

# 22 SERIES BLDC Motor



## GENERAL SPECIFICATION

Winding type: Star
Hall effect angle: 120 degree electrical angle
Shaft run out: 0.025mm
Insulation Class: Class B
Dielectric strength: 500VDC for one minute
Ambient temperature: 0—+50°C

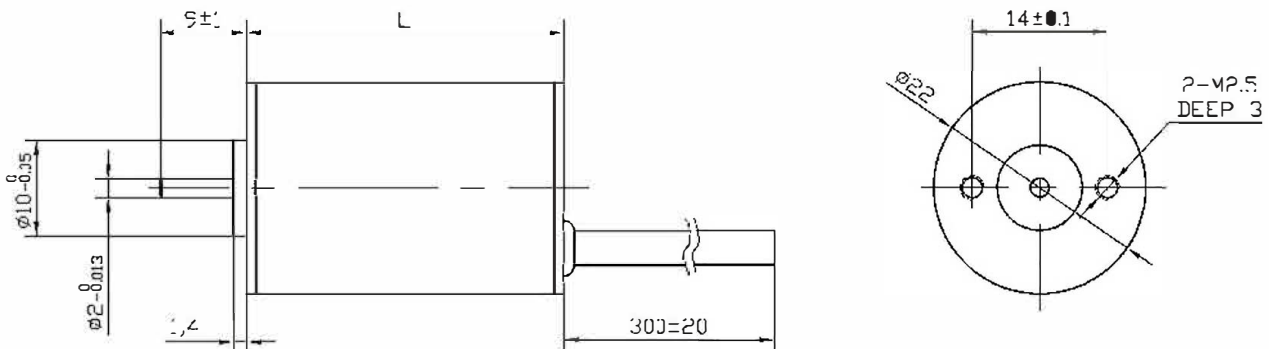
## WIRE DIAGRAM

Lead No.	Lead Color	Lead Gauge	Function
1	ORA	28AWG UL1061	Phase U
2	GRE		Phase V
3	BRO		Phase W
4	RED		+5V
5	BLA		GND
5	YEL	28AWG UL1061	HALL A
7	WHI		HALL B
8	BLU		HALL C

## ELECTRICAL SPECIFICATION

Model		22DM40-24100	22DM50-2460
Voltage	V	24	
Number of poles		4	
Rated power	W	8.5	7
No load speed	rpm	14000	8900
Rated torque	mN.m	8.1	11
Rated Speed	rpm	10000	6000
Rated current	A	0.72	0.54
Back-EMF constant	V/Krpm	1.7	3.5
Resistant	Ohm	9.7	13.9
Weight	Kg	0.05	0.05
Length	mm	40	50

## DIMENSIONS



# 28 SERIES BLDC Motor



## GENERAL SPECIFICATION

Winding type: Star
Hall effect angle: 120 degree electrical angle
Shaft run out: 0.025mm
Insulation Class: Class B
Dielectric strength: 500VDC for one minute
Ambient temperature: -20—+40 °C

