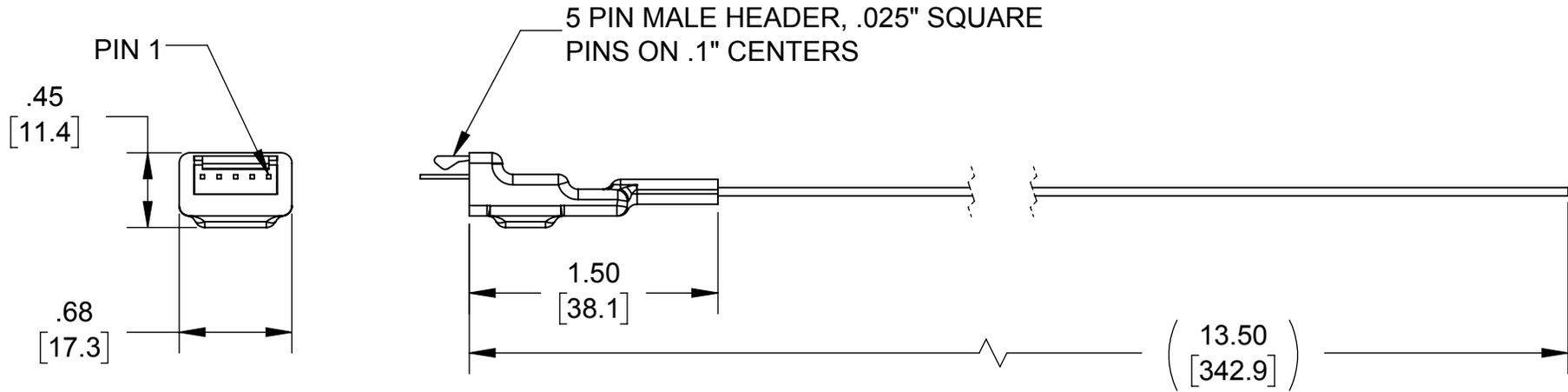
Compatibility with US Digital products:

- ▶ PC3-H5 header version is used with the E2 and H1. This is the version pictured above, with hollow pins that attach to an encoder module, and a white header for output.
- ▶ PC3-C5 and PC3-LC5 inline versions can be used with E2, E3, H1, and H3 encoders, and with the HEDS and EM1 optical encoder modules. These versions both have the white header pictured above, but the hollow 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 hollow pins have been replaced with wires terminating in a female finger latching connector that plugs into the listed encoders, and the output is a male right angle finger latching receptacle.
- ▶ PC3-W5 inline version can be used when customer wants five 12" individual discrete wire leads (no connector) on the input (encoder) end. This version has the white header for output, and the hollow pins have been replaced with a short length of discrete unterminated wires.

