



**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 PRECISION SERVO MOTORS

	<b>Motor No.</b>	<b>Dia x Length (max)</b>	<b>Max. Power</b>	<b>Page</b>
1	<b>0837M5**M**</b>	10.00 x 40.40 mm	0.2 W	4
2	<b>1043M5**M**</b>	10.00 x 43.00 mm	1.3 W	5
3	<b>1238M7**M**</b>	12.40 x 38.00 mm	0.6 W	6
4	<b>1654C5**M**</b>	16.00 x 54.00 mm	2.7 W	7
5	<b>2281C5**M**</b>	22.00 x 81.00 mm	7.2 W	8
6	<b>2581C9**M**</b>	25.00 x 80.30 mm	22.1 W	9

# 5

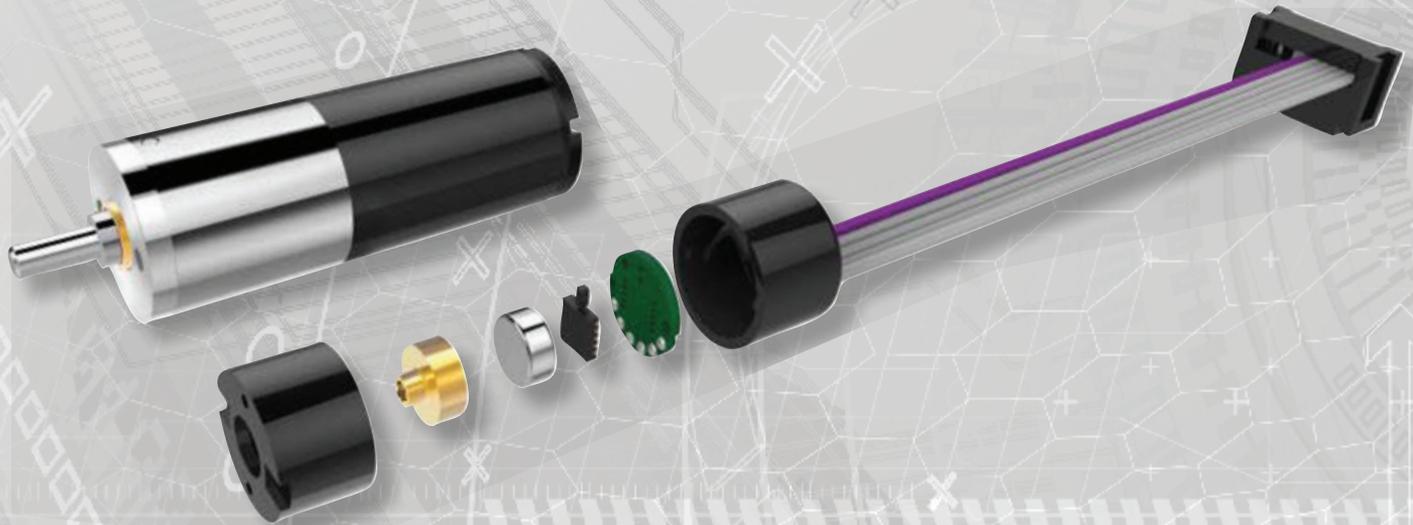
## Product Introduction



**KOCO**  
INDIA 

# PRECISION SERVO MOTOR

Text PRECISION SERVO MOTOR operational lifetime is extremely long. Excellent performance of the motor also lies in its good reliability, high rotation speed, small size, high overloading capability and low electromagnetic interference. It has good speed regulating performance and it can work in a poor environment as well. The motor is applicable in the fields of medical equipment, industrial equipment, UAV, electrical tools and mini household appliances.



