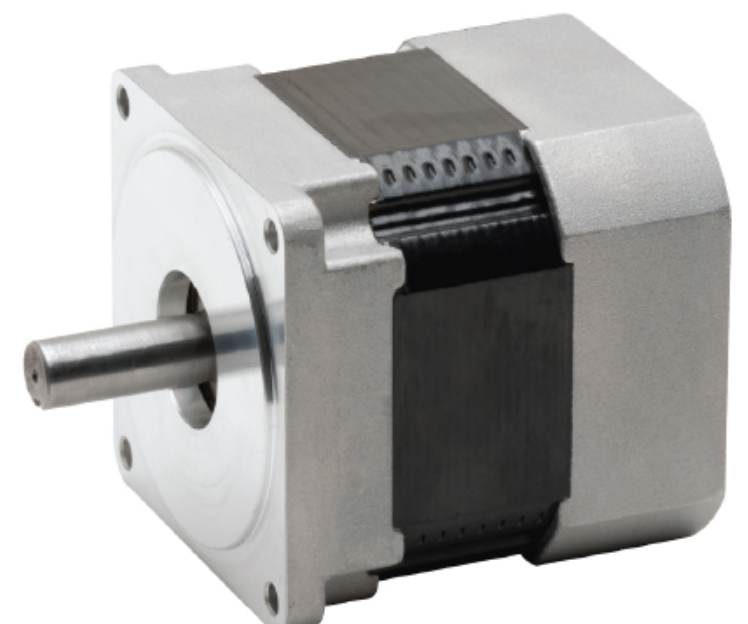
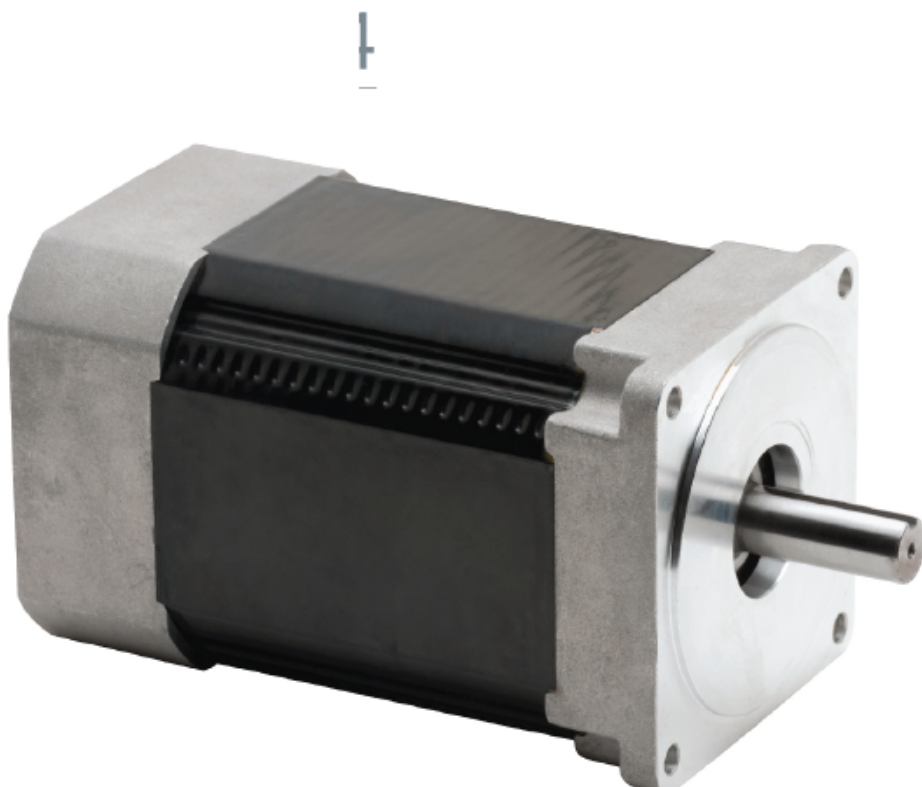
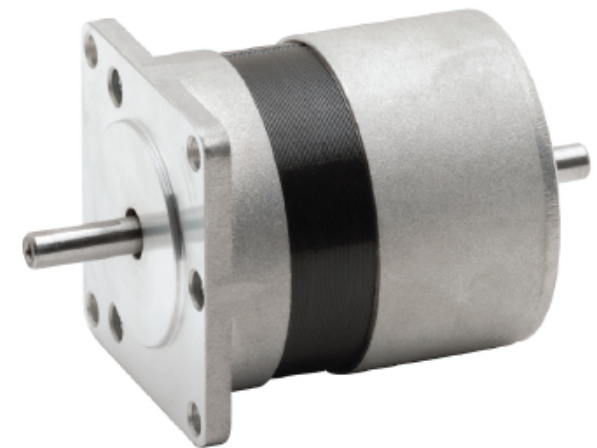
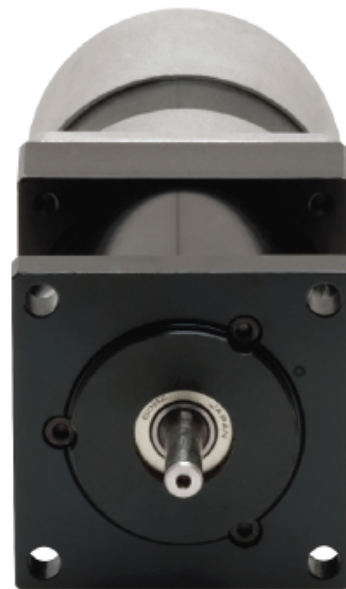
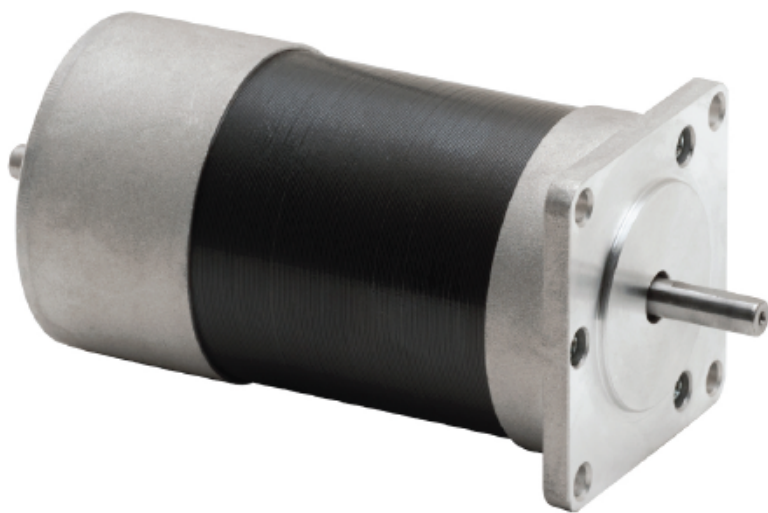
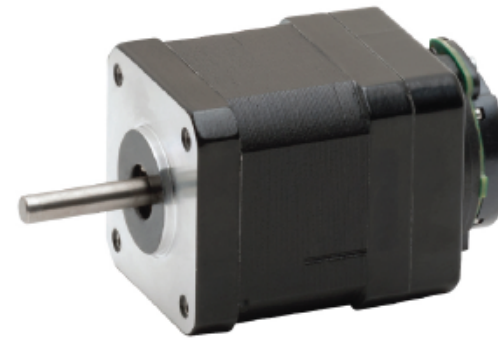
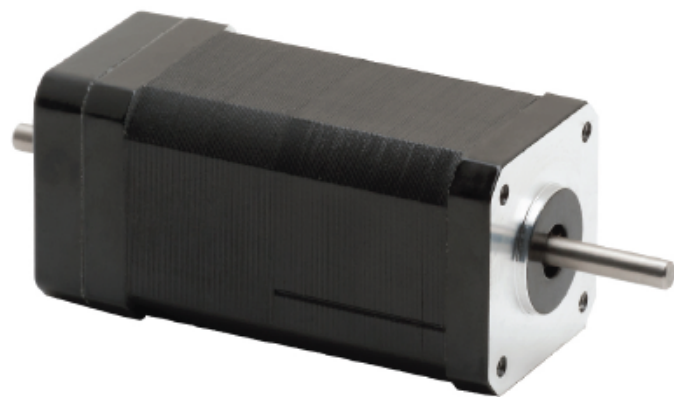




