



KOCO
Group

A VARIETY OF APPLICATIONS



PRECISION DC CORELESS MOTOR

1



BRUSHLESS DC MOTOR

2



ELECTRONIC SPEED CONTROLLER

3



PRECISION GEARMOTOR

4



PRECISION SERVO MOTOR

5



DC CORELESS MOTOR

6



FLAT DC MOTOR

7



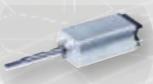
DC CORE MOTOR

8



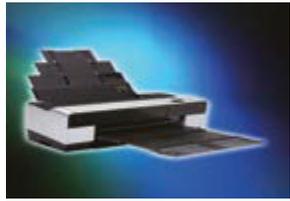
MINI STEP MOTOR

9



SONIC MOTOR

10





Overview of the DC CORE MOTORS

	Motor No.	Dia x Length (max)	Max. Power	Page
1	C1012F43	10.00 x 12.60 mm	0.84 W	4
2	C1015F13	10.00 x 15.00 mm	0.32 W	5
3	C1212F13	12.00 x 12.20 mm	0.45 W	6
4	C1215F13	12.00 x 15.10 mm	1.18 W	7
5	C1220F35	12.00 x 20.60 mm	0.94 W	8
6	C1627F34H	15.50 x 26.40 mm	0.85 W	9
7	C1718R14	17.00 x 17.80 mm	1.01 W	10
8	C1723R14	17.00 x 22.80 mm	1.48 W	11
9	C2430R23	24.40 x 30.80 mm	0.43 W	12
10	C2032F41	20.30 x 32.00 mm	2.10 W	13
11	C2838R	27.50 x 37.65 mm	19.03 W	14

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Product Introduction



DC CORE MOTOR

As the name implies, this motor contains an iron core over which the winding is made. The product features stable and reliable performance. For heavy load applications requiring long operational life, a carbon brush structure is available. The drive motor series are widely used in applications of security equipment, small electronic products, remote control model aircraft, personal care products, and portable electric tools. The motor is also available in a vibration series which are widely used in communication devices and health care equipment.



Precious Metal Commutation · C1012F43

Motor Characteristics			-0045
1	Voltage	V	4.5
2	Terminal resistance	Ω	3.7
3	No-load speed	rpm	32000
4	No-load current	mA	80
5	Stall torque	mNm	1.00
6	Stall current	mA	960
7	Load torque	mNm	0.29
8	Load speed	rpm	23000
9	Load current	mA	330
10	Max. output power	W	0.84
11	Max. efficiency	%	46.8
12	Back-EMF constant	mV/rpm	0.13
13	Torque constant	mNm/A	1.14
14	Speed/torque gradient	rpm/mNm	32000
15	Varistor	Yes/No	Yes
16	Weight	g	3.15
17	Operating temperature range	°C	-20 ~ +80

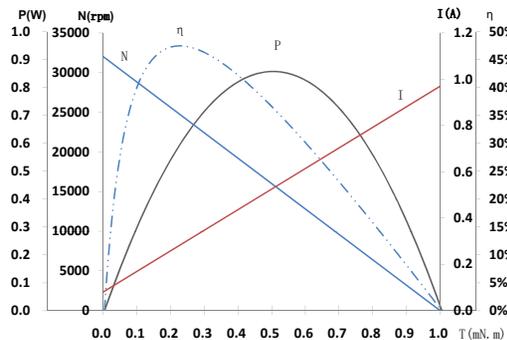
Applications

Security equipment,
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 remote control aerocrafts,
 personal caring products,
 portable tools, etc.

