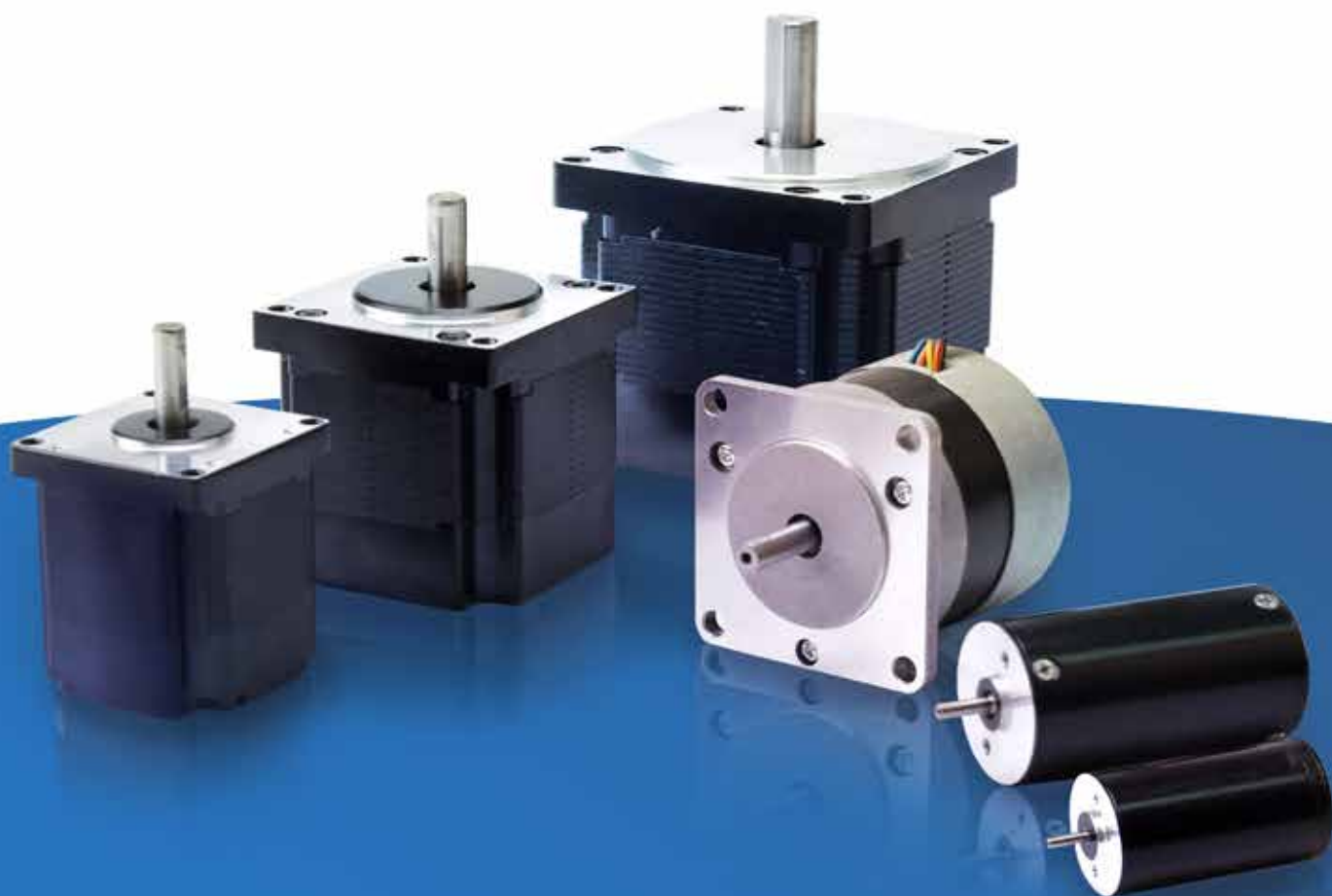


# BLDC



**MOONS'**  
*moving in better ways*



## Catalog

|                                   |    |
|-----------------------------------|----|
| Introduction of BLDC Motors ..... | 01 |
| □42BLDC Motors .....              | 02 |
| □57BLDC Motors .....              | 04 |
| □70BLDC Motors .....              | 06 |
| □80BLDC Motors .....              | 07 |
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Introduction of  
BLDC Motors

□ 42  
BLDC Motors

□ 57  
BLDC Motors

□ 70  
BLDC Motors

□ 80  
BLDC Motors

Round  
BLDC Motors

R16  
BLDC Motors

R22  
BLDC Motors

R30  
BLDC Motors

R36  
BLDC Motors

R42  
BLDC Motors

R57  
BLDC Motors

R63  
BLDC Motors

# Introduction of BLDC Motors

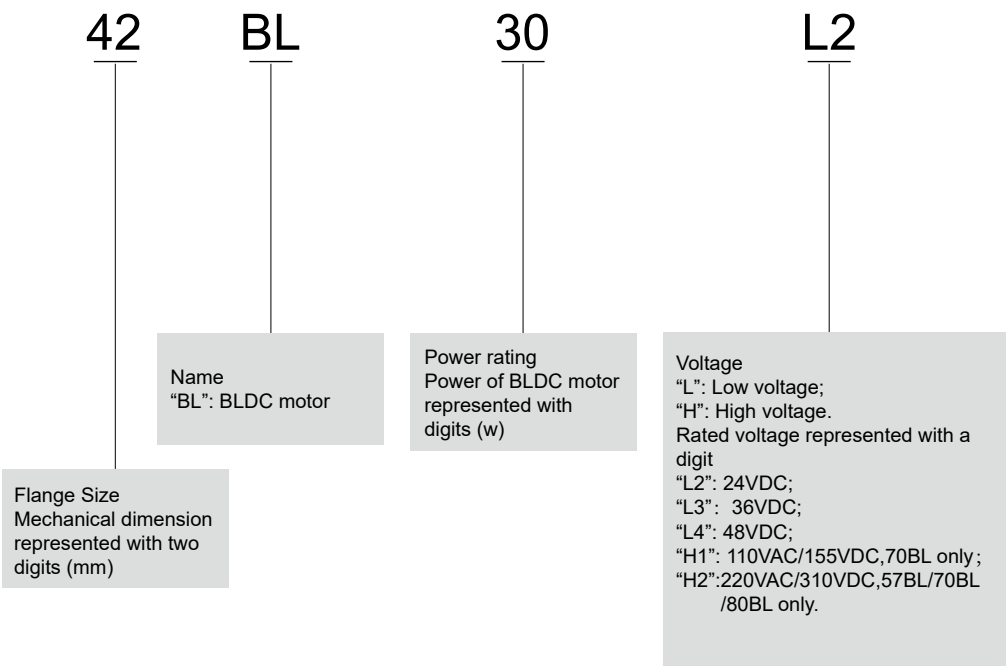
## Characteristics

- Wide range of speed control and smooth torque output
- Excellent speed stability
- Small size, high power
- Low temperature rise, low noise, low vibration
- Long life, low maintenance costs
- Low positioning torque
- Energy efficient

## Applications

- Mechanical automation (textile machines)
- Financial automation (ATM)
- Office equipment (printer)
- Solar energy equipment
- Drive system
- Speed setting and regulation devices in various industries
- Automotive On-board equipment
- Pump (metering pump)
- Food industry
- Sorting equipment

## Model Numbering System



□ 42BLDC Motor Series: 42mm, 30-90 Watts



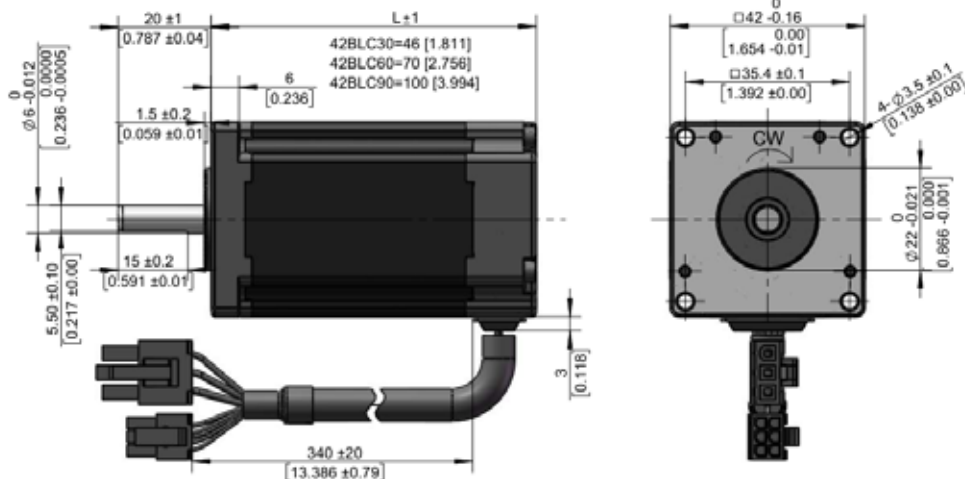
- Commutation Signals Hall Sensor
- Insulation Class B (130°C )
- Protective Rating IP40
- Operating Temperature 0 ~ +50°C
- Storage Temperature -25 ~ +70°C
- Operating RH 85%RH or Below (non-condensing)
- Operating Environment Indoor, no corrosive gas, no flammable gas, no oil mist, no dust
- Altitude 1000m max