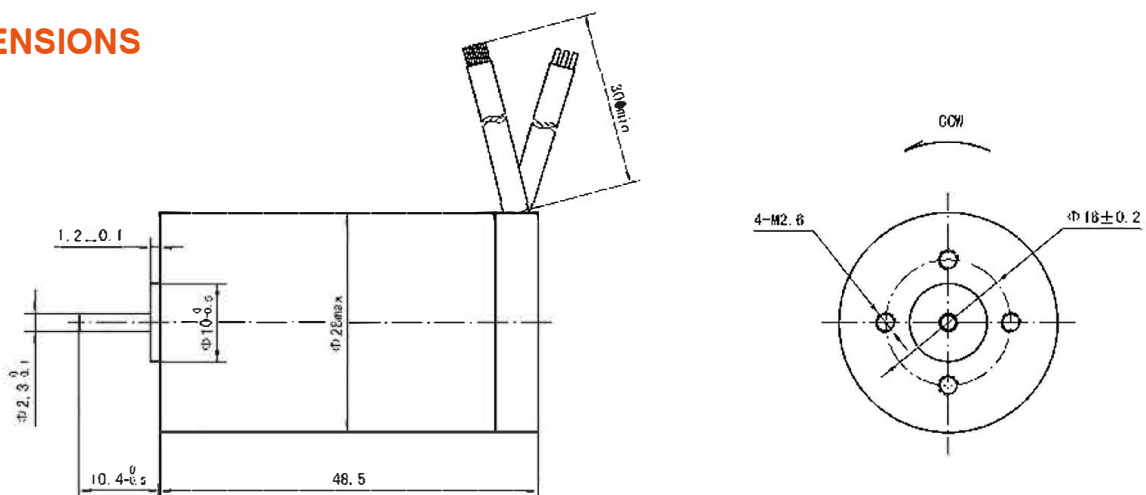
## WIRE DIAGRAM

Lead No.	Lead Color	Lead Gauge	Function
1	RED	20AWG UL1569	Phase U
2	YEL		Phase V
3	BLA		Phase W
4	RED	26AWG UL1569	+5V
5	BLU		Hall A
5	GRE		Hall B
7	WHI		Hall C
8	BLA		GND

## ELECTRICAL SPECIFICATION

Model	28DM49-2475	
Voltage	V	24
Number of poles		4
Rated power	W	12
No load speed	rpm	10000
Rated torque	Nm	0.015
Rated Speed	rpm	7500
Rated Current	A	1
Torque(max)	Nm	0.045
Weight	Kg	0.1
Length	mm	49

## DIMENSIONS



## 30 SERIES BLDC Motor



### GENERAL SPECIFICATION

Winding type: Star
Hall effect angle: 120 degree electrical angle
Shaft run out: 0.025mm
Insulation Class: Class B
Dielectric strength: 500VDC for one minute
Ambient temperature: 0—+50 °C

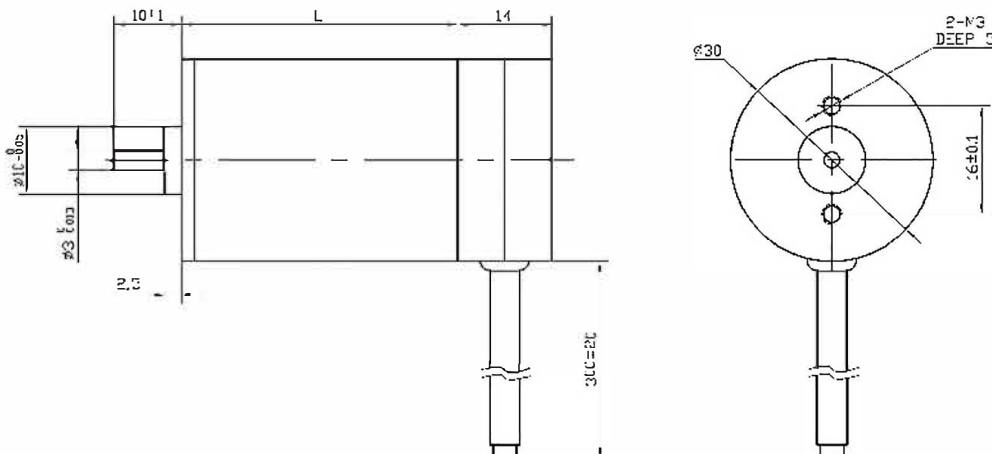
### WIRE DIAGRAM

Lead No.	Lead Color	Lead Gauge	Function
1	ORA	26AWG UL1007	Phase U
2	GRE		Phase V
3	BRO		Phase W
4	RED	26AWG UL1007	+5V
5	BLA		GND
5	YEL		HALL A
7	WHI		HALL B
8	BLU		HALL C

### ELECTRICAL SPECIFICATION

Model		30DM41-2450	30DM56-1250
Voltage	V	24	12
Number of poles		4	
Rated power	W	6	4
No load speed	rpm	7700	3200
Rated torque	mN.m	11	25
Rated Speed	rpm	5000	1500
Rated current	A	0.5	0.7
Back-EMF constant	V/Krpm	2.2	3.4
Resistant	Ohm	11.2	6
Weight	Kg	0.08	0.1
Length	mm	41	56

### DIMENSIONS



# 36 SERIES BLDC Motor



## GENERAL SPECIFICATION

Winding type: Star
Hall effect angle: 120 degree electrical angle
Shaft run out: 0.025mm
Insulation Class: Class B
Dielectric strength:500VDC for one minute
Ambient temperature: 0—+50℃

