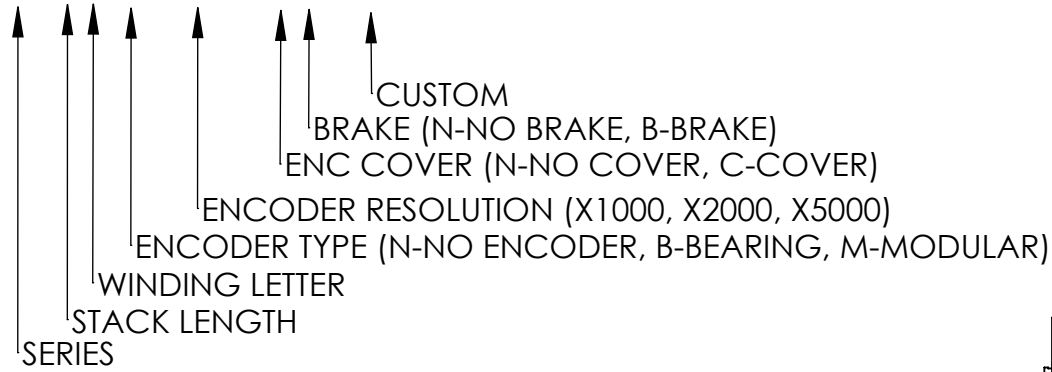


PART REVISION HISTORY

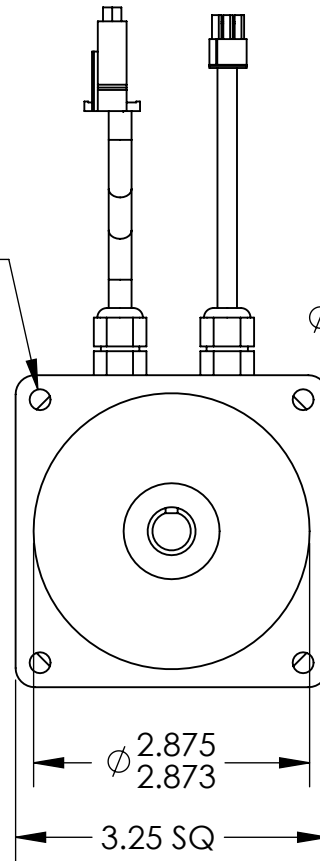
| REV. | DESCRIPTION | ECO | DWN | CHKD | DATE |
|------|-------------|-----|-----|------|------|
| | | | | | |

PART NUMBER

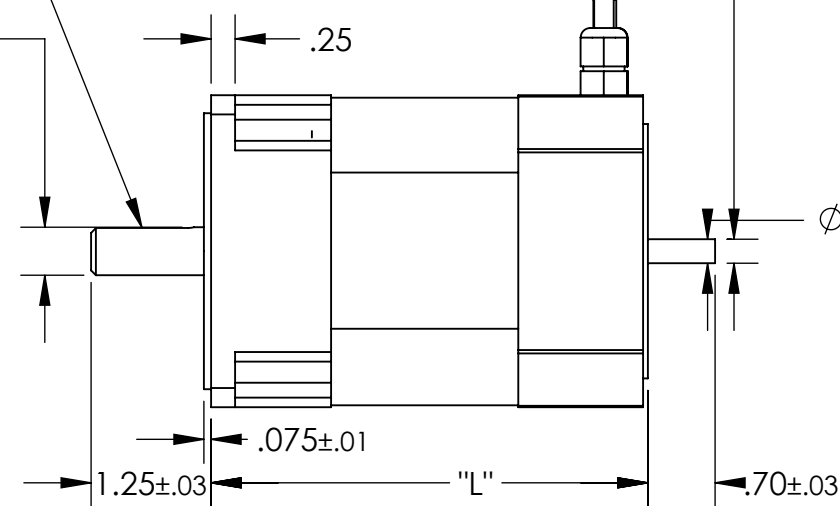
E034-XX-NXXXXX-NN-XXX



(4) ϕ .218 THRU EQ SP
ON ϕ 3.875 B.C.