## Technical Specification

| Series                   |                   | 42BL30                    |          | 42BL60                   |          | 42BL90                  |          |
|--------------------------|-------------------|---------------------------|----------|--------------------------|----------|-------------------------|----------|
| Length                   | mm                | 46                        |          | 70                       |          | 100                     |          |
| Model Number             |                   | 42BL30L2                  | 42BL30L4 | 42BL60L2                 | 42BL60L4 | 42BL90L2                | 42BL90L4 |
| DC Supply Voltage        | V dc              | 24                        | 48       | 24                       | 48       | 24                      | 48       |
| Rated Output Power       | Watts             | 30                        | 30       | 60                       | 60       | 90                      | 90       |
| Rated Speed              | RPM               | 4000                      | 4000     | 4000                     | 4000     | 4000                    | 4000     |
| Rated Torque             | Nm                | 0.072                     | 0.072    | 0.144                    | 0.144    | 0.215                   | 0.215    |
| Rated Current            | A rms             | 1.67                      | 0.81     | 3.28                     | 1.63     | 4.92                    | 2.40     |
| Max. Intermitent Torque  | Nm                | 0.216                     | 0.216    | 0.432                    | 0.432    | 0.645                   | 0.645    |
| Max. Intermitent Current | A rms             | 5.01                      | 2.43     | 9.84                     | 4.89     | 14.76                   | 7.2      |
| Voltage Constant         | Vrms / K RPM      | 2.95                      | 6.13     | 3                        | 6        | 3                       | 6.1      |
| Torque Constant          | Nm / A rms        | 0.043                     | 0.089    | 0.044                    | 0.088    | 0.044                   | 0.089    |
| Winding Line Resistance  | Ohms              | 1.34                      | 5.92     | 0.68                     | 2.62     | 0.4                     | 1.47     |
| Winding Line Inductance  | mH                | 1.15                      | 5.00     | 0.60                     | 2.50     | 0.37                    | 1.57     |
| Max. Mechanical Speed    | RPM               | 5000                      |          | 5000                     |          | 5000                    |          |
| Moment of Inertia        | kg m <sup>2</sup> | 0.0388 x 10 <sup>-4</sup> |          | 0.072 x 10 <sup>-4</sup> |          | 0.114 x10 <sup>-4</sup> |          |
| Phases                   |                   | 3                         |          | 3                        |          | 3                       |          |
| Pole-Pairs               |                   | 3                         |          | 3                        |          | 3                       |          |

## Mechanical Dimension

Unit: mm



Torque - Speed Features

Introduction of BLDC Motors

42 BLDC Motors

57 BLDC Motors

70 BLDC Motors

80 BLDC Motors

Round BLDC Motors

R16 BLDC Motors

R22 BLDC Motors

R30 BLDC Motors

R36 BLDC Motors

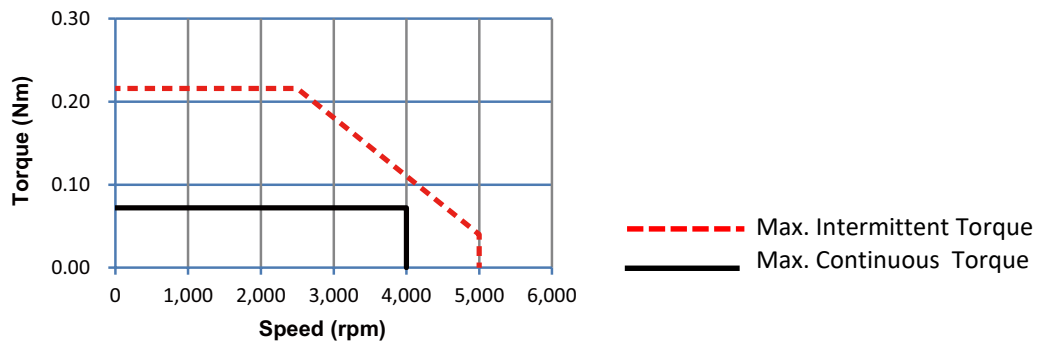
R42 BLDC Motors

R57 BLDC Motors

R63 BLDC Motors

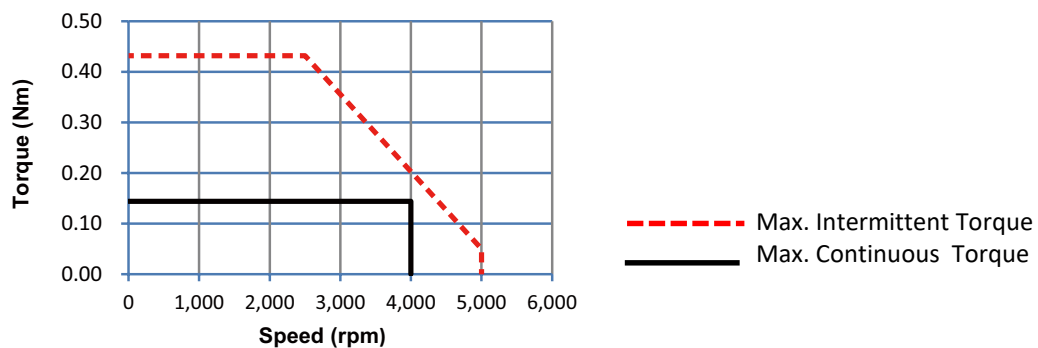
42BL30L2 (30W,24V)

42BL30L4 (30W,48V)



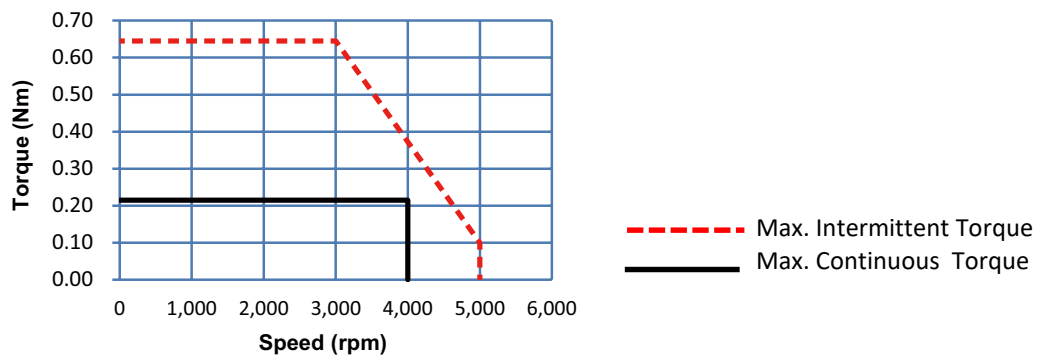
42BL60L2 (60W,24V)

42BL60L4 (60W,48V)



42BL90L2 (90W,24V)

42BL90L4 (90W,48V)



## 57BLDC Motor Series: 57mm, 30-180 Watts



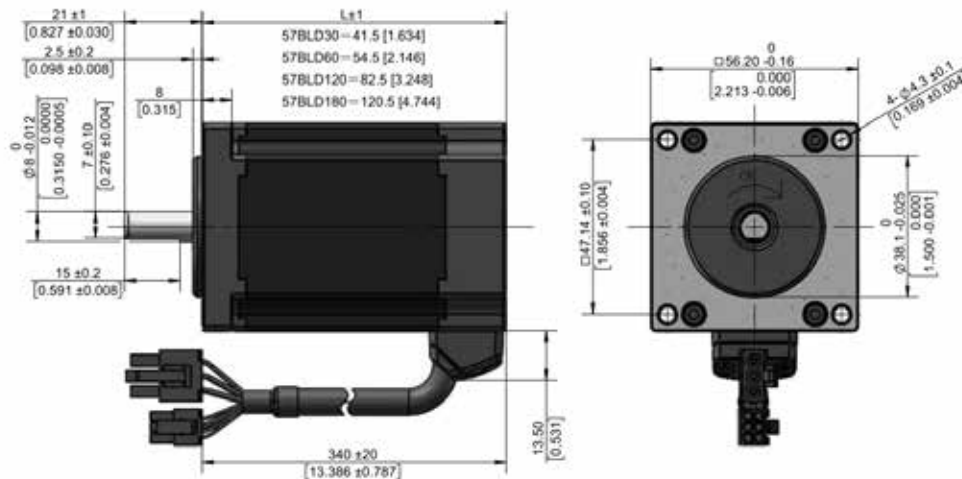
- Commutation Signals
  - Insulation Class
  - Protective Rating
  - Operating Temperature
  - Storage Temperature
  - Operating RH
  - Operating Environment
  - Altitude
- Hall Sensor  
B (130°C)  
IP40  
0 ~ +50°C  
-25 ~ +70°C  
85%RH or Below (non-condensing)  
Indoor, no corrosive gas, no flammable gas, no oil mist, no dust  
1000m max