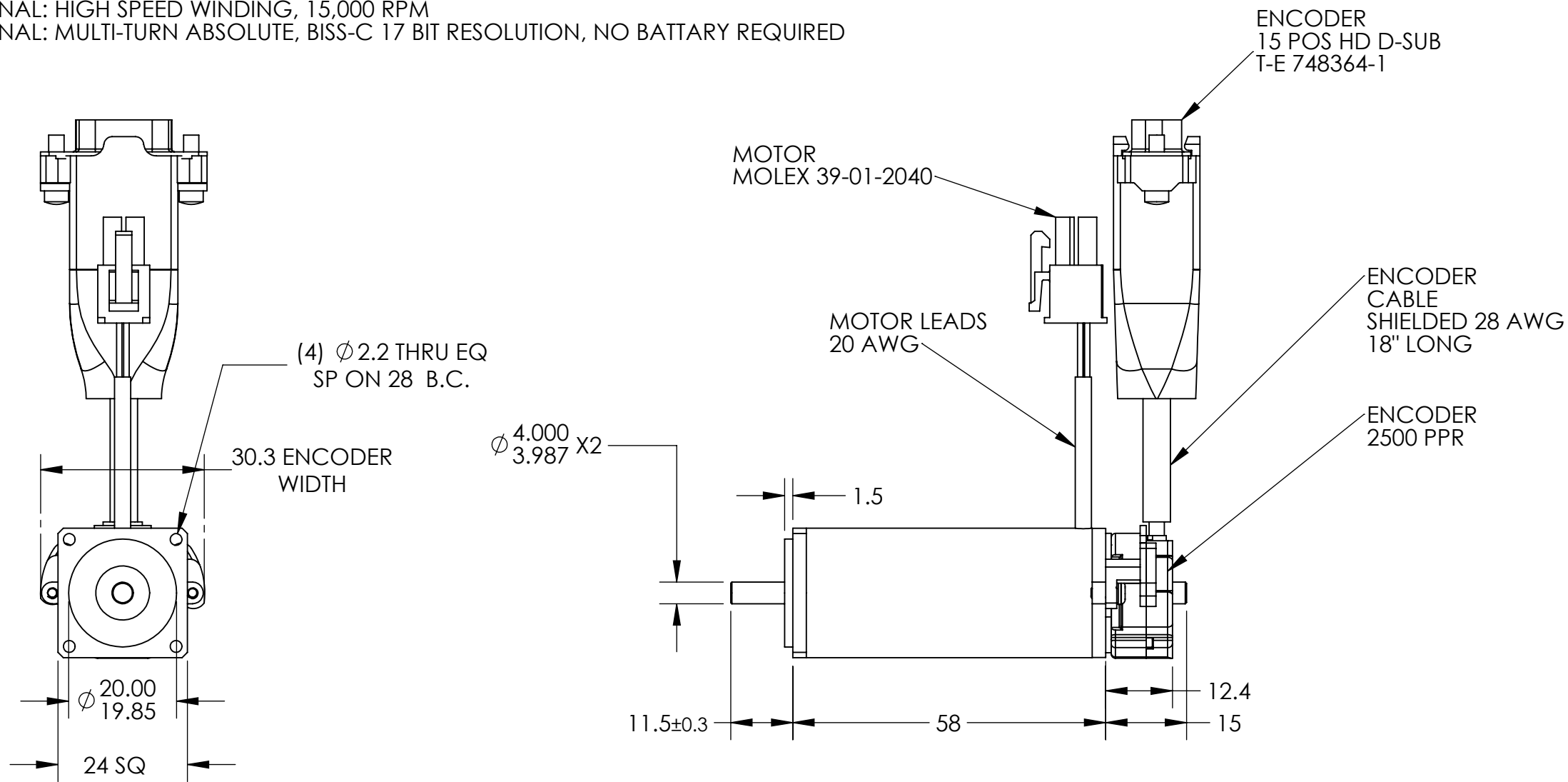
BRUSHLESS MOTORS



CYMATIX BRUSHLESS MOTORS									Encoder Resolution		OPTIONAL BRAKE	BISS-C ABSOLUTE
	Flange [mm]	Motor Length [mm]	Rated Voltage [vdc]	Rated Torque [N-m]	Rated speed [rpm]	Power [Watts]	Max Voltage [vdc]	Front Shaft Dia x Length [mm]	5000 ppr	2500 ppr		
MP24-2B	24	58	24	0.1	3000	30	170	4 x 11.5		X		X
E017-1A	42	53	24	0.1	3000	30	170	5 x 24	X		X	X
E017-2A	42	72	24	0.2	3000	60	170	5 x 24	X		X	X
E017-3A	42	90	24	0.3	3000	90	170	5 x 24	X		X	X
EP23-1A	57	71	72	0.39	6000	220	170	6.35 x 20.5	X		X	X
EP23-2A	57	97	72	0.63	5250	350	170	6.35 x 20.5	X		X	X
EP23-3A	57	122	72	0.78	5750	467	170	6.35 x 20.5	X		X	X
MP60-1A	60	103	48	0.25	4000	100	170	14 x 30	X		X	
MP60-1B	60	103	72	0.25	4000	100	310	14 x 30	X		X	
MP60-3A	60	143	48	1	4000	400	170	14 x 30	X		X	
MP60-3B	60	143	72	1	4000	400	310	14 x 30	X		X	
MP80-2B	80	153	310	2.44	3000	765	310	16 x 35		X	X	
EP34-2A	82	153	48	2.44	3000	765	170	12.7 x 32		X	X	X
EP34-2B	82	153	310	2.44	3000	765	310	12.7 x 32		X	X	

- NOTES:
1. Kt AND Ke BASED PEAK SINE WAVE DRIVE
 2. 4 POLE DESIGN
 3. ZERO COGGING
 4. OPTIONAL: HIGH SPEED WINDING, 15,000 RPM
 5. OPTIONAL: MULTI-TURN ABSOLUTE, BISS-C 17 BIT RESOLUTION, NO BATTERY REQUIRED

PART REVISION HISTORY					
REV.	DESCRIPTION	ECO	DWN	CHKD	DATE



MOTOR PARAMETERS		
		MP24-2B
NOMINAL VOLTAGE	VDC	24
NO LOAD SPEED	RPM	4615
RATE SPEED	RPM	2875
RATED TORQUE	Nm	0.1
PEAK TORQUE	Nm	0.3
CONTINUOUS CURRENT	AMPS	2
PEAK CURRENT	AMPS	6
VOLTAGE CONSTANT, Ke	V/KRPM	5.2
TORQUE CONSTANT, Kt	Nm/A	.049
RESISTANCE	OHM	3.02
INDUCTANCE	mH	0.177
MOMENT OF INERTIA	gm-cm2	TBD
WEIGHT	kg	0.16

ENCODER WIRING		
POS	COLOR	FUNCTION
1	RED	5 VDC
2	BLACK	COMMON
3	BROWN	CHANNEL A
4	WHITE	CHANNEL A/
5	BLUE	CHANNEL B
6	GREEN	CHANNEL B/
7	ORANGE	INDEX
8	YELLOW	INDEX /
9		
10		
11	VIOLET	CHANNEL U
12	WHT/BRN	CHANNEL V
13	WHT/ORG	CHANNEL W
14		
15	SHIELD	SHIELD

MOTOR CONNECTOR		
POS	COLOR	VALUE
1	RED	PHASE R
2	BLACK	PHASE S
3	WHITE	PHASE T
4		

ENCODER SPECIFICATIONS	
TYPE	OPTICAL
OUTPUT TYPE	LINE DRIVER
LINE COUNT	2500
INPUT VOLTAGE	5 +/- 5%
CURRENT	50 mA
MAX FREQ	500 KHz *

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.			
MATERIAL		TITLE:	
FINISH		BL MOTOR, 24mm, 24 VDC	
DRAWN JPB		DATE 07/07/20	
CHECKED TPB		DATE 07/07/20	

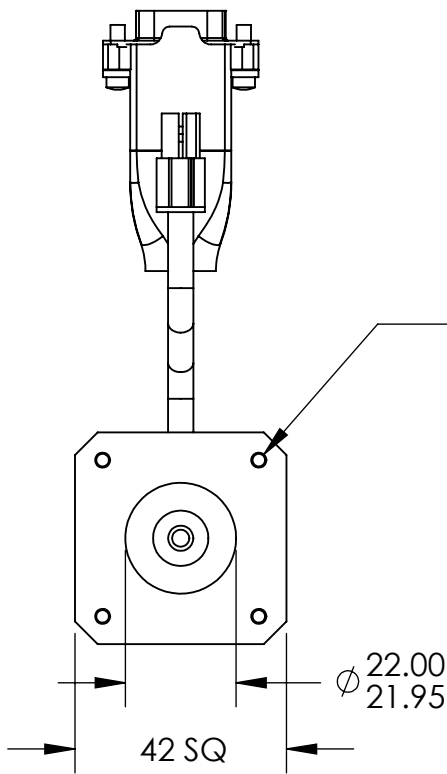
CYMATIX INC.			
BL MOTOR, 24mm, 24 VDC			
2500 ppr ENCODER			
PART NO.		MP24-2B-MX2500-NN-001	
SHEET 1 OF 1		DWG.NO. R	

NOTES:

1. Kt AND Ke BASED ON PEAK SINE WAVE
2. 8 POLE DESIGN
3. OPTIONAL MULTI-TURN ABSOLUTE ENCODER
BISS-C OUTPUT, 17 BIT RESOLUTION, 16 BIT TURNS,
No BATTERY REQUIRED
4. OPTIONAL FAIL SAFE BRAKE, 0.1 N-m, 24 VDC
ADD 49 mm TO "L"

PART REVISION HISTORY

REV.	DESCRIPTION	ECO	DWN	CHKD	DATE



(4) M3x0.5, 4⇓
EQ SP ON 43.8 B.C.