# Precious Metal Commutation · 0837M5\*\*M\*\*

Motor Characteristics			0816N5M10-90-3.0
1	Voltage	V	3.0
2	Terminal resistance	Ω	14.2
3	No-load speed	rpm	9000
4	No-load current	mA	8
5	Stall torque	mNm	0.6
6	Stall current	mA	210
7	Nominal torque	mNm	0.3
8	Nominal speed	rpm	5490
9	Nominal current	mA	88
10	Max. output power	W	0.2
11	Max. efficiency	%	67
12	Back-EMF constant	mV/rpm	0.32
13	Torque constant	mNm/A	3.06
14	Speed/torque gradient	rpm/mNm	13994
15	Rotor inertia	gcm <sup>2</sup>	0.03
16	Weight	g	7.2

## Applications

Precision control fields such as medical instruments, industrial robots, etc.

## Operating temperature range

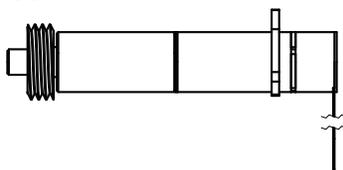
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## Options

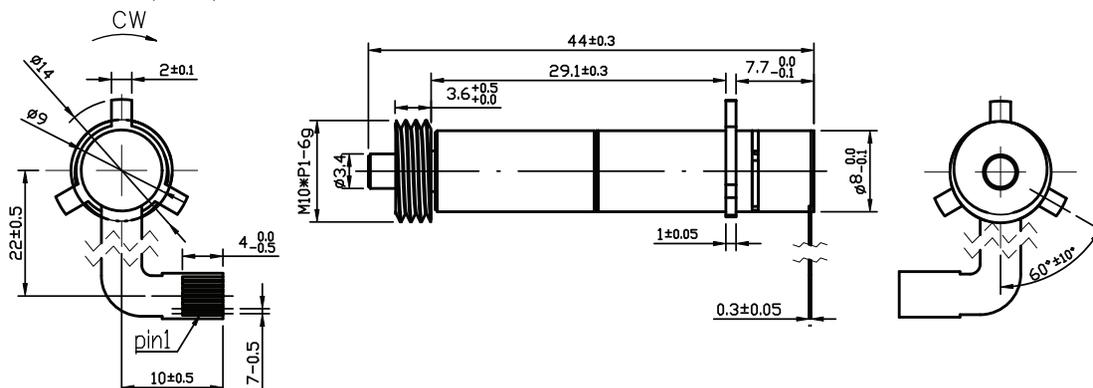
- Lead wires length
- Shaft length
- Special coils
- Gearheads
- Encoder channels
- Encoder counts per turn

Encoder Characteristics				
1	Number of channels		2	3
2	Counts per turn	cpt	16, 32, 64	16, 32, 64
3	Supply voltage	V	5.0 (5.0)	5.0 (5.0)
4	Max. speed	rpm	30000	30000
5	Phase shift	°e	90±45	90±45
6	Output signal		TTL	TTL
7	Diameter	mm	10	10
8	Length	mm	8.5	8.5

## Approx. actual size



## Dimension (mm) · 0837M5\*\*M\*\*





# Precious Metal Commutation · 1238M7\*\*M\*\*

Motor Characteristics			1230N7M01-48-4.5
1	Voltage	V	4.5
2	Terminal resistance	Ω	8.5
3	No-load speed	rpm	4800
4	No-load current	mA	15
5	Stall torque	mNm	4.6
6	Stall current	mA	530
7	Nominal torque	mNm	2.0
8	Nominal speed	rpm	2760
9	Nominal current	mA	235
10	Max. output power	W	0.6
11	Max. efficiency	%	71
12	Back-EMF constant	mV/rpm	0.91
13	Torque constant	mNm/A	8.70
14	Speed/torque gradient	rpm/mNm	1041
15	Rotor inertia	gcm <sup>2</sup>	0.25
16	Weight	g	17.7

## Applications

Precision control fields such as medical instruments, industrial robots, etc.