### Technical Specification

| Series                   |                   | 57BL30                   |          | 57BL60                   |          | 57BL120                  |           | 57BL180                  |           |
|--------------------------|-------------------|--------------------------|----------|--------------------------|----------|--------------------------|-----------|--------------------------|-----------|
| Length                   | mm                | 41.5                     |          | 54.5                     |          | 82.5                     |           | 120.5                    |           |
| Model Number             |                   | 57BL30L2                 | 57BL30L4 | 57BL60L2                 | 57BL60L4 | 57BL120L2                | 57BL120L4 | 57BL180L2                | 57BL180L4 |
| DC Supply Voltage        | V dc              | 24                       | 48       | 24                       | 48       | 24                       | 48        | 24                       | 48        |
| Rated Output Power       | Watts             | 30                       | 30       | 60                       | 60       | 120                      | 120       | 180                      | 180       |
| Rated Speed              | RPM               | 4000                     | 4000     | 4000                     | 4000     | 4000                     | 4000      | 4000                     | 4000      |
| Rated Torque             | Nm                | 0.072                    | 0.072    | 0.145                    | 0.145    | 0.29                     | 0.29      | 0.43                     | 0.43      |
| Rated Current            | A rms             | 1.71                     | 0.86     | 3.20                     | 1.60     | 6.90                     | 3.00      | 10.50                    | 4.50      |
| Max. Intermitent Torque  | Nm                | 0.216                    | 0.216    | 0.435                    | 0.435    | 0.87                     | 0.87      | 1.29                     | 1.29      |
| Max. Intermitent Current | A rms             | 5.13                     | 2.58     | 9.60                     | 4.80     | 20.70                    | 9.00      | 31.50                    | 13.50     |
| Voltage Constant         | Vrms / K RPM      | 3.00                     | 6.45     | 3.08                     | 6.35     | 3.00                     | 6.40      | 3.00                     | 6.45      |
| Torque Constant          | Nm / A rms        | 0.042                    | 0.084    | 0.045                    | 0.090    | 0.042                    | 0.097     | 0.041                    | 0.096     |
| Winding Line Resistance  | Ohms              | 0.71                     | 3.25     | 0.48                     | 1.80     | 0.18                     | 0.76      | 0.11                     | 0.44      |
| Winding Line Inductance  | mH                | 0.71                     | 3.25     | 0.45                     | 1.90     | 0.18                     | 0.84      | 0.11                     | 0.54      |
| Max. Mechanical Speed    | RPM               | 500                      |          | 500                      |          | 500                      |           | 500                      |           |
| Moment of Inertia        | kg m <sup>2</sup> | 0.087 x 10 <sup>-4</sup> |          | 0.148 x 10 <sup>-4</sup> |          | 0.279 x 10 <sup>-4</sup> |           | 0.456 x 10 <sup>-4</sup> |           |
| Phases                   |                   | 3                        |          | 3                        |          | 3                        |           | 3                        |           |
| Pole-Pairs               |                   | 4                        |          | 4                        |          | 4                        |           | 4                        |           |

### Mechanical Dimension

Unit: mm



Torque - Speed Features

Introduction of  
BLDC Motors

42  
BLDC Motors

57  
BLDC Motors

70  
BLDC Motors

80  
BLDC Motors

Round  
BLDC Motors

R16  
BLDC Motors

R22  
BLDC Motors

R30  
BLDC Motors

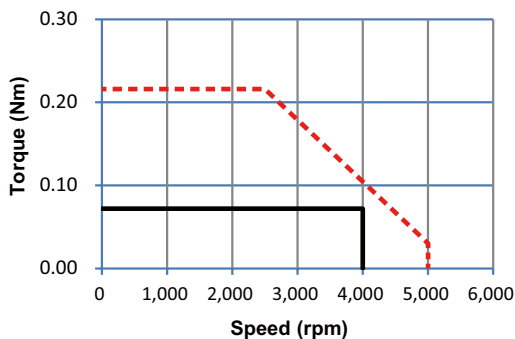
R36  
BLDC Motors

R42  
BLDC Motors

R57  
BLDC Motors

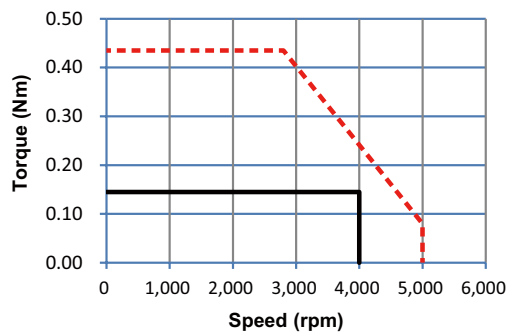
R63  
BLDC Motors

57BL30L2 (30W,24V)  
57BL30L4 (30W,48V)



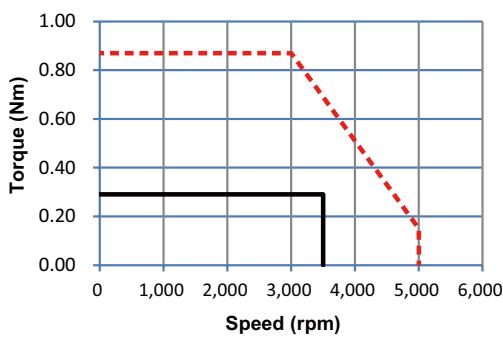
--- Max. Intermittent Torque  
— Max. Continuous Torque

57BL60L2 (60W,24V)  
57BL60L4 (60W,48V)



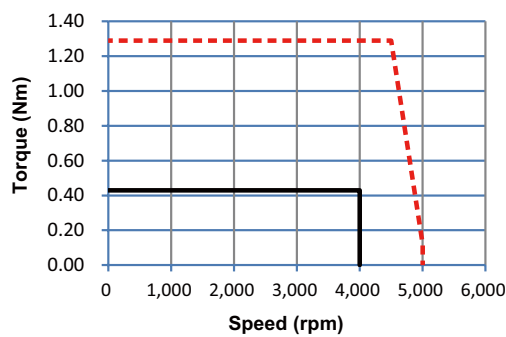
--- Max. Intermittent Torque  
— Max. Continuous Torque

57BL120L4 (120W,48V)



--- Max. Intermittent Torque  
— Max. Continuous Torque

57BL180L4 (180W,48V)