Ø 5.000
4.988

MOTOR POWER
MOLEX 39-01-2040

MOTOR CABLE
0.3m 20 AWG

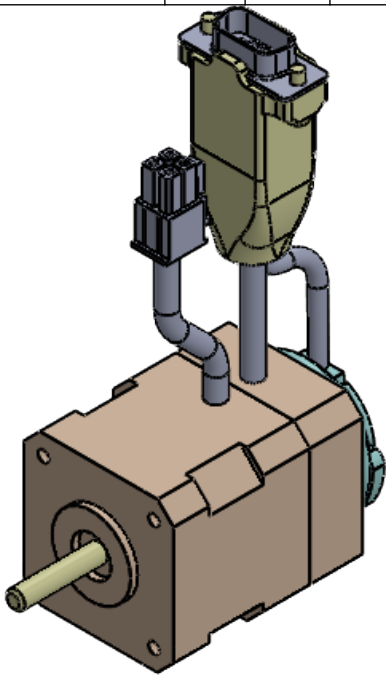
FEEDBACK
15 POS MALE D-SUB
T-E 748364-1

ENCODER/HALL
0.3m
HALLS 24 AWG
ENCODER 28 AWG
SHIELD CABLE

24±0.5

"L"

15



MOTOR PARAMETERS

		E017-1A	E017-2A	E017-3A
NOMINAL VOLTAGE	VDC	24	24	24
RATE SPEED	RPM	3000	3000	3000
RATED TORQUE	Nm	0.1	0.2	0.3
PEAK TORQUE	Nm	0.3	0.6	0.9
CONTINUOUS CURRENT	AMPS (RMS)	2.5	4.4	5.2
PEAK CURRENT	AMPS (RMS)	7.5	13.2	15.6
VOLTAGE CONSTANT, Ke	V/KRPM (RMS)	4.3	4.3	4.3
TORQUE CONSTANT, Kt	Nm/A (RMS)	.04	.04	.04
RESISTANCE	OHM	2.4	0.85	0.61
INDUCTANCE	mH	1.35	0.63	0.38
MOMENT OF INERTIA	Kg-cm ²	.042	.084	.126
"L" LENGTH	mm	53	72	90
WEIGHT	Kg	0.36	0.5	0.6

FEEDBACK

Pin	Color	Function
1	Red	5 vdc
2	Black	GND
3	Brown	Chl A
4	White	Chl A/
5	Blue	Chl B
6	Green	Chl B/
7	Orange	Index
8	Yellow	Index/
9	Red	Hall 5 vdc
10	Black	Hall GND
11	Yellow	Hall A
12	Green	Hall B
13	Blue	Hall C
14		
15	Shield	Shield

MOTOR CONNECTOR

MOLEX 39-01-2040		
POS	COLOR	VALUE
1	YELLOW	PHASE R
2	GREEN	PHASE S
3	BLUE	PHASE T
4		

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	1°
.XXXX = ± .0005	.020 MAX		

MATERIAL

FINISH

DRAWN JPB

DATE 02/08/22

CHECKED TPB

DATE 02/08/22

TITLE: BL MOTOR, NEMA17,24 VDC
5000 PPR

PART NO. E017 -XA-MX5000-NN-001

SCALE: NONE

SHEET 1 OF 1

DWG.NO. R

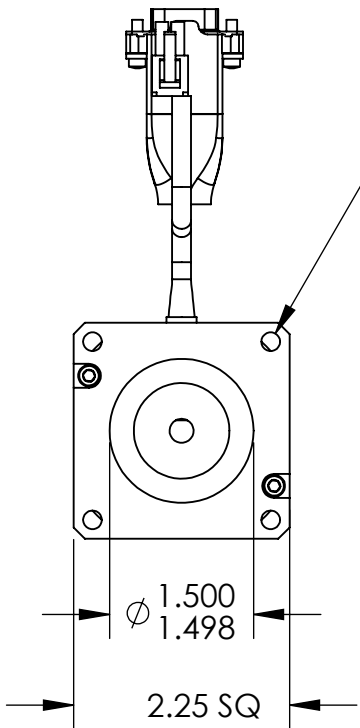


NOTES:

1. Kt AND Ke BASED ON PEAK SINE WAVE
2. 4 POLE DESIGN
3. OPTIONAL MULTI-TURN ABSOLUTE ENCODER
BISS-C OUTPUT, 17 BIT RESOLUTION, 16 BIT TURNS,
No BATTERY REQUIRED
4. OPTIONAL 0.8 N-m FAIL SAFE BRAKE, 24 VDC
ADD 2.24" TO "L"

PART REVISION HISTORY

REV.	DESCRIPTION	ECO	DWN	CHKD	DATE



(4) ϕ .195 THRU EQ
SP ON 2.625 B.C

MOLEX POWER
3901-2040

MOTOR LEADS
18" 20 AWG

FEEDBACK
15 POS MALE
D-SUB HD

ENCODER/HALLS
CABLE 18"
HALLS 22 AWG
ENCODER 28 AWG

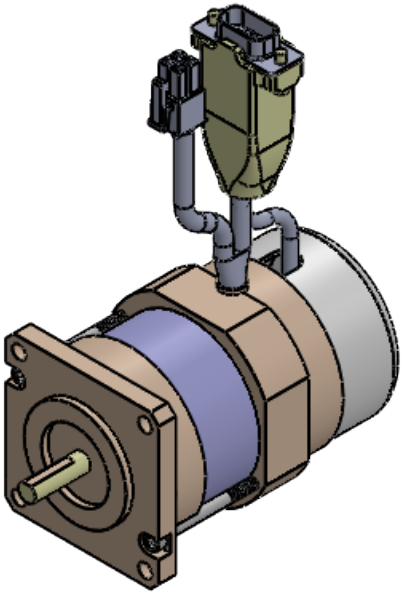
FLAT 0.15 DP
x0.63 LG

ϕ .2500
 ϕ .2495

.81 $\pm$.03

"L"

.95



FEEDBACK

T-E 748364-1

Pin	Color	Function
1	Red	5 vdc
2	Black	GND
3	Brown	Chl A
4	White	Chl A/
5	Blue	Chl B
6	Green	Chl B/
7	Orange	Index
8	Yellow	Index/
9	Red	Hall 5 vdc
10	Black	Hall GND
11	Brown	Hall A
12	Orange	Hall B
13	Yellow	Hall C
14		
15	Shield	Shield

MOTOR PARAMETERS

		EP23-1A	EP23-2A	EP23-3A
MAX TERMINAL VOLTAGE	VDC	170	170	170
RATED SPEED	RPM	6000	6000	6000
RATED TORQUE	Oz-In	50	90	110
PEAK TORQUE	Oz-In	150	270	330
CONTINUOUS CURRENT	AMPS	3.6	5.2	7
PEAK CURRENT	AMPS	10.8	15.5	21.1
VOLTAGE CONSTANT, Ke	V/KRPM	11.2	14.0	12.6
TORQUE CONSTANT, Kt	Oz-In/A	15.1	18.9	17.0
RESISTANCE	OHM	2.09	1.16	0.58
INDUCTANCE	mH	1.6	1.1	0.54
MOMENT OF INERTIA	Oz-In-Sec ²	.0019	.0037	.0055
"L" LENGTH	INCH	2.8	3.8	4.8
WEIGHT	LBS	1.5	2.2	3

MOTOR CONNECTOR

MOLEX 39-01-2040

POS	COLOR	VALUE
1	RED	PHASE R
2	WHITE	PHASE S
3	BLUE	PHASE T
4	GREEN	CASE

ENCODER SPECIFICATIONS

TYPE	OPTICAL
OUTPUT TYPE	LINE DRIVER
LINE COUNT	5000 LINE
GATED	A / B AT 90 DEGREE
INPUT VOLTAGE	5 VDC +/- 5%
CURRENT	65 mA TYPICAL