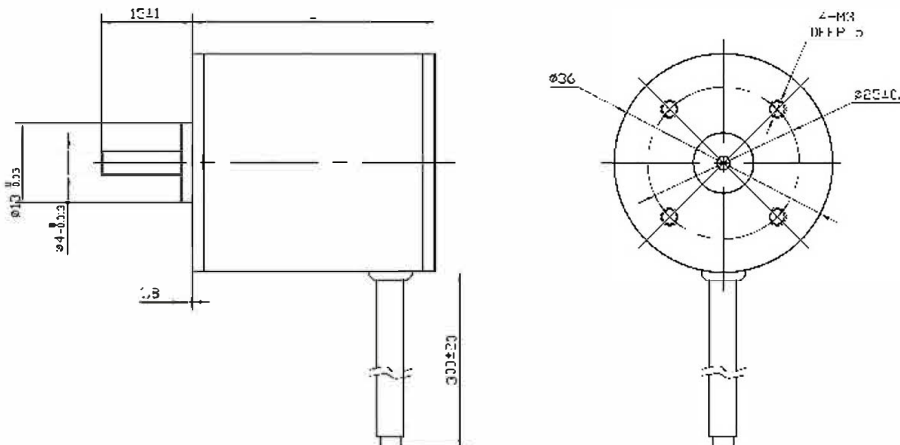
## WIRE DIAGRAM

Lead No.	Lead Color	Lead Gauge	Function
1	ORE	22AWG UL1007	Phase U
2	GRN		Phase V
3	BRO		Phase W
4	RED	26AWG UL1007	+5V
5	BLA		GND
5	YEL		HALL A
7	WHI		HALL B
8	BLU		HALL C

## ELECTRICAL SPECIFICATION

Model		36DM40-2450	36DM45-1218	36DM50-2450	36DM55-2440	36DM65-2430
Voltage	V	24	12	24	24	24
Number of poles		4				
Rated power	W	10	4	15	20	20
No load speed	rpm	7500	3000	7400	5800	4200
Rated torque	mN.m	19	21	29	48	64
Rated Speed	rpm	5000	1800	5000	4000	3000
Rated current	A	0.75	0.75	0.98	1.3	1.09
Back-EMF constant	V/Krpm	3.5	3.6	3.9	4.4	5.9
Resistant	Ohm	5.8	5.5	3.6	2.85	3.3
Weight	Kg	0.15	0.18	0.18	0.22	0.22
Length	mm	40	45	50	55	65

## DIMENSIONS



# 42 SERIES BLDC Motor



## GENERAL SPECIFICATION

Winding type: Star
Hall effect angle: 120 degree electrical angle
Shaft run out: 0.025mm
Insulation Class: Class B
Dielectric strength: 500VDC for one minute
Ambient temperature: -20—+40℃

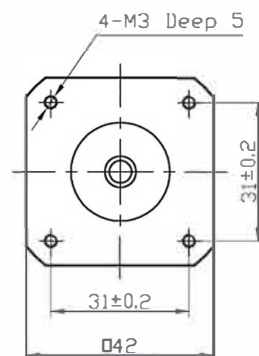
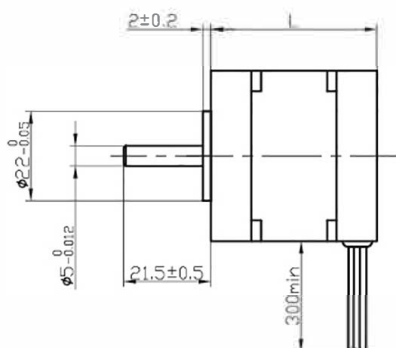
## WIRE DIAGRAM

Lead No.	Lead Color	Lead Gauge	Function
1	RED	20AWG UL1569	Phase U
2	YEL		Phase V
3	BLA		Phase W
4	RED	26AWG UL1569	+5V
5	BLU		Hall A
5	GRE		Hall B
7	WHI		Hall C
8	BLA		GND