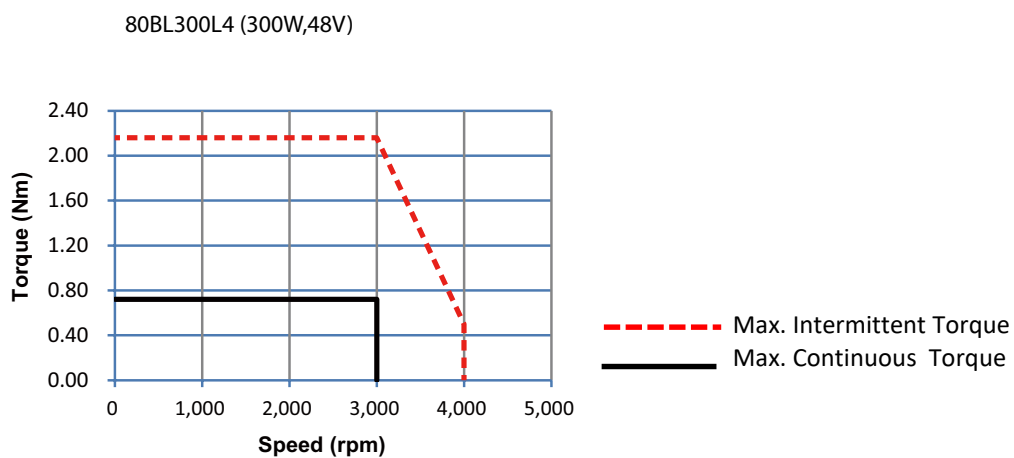
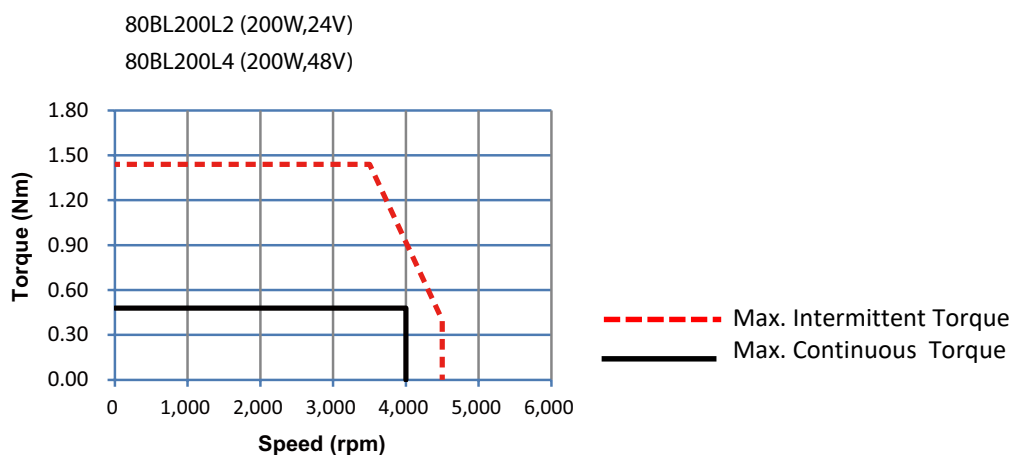
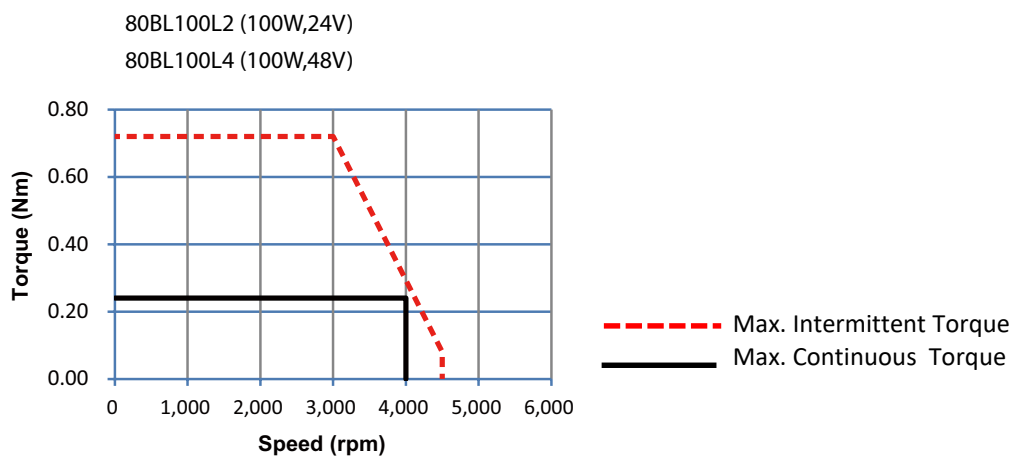


--- Max. Intermittent Torque  
— Max. Continuous Torque



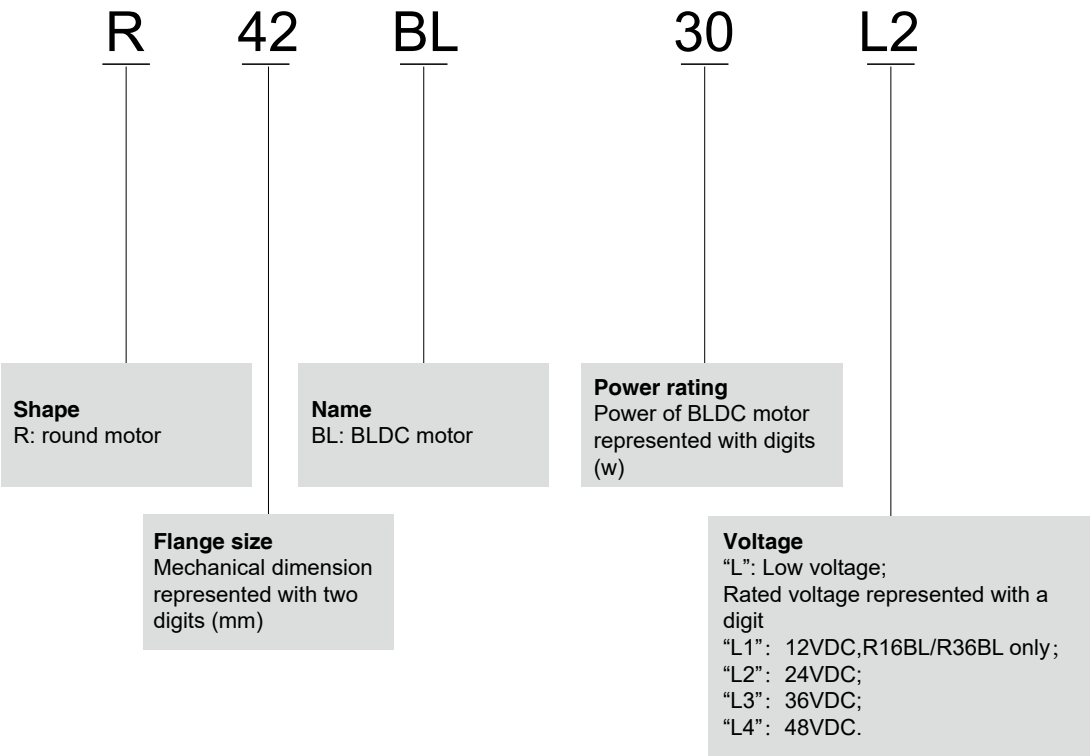


## Torque - Speed Features

Introduction of  
BLDC Motors□ 42  
BLDC Motors□ 57  
BLDC Motors□ 70  
BLDC Motors□ 80  
BLDC MotorsRound  
BLDC MotorsR16  
BLDC MotorsR22  
BLDC MotorsR30  
BLDC MotorsR36  
BLDC MotorsR42  
BLDC MotorsR57  
BLDC MotorsR63  
BLDC Motors

# Round BLDC Motors

## Model Numbering System



# R16BLDC Motor Series: 16mm, 3 Watts

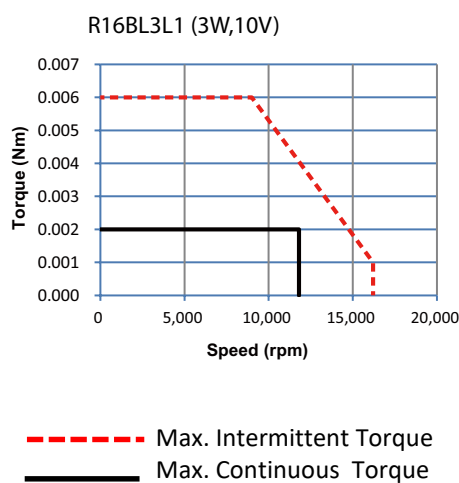


- Commutation Signals
  - Insulation Class
  - Protective Rating
  - Operating Temperature
  - Storage Temperature
  - Operating RH
  - Operating Environment
  - Altitude
- Hall Sensor  
B (130°C)  
IP40  
0 ~ +50°C  
-25 ~ +70°C  
85%RH or Below (non-condensing)  
Indoor, no corrosive gas, no flammable gas, no oil mist, no dust  
1000m max

## Technical Specification

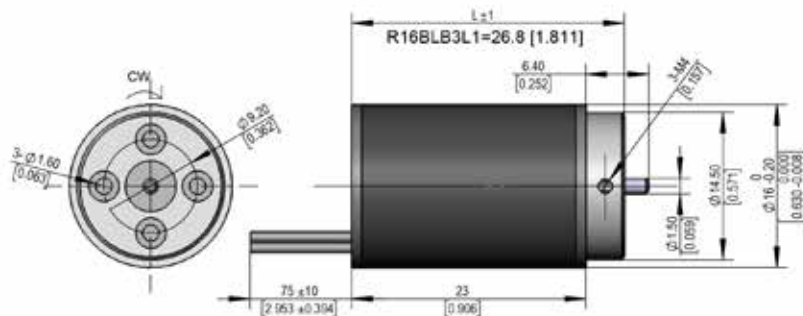
| Series                   |                   | R16BL3                |
|--------------------------|-------------------|-----------------------|
| Length                   | mm                | 26.8                  |
| Model Number             |                   | R16BL3L1              |
| DC Supply Voltage        | V dc              | 10                    |
| Rated Output Power       | Watts             | 3                     |
| Rated Speed              | RPM               | 11800                 |
| Rated Torque             | Nm                | 0.002                 |
| Rated Current            | A rms             | 0.42                  |
| Max. Intermitent Torque  | Nm                | 0.006                 |
| Max. Intermitent Current | A rms             | 2.1                   |
| Voltage Constant         | Vrms / K RPM      | 0.45                  |
| Torque Constant          | Nm / A rms        | $5.04 \times 10^{-3}$ |
| Winding Line Resistance  | Ohms              | 2.2                   |
| Winding Line Inductance  | mH                | 0.3                   |
| Max. Mechanical Speed    | RPM               | 16200                 |
| Moment of Inertia        | kg m <sup>2</sup> | $2.86 \times 10^{-7}$ |
| Phases                   |                   | 3                     |
| Pole-Pairs               |                   | 2                     |

