

Advantech AE Technical Share Document

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Category	■ FAQ □ SOP	Related OS	Microsoft Windows XP / 7
Abstract	The encoder Single-Ended wiring connection with ADAM-3956		
Keyword	Common motion / Advantech motion card / ADAM-3956 / encoder / single-ended circuit		
Related Product	PCI-1285 / PCI-1285E / PCI-1265 / PCI-1245 / PCI-1245E / PCI-1245L		

■ Problem Description:

This document describes how to connect encoder and ADAM-3956 with Single-Ended (A/GND, B/GND, Z/GND); because default setting of ADAM-3956 encoder pins is design for Differential connection (Phase A+/-, B+/-, Z+/-)

■ Brief Solution :

There has three different encoder output from motor controller:

1. Motor controller has own voltage (Vcc / V+) inside (Common Anode, CA). The Figure 1 shows circuit for one channel. (EC: Encoder Signal; EC+/-: ECA+/-, ECB+/-, ECB+/-)

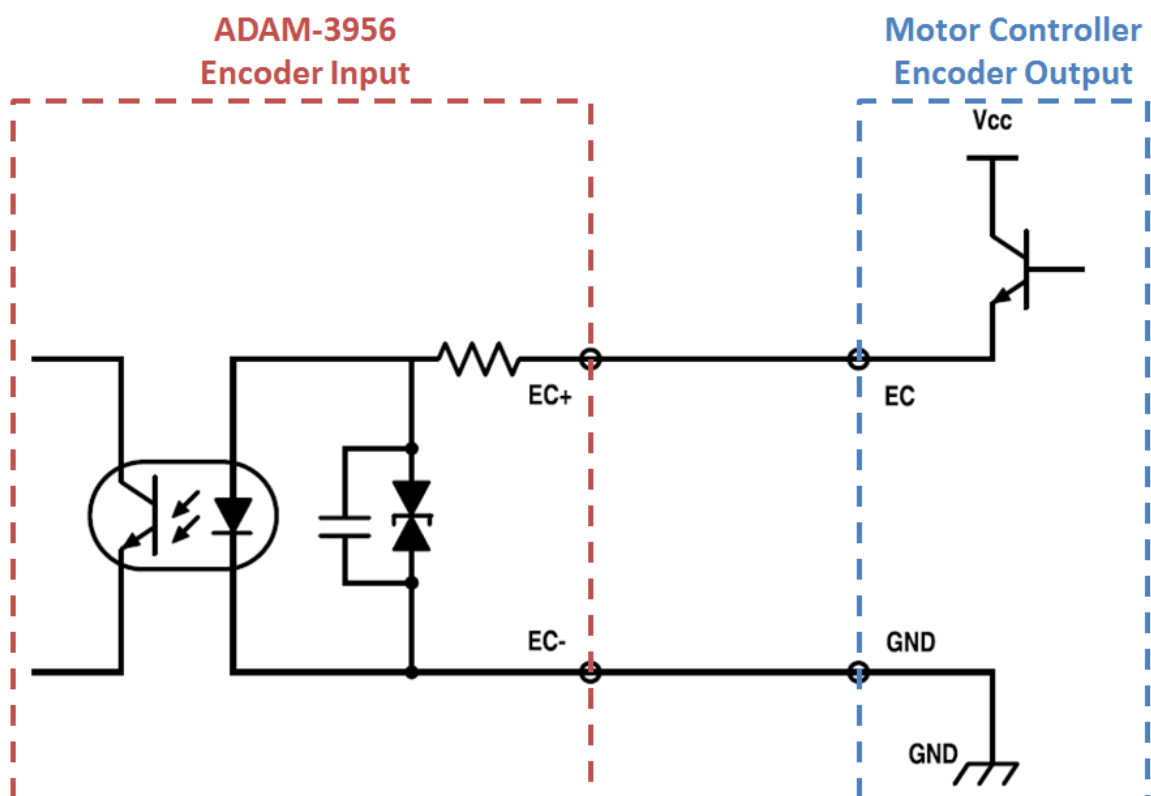


Figure 1. The diagram of encoder wiring connection for one channel (encoder A or B or Z)

2. Motor controller needs input voltage from outside (Common Anode, CA). The Figure 2 shows circuit for one channel. (EC: Encoder Signal; EC+/-: ECA+/-, ECB+/-, ECB+/-)

