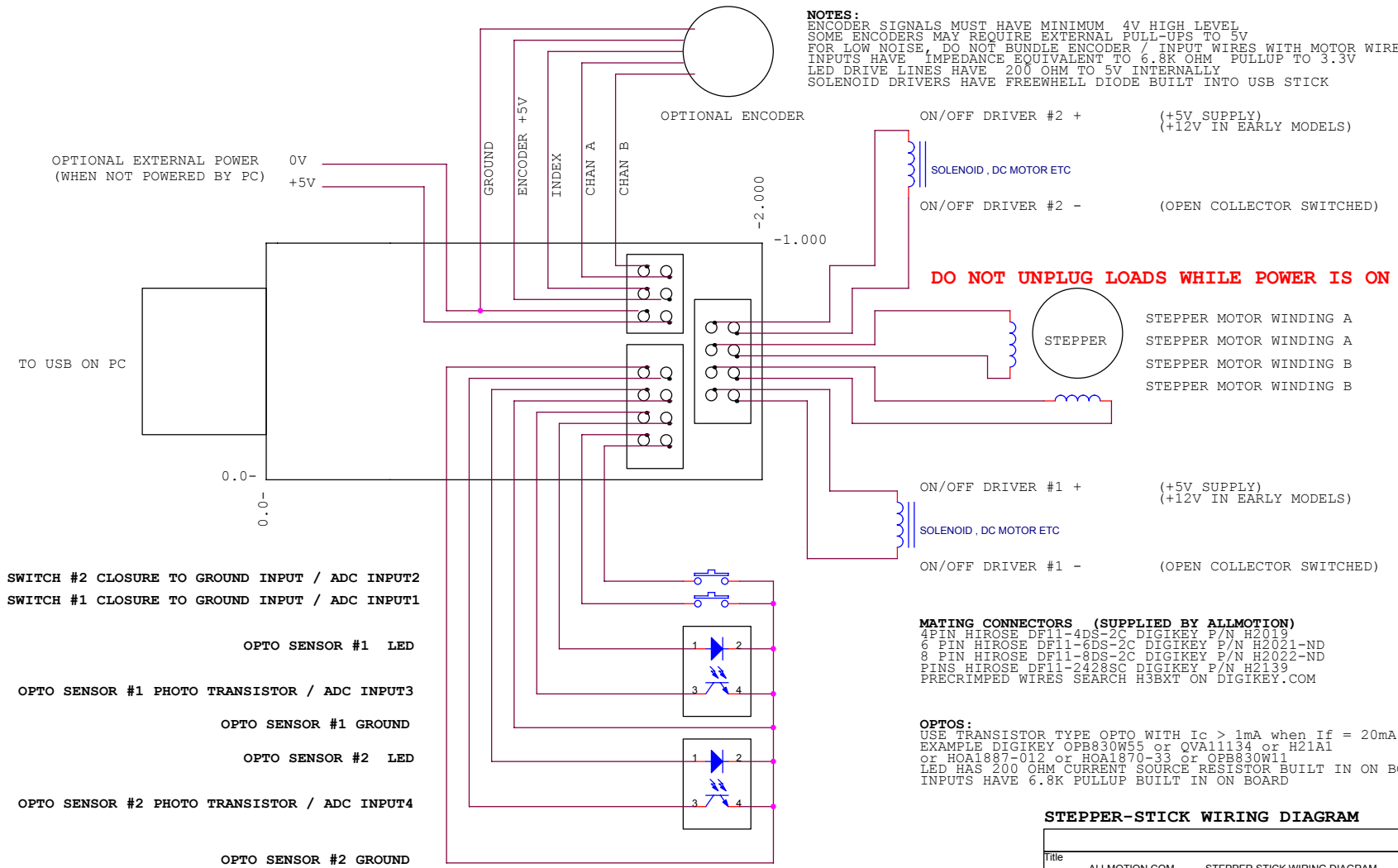


# STEPPER STICK DRIVER + CONTROLLER MODEL

## OPTIONAL ENCODER CONNECTION



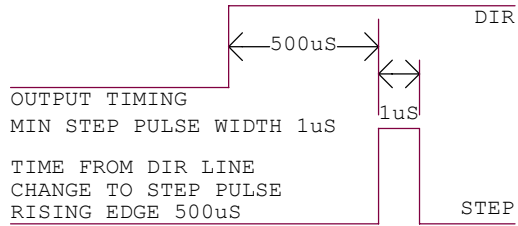
↓ PAGE DOWN FOR STEPPER STICK CONTROLLER ↓