## ELECTRICAL SPECIFICATION

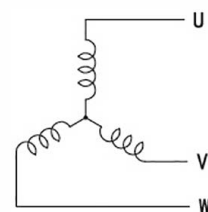
Model		42DM41-2440	42DM51-2440	42DM61-2440	42DM81-2440	42DM101-2440
Voltage	V	24				
Number of poles		8				
Rated power	W	25	40	50	75	100
No load speed	rpm	5000	5000	5000	5000	5000
Rated torque	Nm	0.063	0.096	0.125	0.18	0.25
Rated Speed	rpm	4000	4000	4000	4000	4000
Rated Current	A	1.7	2.4	3.5	4.6	6
Torque(max)	Nm	0.19	0.23	0.38	0.57	0.75
Back-EMF constant	V/Krpm	3.13	3.13	3.15	3.16	3.17
Torque Constant	Nm/A	0.039	0.04	0.04	0.05	0.05
Resistance	ohm	1.5	1	0.74	0.56	0.4
Weight	Kg	0.3	0.4	0.5	0.7	0.9
Length	mm	41	51	61	81	101

## DIMENSIONS



The diameter of axle (max): 8mm

Connection mode





# 57 SERIES BLDC Motor



## GENERAL SPECIFICATION

Winding type: Star
Hall effect angle: 120 degree electrical angle
Shaft run out: 0.025mm
Insulation Class: Class B
Dielectric strength:500VDC for one minute
Ambient temperature: -20—+40 °C

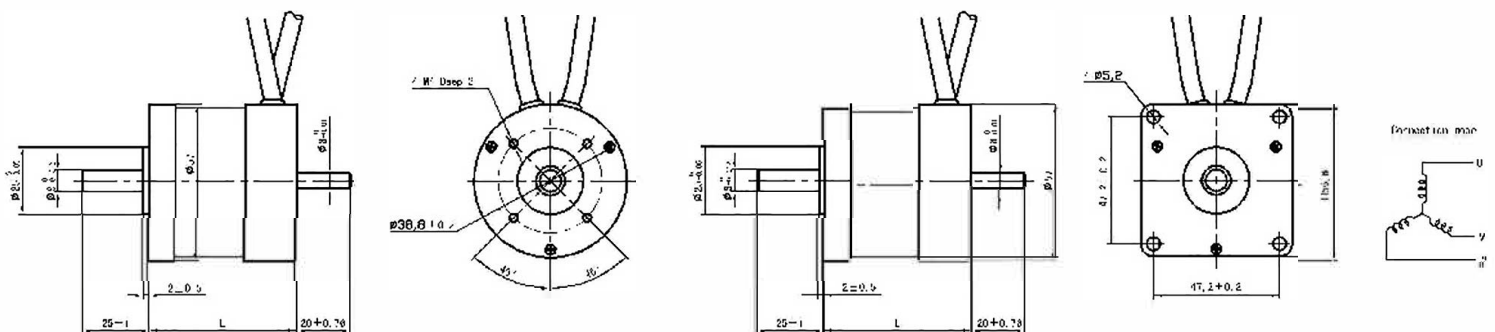
## WIRE DIAGRAM

Lead No.	Lead Color	Lead Gauge	Function
1	RED	18AWG UL1569	Phase U
2	YEL		Phase V
3	BLA		Phase W
4	RED	26AWG UL1569	+5V
5	BLU		Hall A
5	GRE		Hall B
7	WHI		Hall C
8	BLA		GND

## ELECTRICAL SPECIFICATION

Model		57DM45-3640	57DM55-3640	57DM75-3640	57DM95-3640	57DM115-3640
Voltage	V	36				
Number of poles		4				
Rated power	W	25	50	90	130	170
No load speed	rpm	5200	5200	5200	5300	5400
Rated torque	Nm	0.055	0.11	0.22	0.32	0.42
Rated Speed	rpm	4000	4000	4000	4000	4000
Rated Current	A	1.0	1.8	3.2	4.7	6.5
Torque(max)	Nm	0.16	0.3	0.5	0.8	1.2
Back-EMF constant	V/Krpm	4.4	4.5	4.8	4.83	4.9
Torque Constant	Nm/A	0.07	0.072	0.078	0.08	0.09
Resistance	ohm	3.4	1.7	0.75	0.5	0.39
Weight	Kg	0.35	0.45	0.8	1.1	1.4
Length	mm	45	55	75	95	115