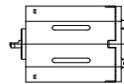
Options

- Lead wires length
- Shaft length
- Special coils
- Gearheads

Characteristics Curve Model C1012F43-0045

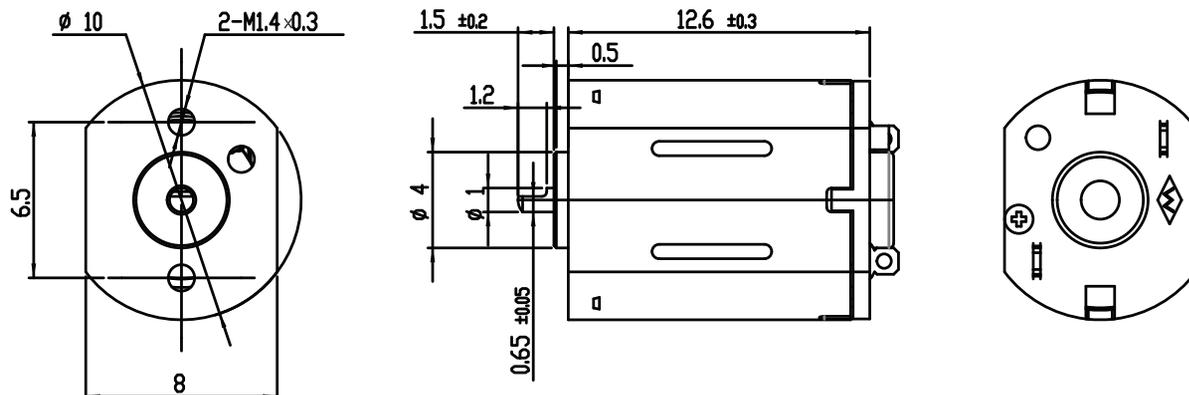


Approx. actual size



Dimension (mm) · C1012F43

ROTATION: CW



Precious Metal Commutation · C1015F13

Motor Characteristics			-0016
1	Voltage	V	1.5
2	Terminal resistance	Ω	0.9
3	No-load speed	rpm	17500
4	No-load current	mA	110
5	Stall torque	mNm	0.70
6	Stall current	mA	1688
7	Load torque	mNm	0.10
8	Load speed	rpm	15060
9	Load current	mA	330
10	Max. output power	W	0.32
11	Max. efficiency	%	32.3
12	Back-EMF constant	mV/rpm	0.08
13	Torque constant	mNm/A	0.45
14	Speed/torque gradient	rpm/mNm	24898
15	Varistor	Yes/No	Yes
16	Weight	g	3.9
17	Operating temperature range	°C	-20 ~ +80

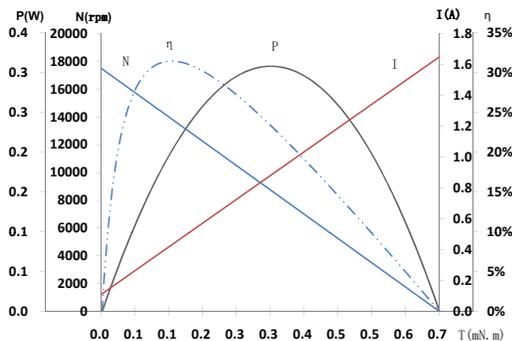
Applications

Security equipment,
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 remote control aerocrafts,
 personal caring products,
 portable tools, etc.

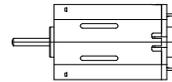
Options

- Lead wires length
- Shaft length
- Special coils
- Gearheads

Characteristics Curve C1015F13-0016

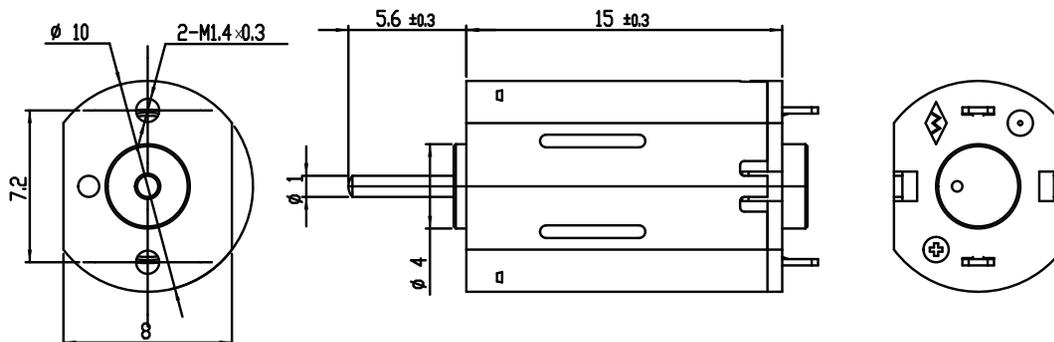


Approx. actual size



Dimension (mm) · C1015F13

ROTATION: CW



Precious Metal Commutation · C1212F13

Motor Characteristics			-0159
1	Voltage	V	4.2
2	Terminal resistance	Ω	7.8
3	No-load speed	rpm	20460
4	No-load current	mA	50
5	Stall torque	mNm	0.83
6	Stall current	mA	474
7	Load torque	mNm	0.10
8	Load speed	rpm	18050
9	Load current	mA	100
10	Max. output power	W	0.45
11	Max. efficiency	%	51.0
12	Back-EMF constant	mV/rpm	0.19
13	Torque constant	mNm/A	1.96
14	Speed/torque gradient	rpm/mNm	24592
15	Varistor	Yes/No	Yes
16	Weight	g	5.4
17	Operating temperature range	°C	-20 ~ +80

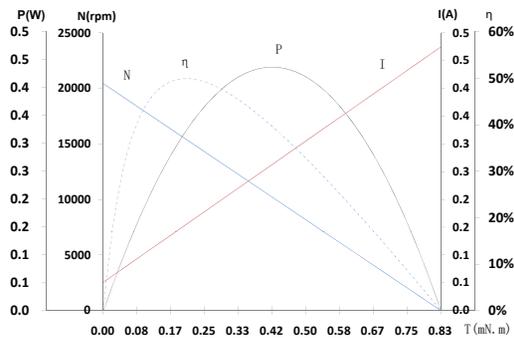
Applications

Security equipment,
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 remote control aerocrafts,
 personal caring products,
 portable tools, etc.