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### STEPPER-STICK WIRING DIAGRAM

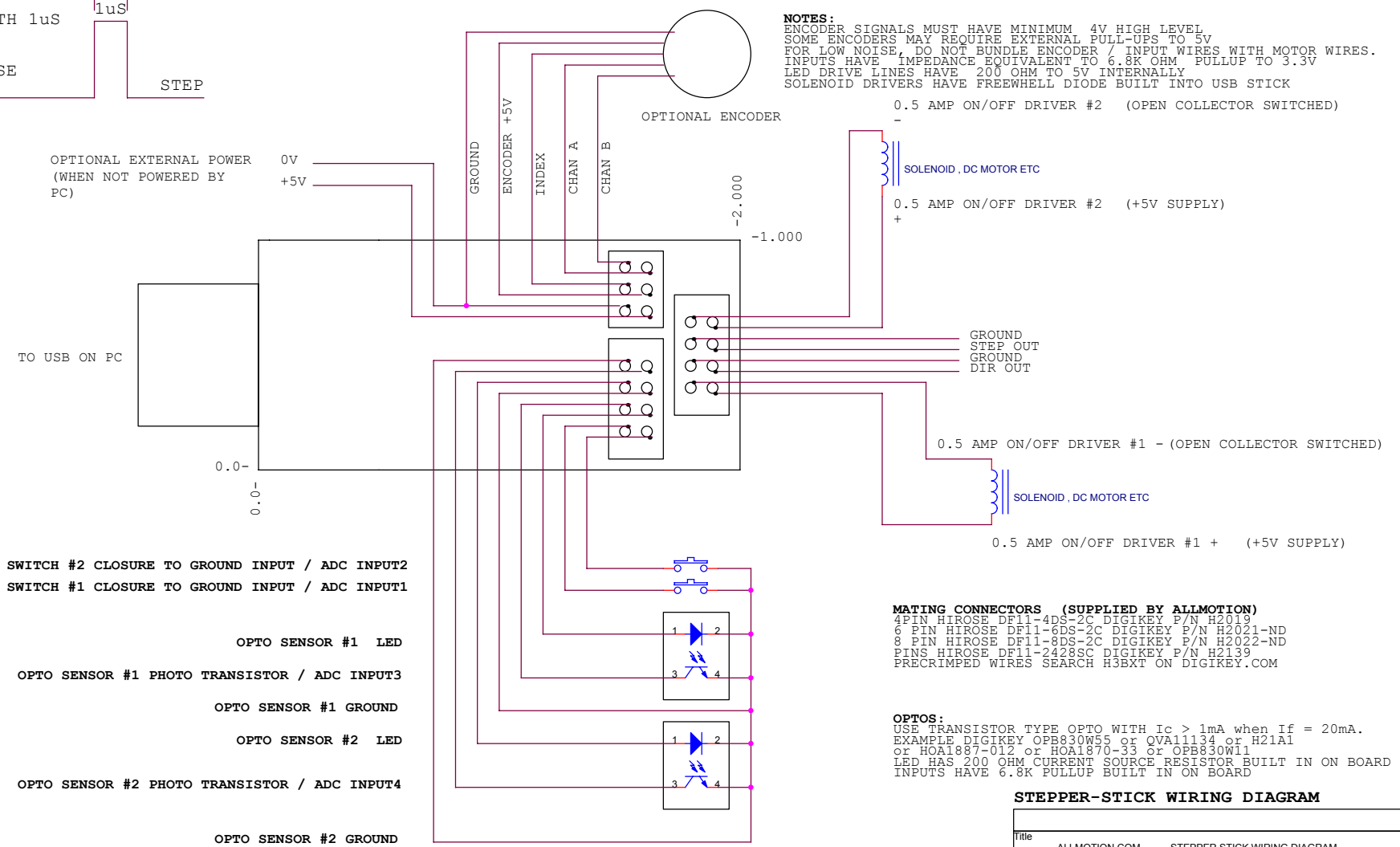
Title		ALLMOTION.COM STEPPER STICK WIRING DIAGRAM	
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STEPPER STICK CONTROLLER ONLY MODEL