## Torque - Speed Features



## Mechanical Dimension

Unit: mm



Introduction of  
BLDC Motors

□ 42  
BLDC Motors

□ 57  
BLDC Motors

□ 70  
BLDC Motors

□ 80  
BLDC Motors

Round  
BLDC Motors

R16  
BLDC Motors

R22  
BLDC Motors

R30  
BLDC Motors

R36  
BLDC Motors

R42  
BLDC Motors

R57  
BLDC Motors

R63  
BLDC Motors

# 22BLDC Motor Series: 22mm, 7-8.5 Watts



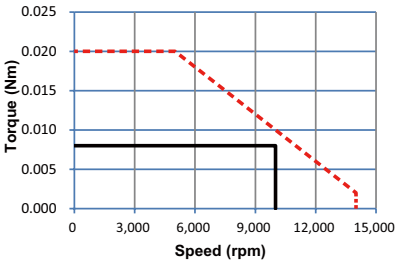
- Commutation Signals
  - Insulation Class
  - Protective Rating
  - Operating Temperature
  - Storage Temperature
  - Operating RH
  - Operating Environment
- Altitude
- Hall Sensor  
B (130°C )  
IP40  
0 ~ +50°C  
-25 ~ +70°C  
85%RH or Below (non-condensing)  
Indoor, no corrosive gas, no flammable gas, no oil mist, no dust  
1000m max

## Technical Specification

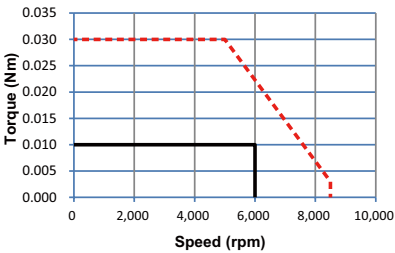
| Series                   |                   | R22BL9                  | R22BL7                  |
|--------------------------|-------------------|-------------------------|-------------------------|
| Length                   | mm                | 40                      | 50                      |
| Model Number             |                   | R22BL9L2                | R22BL7L2                |
| DC Supply Voltage        | V dc              | 24                      | 24                      |
| Rated Output Power       | Watts             | 8.5                     | 7                       |
| Rated Speed              | RPM               | 10000                   | 6000                    |
| Rated Torque             | Nm                | 0.008                   | 0.01                    |
| Rated Current            | A rms             | 0.72                    | 0.54                    |
| Max. Intermitent Torque  | Nm                | 0.02                    | 0.03                    |
| Max. Intermitent Current | A rms             | 1.6                     | 1.3                     |
| Voltage Constant         | Vrms / K RPM      | 1.16                    | 2.01                    |
| Torque Constant          | Nm / A rms        | 0.011                   | 0.019                   |
| Winding Line Resistance  | Ohms              | 9.7                     | 13                      |
| Winding Line Inductance  | mH                | 1.67                    | 3.4                     |
| Max. Mechanical Speed    | RPM               | 14000                   | 8900                    |
| Moment of Inertia        | kg m <sup>2</sup> | 1.53 x 10 <sup>-5</sup> | 1.02 x 10 <sup>-5</sup> |
| Phases                   |                   | 3                       | 3                       |
| Pole-Pairs               |                   | 2                       | 2                       |

## Torque - Speed Features

R22BL9L2 (8.5W, 24V)



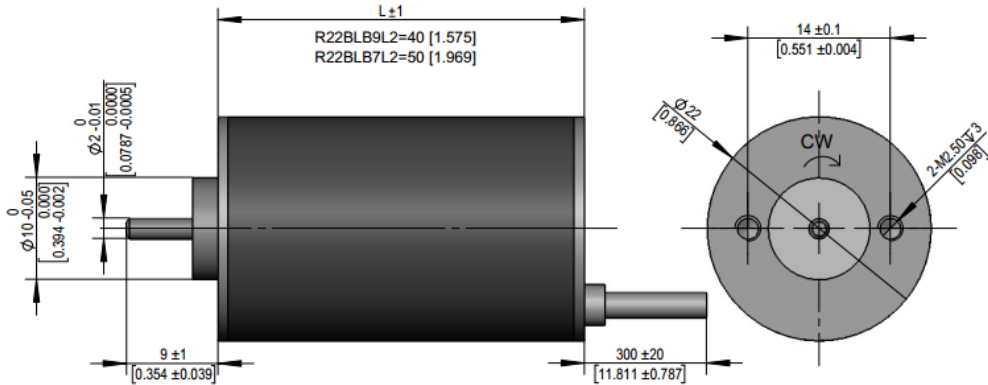
R22BL7L2 (7W, 24V)



---- Max. Intermitent Torque  
——— Max. Continuous Torque

## Mechanical Dimension

Unit: mm



# R30BLDC Motor Series: 30mm, 4-6 Watts



- Commutation Signals
- Insulation Class
- Protective Rating
- Operating Temperature
- Storage Temperature
- Operating RH
- Operating Environment
- Altitude

Hall Sensor

B (130°C )

IP40

0 ~ +50°C

-25 ~ +70°C

85%RH or Below (non-condensing)

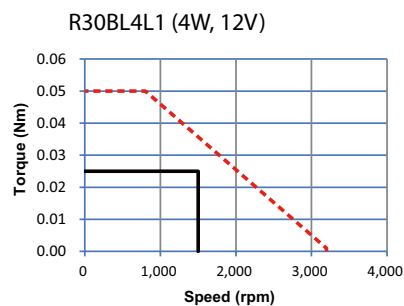
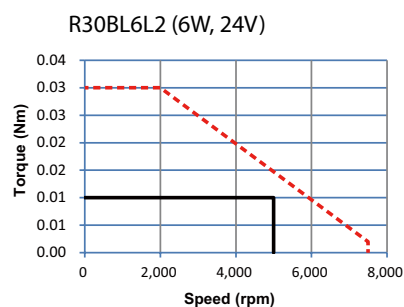
Indoor, no corrosive gas, no flammable gas, no oil mist, no dust

1000m max

## Technical Specification

| Series                   |                   | R30BL6                  | R30BL4                  |
|--------------------------|-------------------|-------------------------|-------------------------|
| Length                   | mm                | 41                      | 56                      |
| Model Number             |                   | R30BL6L2                | R30BL4L1                |
| DC Supply Voltage        | V dc              | 24                      | 12                      |
| Rated Output Power       | Watts             | 6                       | 4                       |
| Rated Speed              | RPM               | 5000                    | 1500                    |
| Rated Torque             | Nm                | 0.01                    | 0.025                   |
| Rated Current            | A rms             | 0.5                     | 0.7                     |
| Max. Intermitent Torque  | Nm                | 0.03                    | 0.05                    |
| Max. Intermitent Current | A rms             | 1.6                     | 1.5                     |
| Voltage Constant         | Vrms / K RPM      | 1.56                    | 2.4                     |
| Torque Constant          | Nm / A rms        | 0.020                   | 0.036                   |
| Winding Line Resistance  | Ohms              | 11.2                    | 6                       |
| Winding Line Inductance  | mH                | 8.7                     | 6.7                     |
| Max. Mechanical Speed    | RPM               | 7700                    | 3200                    |
| Moment of Inertia        | kg m <sup>2</sup> | 2.04 x 10 <sup>-6</sup> | 3.06 x 10 <sup>-6</sup> |
| Phases                   |                   | 3                       | 3                       |
| Pole-Pairs               |                   | 2                       | 2                       |

