

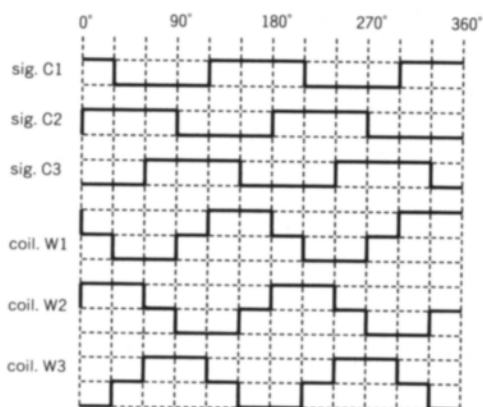
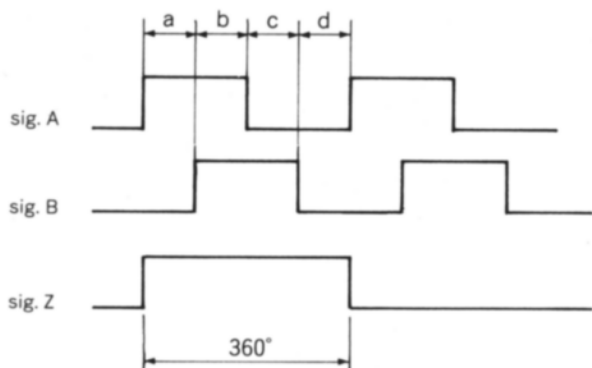
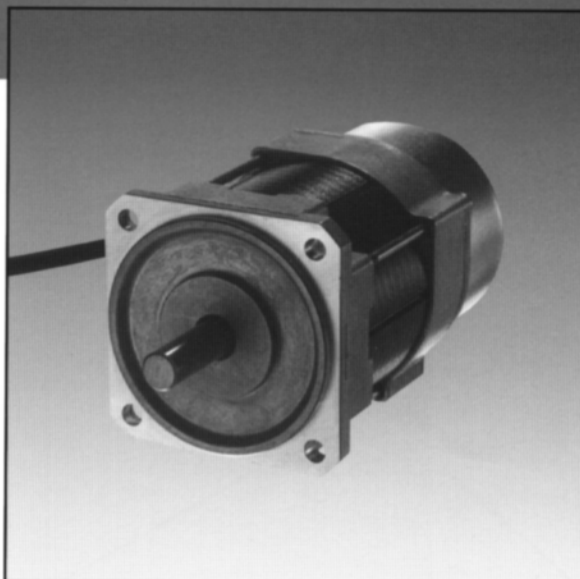
SPECIFICATION

| PARAMETER | UNITS | LA052-040E | | LA052-080E | | LA052-110E |
|-----------------------------------|-------------------|------------|-------|------------|-------|------------|
| | | | | | | |
| RATED POWER | W | 40 | | 80 | | 110 |
| RATED VOLTAGE | VDC | 24 | 75 | 24 | 75 | 75 |
| RATED SPEED | rpm | 3,000 | | 3,000 | | 3,000 |
| RATED TORQUE | N-cm | 12.7 | 12.7 | 25.5 | 25.5 | 35.3 |
| | kgf-cm | 1.3 | 1.3 | 2.6 | 2.6 | 3.6 |
| RATED CURRENT | A | 2.5 | 0.9 | 4.6 | 1.8 | 2.1 |
| TORQUE CONSTANT | N-cm/A | 5.0 | 14.8 | 5.9 | 19.1 | 19.6 |
| | kgf-cm/A | 0.51 | 1.51 | 0.6 | 1.95 | 2.00 |
| BACK EMF CONSTANT | V/krpm | 5.2 | 15.5 | 6.2 | 20.0 | 20.5 |
| PHASE RESISTANCE | W | 1.18 | 11.0 | 0.60 | 6.2 | 3.71 |
| PHASE INDUCTANCE | mH | 4.4 | 42 | 1.4 | 14 | 9.1 |
| INSTANTANEOUS PEAK TORQUE | N-cm | 38.2 | 38.2 | 76.5 | 76.5 | 105.9 |
| | kgf-cm | 3.9 | 3.9 | 7.8 | 7.8 | 10.8 |
| MAX SPEED | rpm | 5,000 | 5,000 | 5,000 | 5,000 | 5,000 |
| ROTOR INERTIA (TYPE 2) | g-cm ² | 87 | 87 | 91 | 91 | 166 |
| | g-cm ² | 110 | 110 | 117 | 117 | 18 |
| POWER RATE (TYPE 2) | kW/s | 1.87 | 1.87 | 7.14 | 7.14 | 8.48 |
| | kW/s | 1.48 | 1.48 | 5.56 | 5.56 | 6.74 |
| MECHANICAL TIME CONSTANT (TYPE 2) | ms | 4.1 | 4.4 | 4.6 | 1.5 | 1.6 |
| | ms | 5.2 | 5.5 | 2.0 | 2.0 | 1.8 |
| ELECTRICAL TIME CONSTANT | ms | 3.7 | 3.8 | 2.3 | 2.3 | 2.5 |
| MASS | kg | 0.6 | 0.6 | 0.6 | 0.6 | 0.8 |