## Operating temperature range

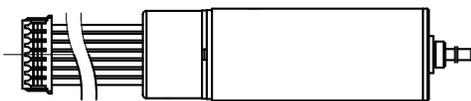
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## Options

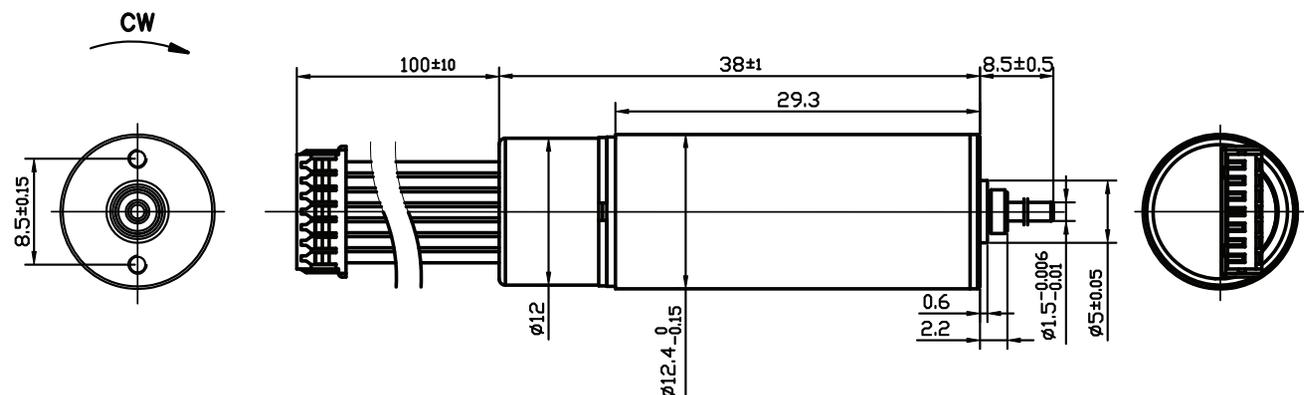
- Lead wires length
- Shaft length
- Special coils
- Gearheads
- Encoder channels
- Encoder counts per turn

Encoder Characteristics				
1	Number of channels		2	3
2	Counts per turn	cpt	16, 32, 64	16, 32, 64
3	Supply voltage	V	5.0 (5.0)	5.0 (5.0)
4	Max. speed	rpm	30000	30000
5	Phase shift	°e	90±45	90±45
6	Output signal		TTL	TTL
7	Diameter	mm	12	12
8	Length	mm	8.5	8.5

## Approx. actual size



## Dimension (mm) · 1238M7\*\*M\*\*



# Graphite Brush · 1654C5\*\*M\*\*

Motor Characteristics			1625N5C02-150-12.0
1	Voltage	V	12.0
2	Terminal resistance	Ω	13.0
3	No-load speed	rpm	15000
4	No-load current	mA	25
5	Stall torque	mNm	6.8
6	Stall current	mA	920
7	Nominal torque	mNm	3.2
8	Nominal speed	rpm	7800
9	Nominal current	mA	455
10	Max. output power	W	2.7
11	Max. efficiency	%	72
12	Back-EMF constant	mV/rpm	0.78
13	Torque constant	mNm/A	7.43
14	Speed/torque gradient	rpm/mNm	2194
15	Rotor inertia	gcm <sup>2</sup>	0.8
16	Weight	g	18.2

## Applications

Precision control fields such as medical instruments, industrial robots, etc.