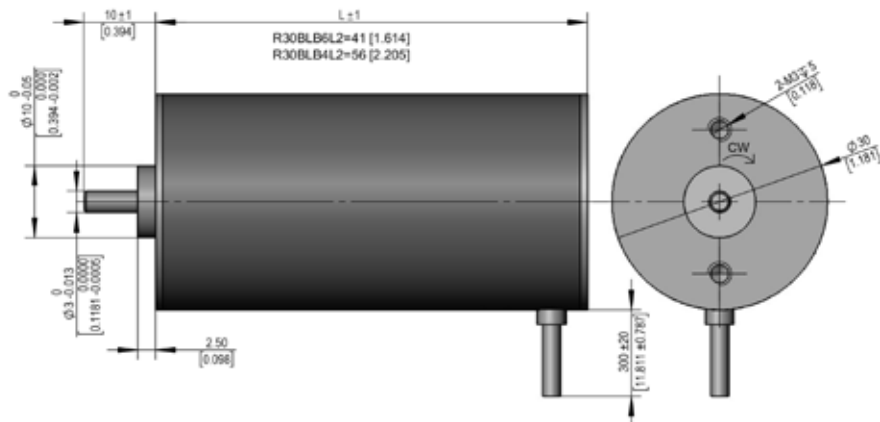
## Torque - Speed Features



--- Max. Intermitent Torque  
 — Max. Continuous Torque

## Mechanical Dimension

Unit: mm



R36BLDC Motor Series: 36mm, 4-20 Watts

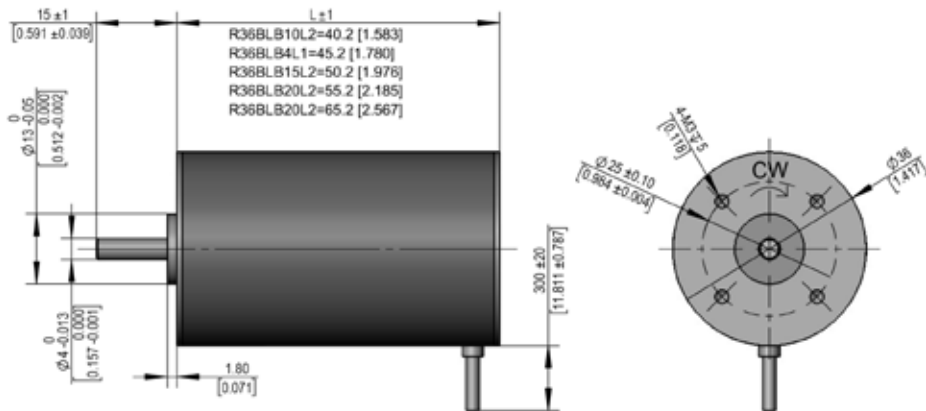


- Commutation Signals
  - Insulation Class
  - Protective Rating
  - Operating Temperature
  - Storage Temperature
  - Operating RH
  - Operating Environment
  - Altitude
- Hall Sensor  
B (130°C )  
IP40  
0 ~ +50°C  
-25 ~ +70°C  
85%RH or Below (non-condensing)  
Indoor, no corrosive gas, no flammable gas, no oil mist, no dust  
1000m max

Technical Specification

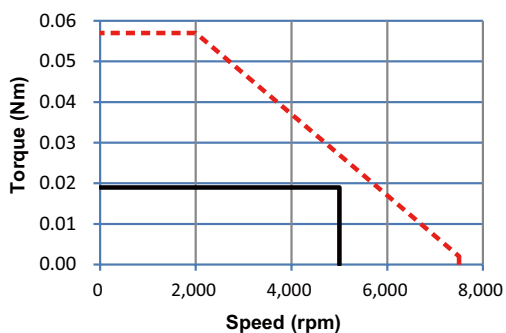
| Series                   |                   | R36BL10                 | R36BL4                  | R36BL15                 | R36BL20                 | R36BL20-1               |
|--------------------------|-------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Length                   | mm                | 40.2                    | 45.2                    | 50.2                    | 55.2                    | 65.2                    |
| Model Number             |                   | R36BL10L2               | R36BL4L1                | R36BL15L2               | R36BL20L2               | R36BL20L2-1             |
| DC Supply Voltage        | V dc              | 24                      | 12                      | 24                      | 24                      | 24                      |
| Rated Output Power       | Watts             | 10                      | 4                       | 15                      | 20                      | 20                      |
| Rated Speed              | RPM               | 5000                    | 1800                    | 5000                    | 4000                    | 3000                    |
| Rated Torque             | Nm                | 0.019                   | 0.021                   | 0.029                   | 0.048                   | 0.064                   |
| Rated Current            | A rms             | 0.75                    | 0.75                    | 0.98                    | 1.3                     | 1.09                    |
| Max. Intermitent Torque  | Nm                | 0.057                   | 0.050                   | 0.086                   | 0.140                   | 0.191                   |
| Max. Intermitent Current | A rms             | 2.25                    | 2.25                    | 2.94                    | 3.9                     | 3.27                    |
| Voltage Constant         | Vrms / K RPM      | 2.1                     | 2.55                    | 2.76                    | 2.51                    | 4.17                    |
| Torque Constant          | Nm / A rms        | 0.025                   | 0.028                   | 0.029                   | 0.037                   | 0.058                   |
| Winding Line Resistance  | Ohms              | 5.8                     | 5.5                     | 3.6                     | 2.85                    | 3.3                     |
| Winding Line Inductance  | mH                | 8.3                     | 7.8                     | 5.81                    | 5.2                     | 7.1                     |
| Max. Mechanical Speed    | RPM               | 7500                    | 3000                    | 7400                    | 5800                    | 4200                    |
| Moment of Inertia        | kg m <sup>2</sup> | 3.148x 10 <sup>-6</sup> | 4.197x 10 <sup>-6</sup> | 5.248x 10 <sup>-6</sup> | 6.296x 10 <sup>-6</sup> | 8.395x 10 <sup>-6</sup> |
| Phases                   |                   | 3                       | 3                       | 3                       | 3                       | 3                       |
| Pole-Pairs               |                   | 2                       | 2                       | 2                       | 2                       | 2                       |

Mechanical Dimension Unit: mm



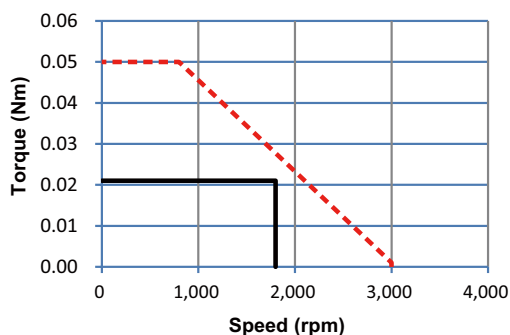
## Torque - Speed Features

R36BL10L2 (10W, 24V)



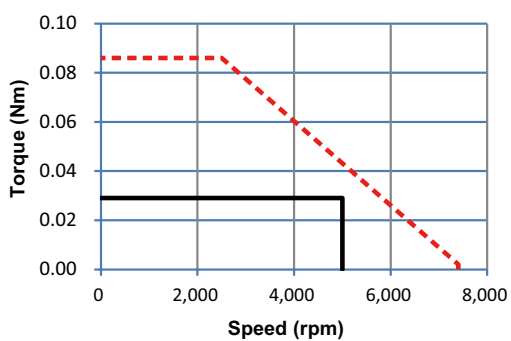
--- Max. Intermittent Torque  
 — Max. Continuous Torque

R36BL4L1 (4W, 12V)



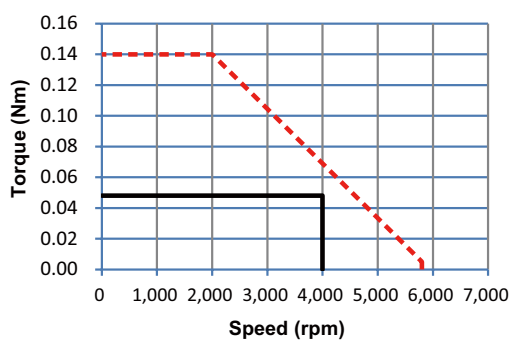
--- Max. Intermittent Torque  
 — Max. Continuous Torque

R36BL15L2 (15W, 24V)



--- Max. Intermittent Torque  
 — Max. Continuous Torque

R36BL20L2 (20W, 24V)



--- Max. Intermittent Torque  
 — Max. Continuous Torque

Introduction of  
BLDC Motors42  
BLDC Motors57  
BLDC Motors70  
BLDC Motors80  
BLDC MotorsRound  
BLDC MotorsR16  
BLDC MotorsR22  
BLDC MotorsR30  
BLDC MotorsR36  
BLDC MotorsR42  
BLDC MotorsR57  
BLDC MotorsR63  
BLDC Motors

