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SM34 Stepper Motor Specification Sheet

SHEET # 940-2S040

DESCRIPTION

Our line of NEMA 34 size motors are selected to perfectly match AMCI's line of stepper drives. The NEMA size 34 motors are available in single or double shaft configurations. An optional 1000 line optical encoder can be factory installed on the double shaft motors. All motors have four leads to simplify wiring. The output shaft is 1/2", and the optional back end shaft is 3/8".

PART NUMBERS

SM34 - ☐ ☐ ☐

Stepper Motor:
NEMA 34 size

Nominal Holding Torque
450 - 467 oz-in
850 - 906 oz-in
1100 - 1175 oz-in

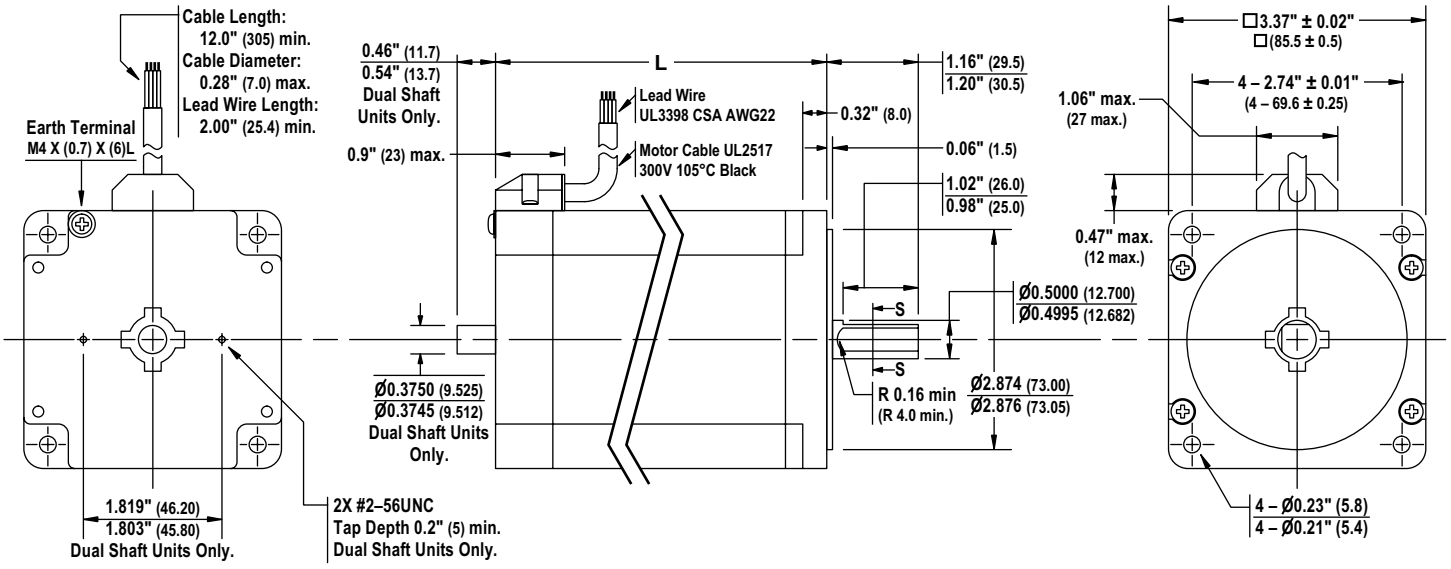
SHAFT
blank - single
"D" - double

ENCODER
blank - none
"E" - encoder installed

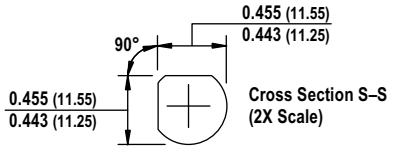
Sample Part Numbers
SM34-450
SM34-450D
SM34-450DE

NOTE: If you want the factory installed encoder, you must order a double shaft motor. (SM34-850DE is valid number, SM34-850E is not.)

DIMENSIONAL DRAWING



Part #	Holding Torque	Motor Current	Motor Length	Rotor Inertia x10^{-3} oz-in-sec^2	Motor Weight
SM34-450xy	467 oz-in	4.00 A	2.6" (66)	20.96	3.9 lb
SM34-850xy	906 oz-in	4.00 A	3.8" (97)	42.48	6.3 lb
SM34-1100xy	1175 oz-in	4.00 A	5.0" (127)	63.73	8.8 lb