## Operating temperature range

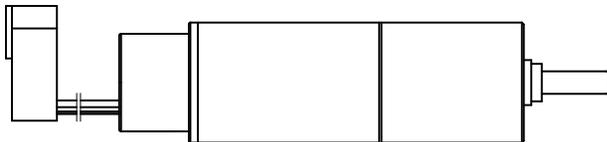
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## Options

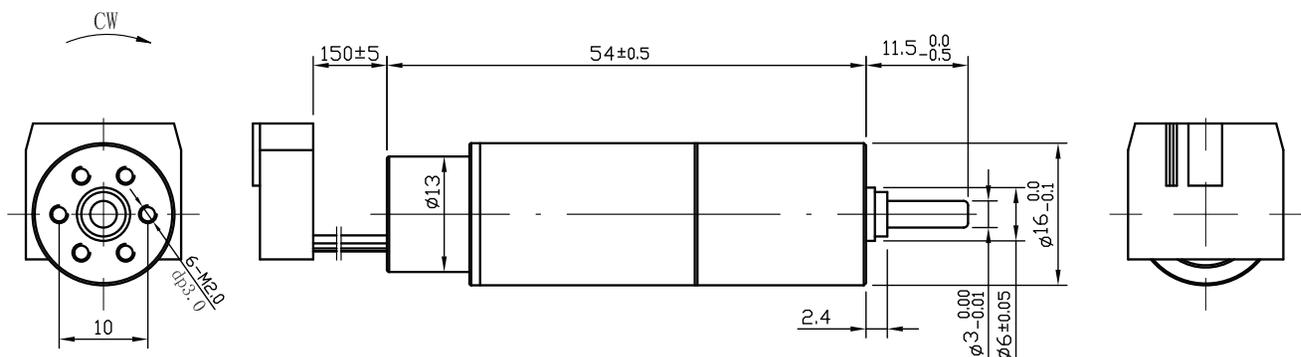
- Lead wires length
- Shaft length
- Special coils
- Gearheads
- Encoder channels
- Encoder counts per turn

Encoder Characteristics				
1	Number of channels		2	3
2	Counts per turn	cpt	16, 32, 64	16, 32, 64
3	Supply voltage	V	5.0 (5.0)	5.0 (5.0)
4	Max. speed	rpm	30000	30000
5	Phase shift	°e	90±45	90±45
6	Output signal		TTL	TTL
7	Diameter	mm	13	13
8	Length	mm	8.5	8.5

## Approx. actual size



## Dimension (mm) · 1654C5\*\*M\*\*



# Graphite Brush · 2281C5\*\*M\*\*

Motor Characteristics		2233N5C11-76-24.0	
1	Voltage	V	24.0
2	Terminal resistance	Ω	19.6
3	No-load speed	rpm	7600
4	No-load current	mA	20
5	Stall torque	mNm	36.2
6	Stall current	mA	1220
7	Nominal torque	mNm	9.8
8	Nominal speed	rpm	5510
9	Nominal current	mA	350
10	Max. output power	W	7.2
11	Max. efficiency	%	77
12	Back-EMF constant	mV/rpm	3.11
13	Torque constant	mNm/A	29.66
14	Speed/torque gradient	rpm/mNm	210
15	Rotor inertia	gcm <sup>2</sup>	4
16	Weight	g	52

## Applications

Precision control fields such as medical instruments, industrial robots, etc.