## DIMENSIONS





# 57 SERIES BLDC Motor(High Torque)



## GENERAL SPECIFICATION

Winding type: Star
Hall effect angle: 120 degree electrical angle
Shaft run out: 0.025mm
Insulation Class: Class B
Dielectric strength:500VDC for one minute
Ambient temperature: -20—+40 °C

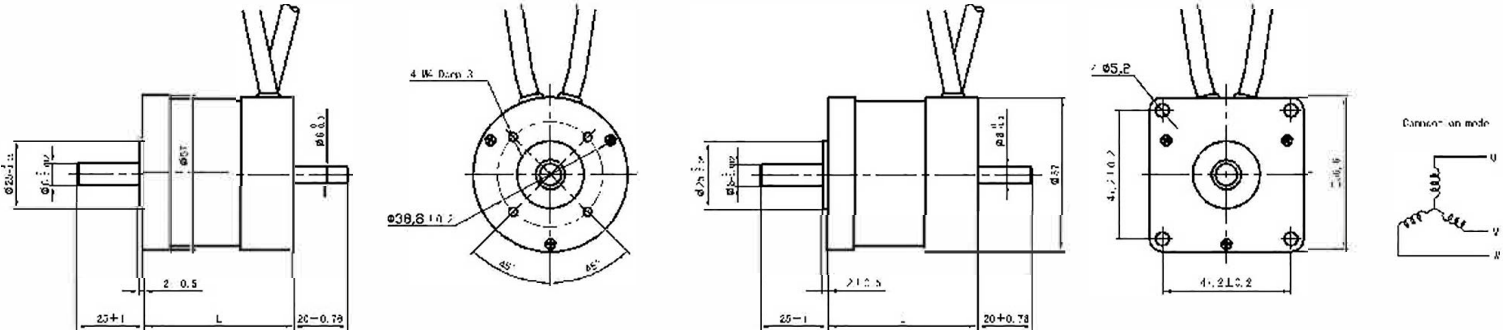
## WIRE DIAGRAM

Lead No.	Lead Color	Lead Gauge	Function
1	RED	18AWG UL1569	Phase U
2	YEL		Phase V
3	BLA		Phase W
4	RED	26AWG UL1569	+5V
5	BLU		Hall A
5	GRE		Hall B
7	WHI		Hall C
8	BLA		GND

## ELECTRICAL SPECIFICATION

Model		57DMH55-3640	57DMH75-3640	57DMH95-3640	57DMH115-3640
Voltage	V	36			
Number of poles		4			
Rated power	W	60	75	180	200
No load speed	rpm	5200	5200	5200	5200
Rated torque	Nm	0.14	0.28	0.43	0.56
Rated Speed	rpm	4000	4000	4000	4000
Rated Current	A	2.2	4.5	6.8	9
Torque(max)	Nm	0.4	0.6	0.9	1.7
Back-EMF constant	V/Krpm	4.5	4.8	4.83	4.9
Torque Constant	Nm/A	0.072	0.078	0.08	0.09
Resistance	ohm	2	0.9	0.7	0.5
Weight	Kg	0.5	0.8	1.1	1.5
Length	mm	55	75	95	115

## DIMENSIONS





# 60 SERIES BLDC Motor



## GENERAL SPECIFICATION

Winding type: Star
Hall effect angle: 120 degree electrical angle
Shaft run out: 0.025mm
Insulation Class: Class B
Dielectric strength:500VDC for one minute
Ambient temperature: -20—+40℃

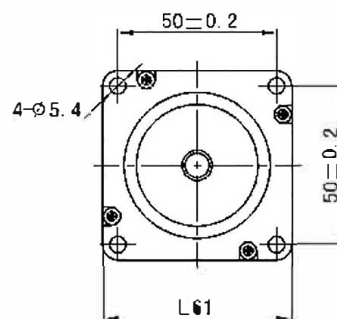
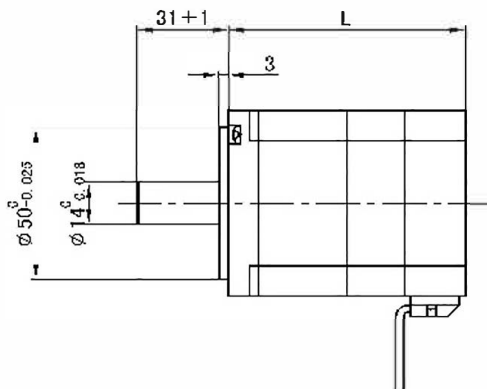
## WIRE DIAGRAM