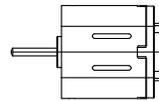
Options

- Lead wires length
- Shaft length
- Special coils
- Gearheads

Characteristics Curve C1015F13-0016

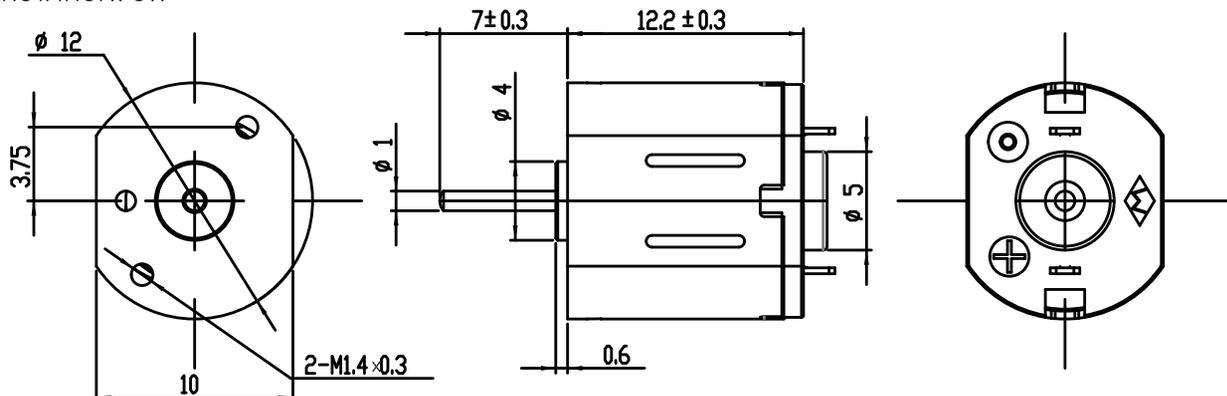


Approx. actual size



Dimension (mm) · C1212F13

ROTATION: CW



Precious Metal Commutation · C1215F13

Motor Characteristics			-0086
1	Voltage	V	3.5
2	Terminal resistance	Ω	1.7
3	No-load speed	rpm	25000
4	No-load current	mA	100
5	Stall torque	mNm	1.80
6	Stall current	mA	1506
7	Load torque	mNm	0.29
8	Load speed	rpm	20910
9	Load current	mA	330
10	Max. output power	W	1.18
11	Max. efficiency	%	56.5
12	Back-EMF constant	mV/rpm	0.13
13	Torque constant	mNm/A	1.28
14	Speed/torque gradient	rpm/mNm	13912
15	Varistor	Yes/No	Yes
16	Weight	g	5.4
17	Operating temperature range	°C	-20 ~ +80

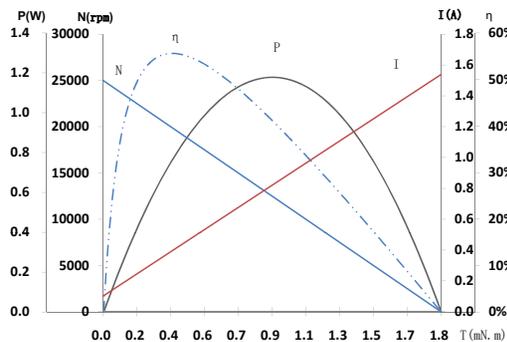
Applications

Security equipment,
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 remote control aerocrafts,
 personal caring products,
 portable tools, etc.

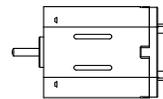
Options

- Lead wires length
- Shaft length
- Special coils
- Gearheads

Characteristics Curve C1215F13-0086

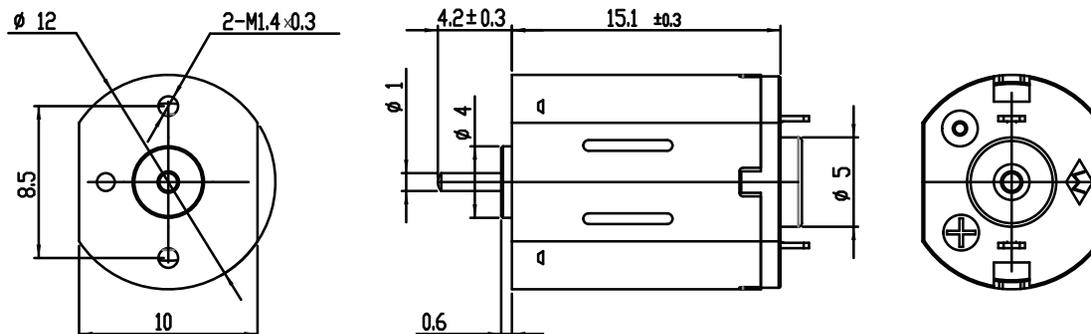


Approx. actual size



Dimension (mm) · C1215F13

ROTATION: CW



Precious Metal Commutation · C1220F35

Motor Characteristics			-0083
1	Voltage	V	6
2	Terminal resistance	Ω	7.4
3	No-load speed	rpm	13800
4	No-load current	mA	50
5	Stall torque	mNm	2.60
6	Stall current	mA	846
7	Load torque	mNm	0.29
8	Load speed	rpm	12240
9	Load current	mA	140
10	Max. output power	W	0.94
11	Max. efficiency	%	48.0
12	Back-EMF constant	mV/rpm	0.41
13	Torque constant	mNm/A	3.27
14	Speed/torque gradient	rpm/mNm	5306
15	Varistor	Yes/No	Yes
16	Weight	g	7.9
17	Operating temperature range	°C	-20 ~ +80

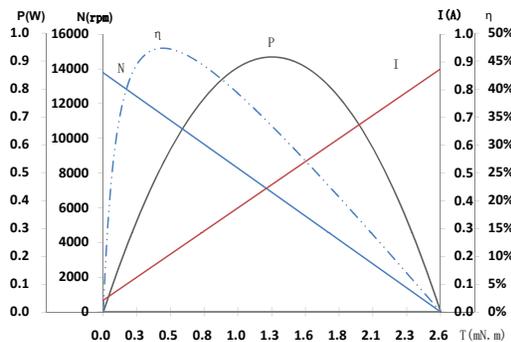
Applications

Security equipment,
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 remote control aerocrafts,
 personal caring products,
 portable tools, etc.