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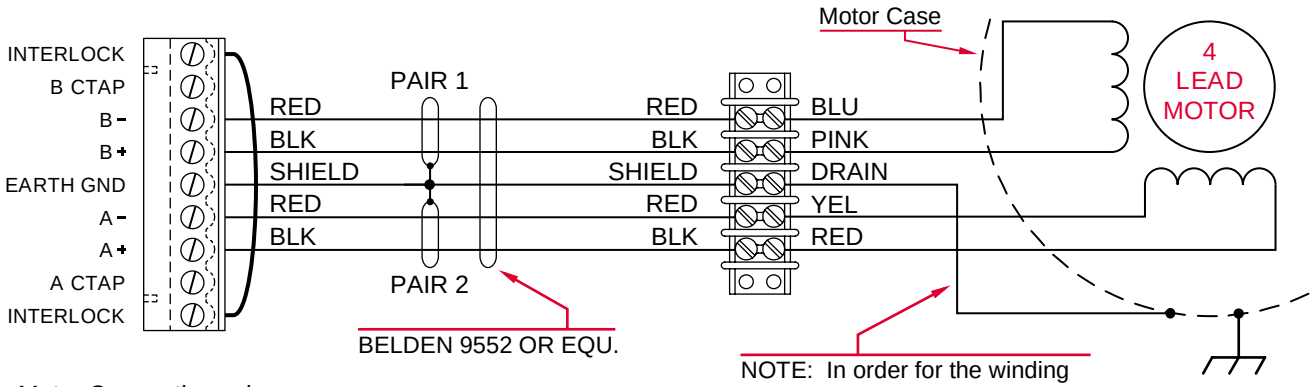
WIRING DIAGRAM



Motor Connections shown for CW rotation. (Facing mounting flange.)

For CCW rotation, reverse Stepper Drive B+ and B– connections.

NOTE: In order for the winding short circuit detection to function, you must connect a drain wire from the case of the motor to the shield of the extention cable.

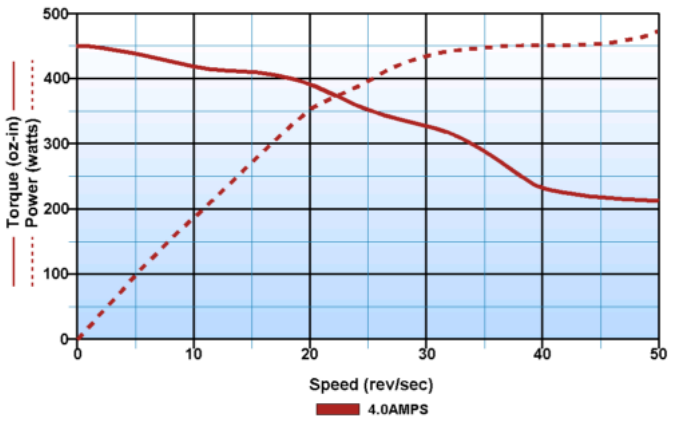
Extending the Motor Cable

As you extend the motor cable, you increase the chances of forming a ground loop between the motor and the drive. In order to keep this possibility to a minimum, connect motor and drive to the same point on your earth grounding system.

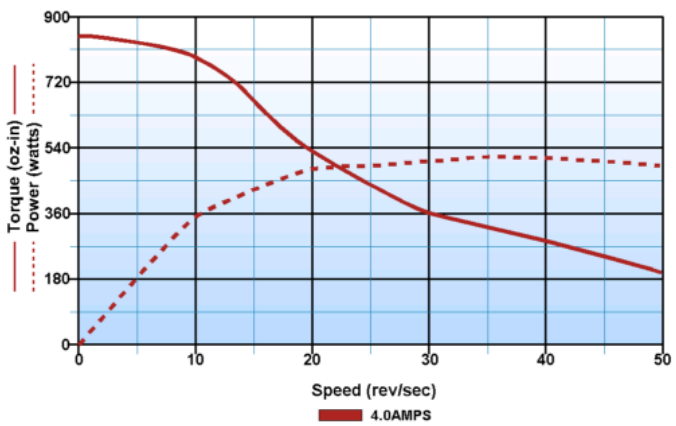
Even though it is possible to extend the cable length up to forty feet, AMCI recommends installing the drive as close as possible to the motor. This will decrease the chance of forming a ground loop, and has the added benefit of limiting the amount of power loss in the motor cable. If you must extend the cable, you should use a cable with twisted pairs 18 AWG or larger and an overall shield, such as the Belden 9552.

TORQUE CURVES

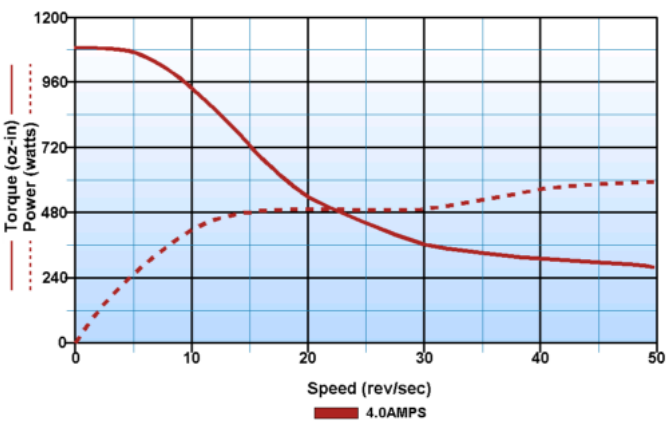
SM34-450



SM34-850



SM34-1100



Installing the Motor Cable

All of the motor connections are high power, high voltage signals. The cable from the motor can be installed in conduit along with ac/dc power lines or high power ac/dc I/O as long as safety codes are followed. It cannot be installed in conduit with low power cabling such as cabling from the drive to the indexer, communication cables, or low power ac/dc I/O lines.

When extending the motor cable, treat the shield as a signal carrying conductor when installing the motor cable. Do not connect the shield to earth ground at any junction box.