Lead No.	Lead Color	Lead Gauge	Function
1	RED	18AWG UL1569	Phase U
2	YEL		Phase V
3	BLA		Phase W
4	RED	26AWG UL1569	+5V
5	BLU		Hall A
5	GRE		Hall B
7	WHI		Hall C
8	BLA		GND

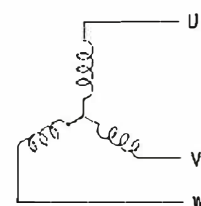
## ELECTRICAL SPECIFICATION

Model		60DM75-3630	60DM95-3630	60DM115-3630
Voltage	V	36		
Number of poles		8		
Rated power	W	80	160	230
No load speed	rpm	4100	4100	4100
Rated torque	Nm	0.25	0.5	0.75
Rated Speed	rpm	3000	3000	3000
Rated Current	A	3	6	9
Torque(max)	Nm	0.75	1.5	2
Back-EMF constant	V/Krpm	6.2	6.5	6.5
Torque Constant	Nm/A	0.043	0.045	0.041
Resistance	ohm	0.59	0.26	0.2
Weight	Kg	0.9	1.2	1.6
Length	mm	75	95	115

## DIMENSIONS



Connection mode



# 70 SERIES BLDC Motor



## GENERAL SPECIFICATION

Winding type: Star
Hall effect angle: 120 degree electrical angle
Shaft run out: 0.025mm
Insulation Class: Class B
Dielectric strength: 500VDC for one minute
Ambient temperature: -20—+40℃

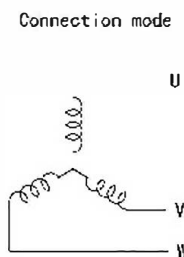
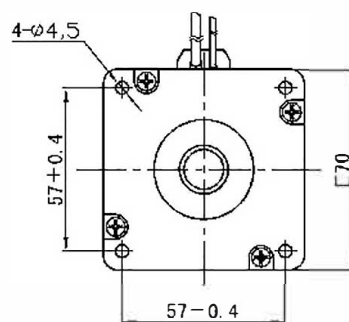
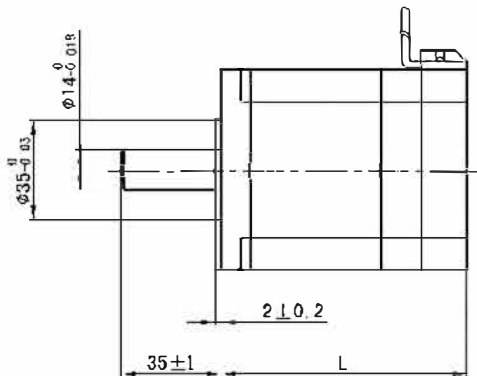
## WIRE DIAGRAM

Lead No.	Lead Color	Lead Gauge	Function
1	RED	18AWG UL1569	Phase U
2	YEL		Phase V
3	BLA		Phase W
4	RED	26AWG UL1569	+5V
5	BLU		Hall A
5	GRE		Hall B
7	WHI		Hall C
8	BLA		GND

## ELECTRICAL SPECIFICATION

Model		70DM86-4830	70DM116-4830	70DM136-4830
Voltage	V	48		
Number of poles		8		
Rated power	W	200	350	450
No load speed	rpm	3600		
Rated torque	Nm	0.65	1.2	1.5
Rated Speed	rpm	3000	3000	3000
Rated Current	A	5.5	9.7	12.9
Torque(max)	Nm	2.1	3.6	4.5
Back-EMF constant	V/Krpm	7.1	7.3	7.5
Torque Constant	Nm/A	0.095	0.098	0.099
Resistance	ohm	1.2	0.6	0.3
Weight	Kg	1.7	2.2	2.8
Length	mm	86	116	136