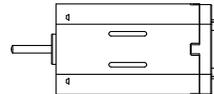
Options

- Lead wires length
- Shaft length
- Special coils
- Gearheads

Characteristics Curve C1220F35-0083

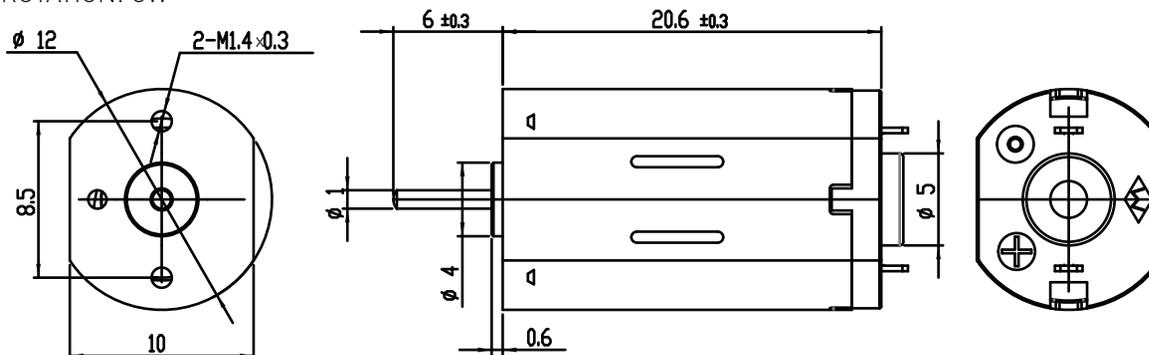


Approx. actual size



Dimension (mm) · C1220F35

ROTATION: CW



Precious Metal Commutation · C1627F34H

Motor Characteristics			-0055
1	Voltage	V	6
2	Terminal resistance	Ω	8.8
3	No-load speed	rpm	8600
4	No-load current	mA	55
5	Stall torque	mNm	3.75
6	Stall current	mA	652
7	Load torque	mNm	0.79
8	Load speed	rpm	6800
9	Load current	mA	180
10	Max. output power	W	0.85
11	Max. efficiency	%	51.9
12	Back-EMF constant	mV/rpm	0.64
13	Torque constant	mNm/A	6.28
14	Speed/torque gradient	rpm/mNm	2293
15	Varistor	Yes/No	Yes
16	Weight	g	16.7
17	Operating temperature range	°C	-20 ~ +80

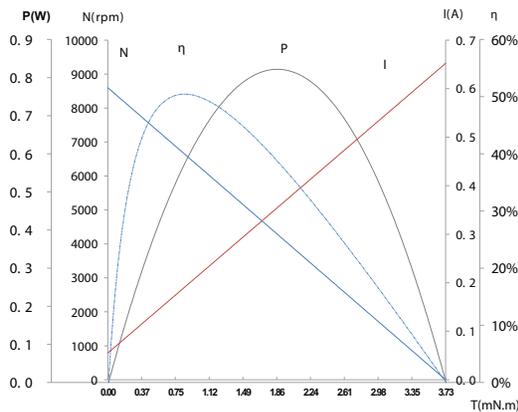
Applications

Security equipment,
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 remote control aircrafts,
 personal caring products,
 portable tools, etc.

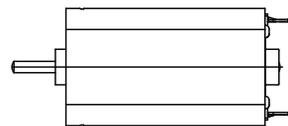
Options

- Lead wires length
- Shaft length
- Special coils
- Gearheads

Characteristics Curve C1627F34H-0055

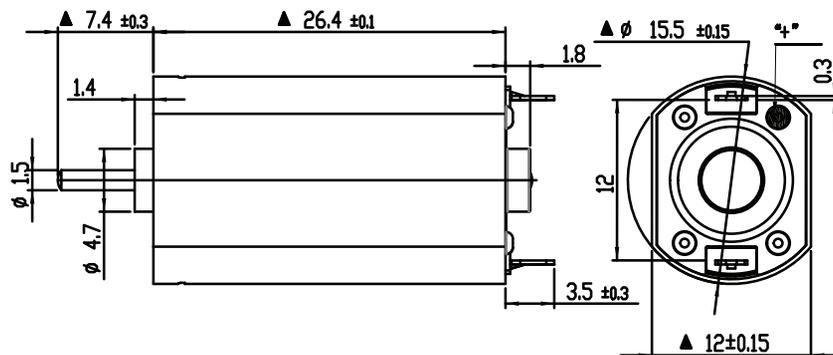
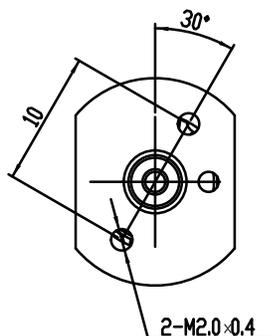