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	1°
.XXXX = $\pm$.0005	.020 MAX		

MATERIAL

FINISH

DRAWN JPB

DATE 02/08/22

CHECKED TPB

DATE 02/08/22

TITLE: NEMA 23 BRUSHLESS DC MOTOR

PART NO. EP23-XA-MX5000-CN-001

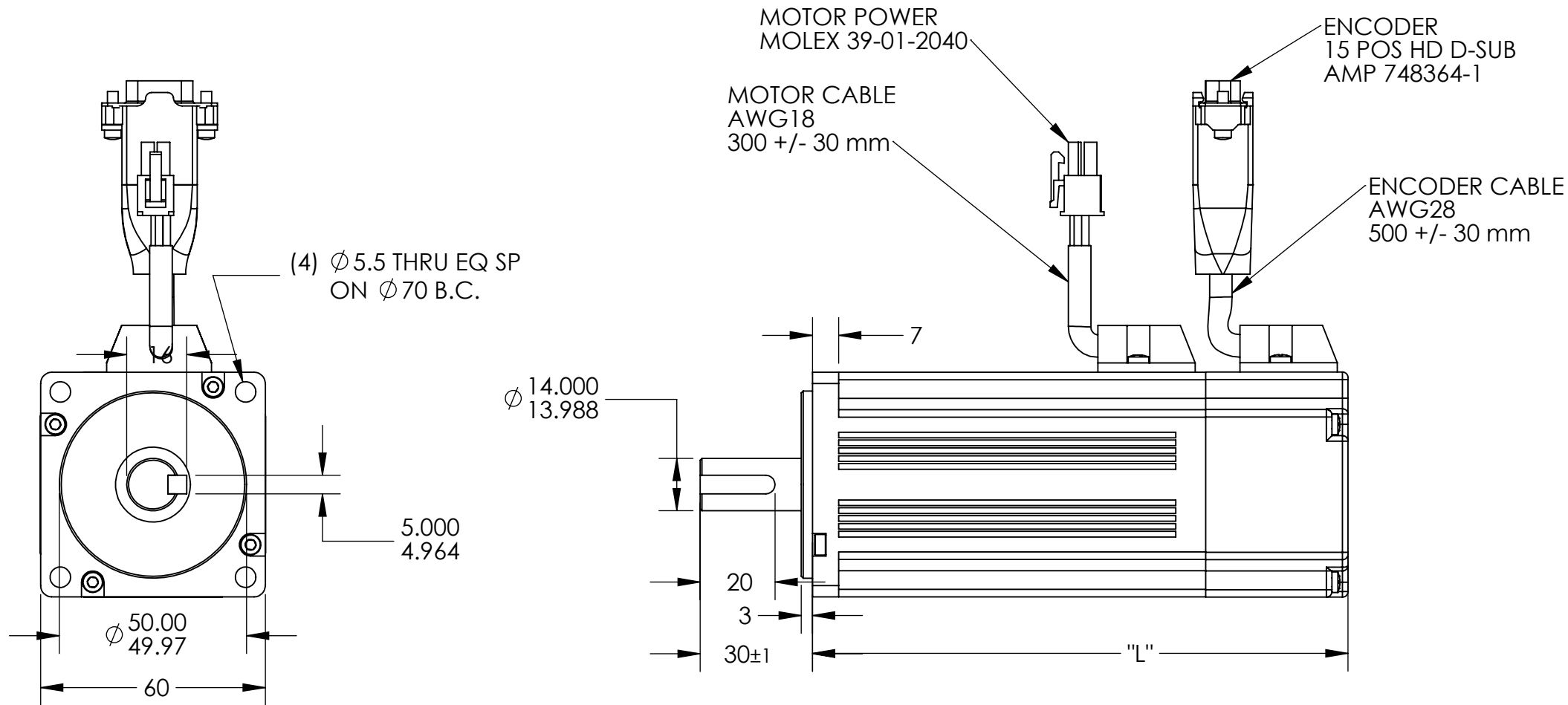
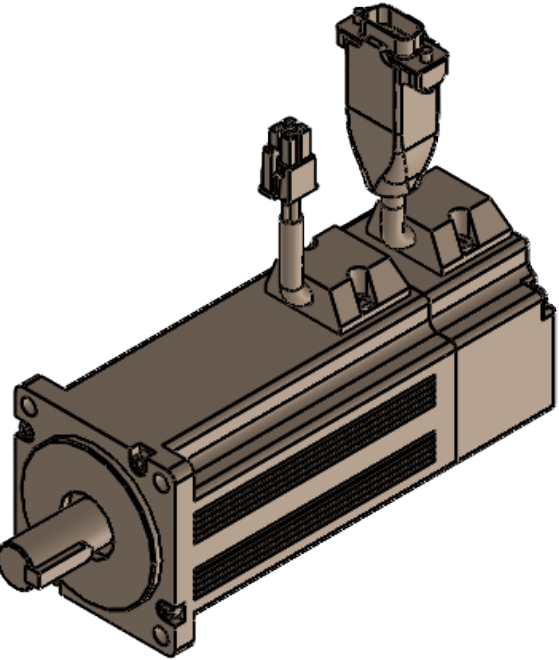
SCALE: NONE

SHEET 1 OF 1

DWG.NO. R



- NOTE:
1. Kt AND Ke BASED ON PEAK SINE WAVE DRIVE
 2. 8 POLE DESIGN
 3. 24/48 VDC WINDING AVAILABLE
 4. OPTIONAL 1.5 N-m FAIL SAFE BRAKE, 24 VDC
ADD 70 MM to "L"



MOTOR PARAMETERS		MP60-1B	MP60-3B
SUPPLY VOLTAGE	VDC	72	72
RATE SPEED	RPM	4000	4000
RATED STALL TORQUE	N-m	0.30	1.3
RATED TORQUE @ 4000 RPM	N-m	0.25	1.0
POWER @ RATED SPEED	WATTS	100	400
PEAK TORQUE	N-m	1.2	4.1
CONTINUOUS CURRENT 0-p	AMPS	2	7.6
PEAK CURRENT 0-p	AMPS	6	22.8
VOLTAGE CONSTANT, Ke rms	V/KRPM	13	13
TORQUE CONSTANT, Kt rms	N-m/A	.124	.124
RESISTANCE	OHM	2.3	0.44
INDUCTANCE	mH	1.9	0.48
MOMENT OF INERTIA	Kg-cm2	0.1	0.29
INSULATION CLASS		F	F
LENGTH "L"	mm	103	143

FEEDBACK		
Pin	Color	Function
1	Red	5 vdc
2	Black	GND
3	Brown	Chl A
4	White	Chl A/
5	Blue	Chl B
6	Green	Chl B/
7	Orange	Index
8	Yellow	Index/
9		
10		
11	Violet	COMM A
12	WHT/BRN	COMM B
13	WHT/ORG	COMM C
14		
15	Shield	Shield

ENCODER SPECIFICATIONS	
TYPE	OPTICAL
OUTPUT TYPE	LINE DRIVER
LINE COUNT	5000
GATED	A / B AT 90 DEDREE
INPUT VOLTAGE	5 VDC +/- 5%
CURRENT	55 mA TYPICAL

Motor leads		
Molex 39-01-2040		
Pin	Color	Function
1	Yellow	Phase U
2	Green	Phase V
3	Blue	Phase W
4	GRN/YEL	CASE

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.