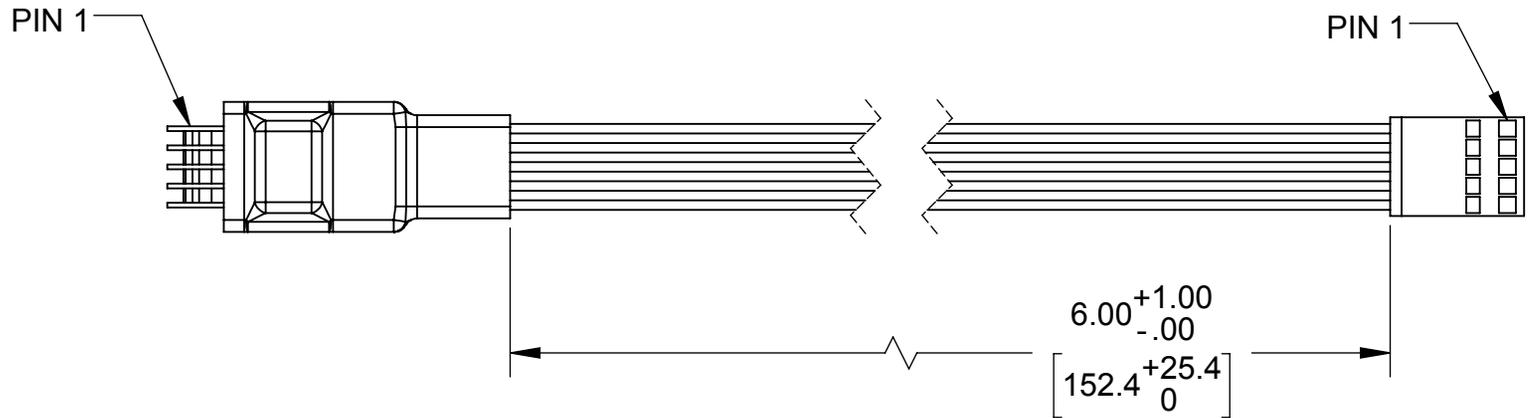
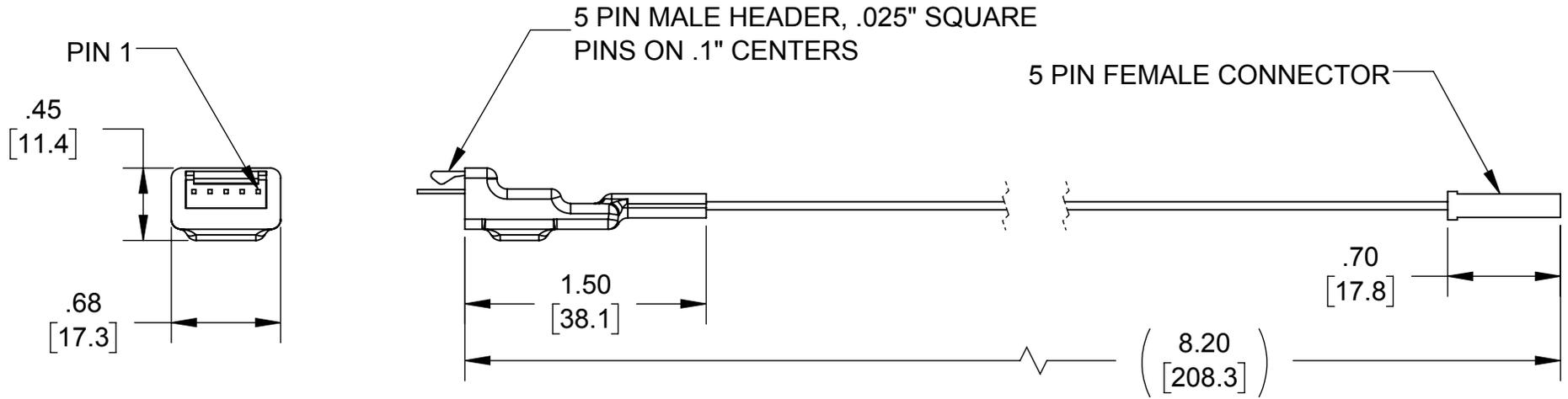