Approx. actual size



Dimension (mm) · C1627F34H

ROTATION: CW



Precious Metal Commutation · C1718R14

Motor Characteristics			-0020
1	Voltage	V	4.5
2	Terminal resistance	Ω	3.5
3	No-load speed	rpm	14000
4	No-load current	mA	65
5	Stall torque	mNm	2.74
6	Stall current	mA	1780
7	Load torque	mNm	0.39
8	Load speed	rpm	12000
9	Load current	mA	310
10	Max. output power	W	1.01
11	Max. efficiency	%	35.4
12	Back-EMF constant	mV/rpm	0.31
13	Torque constant	mNm/A	1.60
14	Speed/torque gradient	rpm/mNm	5102
15	Varistor	Yes/No	Yes
16	Weight	g	12.6
17	Operating temperature range	°C	-20 ~ +80

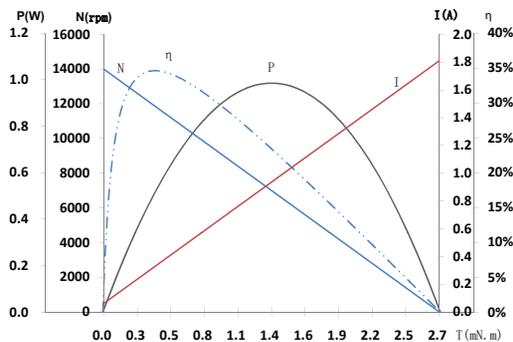
Applications

Security equipment,
 mini electronic products,
 remote control aerocrafts,
 personal caring products,
 portable tools, etc.

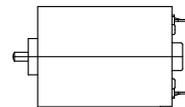
Options

- Lead wires length
- Shaft length
- Special coils
- Gearheads

Characteristics Curve C1718R14-0020

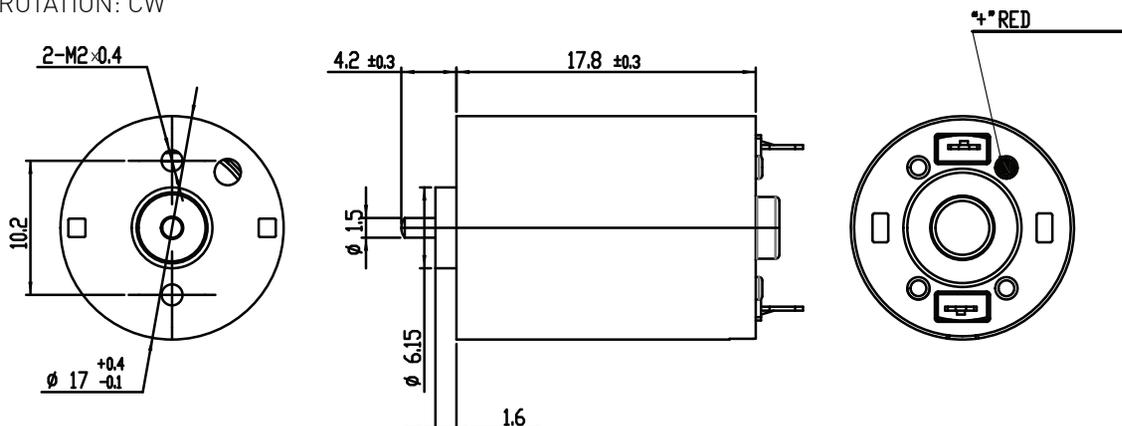


Approx. actual size



Dimension (mm) · C1718R14

ROTATION: CW



Precious Metal Commutation · C1723R14

Motor Characteristics			-1094
1	Voltage	V	4.5
2	Terminal resistance	Ω	1.7
3	No-load speed	rpm	12000
4	No-load current	mA	85
5	Stall torque	mNm	4.70
6	Stall current	mA	2665
7	Load torque	mNm	0.39
8	Load speed	rpm	11000
9	Load current	mA	300
10	Max. output power	W	1.48
11	Max. efficiency	%	35.5
12	Back-EMF constant	mV/rpm	0.36
13	Torque constant	mNm/A	1.82
14	Speed/torque gradient	rpm/mNm	2551
15	Varistor	Yes/No	Yes
16	Weight	g	18.5
17	Operating temperature range	°C	-20 ~ +80

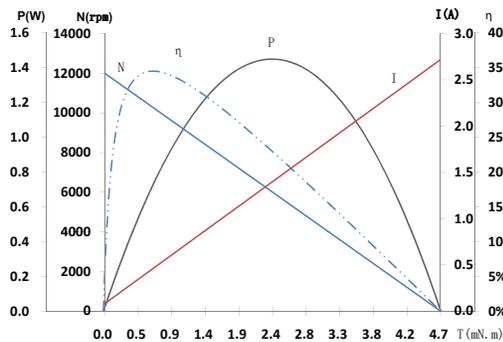
Applications

Security equipment,
 mini electronic products,
 remote control aerocrafts,
 personal caring products,
 portable tools, etc.

