ADVANCED MICRO CONTROLS INC.
20 GEAR DRIVE, PLYMOUTH INDUSTRIAL PARK, TERRYVILLE, CT 06786
TEL: (860) 585-1254 FAX: (860) 584-1973 http://www.amci.com

SM34 Stepper Motor Specification Sheet

SHEET # 940-2S042

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 rear shaft is 3/8".

SM34 - □ □ □

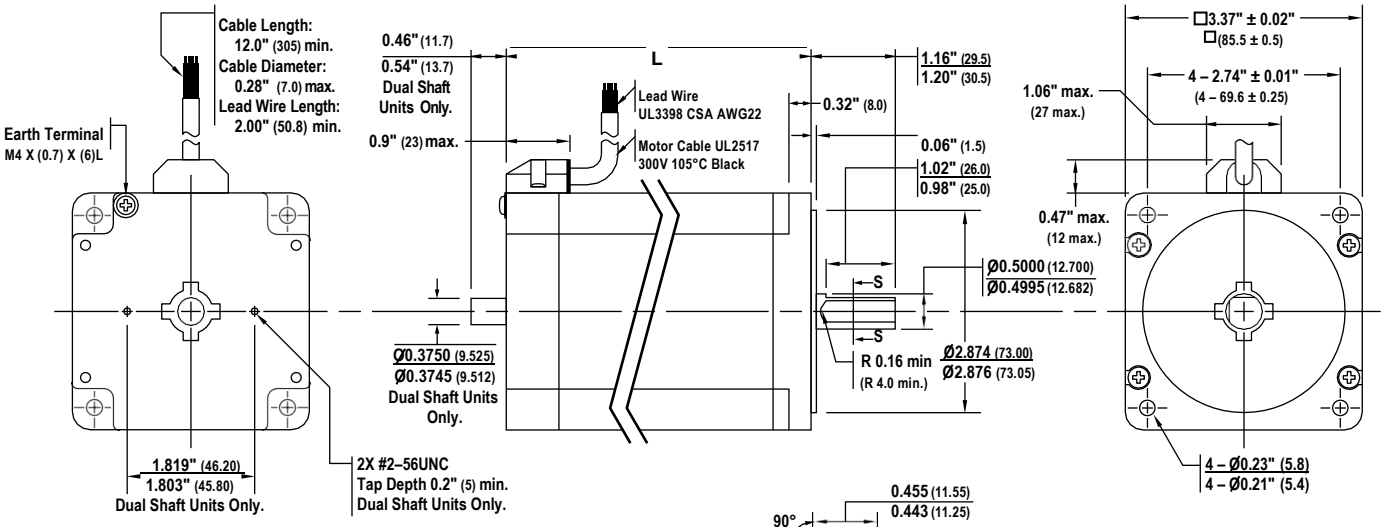
Stepper Motor: NEMA Size 34

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

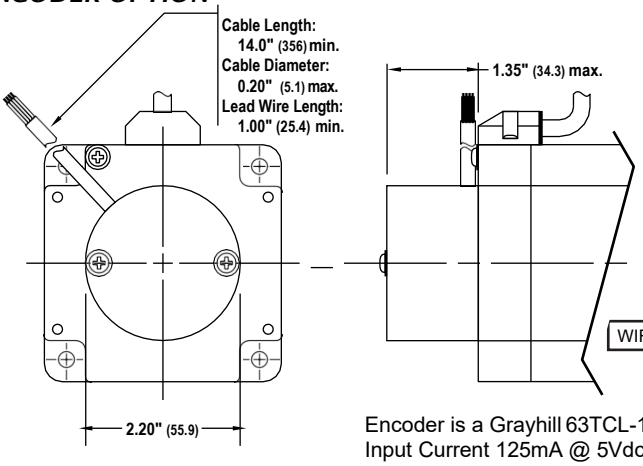
Shaft
blank - single
"D" - double

Encoder
blank - none
"E" - encoder installed

DIMENSIONAL DRAWING



ENCODER OPTION



Part #	Holding Torque	Motor Current	Motor Length	Rotor Inertia x10⁻³ oz-in-sec²	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