## DIMENSIONS



# 80 SERIES BLDC Motor



## GENERAL SPECIFICATION

Winding type: Star
Hall effect angle: 120 degree electrical angle
Shaft run out: 0.025mm
Insulation Class: Class B
Dielectric strength:500VDC for one minute
Ambient temperature: -20—+40℃

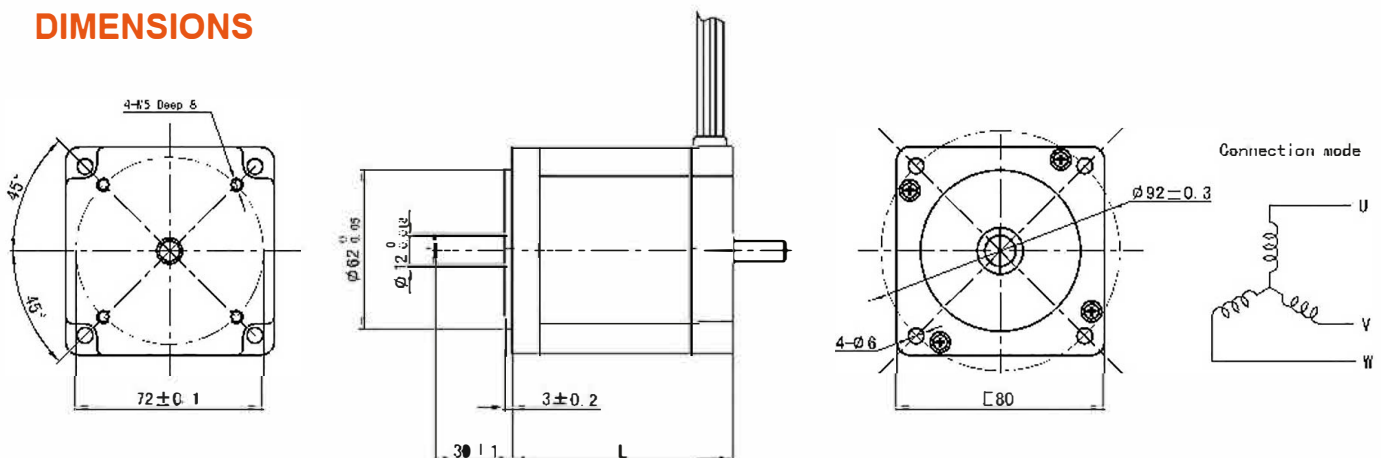
## WIRE DIAGRAM

Lead No.	Lead Color	Lead Gauge	Function
1	RED	16AWG UL1569	Phase U
2	YEL		Phase V
3	BLA		Phase W
4	RED	26AWG UL1569	+5V
5	BLU		Hall A
5	GRE		Hall B
7	WHI		Hall C
8	BLA		GND

## ELECTRICAL SPECIFICATION

Model		80DM85-2430	80DM105-2430	80DM125-2430
Voltage	V	24		
Number of poles		4		
Rated power	W	100	200	300
No load speed	rpm	4200	4200	4200
Rated torque	Nm	0.32	0.65	1
Rated Speed	rpm	3000	3000	3000
Rated Current	A	5.2	10.5	15
Torque(max)	Nm	79	157	236
Back-EMF constant	V/Krpm	9	9.2	9.5
Torque Constant	Nm/A	0.06	0.052	0.05
Resistance	ohm	0.5	0.43	0.35
Weight	Kg	1.6	2.2	3
Length	mm	85	105	125

## DIMENSIONS



# 86 SERIES BLDC Motor



## GENERAL SPECIFICATION

Winding type: Star
Hall effect angle: 120 degree electrical angle
Shaft run out: 0.025mm
Insulation Class: Class B
Dielectric strength: 500VDC for one minute
Ambient temperature: -20—+40℃