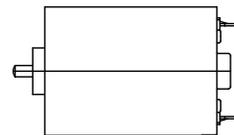
Options

- Lead wires length
- Shaft length
- Special coils
- Gearheads

Characteristics Curve C1723R14-1094

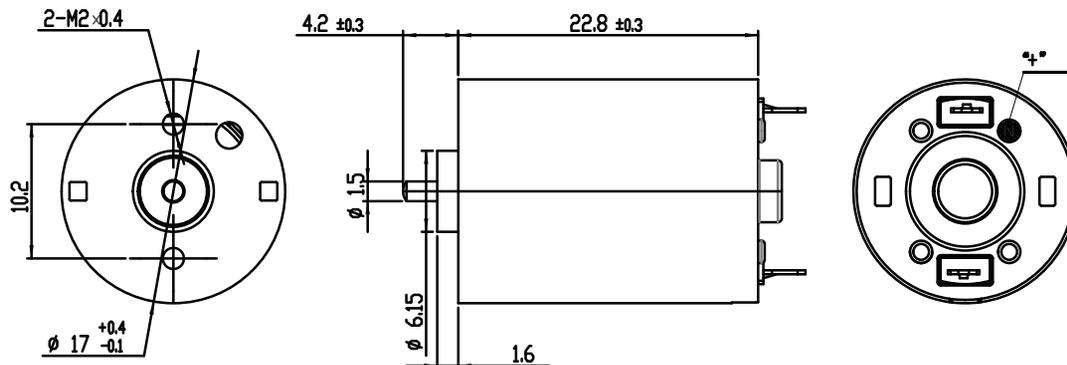


Approx. actual size



Dimension (mm) · C1723R14

ROTATION: CW



Precious Metal Commutation · C2430R23

Motor Characteristics			-0021
1	Voltage	V	24
2	Terminal resistance	Ω	260
3	No-load speed	rpm	2500
4	No-load current	mA	4
5	Stall torque	mNm	6.53
6	Stall current	mA	110
7	Load torque	mNm	1.96
8	Load speed	rpm	1750
9	Load current	mA	35
10	Max. output power	W	0.43
11	Max. efficiency	%	45.7
12	Back-EMF constant	mV/rpm	9.18
13	Torque constant	mNm/A	61.60
14	Speed/torque gradient	rpm/mNm	383
15	Varistor	Yes/No	Yes
16	Weight	g	48.5
17	Operating temperature range	°C	-20 ~ +80

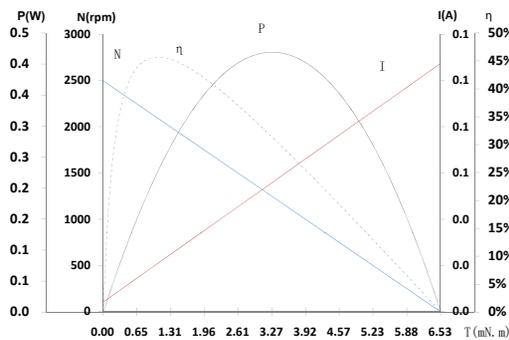
Applications

Security equipment,
 mini electronic products,
 remote control aerocrafts,
 personal caring products,
 portable tools, etc.

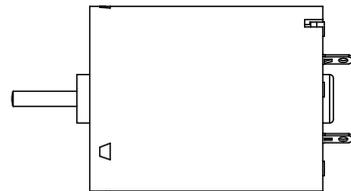
Options

- Lead wires length
- Shaft length
- Special coils
- Gearheads

Characteristics Curve C2430R23-0021

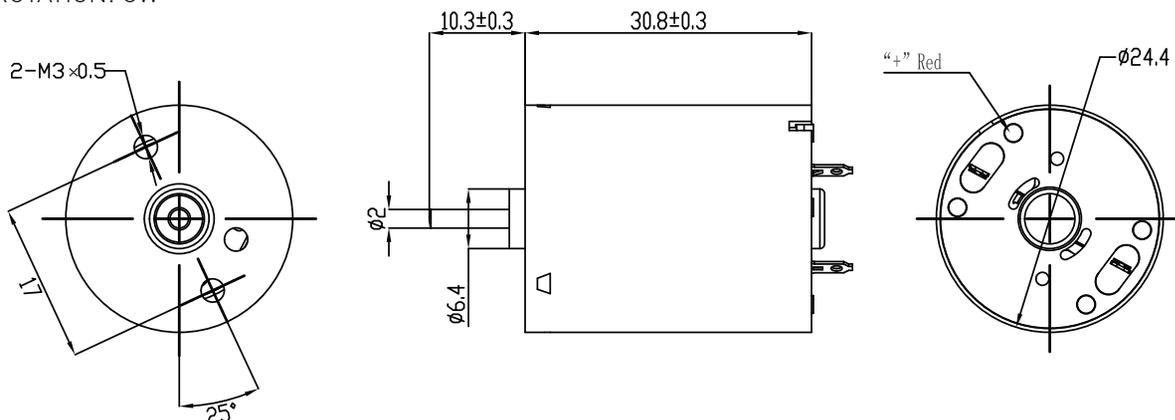


Approx. actual size



Dimension (mm) · C2430R23

ROTATION: CW



Graphite Brush · C2032F41

Motor Characteristics			-0141
1	Voltage	V	6
2	No-load speed	rpm	7600
3	No-load current	mA	100
4	Stall torque	mNm	10.5
5	Stall current	mA	1562
6	Load torque	mNm	1.80
7	Load speed	rpm	6300
8	Load current	mA	350
9	Max. output power	W	2.10
10	Max. efficiency	%	57.0
11	Torque constant	mNm/A	7.20
12	Speed/torque gradient	rpm/mNm	722
13	Varistor	Yes/No	Yes
14	Weight	g	33
15	Operating temperature range	°C	-0 ~ +60

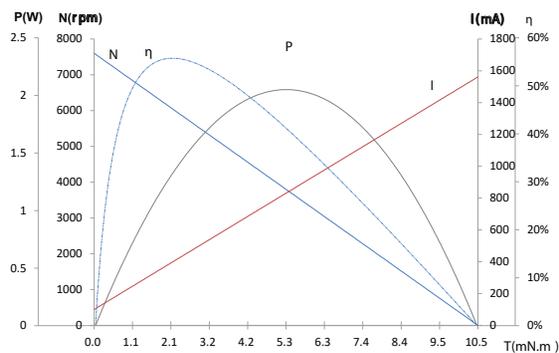
Applications

Mini electronic products, portable tools, etc.