1/8" SQ x 1.00 LONG
KEYWAY

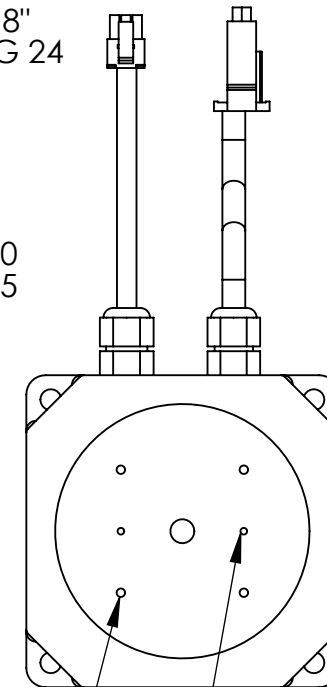


HALL SENSORS
MOLEX 43025-0600

HALL CABLE
SHIELDED 18"
LONG AWG 24

MOTOR POWER
AMP 1-480702-0

MOTOR CABLE
SHIELDED 18"
LONG 16 AWG



MOTOR PARAMETERS

| | | E034-2A | E034-4A | E034-6A |
|-------------------------|------------|---------|---------|---------|
| RATE SPEED | RPM | 6000 | 5000 | 4000 |
| RATED TORQUE | LB-IN | 8.44 | 13.44 | 18.13 |
| PEAK TORQUE | LB-IN | 25 | 40.6 | 54 |
| CONTINUOUS CURRENT | AMPS | 7.2 | 11.8 | 11.8 |
| PEAK CURRENT | AMPS | 21.4 | 35.5 | 35.3 |
| VOLTAGE CONSTANT, K_e | V/KRPM | 15 | 14.7 | 19.7 |
| TORQUE CONSTANT, K_t | LB-IN/A | 1.27 | 1.24 | 1.67 |
| RESISTANCE | OHM | 0.443 | .259 | .346 |
| INDUCTANCE | mH | 1.89 | 1.05 | 1.38 |
| MOMENT OF INERTIA | LB-IN-S**2 | .0009 | .0014 | .0021 |
| "L" LENGTH | INCH | 3.55 | 4.55 | 5.55 |
| WEIGHT | LBS | 4.4 | 6.7 | 9 |

NOTE: K_t AND K_e BASED ON TRAPEZOIDAL DRIVE
8 POLE

MOTOR CONNECTOR

| POS | COLOR | VALUE |
|-----|-------|---------|
| 1 | RED | PHASE R |
| 2 | WHITE | PHASE S |
| 3 | BLACK | PHASE T |
| 4 | BARE | SHIELD |

HALL CONNECTOR

| POS | COLOR | VALUE |
|-----|--------|--------|
| 1 | RED | 5 VDC |
| 2 | BLACK | GND |
| 3 | BROWN | HALL A |
| 4 | ORANGE | HALL B |
| 5 | YELLOW | HALL C |
| 6 | BARE | SHIELD |

NOTICE ON REPRODUCTIONS
THIS DRAWING THE DESIGN AND THE PATENTS IT COVERS ARE THE
PROPERTY OF CYMATIX, INC., OR THEIR CUSTOMERS. THEY WILL NOT
BE REPRODUCED, COPIED, LOANED, EXHIBITED NOR USED EXCEPT
IN THE LIMITED WAY AND THE PRIVATE USE PERMITTED BY THE
CONSENT GIVEN BY THE LENDER TO THE BORROWER.

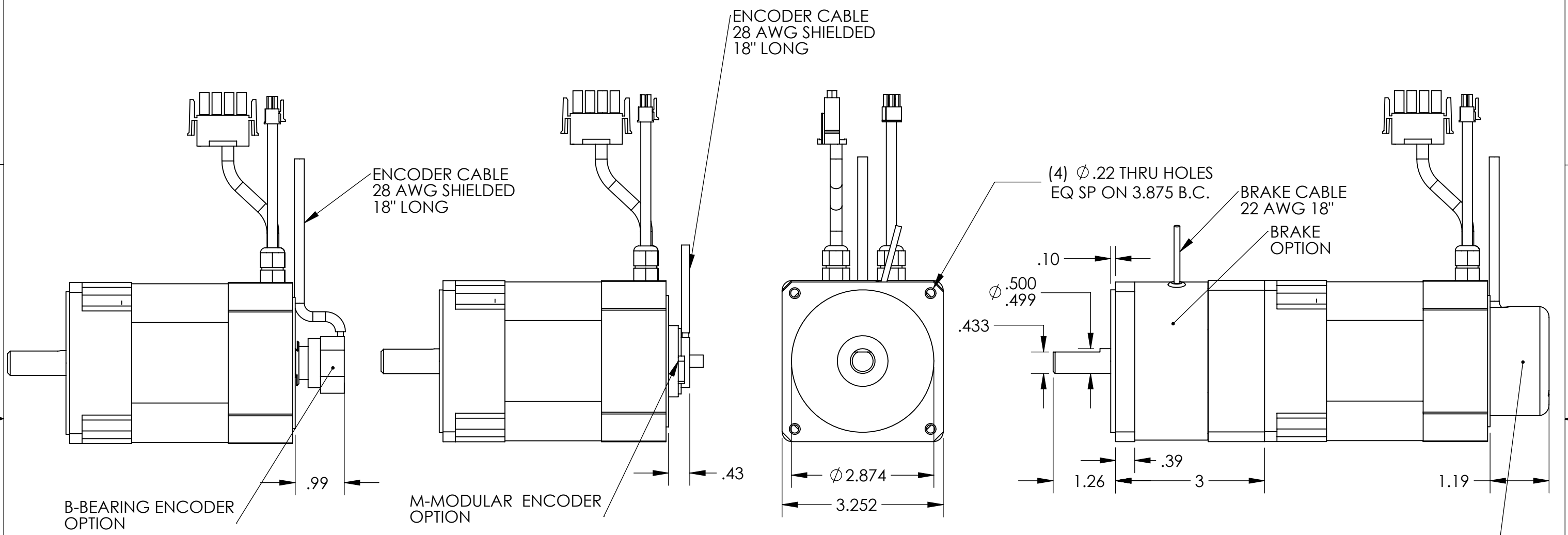
TOLERANCES UNLESS OTHERWISE SPECIFIED (U.O.S.)