## Operating temperature range

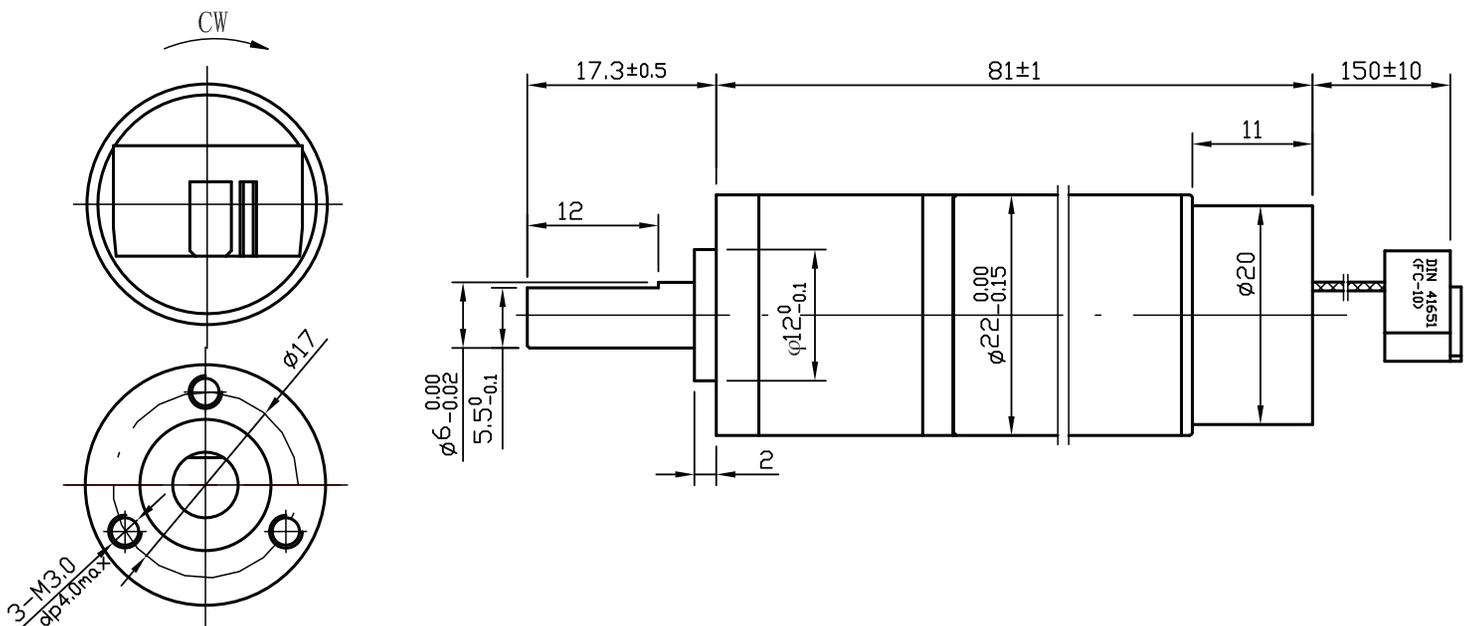
-20 ~ +85°C

## Options

- Lead wires length
- Shaft length
- Special coils
- Gearheads
- Encoder channels
- Encoder counts per turn

Encoder Characteristics		2		3	
1	Number of channels		2		3
2	Counts per turn	cpt	16, 32, 64, 128, 256, 512, 1024	16, 32, 64, 128, 256, 512, 1024	
3	Supply voltage	V	5.0 (5.0)	5.0 (5.0)	
4	Max. speed	rpm	30000	30000	
5	Phase shift	°e	90±45	90±45	
6	Output signal		TTL	TTL	
7	Diameter	mm	20	20	
8	Length	mm	11	11	

## Dimension (mm) · 2281C5\*\*M\*\* · Approx. actual size



# Graphite Brush · 2581C9\*\*M\*\*

Motor Characteristics			2543N9C2B03-65-24.0
1	Voltage	V	24.0
2	Terminal resistance	Ω	6.5
3	No-load speed	rpm	6500
4	No-load current	mA	15
5	Stall torque	mNm	129.6
6	Stall current	mA	3690
7	Nominal torque	mNm	37.6
8	Nominal speed	rpm	4570
9	Nominal current	mA	1070
10	Max. output power	W	22.1
11	Max. efficiency	%	88
12	Back-EMF constant	mV/rpm	3.68
13	Torque constant	mNm/A	35.12
14	Speed/torque gradient	rpm/mNm	50
15	Rotor inertia	gcm <sup>2</sup>	13.2
16	Weight	g	98

## Applications

Precision control fields such as medical instruments, industrial robots, etc.