# R42BLDC Motor Series: 42mm, 10-75 Watts



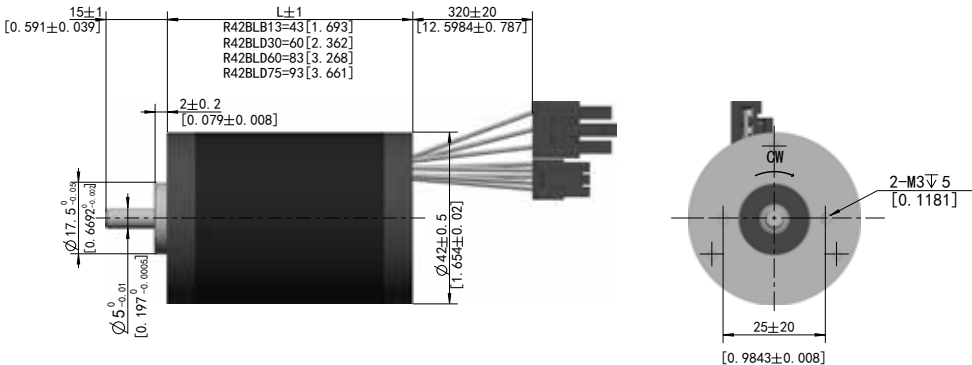
- Commutation Signals
  - Insulation Class
  - Protective Rating
  - Operating Temperature
  - Storage Temperature
  - Operating RH
  - Operating Environment
  - Altitude
- Hall Sensor  
B (130°C )  
IP40  
0 ~ +50°C  
-25 ~ +70°C  
85%RH or Below (non-condensing)  
Indoor, no corrosive gas, no flammable gas, no oil mist, no dust  
1000m max

## Technical Specification

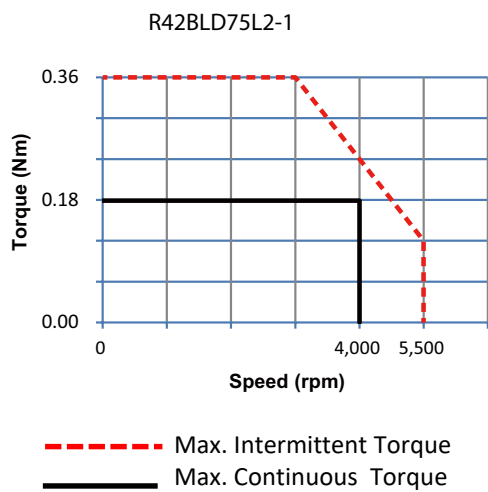
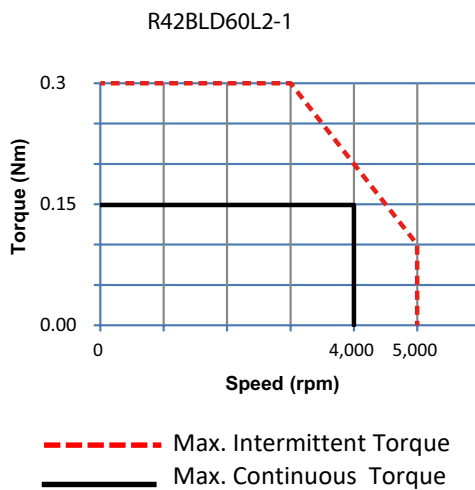
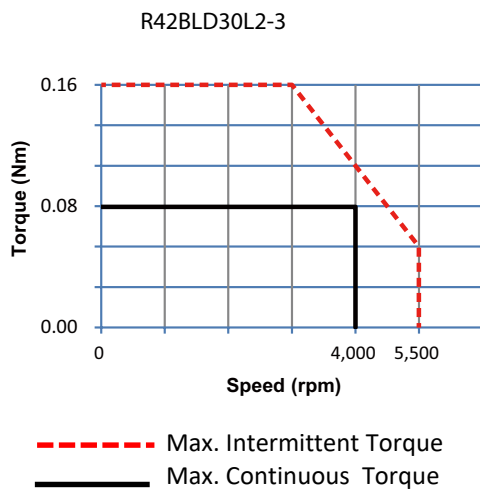
| Series                   |                   | R42BLD30L2-3 | R42BLD60L2-1 | R42BLD75L2-1 |
|--------------------------|-------------------|--------------|--------------|--------------|
| Length                   | mm                | 60           | 83           | 93           |
| Model Number             |                   | R42BLD30L2-3 | R42BLD60L2-1 | R42BLD75L2-1 |
| DC Supply Voltage        | V dc              | 24           | 24           | 24           |
| Rated Output Power       | Watts             | 30           | 60           | 75           |
| Rated Speed              | RPM               | 4000         | 4000         | 4000         |
| Rated Torque             | Nm                | 0.08         | 0.15         | 0.18         |
| Rated Current            | A rms             | 1.85         | 3.40         | 4.20         |
| Max. Intermitent Torque  | Nm                | 0.16         | 0.30         | 0.36         |
| Max. Intermitent Current | A rms             | 3.70         | 6.80         | 8.40         |
| Voltage Constant         | Vrms / K RPM      | 3.03         | 3.10         | 2.95         |
| Torque Constant          | Nm / A rms        | 0.043        | 0.044        | 0.043        |
| Winding Line Resistance  | Ohms              | 0.98         | 0.46         | 0.42         |
| Winding Line Inductance  | mH                | 1.73         | 0.74         | 0.80         |
| Max. Mechanical Speed    | RPM               | 5500         | 5000         | 5500         |
| Moment of Inertia        | kg m <sup>2</sup> | 4.017        | 6.015        | 6.036        |
| Phases                   |                   | 3            | 3            | 3            |
| Pole-Pairs               |                   | 8            | 8            | 8            |

## Mechanical Dimension

Unit: mm



## Torque - Speed Features

Introduction of  
BLDC Motors42  
BLDC Motors57  
BLDC Motors70  
BLDC Motors80  
BLDC MotorsRound  
BLDC MotorsR16  
BLDC MotorsR22  
BLDC MotorsR30  
BLDC MotorsR36  
BLDC MotorsR42  
BLDC MotorsR57  
BLDC MotorsR63  
BLDC Motors

# R57BLDC Motor Series: 57mm, 50-180 Watts



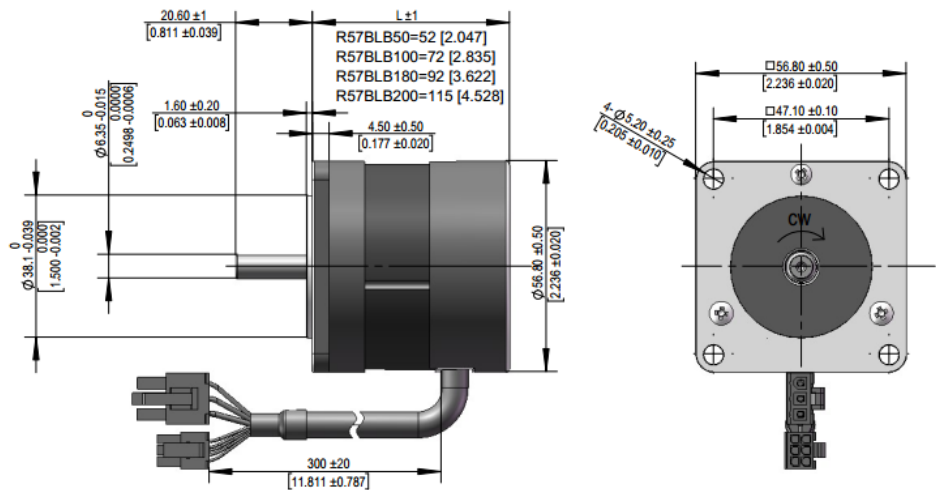
- Commutation Signals
  - Insulation Class
  - Protective Rating
  - Operating Temperature
  - Storage Temperature
  - Operating RH
  - Operating Environment
- Altitude
- Hall Sensor  
B (130°C )  
IP40  
0 ~ +50°C  
-25 ~ +70°C  
85%RH or Below (non-condensing)  
Indoor, no corrosive gas, no flammable gas, no oil mist, no dust  
1000m max