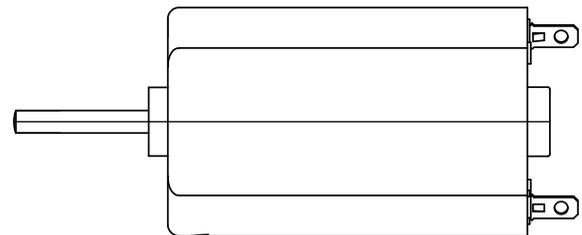
Options

Shaft length
Special coils

Characteristics Curve C2032F41-0141

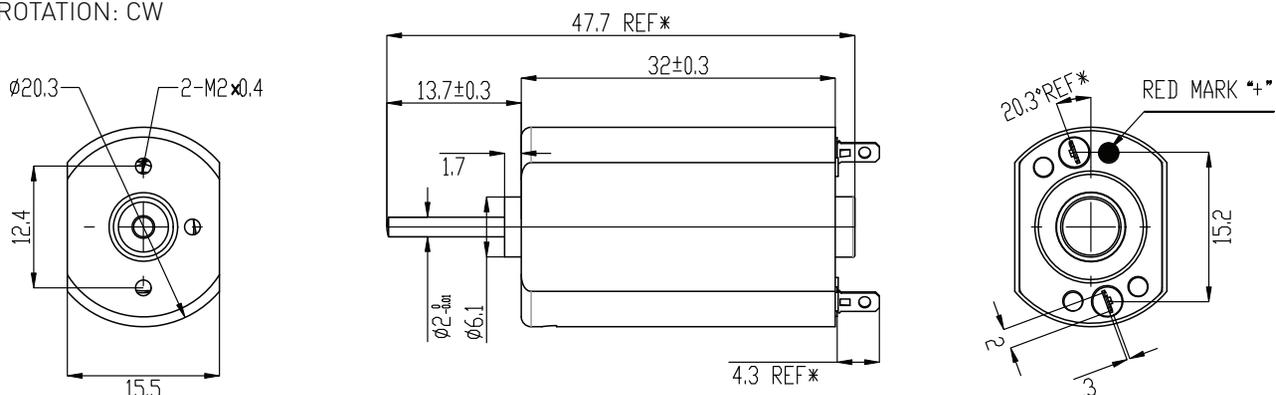


Approx. actual size



Dimension (mm) · C2032F41

ROTATION: CW



Graphite Brush · C2838R

Motor Characteristics			-0007
1	Voltage	V	9
2	No-load speed	rpm	13200
3	No-load current	mA	250
4	Stall torque	mNm	55
5	Stall current	mA	9000
6	Load torque	mNm	8,33
7	Load speed	rpm	11200
8	Load current	mA	1450
9	Max. output power	W	19.03
10	Max. efficiency	%	69
11	Torque constant	mNm/A	6.29
12	Speed/torque gradient	rpm/mNm	240
13	Varistor	Yes/No	Yes
14	Weight	g	70
15	Operating temperature range	°C	-0 ~ +60

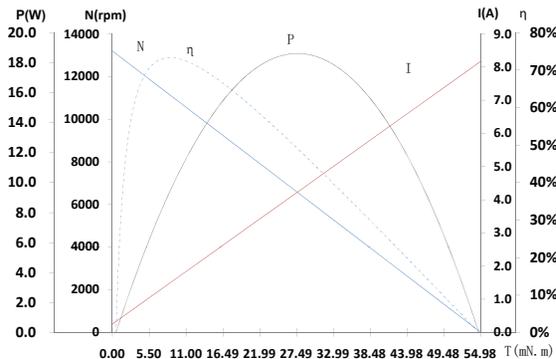
Applications

Automotive products,
breast pumps,
power tools, etc.

