



**STANDARD FEATURES:**

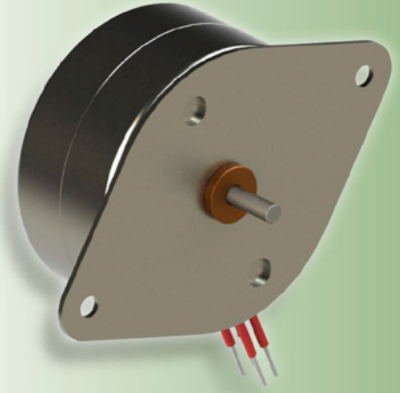
- Rigid construction
- Motor and output sleeve bearings
- Variable lead positioning
- 130° C insulation
- Step angle accuracy range between  $\pm 5^\circ$  and  $\pm 1.0^\circ$
- Available with 50Hz windings

**OPTIONAL FEATURES:**

- Voltages up to 240V
- Custom leads and terminations
- Custom stepper motor outputs
- Custom mounting
- Custom shafting
- Rear shaft extensions
- Available with integrated driver/controller

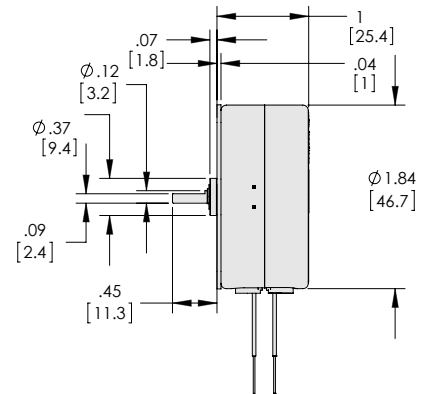
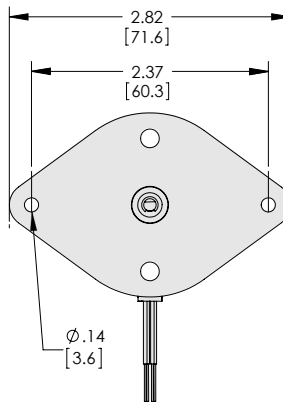
**TYPICAL APPLICATIONS:**

- Medical Devices
- Instrument Control
- HVAC Control
- ATM Machine
- Robotic Controls
- Lighting Controls
- Voting Machine
- Sun Tracker
- Beverage Dispensing
- Video Games/Gaming Machine
- POP Displays



**Series 119-1**

INCH  
[MM]



**Series 119**  
**Part Numbering**  
**Example**

119-**□□□□□□□□**

**Gear Ratio: (If Motor Type 1 - Leave Blank)**

Motor Type 2, 3, (5, 30, 100, 150, . . .)  
Motor Type 4 (12, 48, 192, e.g. 012 = 12:1, 192 = 192:1)

**Wattage/Driver Type**

DC: 1 = Bipolar | 4 = Unipolar | 7 = Centertap  
AC: 2 = 2W | 3 = 3.5W | 5 = 5W

**Motor Speed/Step Angle**

AC: 3 = 300 RPM | 6 = 600 RPM  
DC: 5 = 15 Degrees | 7 = 7.5 Degrees

**Rated Voltage (5, 12, 24, 120, or 240)**

0 = 5VDC | 1 = 12VDC | 2 = 24VDC | 3 = 24VAC/50Hz | 4 = 24VAC/60Hz  
5 = 120VAC/50Hz | 6 = 120VAC/60Hz | 7 = 240VAC/50Hz | 8 = 240VAC/60Hz

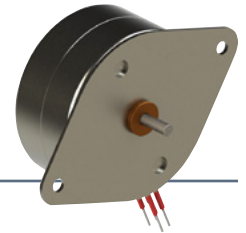
**Motor Type**

1 = Motor Only  
2 = Motor + C Mount Gearbox - Shallow  
3 = Motor + P Mount Gearbox - Deep  
4 = Motor + 2" Gearbox

# Series 119-1

## Size 19 Step Motor

Continued



### SERIES 119 - 1.9 IN DC STEP MOTOR

MOTOR PART NUMBER	VOLTAGE VDC	DRIVE TYPE	STEP ANGLE (°)	HOLD-ING TORQUE IN-OZ	DETENT TORQUE IN-OZ	STEP TIME MS	ROTOR INERTIA MOISS	RESIS-TANCE PER PHASE Ω	INDUC-TANCE PER PHASE MH	VOLTAGE CONSTANT V/KRPM	PULL OUT TORQUE VS RATE IN-OZ/PPS	PULL IN TORQUE VS RATE IN-OZ/PPS
119-1154	12	Unipolar	15.0	4.5	0.65	6.8	0.144	91.0	103.9	29.8	2.5 - (0.007*PPS)	2.5 - (0.008*PPS)
119-1151	12	Bipolar	15.0	7.2	0.67	6.2	0.144	45.5	129.8	31.6	4.9 - (0.013*PPS)	4.9 - (0.014*PPS)
119-1174	12	Unipolar	7.5	5.0	0.50	4.8	0.144	91.0	125.3	34.3	3.1 - (0.007*PPS)	3.0 - (0.008*PPS)
119-1171	12	Bipolar	7.5	7.2	0.55	5.5	0.144	45.5	165.3	37.4	5.1 - (0.011*PPS)	4.7 - (0.011*PPS)
119-1254	24	Unipolar	15.0	4.5	0.65	8.0	0.144	364.0	403.2	58.7	2.5 - (0.007*PPS)	2.5 - (0.008*PPS)
119-1251	24	Bipolar	15.0	7.2	0.67	7.0	0.144	182.0	399.9	55.5	4.9 - (0.013*PPS)	4.9 - (0.014*PPS)
119-1271	24	Bipolar	7.5	7.2	0.55	5.8	0.144	182.0	509.3	65.6	5.1 - (0.011*PPS)	4.7 - (0.011*PPS)
119-1274	24	Unipolar	7.5	5.0	0.50	5.2	0.144	364.0	486.2	67.6	3.1 - (0.007*PPS)	3.0 - (0.008*PPS)

### SERIES 119 - 1.9 IN AC STEP MOTOR

MOTOR PART NUMBER	VOLTAGE VAC	FREQUENCY HZ	INPUT POWER W	SPEED RPM	START TORQUE IN-OZ	STALL TORQUE IN-OZ	CAPACITOR MF
119-1462	24	60	2	600	1.3	3.3	5.0
119-1463	24	60	3.5	600	2.3	3.4	8.0
119-1465	24	60	5	600	3.3	3.6	12.0
119-1432	24	60	2	300	3.6	4.0	5.0
119-1433	24	60	3.5	300	3.7	4.1	8.0
119-1435	24	60	5	300	3.8	4.2	12.0
119-1662	120	60	2	600	1.3	3.3	0.22
119-1663	120	60	3.5	600	2.3	3.4	0.33
119-1665	120	60	5	600	3.3	3.6	0.47
119-1632	120	60	2	300	3.6	4.0	0.22
119-1633	120	60	3.5	300	3.7	4.1	0.33
119-1635	120	60	5	300	3.8	4.2	0.47
119-1862	240	60	2	600	1.3	3.3	0.068
119-1863	240	60	3.5	600	2.3	3.4	0.082
119-1865	240	60	5	600	3.3	3.6	0.15
119-1832	240	60	2	300	3.6	4	0.082
119-1833	240	60	3.5	300	3.7	4.1	0.082
119-1835	240	60	5	300	3.8	4.2	0.15