## Operating temperature range

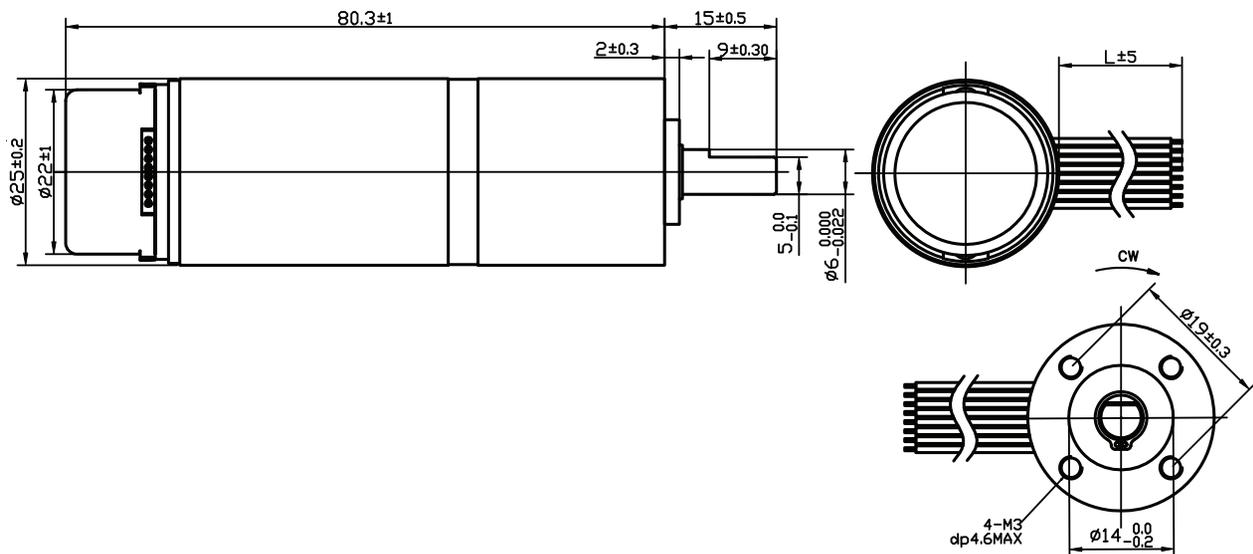
-20 ~ +100°C

## Options

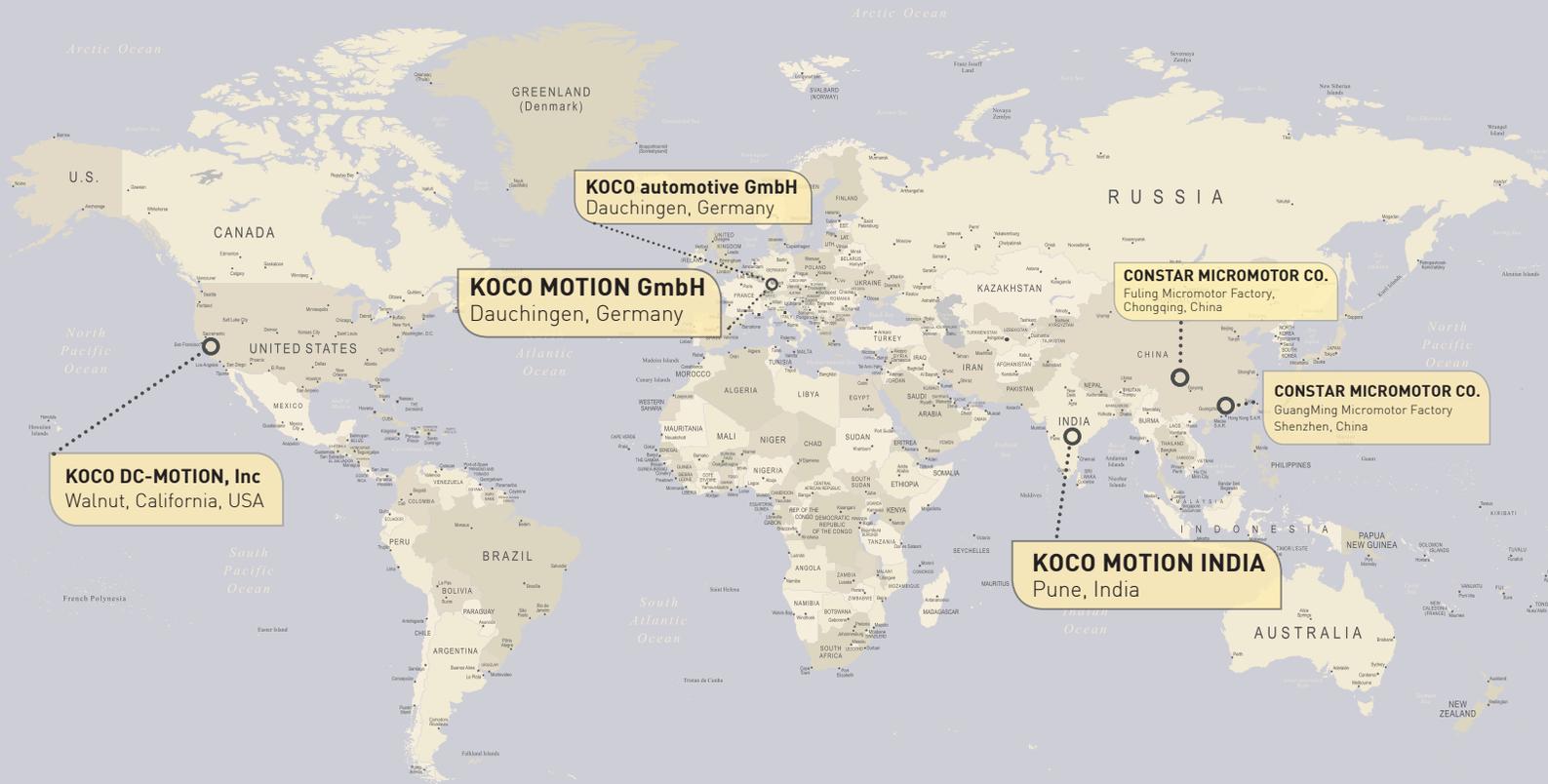
- Lead wires length
- Shaft length
- Special coils
- Gearheads
- Encoder channels
- Encoder counts per turn

Encoder Characteristics				
1	Number of channels		2	3
2	Counts per turn	cpt	16, 32, 64, 128, 256, 512, 1024	16, 32, 64, 128, 256, 512, 1024
3	Supply voltage	V	5.0 (5.0)	5.0 (5.0)
4	Max. speed	rpm	30000	30000
5	Phase shift	°e	90±45	90±45
6	Output signal		TTL	TTL
7	Diameter	mm	22	22
8	Length	mm	12	12

## Dimension (mm) · 2581C9\*\*M\*\* · Approx. actual size



# SALES REPRESENTATIVES



## INDIA

### KOCO MOTION INDIA PVT. LTD.

S. No. 100/5, Ambegaon,  
Pune Satara Highway, Pune 411 046  
India

Phone +91 95119 54544, 77700 26168  
sales@kocomotionindia.com

[www.kocomotionindia.com](http://www.kocomotionindia.com)

## KOCO MOTION GROUP

### KOCO MOTION GmbH

Niedereschacherstr. 54  
78083 Dauchingen  
Germany  
Phone +49 7720 995858-0  
info@kocomotion.de  
[www.kocomotion.de](http://www.kocomotion.de)

### KOCO automotive GmbH

Niedereschacherstr. 52  
78083 Dauchingen  
Germany  
Phone +49 7720 995164-0  
info@kocoautomotive.de  
[www.kocoautomotive.de](http://www.kocoautomotive.de)

### KOCO DC-MOTION, Inc

20676 Carrey Rd.  
Walnut, CA 91789  
USA  
Phone (+1) 909-468-9877  
sales@kocodcmotion.com  
[www.kocodcmotion.com](http://www.kocodcmotion.com)