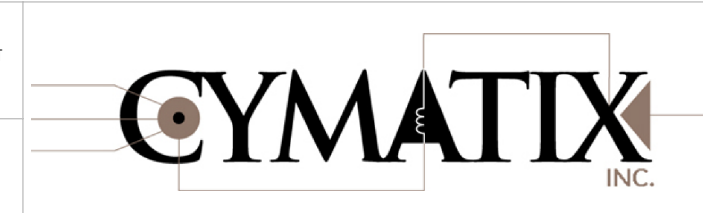
TOLERANCES UNLESS OTHERWISE SPECIFIED (U.O.S.)
DECIMALS .XX = ± .01
.XXX = ± .005
.XXXX = ± .0005
C'BREAKS .010/.020
FILLETS .020 MAX
FRAC. 1/64
MACH. FIN. 125 /
ANGLES 1°

MATERIAL

FINISH

DRAWN JPB DATE 02/09/22

CHECKED TPB DATE 02/09/22



TITLE: BL MOTOR, 60 mm, 72 VDC
5000 PPR

PART NO. MP60-xB-MX5000-CN-001

SCALE: NONE SHEET 1 OF 1 DWG.NO. R

- NOTES:
1. K_t AND K_e BASED ON RMS SINUSOIDAL DRIVE
 2. 8 POLE DESIGN

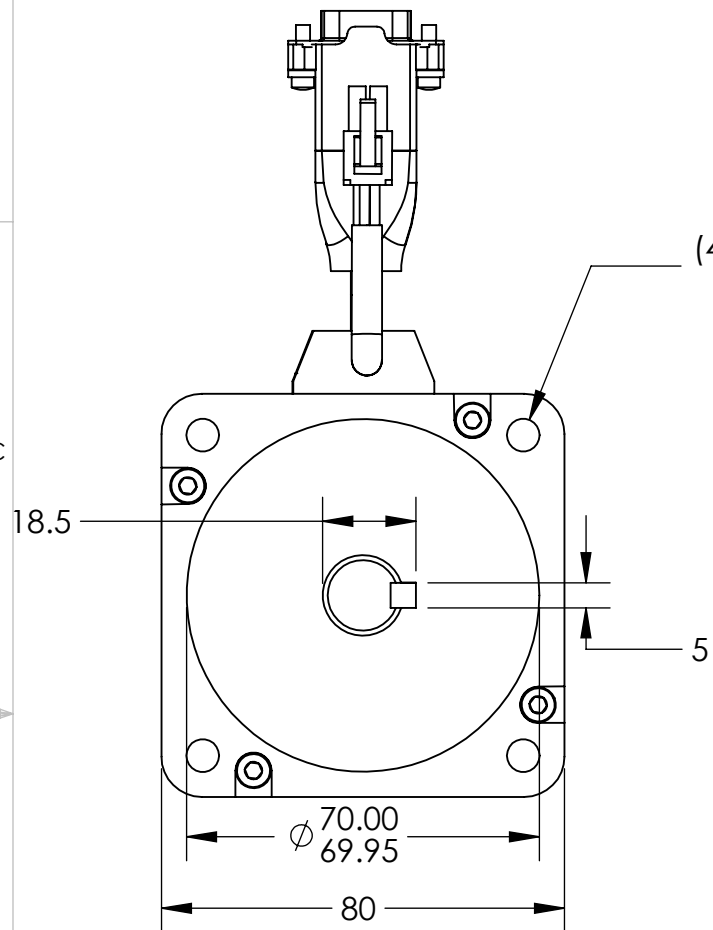
PART REVISION HISTORY					
REV.	DESCRIPTION	ECO	DWN	CHKD	DATE

D

C

B

A



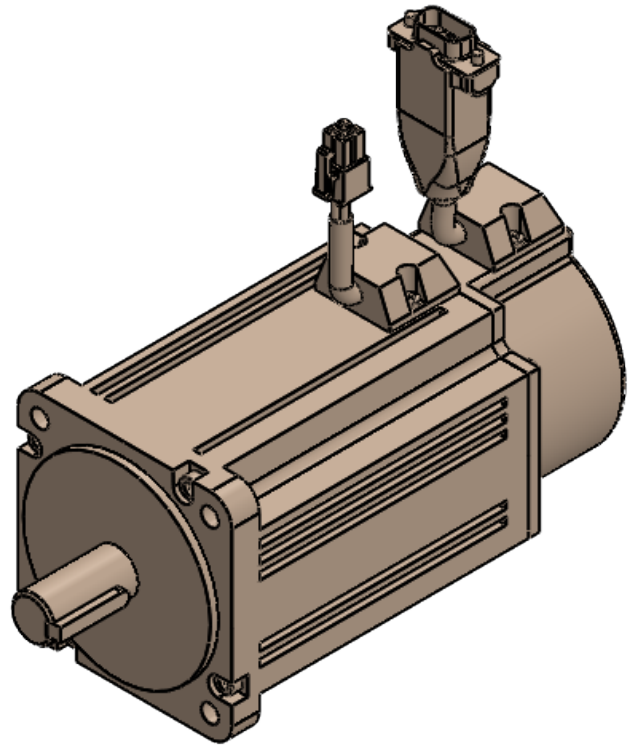
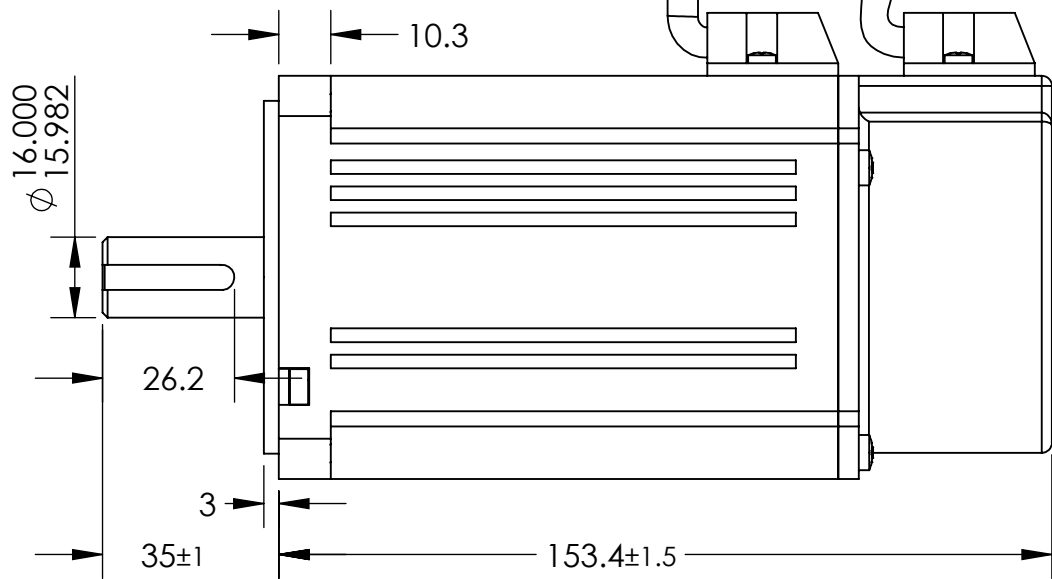
(4) ϕ 6.50 THRU HOLES
EQ SP ON ϕ 90 B.C.

MOTOR POWER
MOLEX 39-01-2040

MOTOR CABLE
AWG 18
300+/- 30 mm

ENCODER
15 POS HD D-SUB MALE
T-E 748364-1

ENCODER CABLE
AWG 28
300 +/- 30 MM



D

C

B

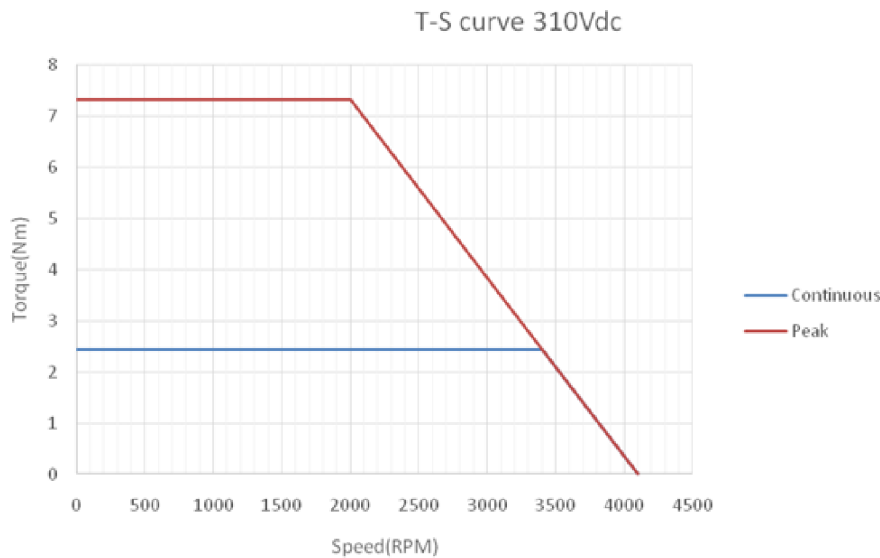
A

MOTOR PARAMETERS		
		MP80-2B
MAX BUS VOLTAGE	VDC	310
RATE SPEED	RPM	3000
RATED TORQUE @ 3000 RPM	N-m	2.44
POWER @ RATED SPEED	WATTS	765
PEAK TORQUE	N-m	7.2
CONTINUOUS CURRENT 0-p	AMPS	3
PEAK CURRENT 0-p	AMPS	9
VOLTAGE CONSTANT, K _e rms	V/KRPM	43
TORQUE CONSTANT, K _t rms	N-m/A	0.411
RESISTANCE	OHM	2.4
INDUCTANCE	mH	6.5
MOMENT OF INERTIA	Kg-cm ²	1.45
INSULATION CLASS		F
WEIGHT	Kg	2.8

FEEDBACK		
Pin	Color	Function
1	Red	5 vdc
2	Black	GND
3	Blue	Chl A
4	BLU/BLK	Chl A/
5	Green	Chl B
6	GRN/BLK	Chl B/
7	Yellow	Index
8	YEL/BLK	Index/
9		
10	Brown	
11	White	COMM A
12	Gray	COMM B
13	WHT/ORG	COMM C
14		
15	Shield	Shield

ENCODER SPECIFICATIONS	
TYPE	OPTICAL
OUTPUT TYPE	LINE DRIVER
LINE COUNT	2500
GATED	A / B AT 90 DEDREE
INPUT VOLTAGE	5 VDC +/- 5%
CURRENT	55 mA TYPICAL

Motor leads		
Pin	Color	Function
1	Yellow	Phase U
2	Green	Phase V
3	Blue	Phase W
4	GRN/YEL	CASE



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

MATERIAL

FINISH

DRAWN JPB **DATE** 02/10/22 **SIZE** B

CHECKED TPB **DATE** 02/10/22

CYMATIX INC.