## Mechanical Drawing

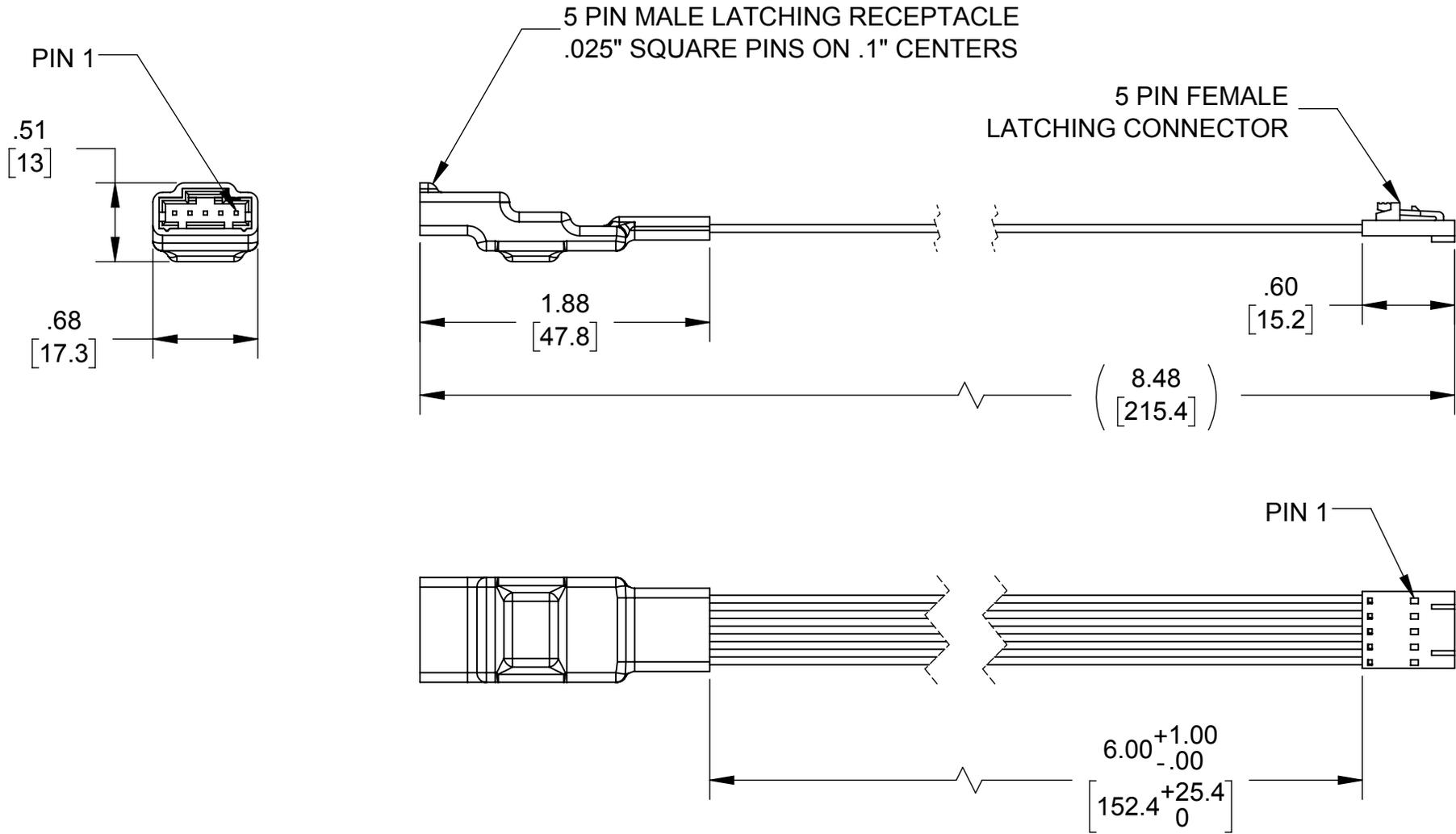
# PC3-W5 Encoder Open Collector Cable Driver