| | | | |
|---------------------|-----------|--------|------------|
| DECIMALS | C'BREAKS | FRAC. | MACH. FIN. |
| .XX = \pm .01 | .010/.020 | 1/64 | 125 |
| .XXX = \pm .005 | FILLETS | ANGLES | |
| .XXXX = \pm .0005 | .020 MAX | 1° | |



| | | | |
|-------------|---------------|-----------------------------------|--------------|
| MATERIAL | | TITLE: NEMA 34 BRUSHLESS DC MOTOR | |
| FINISH | | PART NO. E034 | |
| DRAWN JPB | DATE 06/10/14 | SIZE B | PART REV. B |
| CHECKED TPB | DATE 06/10/14 | SCALE: NONE | SHEET 1 OF 2 |
| | | DWG. NO. R | |

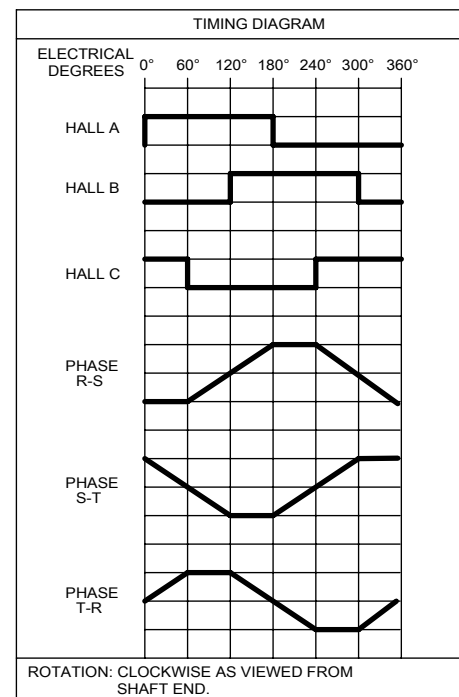
| PART REVISION HISTORY | | | | | |
|-----------------------|-------------|-----|-----|------|------|
| REV. | DESCRIPTION | ECO | DWN | CHKD | DATE |
| | | | | | |



| ENCODER WIRING | |
|----------------|------------|
| COLOR | FUNCTION |
| RED | 5 VDC |
| BLACK | COMMON |
| BROWN | CHANNEL A |
| WHITE | CHANNEL A/ |
| BLUE | CHANNEL B |
| GREEN | CHANNEL B/ |
| ORANGE | INDEX |
| YELLOW | INDEX/ |

| ENCODER SPECIFICATIONS | |
|------------------------|--------------------|
| TYPE | OPTICAL |
| OUTPUT TYPE | LINE DRIVER |
| LINE COUNT | 1000 LINE |
| GATED | A / B AT 90 DEGREE |
| INPUT VOLTAGE | 5 VDC +/- 5% |
| CURRENT | 65 mA TYPICAL |

STD AVAILABLE
RESOLUTIONS: 1000, 2000, 5000 LINE



| BRAKE | |
|---------------|------------------|
| TYPE | POWER TO RELEASE |
| VOLTAGE | 24 VDC |
| CURRENT | 370 mA |
| STATIC TORQUE | 15 IN-LB |
| RESISTANCE | 65 OHM |

NOTICE ON REPRODUCTIONS
THIS DRAWING THE DESIGN AND THE PATENTS IT COVERS ARE THE PROPERTY OF CYMATIX, INC., OR THEIR CUSTOMERS. THEY WILL NOT BE REPRODUCED, COPIED, LOANED, EXHIBITED NOR USED EXCEPT IN THE LIMITED WAY AND THE PRIVATE USE PERMITTED BY THE CONSENT GIVEN BY THE LENDER TO THE BORROWER.

TOLERANCES UNLESS OTHERWISE SPECIFIED (U.O.S.)

| DECIMALS | C'BREAKS | FRAC. | MACH. FIN. |
|-----------------|-----------|--------|------------|
| .XX = ± .01 | .010/.020 | 1/64 | 125 |
| .XXX = ± .005 | FILLETS | ANGLES | |
| .XXXX = ± .0005 | .020 MAX | 1° | |

TITLE: NEMA 34 BRUSHLESS DC MOTOR -ENCODER

| | | | | | | | | | |
|---------|-----|------|----------|--------|------|----------|--------|-----------|---|
| DRAWN | JPB | DATE | 06/10/14 | SIZE | B | PART NO. | E034 | PART REV. | B |
| CHECKED | TPB | DATE | 06/10/14 | SCALE: | NONE | SHEET | 2 OF 2 | DWG. NO. | R |