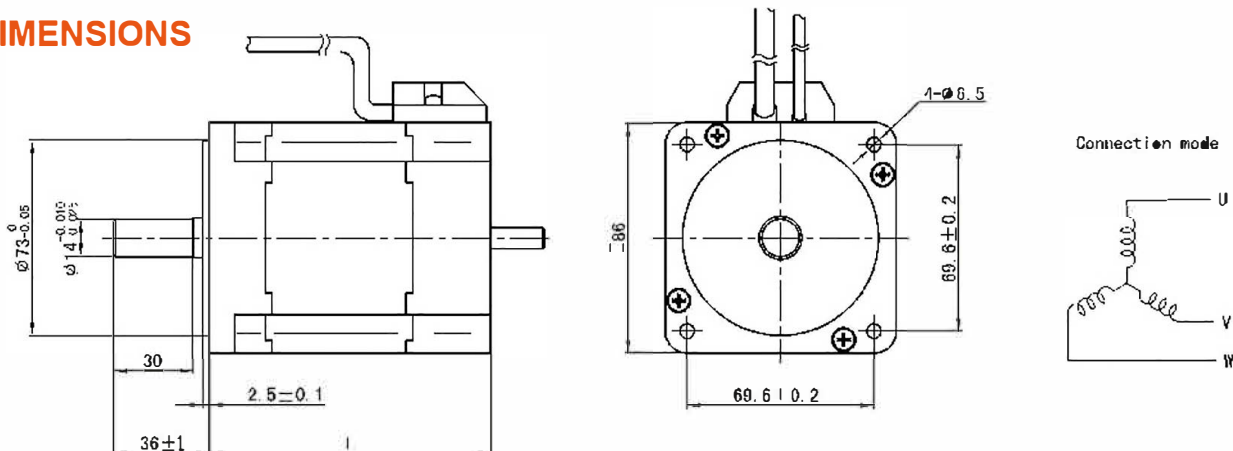
## WIRE DIAGRAM

Lead No.	Lead Color	Lead Gauge	Function
1	RED	14AWG UL1569	Phase U
2	YEL		Phase V
3	BLA		Phase W
4	RED	26AWG UL1569	+5V
5	BLU		Hall A
5	GRE		Hall B
7	WHI		Hall C
8	BLA		GND

## ELECTRICAL SPECIFICATION

Model		86DM70-4830	86DM80-4830	86DM90-4830	86DM105-4830	86DM130-4830
Voltage	V	48				
Number of poles		8				
Rated power	W	200	300	400	550	780
No load speed	rpm	3500	3500	3500	3500	3500
Rated torque	Nm	0.67	1.0	1.3	1.8	2.5
Rated Speed	rpm	3000	3000	3000	3000	3000
Rated Current	A	5.5	8.6	11	14.8	20
Torque(max)	Nm	2	3.0	4	5.4	7.5
Back-EMF constant	V/Krpm	9.8	9.8	9.8	9.8	10
Torque Constant	Nm/A	0.13	0.13	0.13	0.13	0.14
Resistance	ohm	0.43	0.32	0.21	0.15	0.1
Weight	Kg	1.8	2.2	2.8	3.2	4.2
Length	mm	70	80	90	105	130

## DIMENSIONS



# 110 SERIES BLDC Motor



## GENERAL SPECIFICATION

Winding type: Star
Hall effect angle: 120 degree electrical angle
Shaft run out: 0.025mm
Insulation Class: Class B
Dielectric strength:500VDC for one minute
Ambient temperature: -20—+40℃

## WIRE DIAGRAM

Lead No.	Lead Color	Lead Gauge	Function
1	RED	14AWG UL1015	Phase U
2	YEL		Phase V
3	BLA		Phase W
4	RED	26AWG UL1569	+5V
5	BLU		Hall A
5	GRE		Hall B
7	WHI		Hall C
8	BLA		GND

## ELECTRICAL SPECIFICATION

Model		110DM93-31025	110DM123-31025	110DM153-31024	110DM183-31025
Voltage	V	310			
Number of poles		8			
Rated power	W	440	900	1300	1700
No load speed	rpm	2900	2900	2800	2900
Rated torque	Nm	1.65	3.30	5	6.6
Rated Speed	rpm	2550	2550	2400	2550
Rated Current	A	2	3.5	5.1	6.7
Torque(max)	Nm	6	12	18	23
Torque Constant	Nm/A	1.11	1.11	1.11	1.11
Resistance	ohm	5	2.46	1.7	1.3
Weight	Kg	4.2	5.5	6.8	8.1
Length	mm	93	123	153	183

## DIMENSIONS