# PC3-LC5 Encoder Open Collector Cable Driver

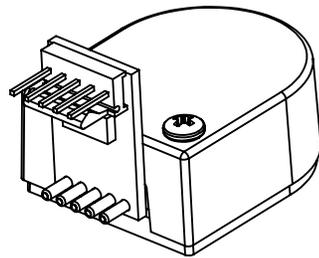
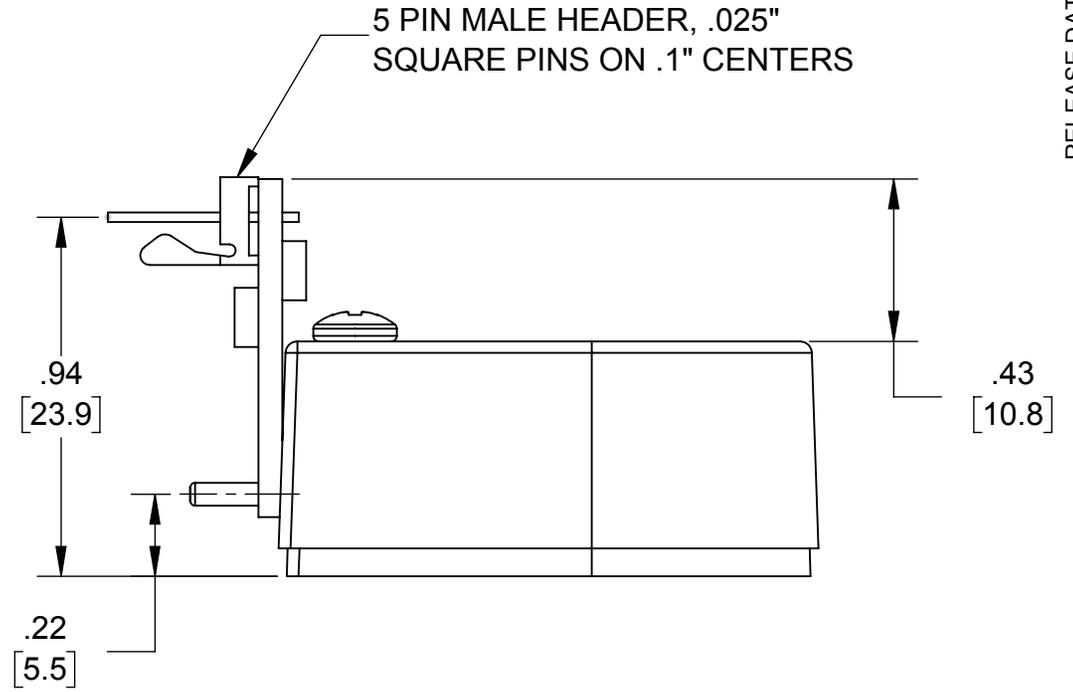
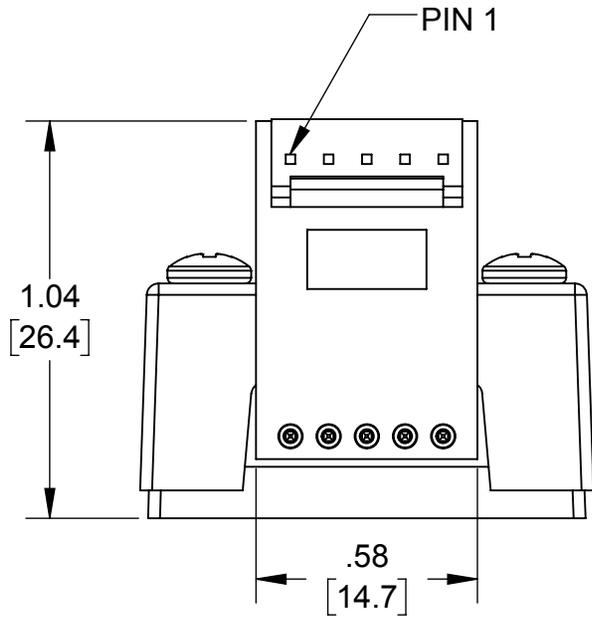