TITLE: BL MOTOR, 80 MM, 310 VDC
2500 PPR

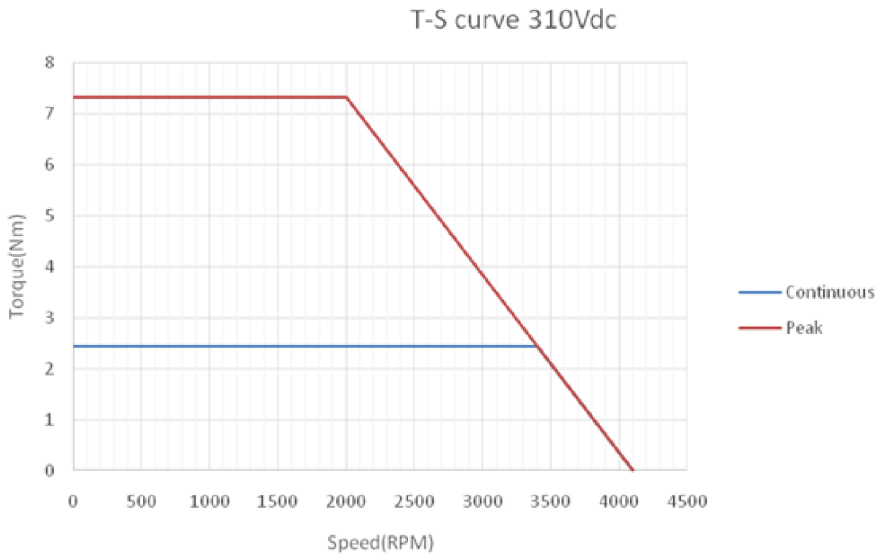
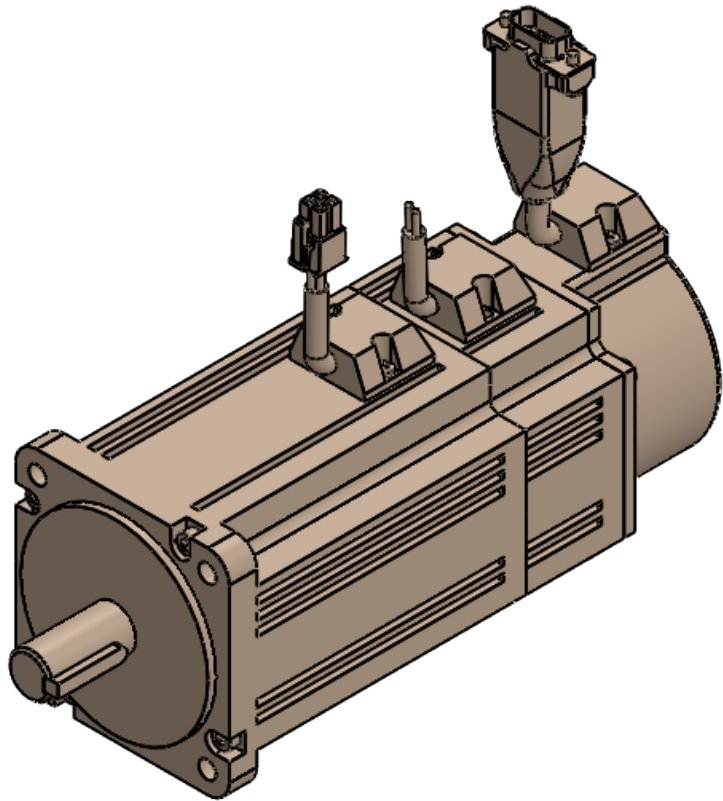
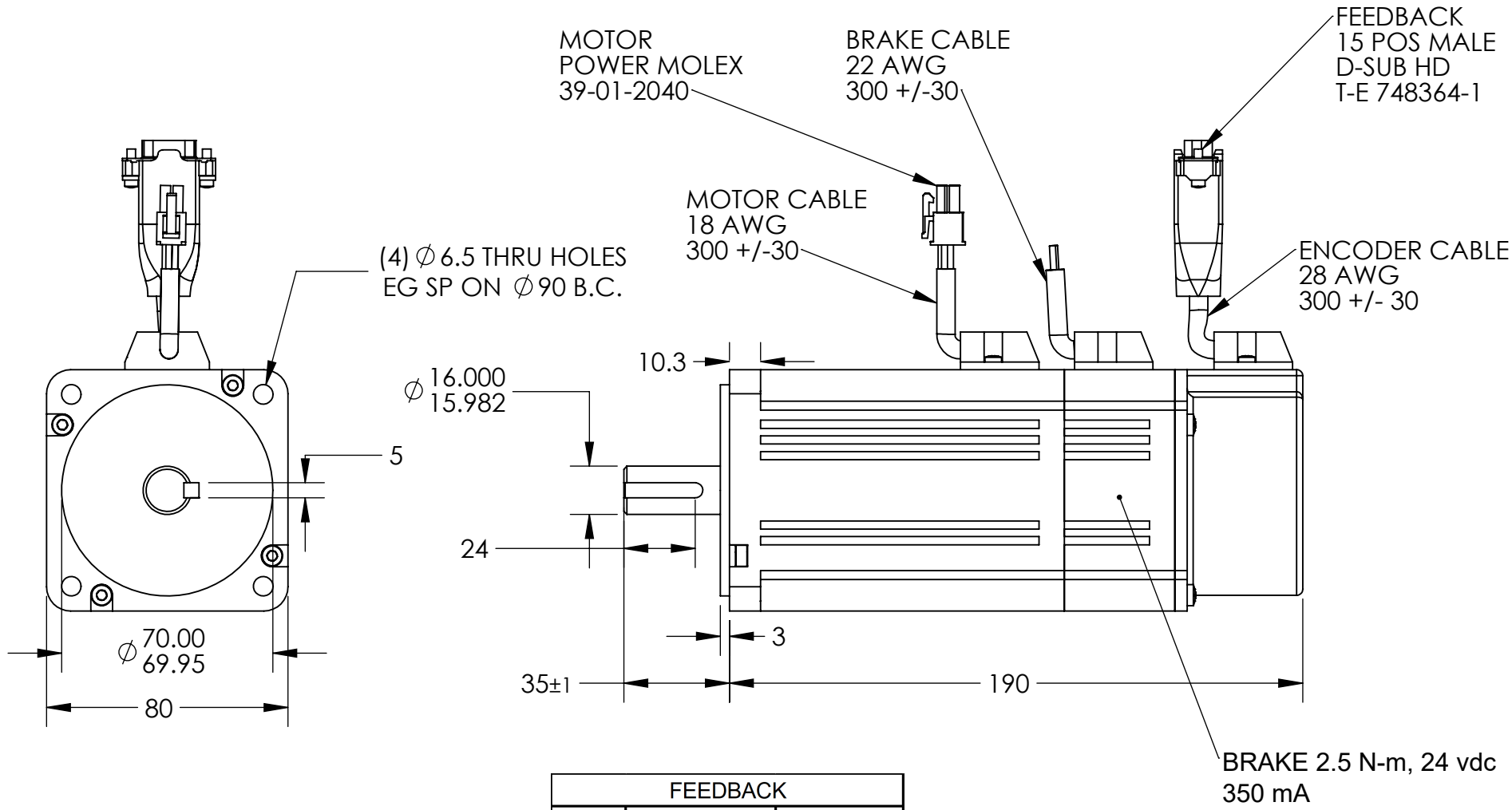
PART NO. MP80-2B-MX2500-CN-001 **PART REV.** A