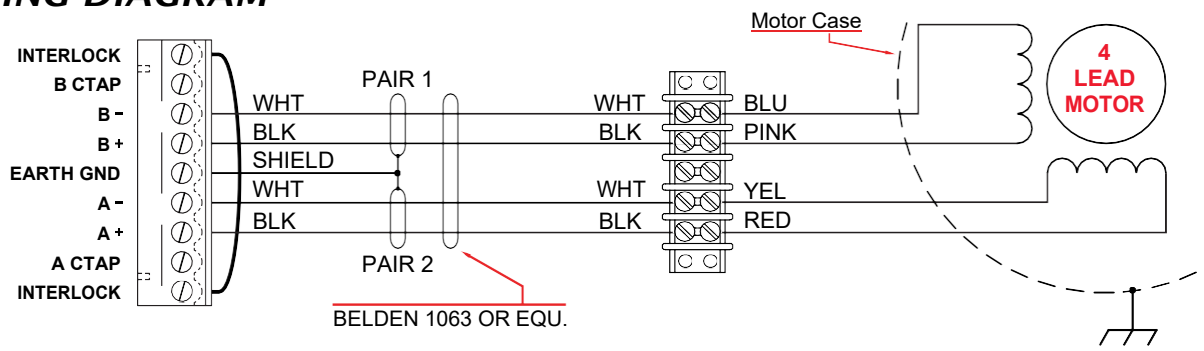
	ENCODER SIGNAL									
	+5Vdc	COM	+A	–A	+B	–B	+Z	–Z	SHLD	CASE
WIRE COLOR	RED	BLK	BRN	WHT	BLU	GRN	ORN	YEL	Drain	WHT/Blk

Encoder is a Grayhill 63TCL-1-3-0-1-1
Input Current 125mA @ 5Vdc + Interface Loads
All Encoder signals are 5V differential.
(AM26LS31 Line Driver)

Frequency Response: 200KHz
Maximum Shaft Speed: 8000 RPM
Extension Cable: Belden 8304 or equ.

SM34 Stepper Motor Specification Sheet

WIRING DIAGRAM



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

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

Extending the Motor Cable

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 1063.

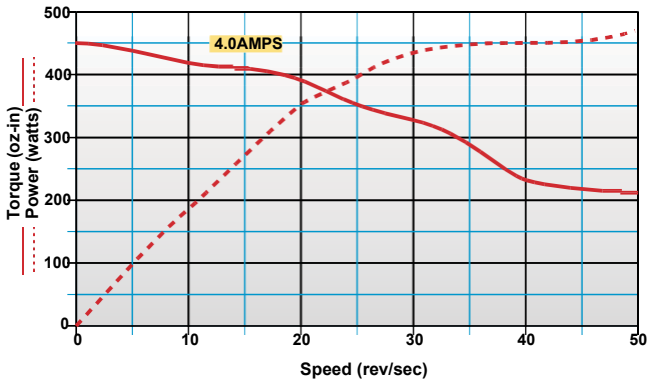
Installing the Motor Cable

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.

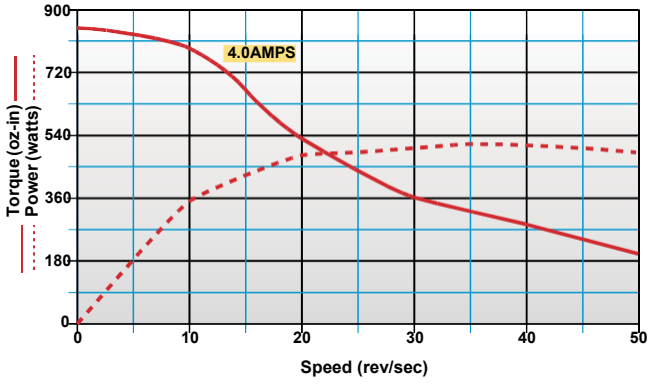
If you are extending the motor cable, treat the shield as a signal carrying conductor when installing the motor cable. Do not connect the shield to earth ground at any junction box.