# PC3-FC5 Encoder Open Collector Cable Driver

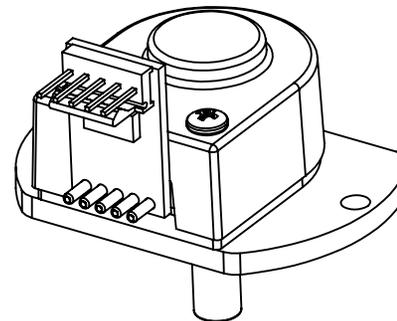


# PC3-H5 Encoder Open Collector Cable Driver

RELEASE DATE: 02/04/2019



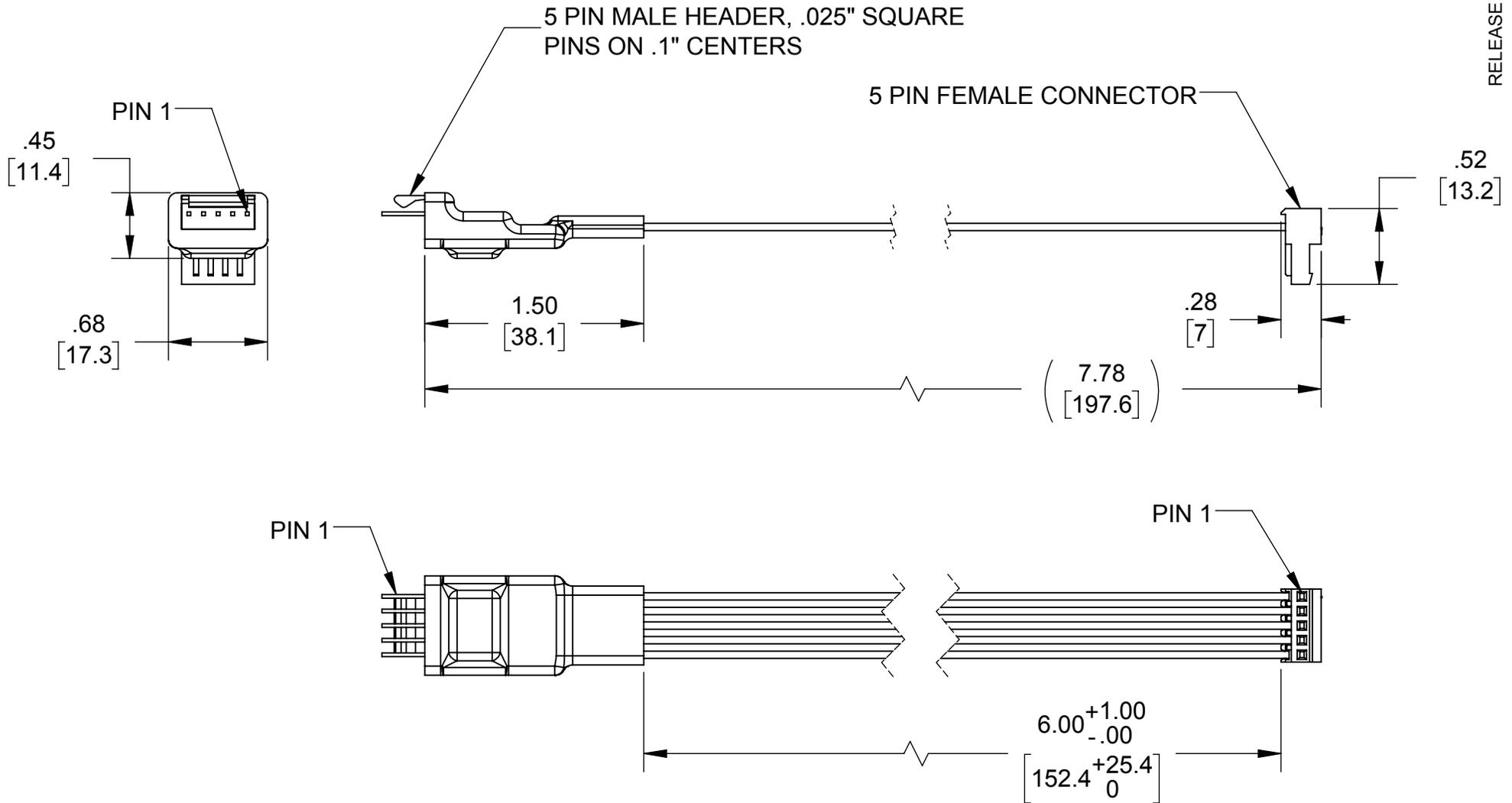
E2 ASSEMBLY



H1 ASSEMBLY

# PC3-C5 Encoder Open Collector Cable Driver

RELEASE DATE: 02/04/2019



### Electrical Characteristics

Parameter	Min.	Typ.	Max.	Units	Notes
Supply Voltage (PWR)	9.5	-	32	Volts	-
Supply Current	-	-	75	mA	-
Conversion Efficiency	80%	85%	60	mA	12V input
Output Voltage Low	-	-	0.4	Volts	100mA

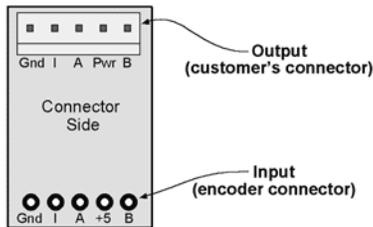
### Absolute Maximum Ratings

Parameter	Min.	Max.	Units
Storage Temperature	-40	100	C
Operating Temperature	-40	85	C

### Pin Description

Pin	Name	Description
1	GND	Ground
2	I	Index

Pin	Name	Description
3	A	A channel
4	PWR	+9.5 to +32VDC Power converted to +5VDC for encoder
5	B	B channel



### 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.

### Base Pricing

Quantity	Price
1	\$19.95
10	\$19.60

For volume discounts, please contact us at sales@usdigital.com or 800.736.0194.

- Add \$2.50 per unit for **Connector** of
- Add \$4.50 per unit for **Connector** of ,