DWG.NO. R

SCALE: NONE **SHEET 1 OF 1**

- NOTES:
1. Kt AND Ke BASED ON RMS SINUSOIDAL DRVE
 2. 8 POLE DESIGN

PART REVISION HISTORY					
REV.	DESCRIPTION	ECO	DWN	CHKD	DATE



MOTOR PARAMETERS		
		MP80-2B
MAX BUS VOLTAGE	VDC	310
RATE SPEED	RPM	3000
RATED TORQUE @ 3000 RPM	N-m	2.44
POWER @ RATED SPEED	WATTS	765
PEAK TORQUE	N-m	7.2
CONTINUOUS CURRENT 0-p	AMPS	3
PEAK CURRENT 0-p	AMPS	9
VOLTAGE CONSTANT, Ke rms	V/KRPM	43
TORQUE CONSTANT, Kt rms	N-m/A	0.411
RESISTANCE	OHM	2.4
INDUCTANCE	mH	6.5
MOMENT OF INERTIA	Kg-cm2	1.45
INSULATION CLASS		F
WEIGHT	Kg	2.8

FEEDBACK		
Pin	Color	Function
1	Red	5 vdc
2	Black	GND
3	Blue	Chl A
4	BLU/BLK	Chl A/
5	Green	Chl B
6	GRN/BLK	Chl B/
7	Yellow	Index
8	YEL/BLK	Index/
9		
10	Brown	
11	White	COMM A
12	Gray	COMM B
13	WHT/ORG	COMM C
14		
15	Shield	Shield

ENCODER SPECIFICATIONS	
TYPE	OPTICAL
OUTPUT TYPE	LINE DRIVER
LINE COUNT	2500
GATED	A / B AT 90 DEDREE
INPUT VOLTAGE	5 VDC +/- 5%
CURRENT	55 mA TYPICAL

Motor leads		
Pin	Color	Function
1	Yellow	Phase U
2	Green	Phase V
3	Blue	Phase W
4	YEL/GRN	CASE

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

MATERIAL

FINISH
DRAWN JPB
CHECKED TPB
DATE 02/10/22
DATE 02/10/22

TITLE: BL MOTOR/BRAKE, 80 MM, 310 VDC
2500 PPR ENCODER

PART NO. MP80-2B-MX2500-CB-001
SHEET 1 OF 1
DWG.NO. R

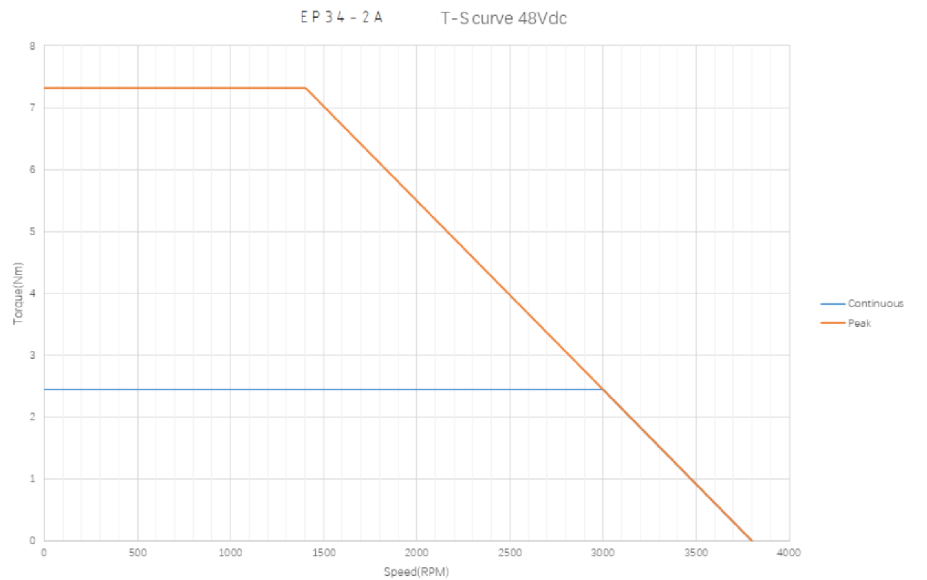
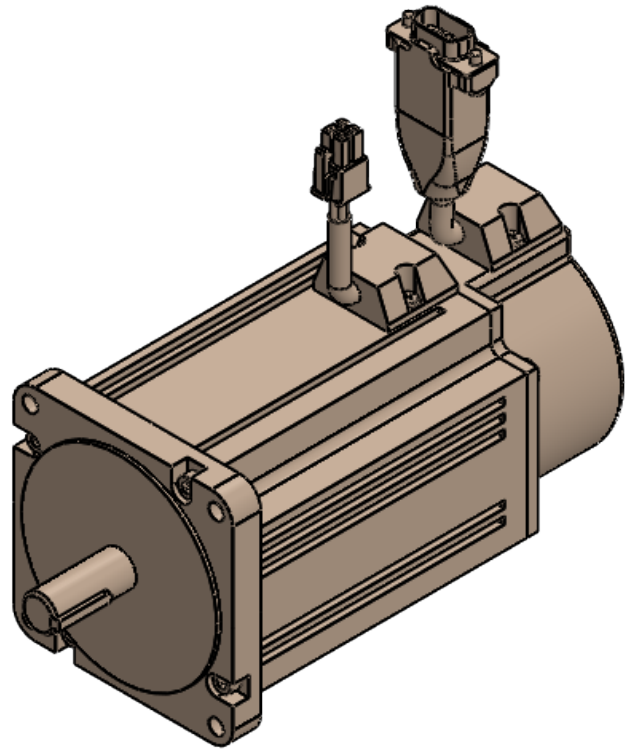
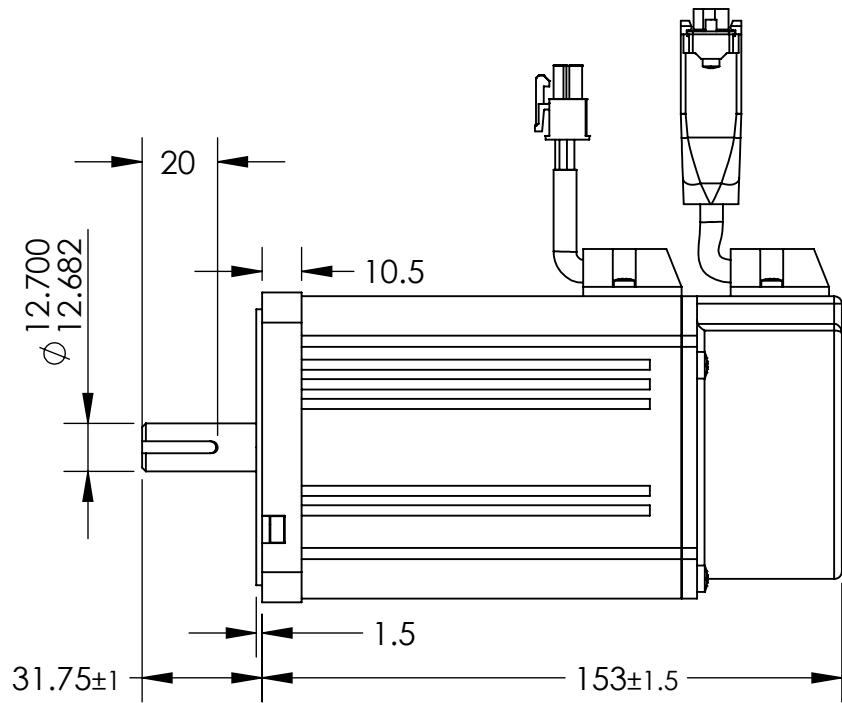
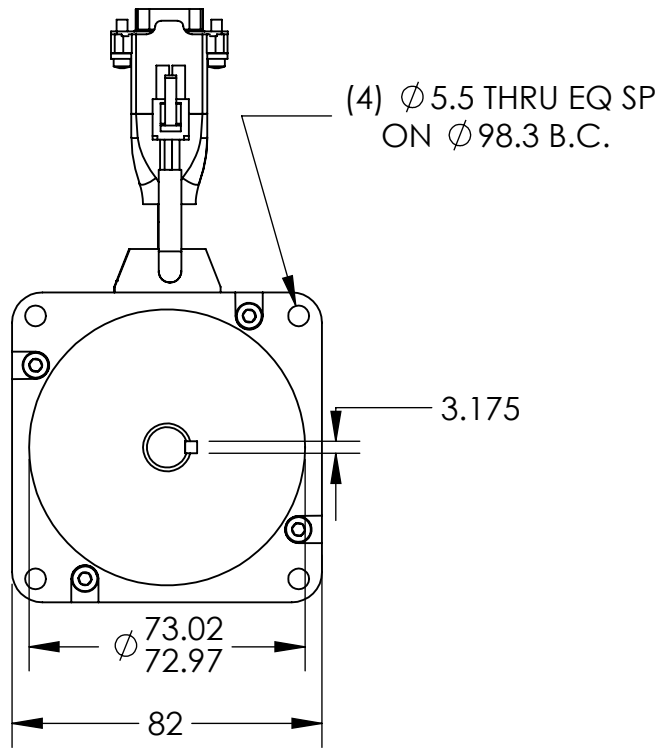
SCALE: NONE

