LIN ENGINEERING
MOTOR SPECIALISTS IN MOTION
A MOONS' COMPANY

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SLU16CH052 SERIES

SLU16CH052-24-G406-M16-1024

SLOTLESS BLDC MOTOR

FEATURES AND BENEFITS

- **Extremely quick response and high acceleration**
- **Quiet Operation**
- **High power density**

MOTOR SPECIFICATIONS

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Frame Size	16 mm
Motor Type	Motor + Encoder + Gearhead
Weight	106.5 g
Number of pole	2
Number of Phases	3
Certification	RoHS

MOTOR VALUES (AT NOMINAL SPEED)

Nominal Voltage	24 VDC
No Load Speed	39 RPM
No Load Current	150 mA
Nominal Speed	34 RPM
Nominal Torque (Max Cont. Torque)	650 mNm
Nominal Current (Max Cont. Current)	1.19 A
Rated Speed	37 RPM
Rated Torque	650 mNm
Rated Current	0.22 A
Stall Torque	33640 mNm
Stall Current	7.6 A

Max. Efficiency	60.68%

MOTOR CHARACTERISTICS

Terminal Resistance	3.16 ohm
Terminal Inductance	0.253 mH
Speed/Torque Gradient	137 RPM/mNm
Speed Constant	643 RPM/V
Mechanical Time Constant	1.22 ms
Rotor Inertia	0.85 g-cm²

MOTOR MECHANICAL DATA

Axial play	0 mm - 0.1 mm
Radial play	0.1
Max. Radial Load	50 N
Distance From Flange For Radial Load	5 mm
Max Force For Press Fit	40 N
Max Speed (Mechanical)	74 RPM

MOTOR THERMAL DATA

Ambient Temperature	-40.00 °C to 85.00 °C
Insulation Class	F
Max winding temperature	155.00 °C
Max winding temperature	155.00 °C
Thermal resistance (Housing-Ambient)	17.60 °C/W
Thermal resistance (Winding-Housing)	1.80 °C/W
Thermal time constant motor	600 s
Thermal time constant winding	3.12 s

GEARHEAD SPECIFICATIONS

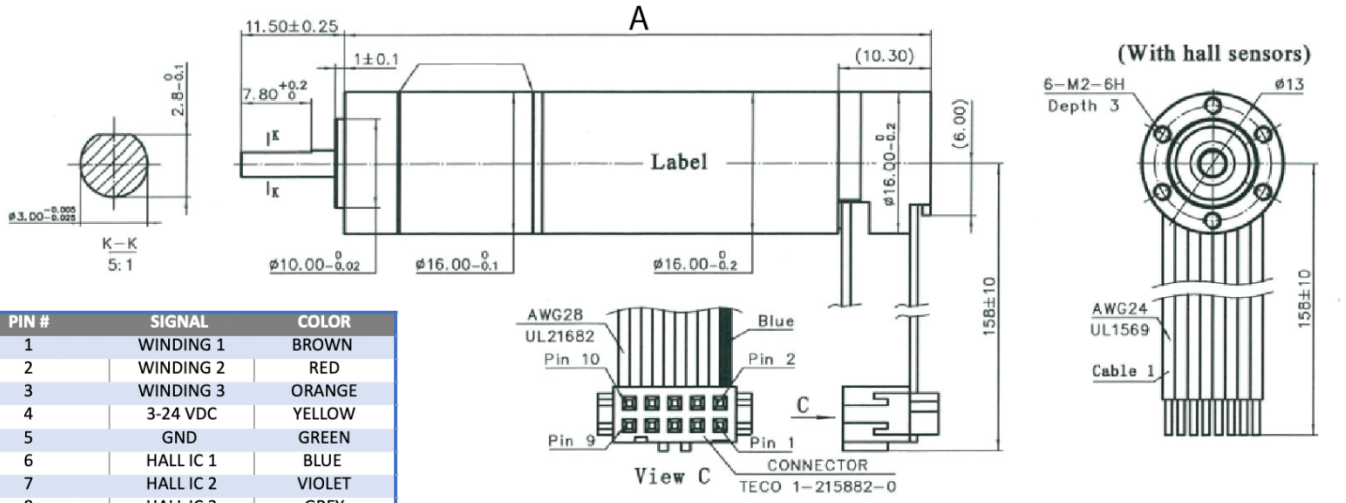
Type Of Gearhead	Planetary Gearhead
Gearhead Reduction Ratio	406
Nominal Reduction Ratio	405.94
Absolute Reduction Ratio	27843750/68590
Number Of Stages	3
Average Backlash (No Load)	1

ENCODER SPECIFICATIONS

Counts Per Turn	1024
Number Of Channels	3

DIMENSIONS

Model	SLU16CH052-24-G406-M16-1024
DIM. A (length) mm	90.7 mm



PIN #	SIGNAL	COLOR
1	WINDING 1	BROWN
2	WINDING 2	RED
3	WINDING 3	ORANGE
4	3-24 VDC	YELLOW
5	GND	GREEN
6	HALL IC 1	BLUE
7	HALL IC 2	VIOLET
8	HALL IC 3	GREY

ENCODER PIN OUT

PIN #	SIGNAL
1	N.C
2	VCC 4.5-5.5 V
3	GND
4	N.C
5	CHANNEL $\bar{A}$
6	CHANNEL A
7	CHANNEL $\bar{B}$
8	CHANNEL B
9	CHANNEL $\bar{I}$
10	CHANNEL I

PERFORMANCE CURVE