TORQUE CURVES

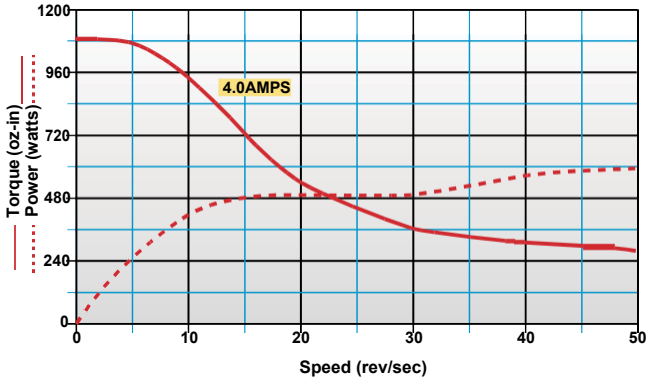
SM34-450



SM34-850



SM34-1100



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SM2340 Stepper Motor Specification Sheet

SHEET # 940-2S131

DESCRIPTION

Our line of NEMA 23 size motors are selected to perfectly match AMCI's line of stepper drives. Avaliable in either single or double shaft configurations, an optional optical encoder can be factory installed on the double shaft motors. All motors have four leads, simplifying installation. Both the output and optional back end shafts are 1/4", with the output shaft having a flat milled in it.

PART NUMBERS

SM2340 ▭ □ □

Stepper Motor:
NEMA 23 size
4.0Arms max.