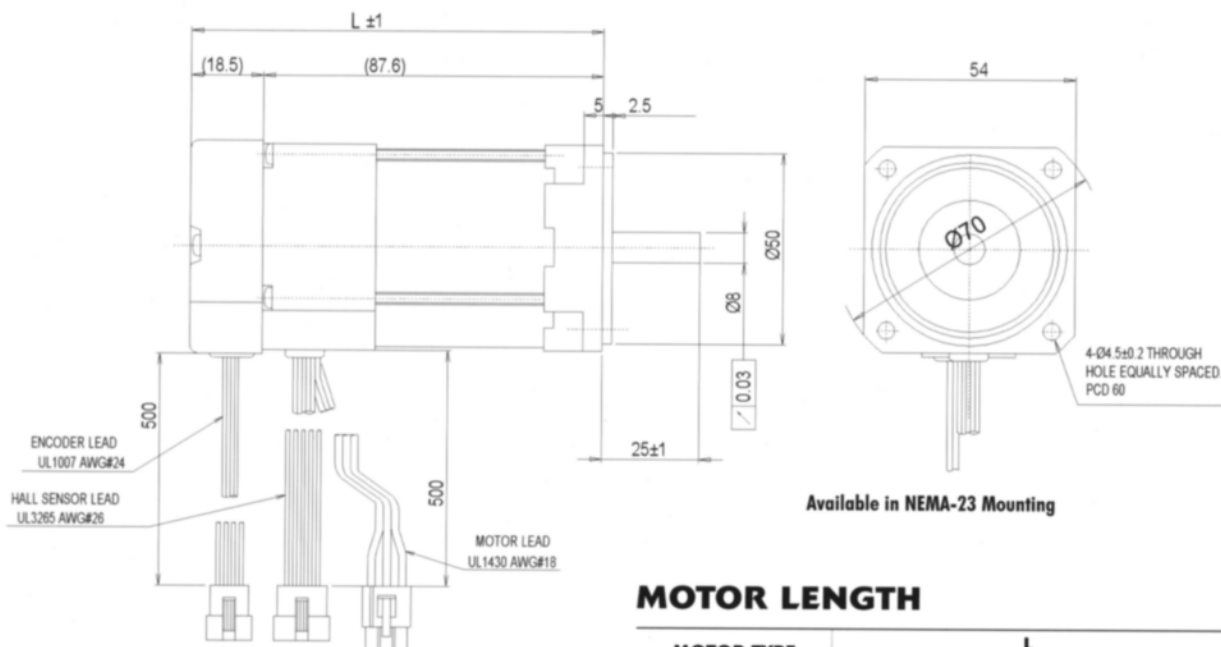
The above values are measured with Aluminum Plate of 200 x 200 x 6 mm

ENCODER SPECIFICATION

| TYPE | UNITS | TYPE 1 | TYPE 2 | |
|-----------------------------|------------|---|---------------------------------|--|
| | | PULL UP AT 4.7 [k Ω] | HALL SENSOR OPEN COLLECTOR | ENCODER TTL COMPATIBLE |
| RESOLUTION | P/R | 500 | - | 200, 400 |
| NUMBER OF CHANNELS | - | 6 (A, B, Z, C1, C2, C3) | C1, C2, C3 | A, B |
| POWER SUPPLY | VDC | 5 \pm 5% | 5 \pm 5% | 5 \pm 5% |
| CONSUMPTION CURRENT | mA (max.) | 100 | 40 | 50 |
| OUTPUT VOLTAGE | VDC | VOH = 2.4 (min.), VOL = 0.4 (max.), (Isink = 4 mA) | 14.4 (max.), (Isink = 15 mA) | VOH = 2.4 (min.), VOL = 0.4 (max.), (Isink = 15 mA) |
| PHASE OFFSET | - | a, b, c, d = 90° \pm 45° | - | a, b, c, d = 90° \pm 45° |
| SIG. Z PULSE WIDTH | - | 360° \pm 180° | - | - |
| FREQUENCY RESPONSE | kHz (min.) | 50 | - | 20 |
| OPERATING TEMPERATURE RANGE | °C | 0 - 60 (temperature inside of encoder) | | |



→ CW ROTATION VIEWED FROM OUTPUT SHAFT END
ENCODER OUTPUT PHASE



MOTOR LENGTH

| MOTOR TYPE | L | |
|------------|--------|--------|
| | TYPE 1 | TYPE 2 |
| LA052-040E | 85 | 86.1 |
| LA052-080E | 85 | 86.1 |
| LA052-110E | 105 | 106.1 |