OPTIONAL ENCODER CONNECTION

**NOTES:**  
 ENCODER SIGNALS MUST HAVE MINIMUM 4V HIGH LEVEL  
 SOME ENCODERS MAY REQUIRE EXTERNAL PULL-UPS TO 5V  
 FOR LOW NOISE, DO NOT BUNDLE ENCODER / INPUT WIRES WITH MOTOR WIRES.  
 INPUTS HAVE IMPEDANCE EQUIVALENT TO 6.8K OHM PULLUP TO 3.3V  
 LED DRIVE LINES HAVE 200 OHM TO 5V INTERNALLY  
 SOLENOID DRIVERS HAVE FREEWHEEL DIODE BUILT INTO USB STICK



OPTIONAL EXTERNAL POWER (WHEN NOT POWERED BY PC)  
 0V  
 +5V

TO USB ON PC

SWITCH #2 CLOSURE TO GROUND INPUT / ADC INPUT2  
 SWITCH #1 CLOSURE TO GROUND INPUT / ADC INPUT1

OPTO SENSOR #1 LED  
 OPTO SENSOR #1 PHOTO TRANSISTOR / ADC INPUT3  
 OPTO SENSOR #1 GROUND  
 OPTO SENSOR #2 LED  
 OPTO SENSOR #2 PHOTO TRANSISTOR / ADC INPUT4  
 OPTO SENSOR #2 GROUND

0.5 AMP ON/OFF DRIVER #2 (OPEN COLLECTOR SWITCHED)

SOLENOID, DC MOTOR ETC

0.5 AMP ON/OFF DRIVER #2 (+5V SUPPLY)

GROUND  
 STEP OUT  
 GROUND  
 DIR OUT

0.5 AMP ON/OFF DRIVER #1 - (OPEN COLLECTOR SWITCHED)

SOLENOID, DC MOTOR ETC

0.5 AMP ON/OFF DRIVER #1 + (+5V SUPPLY)

**MATING CONNECTORS (SUPPLIED BY ALLMOTION)**  
 4PIN HIROSE DF11-4DS-2C DIGIKEY P/N H2019  
 6 PIN HIROSE DF11-6DS-2C DIGIKEY P/N H2021-ND  
 8 PIN HIROSE DF11-8DS-2C DIGIKEY P/N H2022-ND  
 PINS HIROSE DF11-2428SC DIGIKEY P/N H2139  
 PRECRIMPED WIRES SEARCH H3BXT ON DIGIKEY.COM

**OPTOS:**  
 USE TRANSISTOR TYPE OPTO WITH  $I_c > 1mA$  when  $I_f = 20mA$ .  
 EXAMPLE DIGIKEY OPB830W55 or QVA11134 or H21A1  
 or HOA1887-012 or HOA1870-33 or OPB830W11  
 LED HAS 200 OHM CURRENT SOURCE RESISTOR BUILT IN ON BOARD  
 INPUTS HAVE 6.8K PULLUP BUILT IN ON BOARD

OPTIONAL I/O CONNECTION

STEPPER-STICK WIRING DIAGRAM

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