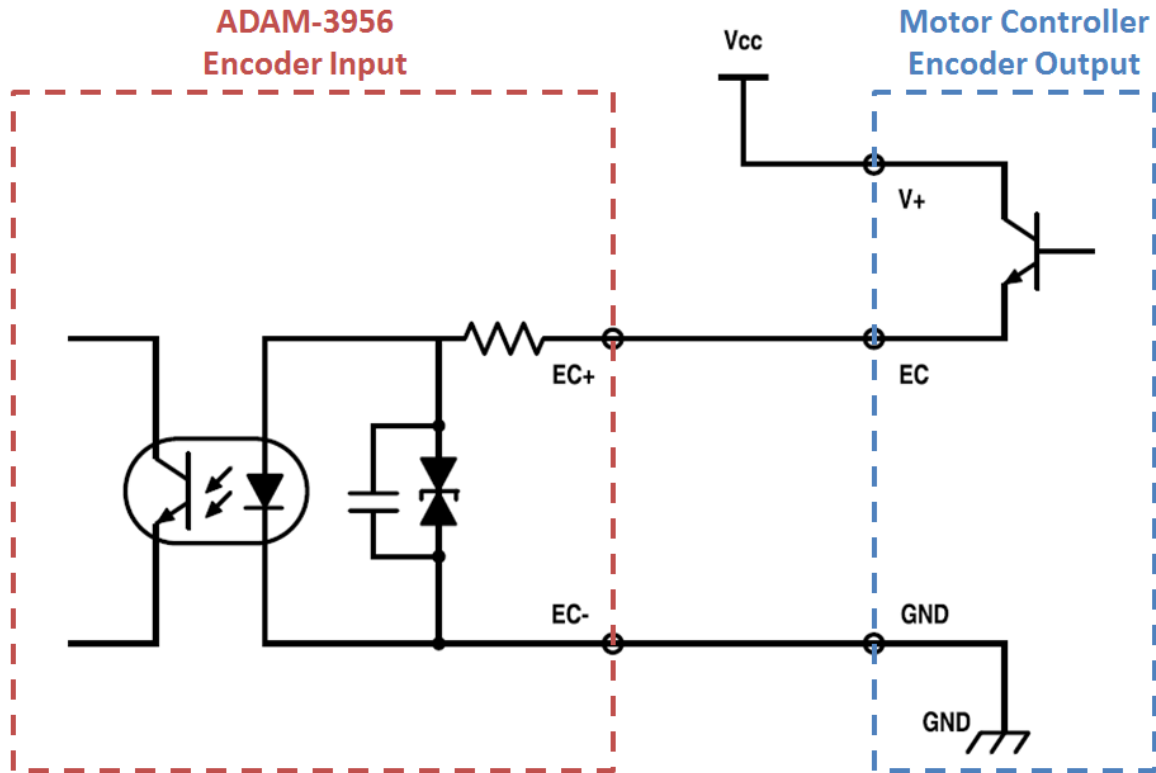


Figure 2. The diagram of encoder wiring connection for one channel (encoder A or B or Z)

3. Motor controller encoder output is CC (Common Cathode, CC or CK) circuit. The Figure 3 shows circuit for one channel. (EC: Encoder Signal; EC+/-: ECA+/-, ECB+/-, ECB+/-)

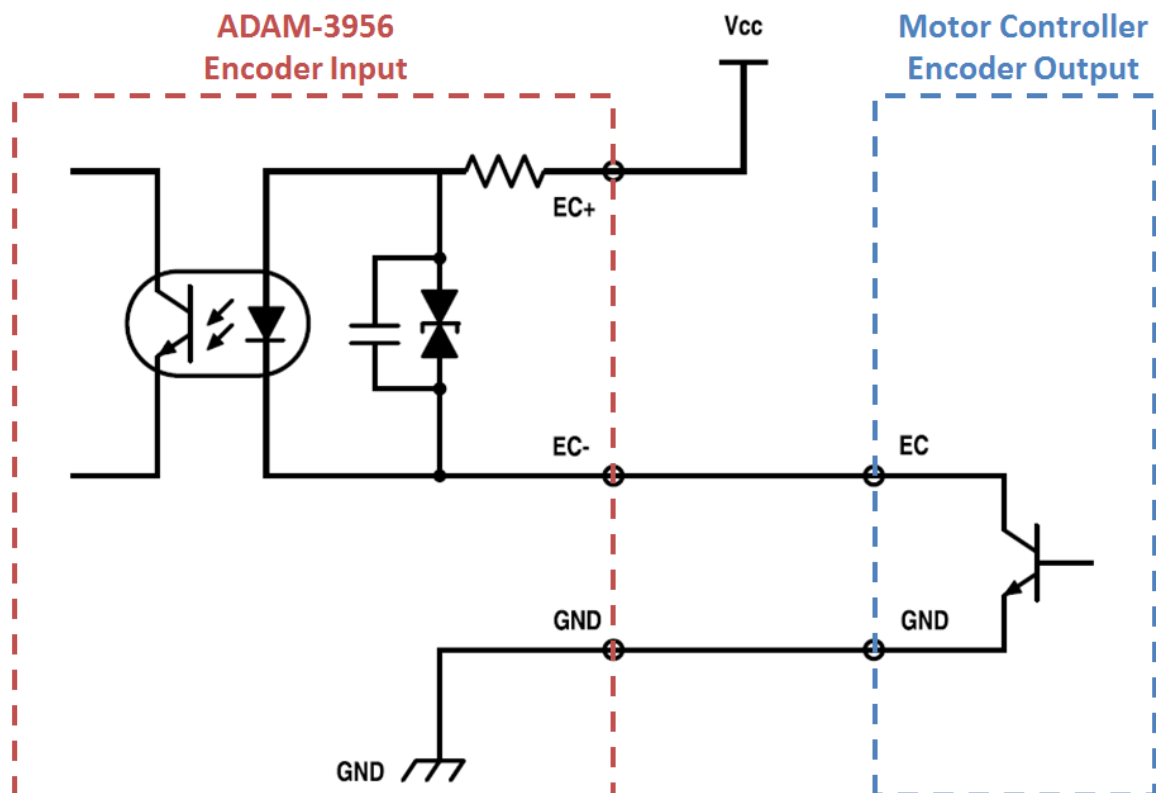


Figure 3. The diagram of encoder wiring connection for one channel (encoder A or B or Z)

■ **Reference:**

ADAM-3956 StartUP manual Page 5. & PCI-1245_1265_User manual chapter 3.