Nominal Holding Torque
130 - 130 oz-in
240 - 240 oz-in

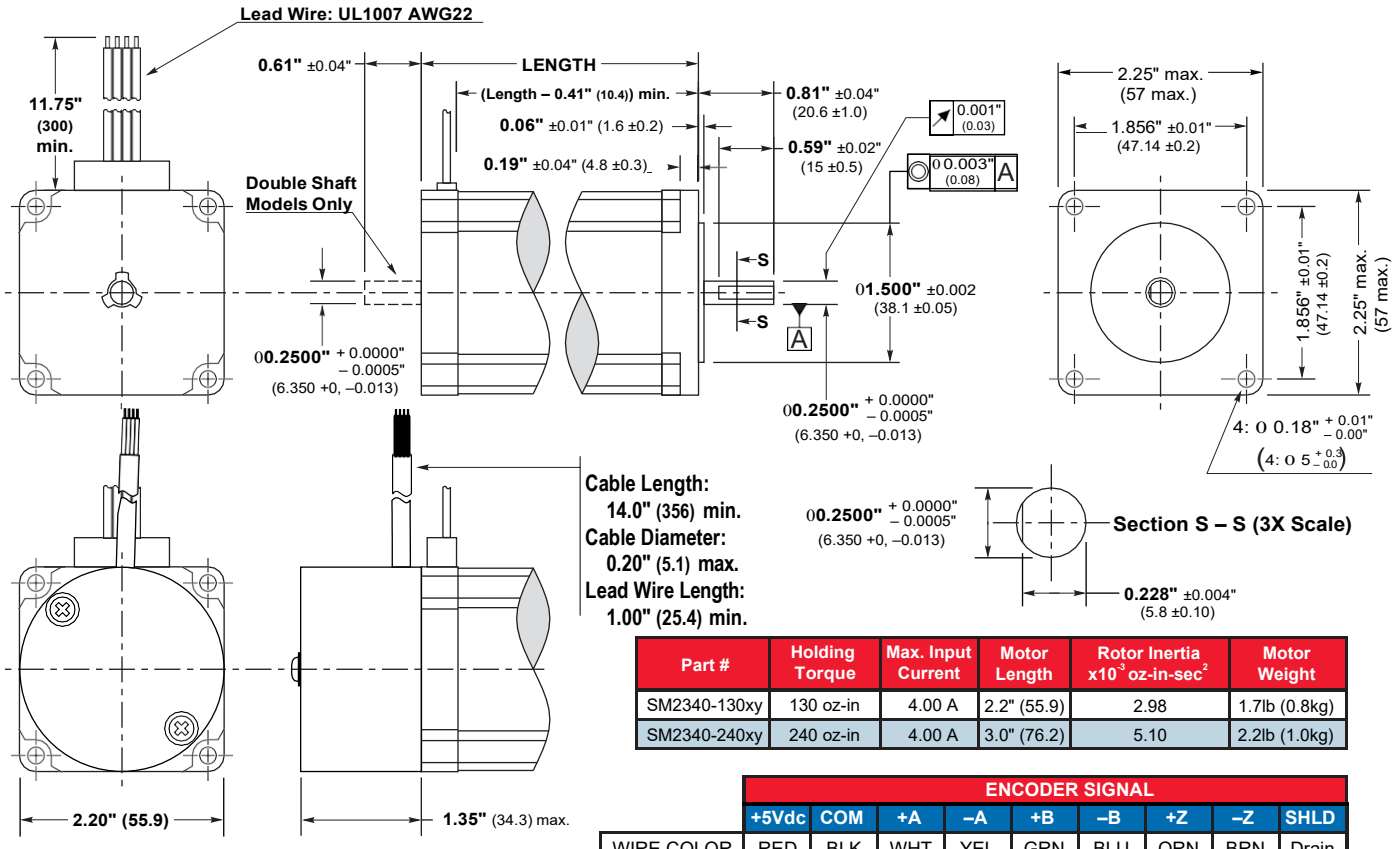
SHAFT
blank - single
"D" - double

ENCODER
blank - none
"E" - encoder installed

Sample Part Numbers
SM2340-130
SM2340-130D
SM2340-130DE

NOTE: If you want the factory installed encoder, you must order a double shaft motor. (SM2340-130DE is a valid number, SM2340-130E is not.)

DIMENSIONAL DRAWING



Part #	Holding Torque	Max. Input Current	Motor Length	Rotor Inertia x10^{-3} oz-in-sec^2	Motor Weight
SM2340-130xy	130 oz-in	4.00 A	2.2" (55.9)	2.98	1.7lb (0.8kg)
SM2340-240xy	240 oz-in	4.00 A	3.0" (76.2)	5.10	2.2lb (1.0kg)

ENCODER OPTION

	ENCODER SIGNAL								
	+5Vdc	COM	+A	–A	+B	–B	+Z	–Z	SHLD
WIRE COLOR	RED	BLK	WHT	YEL	GRN	BLU	ORN	BRN	Drain

All Encoder signals are 5V differential.
(AM26LS31 Line Driver)

Input Current 125mA @ 5Vdc + Interface Loads
Frequency Response: 200KHz
Maximum Shaft Speed: 8000 RPM

SM2340 Stepper Motor Specification Sheet

WIRING INFORMATION

Wire Color	Blue	Red	Green	Black
Signal	A+	A–	B+	B–

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. Belden 9552 meets these specifications.

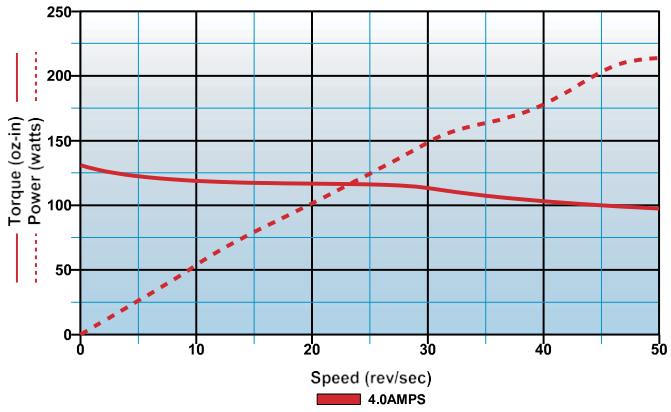
Installing the Motor Cable

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.

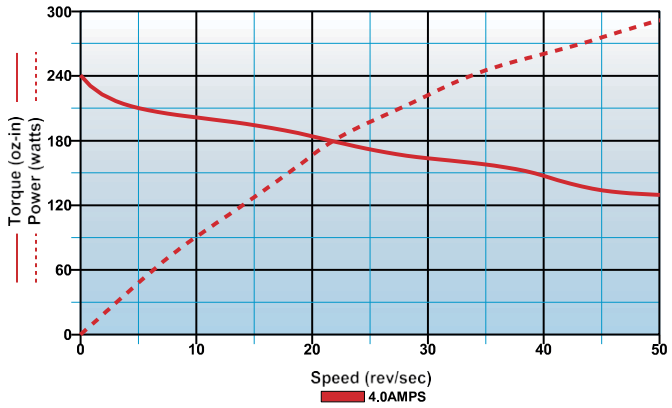
If extending the motor cable, treat the shield as a signal carrying conductor when installing the motor cable. Do not connect the shield to earth ground at any junction box.

TORQUE CURVES

SM2340-130



SM2340-240



All torque curves generated with SD17040 or SD17060 Stepper Driver