## Technical Specification

| Series                   |                   | R57BL50                 | R57BL100                | R57BL130                | R57BL180                |
|--------------------------|-------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Length                   | mm                | 52.9                    | 72.4                    | 92.9                    | 112.4                   |
| Model Number             |                   | R57BL50L2               | R57BL100L2              | R57BL130L3              | R57BL1800L3             |
| DC Supply Voltage        | V dc              | 24                      | 24                      | 36                      | 36                      |
| Rated Output Power       | Watts             | 51                      | 100                     | 135                     | 180                     |
| Rated Speed              | RPM               | 4000                    | 4000                    | 4000                    | 3175                    |
| Rated Torque             | Nm                | 0.13                    | 0.25                    | 0.33                    | 0.55                    |
| Rated Current            | A rms             | 3.00                    | 5.85                    | 5.4                     | 6.86                    |
| Max. Intermitent Torque  | Nm                | 0.39                    | 0.75                    | 16.20                   | 1.65                    |
| Max. Intermitent Current | A rms             | 9.00                    | 17.55                   | 16.2                    | 20.58                   |
| Voltage Constant         | Vrms / K RPM      | 5.0                     | 5.1                     | 7.3                     | 8.3                     |
| Torque Constant          | Nm / A rms        | 0.050                   | 0.047                   | 0.062                   | 0.100                   |
| Winding Line Resistance  | Ohms              | 0.92                    | 0.32                    | 0.53                    | 0.49                    |
| Winding Line Inductance  | mH                | 1.84                    | 0.68                    | 1.29                    | 1.19                    |
| Max. Mechanical Speed    | RPM               | 5000                    | 5000                    | 5000                    | 5000                    |
| Moment of Inertia        | kg m <sup>2</sup> | 0.067x 10 <sup>-4</sup> | 0.122x 10 <sup>-4</sup> | 0.172x 10 <sup>-4</sup> | 0.234x 10 <sup>-4</sup> |
| Phases                   |                   | 3                       | 3                       | 3                       | 3                       |
| Pole-Pairs               |                   | 2                       | 2                       | 2                       | 2                       |

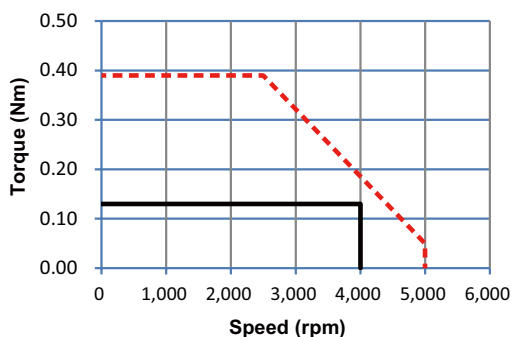
## Mechanical Dimension

Unit: mm



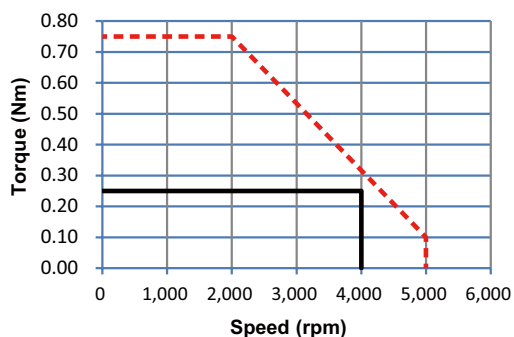
## Torque - Speed Features

R57BL50L2 (50W, 24V)



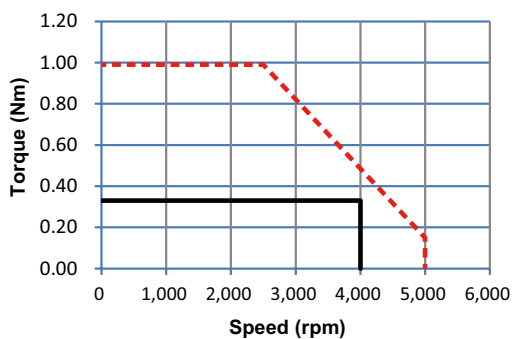
--- Max. Intermittent Torque  
 — Max. Continuous Torque

R57BL100L2 (100W, 24V)



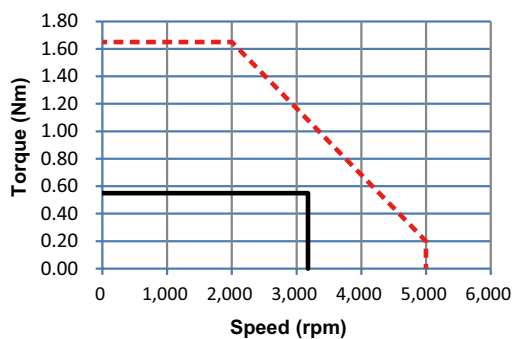
--- Max. Intermittent Torque  
 — Max. Continuous Torque

R57BL130L3 (130W, 36V)



--- Max. Intermittent Torque  
 — Max. Continuous Torque

R57BL180L3 (180W, 36V)



--- Max. Intermittent Torque  
 — Max. Continuous Torque

Introduction of  
BLDC Motors42  
BLDC Motors57  
BLDC Motors70  
BLDC Motors80  
BLDC MotorsRound  
BLDC MotorsR16  
BLDC MotorsR22  
BLDC MotorsR30  
BLDC MotorsR36  
BLDC MotorsR42  
BLDC MotorsR57  
BLDC MotorsR63  
BLDC Motors

# R63BLDC Motor Series: 63mm, 30-60 Watts

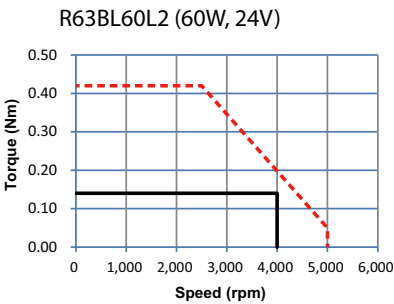
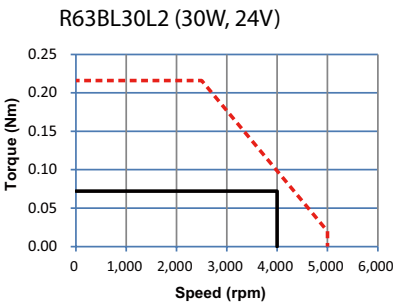


- Commutation Signals
  - Insulation Class
  - Protective Rating
  - Operating Temperature
  - Storage Temperature
  - Operating RH
  - Operating Environment
- Altitude
- Hall Sensor  
B (130°C )  
IP40  
0 ~ +50°C  
-25 ~ +70°C  
85%RH or Below (non-condensing)  
Indoor, no corrosive gas, no flammable gas, no oil mist, no dust  
1000m max

## Technical Specification

| Series                   |                   | R63BL30                | R63BL60               |
|--------------------------|-------------------|------------------------|-----------------------|
| Length                   | mm                | 41.4                   | 50.4                  |
| Model Number             |                   | R63BL30L2              | R63BL60L2             |
| DC Supply Voltage        | V dc              | 24                     | 24                    |
| Rated Output Power       | Watts             | 30                     | 60                    |
| Rated Speed              | RPM               | 4000                   | 4000                  |
| Rated Torque             | Nm                | 0.072                  | 0.14                  |
| Rated Current            | A rms             | 1.8                    | 3                     |
| Max. Intermitent Torque  | Nm                | 0.216                  | 0.42                  |
| Max. Intermitent Current | A rms             | 5.4                    | 9                     |
| Voltage Constant         | Vrms / K RPM      | 3                      | 3.3                   |
| Torque Constant          | Nm / A rms        | 0.040                  | 0.047                 |
| Winding Line Resistance  | Ohms              | 1.15                   | 0.59                  |
| Winding Line Inductance  | mH                | 1.6                    | 0.8                   |
| Max. Mechanical Speed    | RPM               | 5000                   | 5000                  |
| Moment of Inertia        | kg m <sup>2</sup> | 0.08x 10 <sup>-4</sup> | 0.1x 10 <sup>-4</sup> |
| Phases                   |                   | 3                      | 3                     |
| Pole-Pairs               |                   | 2                      | 2                     |

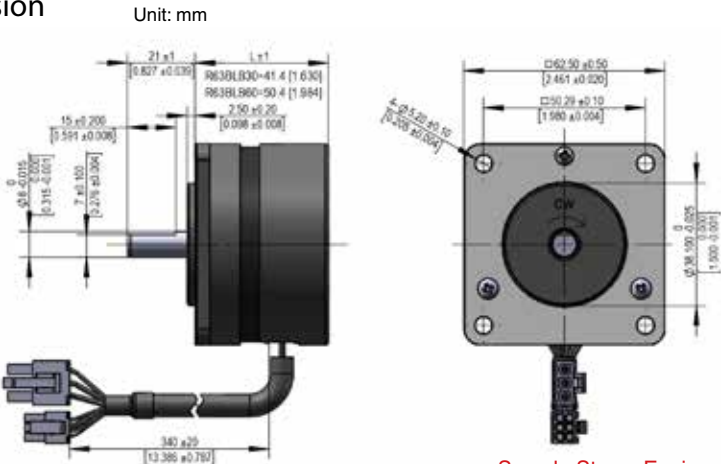
## Torque - Speed Features



----- Max. Intermitent Torque

————— Max. Continuous Torque

## Mechanical Dimension



Sample Stage, Engineering Sample Available.

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