THIRD ANGLE

SIZE B

PART REV. A

- NOTES:
1. Kt AND Ke BASED ON RMS SINE WAVE DRIVE
 2. 8 POLE DESIGN
 3. OPTION 1.7 N-m FAIL SAFE BRAKE
 4. OPTIONAL MULTI-TURN ABSOLUTE BISS-C
17 BIT RESOLUTION, 16 BIT TURN NO BATTERY



MOTOR PARAMETERS		
		EP80-2A
BUS VOLTAGE	VDC	48
RATE SPEED	RPM	3000
RATED TORQUE @ 3000 RPM	N-m	2.44
POWER @ RATED SPEED	WATTS	765
PEAK TORQUE	N-m	7.2
CONTINUOUS CURRENT 0-p	AMPS	21
PEAK CURRENT 0-p	AMPS	63
VOLTAGE CONSTANT, Ke rms	V/KRPM	8.5
TORQUE CONSTANT, Kt rms	N-m/A	0.116
RESISTANCE	OHM	TBD
INDUCTANCE	mH	TBD
MOMENT OF INERTIA	Kg-cm2	1.45
INSULATION CLASS		F
WEIGHT	Kg	2.8

FEEDBACK		
Pin	Color	Function
1	Red	5 vdc
2	Black	GND
3	Brown	Chl A
4	White	Chl A/
5	Blue	Chl B
6	Green	Chl B/
7	Orange	Index
8	Yellow	Index/
9		
10		
11	Violet	COMM A
12	WHT/BRN	COMM B
13	WHT/ORG	COMM C
14		
15	Shield	Shield

Motor leads		
TBD		
Pin	Color	Function
1	Yellow	Phase U
2	Green	Phase V
3	Blue	Phase W
4	GRN/YEL	CASE

ENCODER SPECIFICATIONS	
TYPE	OPTICAL
OUTPUT TYPE	LINE DRIVER
LINE COUNT	2500
GATED	A / B AT 90 DEDREE
INPUT VOLTAGE	5 VDC +/- 5%
CURRENT	55 mA TYPICAL

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

MATERIAL

FINISH

DRAWN JPB DATE 10/21/21

CHECKED TPB DATE 10/21/21

TITLE: BL MOTOR, NEMA 34, 48 VDC, 2500 PPR

PART NO. EP34-2A-MX2500-CN-001

DWG.NO. R

SHEET 1 OF 1

SCALE: NONE

THIRD ANGLE

SIZE B

PART REV. A

- NOTES:
1. Kt AND Ke BASED ON RM SINE WAVE DRIVE
 2. 8 POLE DESIGN
 3. OPTIONAL 1.7 N-m FAIL SAFE BRAKE 24 vdc
ADD 231 MM LENGTH

PART REVISION HISTORY

REV.	DESCRIPTION	ECO	DWN	CHKD	DATE

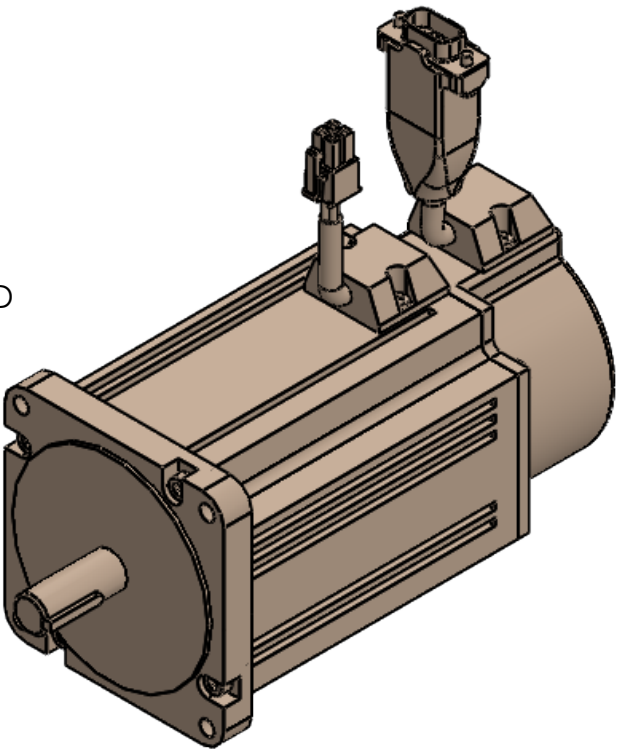
(4) ϕ 5.5 THRU EQ SP
ON ϕ 98.3 B.C.

MOTOR
POWER
MOLEX
39-01-2040

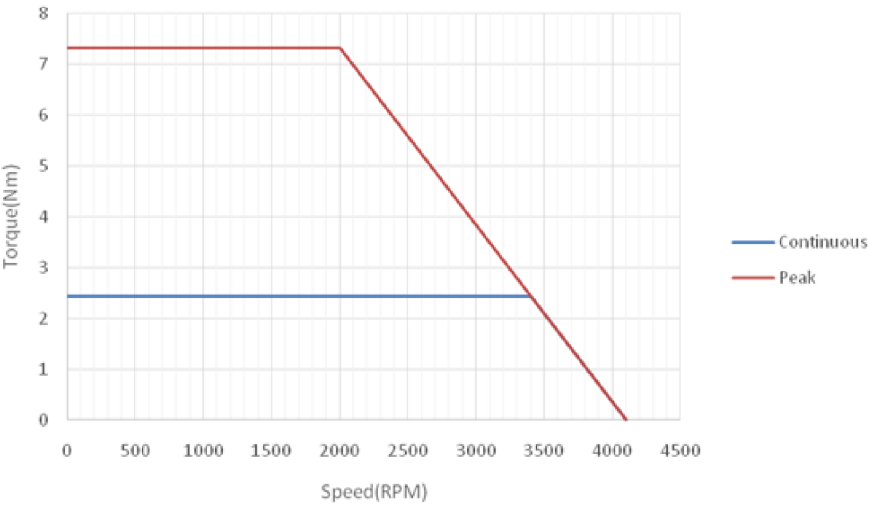
MOTOR
CABLE
18 AWG

FEEDBACK
15 POS MALE
D-SUB HD
T-E 748364-1

FEEDBACK
CABLE SHIELDED
28 AWG



T-S curve 310Vdc



MOTOR PARAMETERS		
		EP80-2B
BUS VOLTAGE	VDC	310
RATE SPEED	RPM	3000
RATED TORQUE @ 3000 RPM	N-m	2.44
POWER @ RATED SPEED	WATTS	765
PEAK TORQUE	N-m	7.2
CONTINUOUS CURRENT 0-p	AMPS	3
PEAK CURRENT 0-p	AMPS	9
VOLTAGE CONSTANT, Ke rms	V/KRPM	43
TORQUE CONSTANT, Kt rms	N-m/A	0.411
RESISTANCE	OHM	2.4
INDUCTANCE	mH	6.5
MOMENT OF INERTIA	Kg-cm2	1.45
INSULATION CLASS		F
WEIGHT	Kg	2.8

FEEDBACK		
Pin	Color	Function
1	Red	5 vdc
2	Black	GND
3	Blue	Chl A
4	BLU/BLK	Chl A/
5	Green	Chl B
6	GRN/BLK	Chl B/
7	Yellow	Index
8	YEL/BLK	Index/
9		
10		
11	Brown	COMM A
12	White	COMM B
13	Gray	COMM C
14		
15	Shield	Shield

Motor leads		
Molex 39-01-2040		
Pin	Color	Function
1	Yellow	Phase U
2	Green	Phase V
3	Blue	Phase W
4	YEL/GRN	CASE

ENCODER SPECIFICATIONS	
TYPE	OPTICAL
OUTPUT TYPE	LINE DRIVER
LINE COUNT	2500
GATED	A / B AT 90 DEDREE
INPUT VOLTAGE	5 VDC +/- 5%
CURRENT	55 mA TYPICAL

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

FINISH

DRAWN JPB

DATE 10/13/21

CHECKED TPB

DATE 10/13/21

TITLE: BL MOTOR, NEMA 34, 310 VDC
2500 PPR

SIZE B
THIRD ANGLE

PART NO.
EP34-2B-BX2500-CN-001

SCALE: NONE

SHEET 1 OF 1

DWG.NO. R

PART REV. A