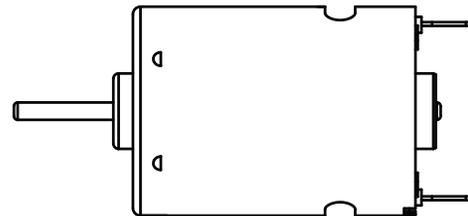
Options

- Lead wires length
- Shaft length
- Special coils
- Gearheads

Characteristics Curve C2838R-0007

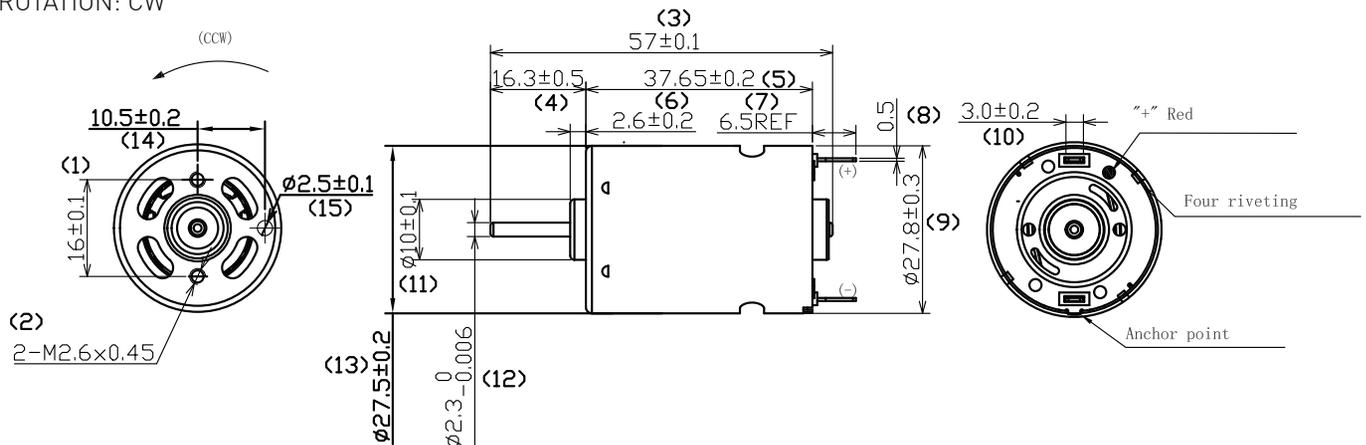


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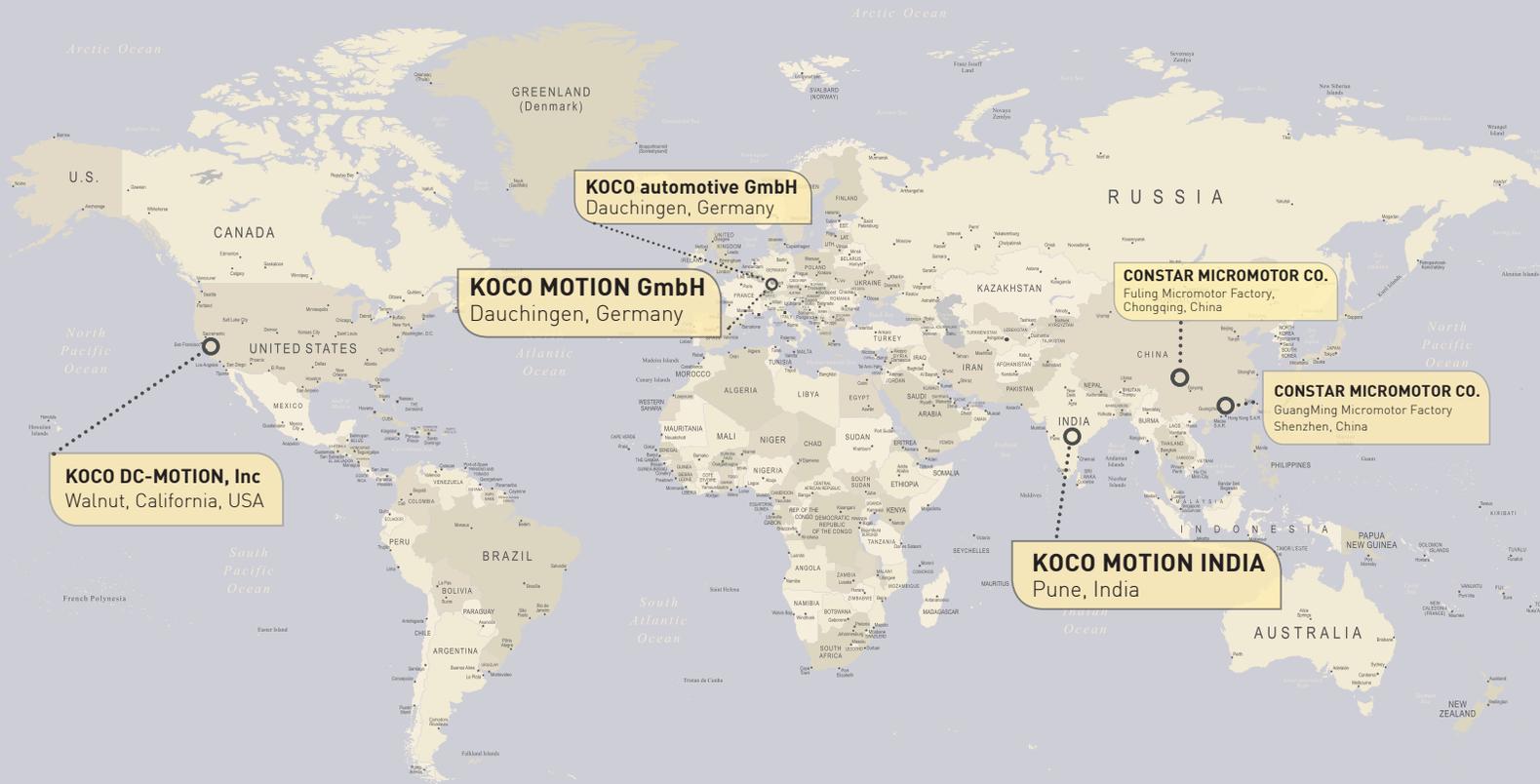


Dimension (mm) · C2838R

ROTATION: CW



SALES REPRESENTATIVES



INDIA

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