

90 SERIEN BÜRSTENLOSER DC GETRIEBEMOTOR (GU TYP)

90 SERIES OF BRUSHLESS DC MOTOR (GU TYPE)



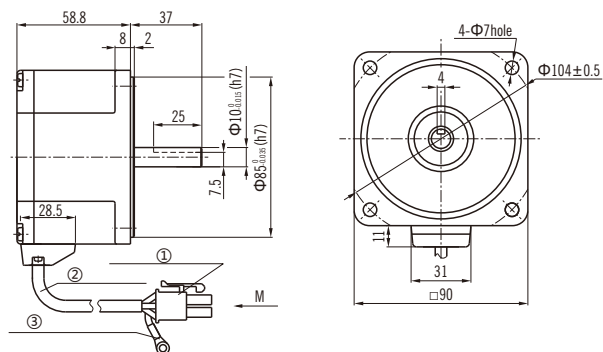
Allgemeine Eigenschaften des Motors / Basic Characteristics Of Motor

● 120W (24VDC / 36VDC / 48VDC für Gleichstromversorgung) / 120W (DC Power Supply When Applied To 24VDC/36VDC/48VDC)

Nennleistung (kontinuierlich) / Rated power (Continuous)		W	120 (60W/90W/120W)
Nennzahl / Rated speed		r/min	2500
Nennmoment / Rated torque		N.m	0.458
Max. Spitzendrehmoment / Instantaneous maximum torque		N.m	0.687
Rotorträgheitsmoment / Rotor moment of inertia		J: X10 ⁻⁴ kg.m ²	0.250
Drehzahlregelbereich / Speed control range		RPM	High pressure 200-2500RPM (Low pressure 200-3000RPM)
Drehzahländerungsrate Speed change rate	On load	Below ±1%: condition 0~rated torque, rated speed, rated voltage, room temperature	
	On voltage	Below ±1%: condition rated voltage ±10%, rated speed, rated load, room temperature	
	On temperature	Below ±1%: Conditions of ambient temperature 0~+40°C rated voltage, rated load and rated speed	
Leistungseingabe Power input	Nennspannung / Rated voltage	V	Single phase 110V Single phase 220V 24VDC (Optional 36VDC/48VDC)
	Spannungstoleranzbereich / Voltage tolerance range		±10%
	Frequenzen / Frequency	Hz	50 / 60
	Frequenztoleranzbereich / Frequency tolerance range		±5%
	Nenneingangsstrom / Rated input current	A	3.5 2.0 6.8
	Max. Spitzeneingangsstrom Instantaneous maximum input current	A	7.0 4.5 13.0

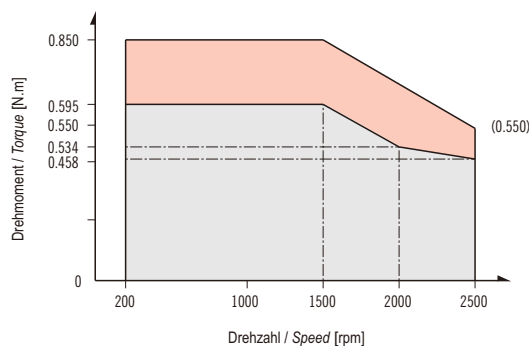
Nur Motor mit runden Wellen / Circular Shaft Type Optical Motor

● Z5BLD120-□ A-25S □ — Spannung / Voltage 24/36/48/110/220

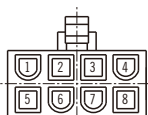


①Connector: 5557-8R/10R (MOLEX) ②Lead wire length 300mm ③Round terminal: SRA-21T-4 (Low ground)

● Z5BLD120-220A-25S Diagramm / Diagram
(ZD Standard Steuerung / ZD Standard Drive)

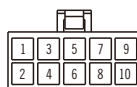


● Niederspannungs-Motorverdrahtungsbuchse entsprechende Signalbeschreibung
Low Voltage Wire Plughole Corresponding Signal Explanation



plughole	1	2	3	4
signal	U	W	Hv	Hu
plughole	5	6	7	8
signal	V	GND	Hw	Vcc

● Hochspannungs-Motorverdrahtungsbuchse entsprechende Signalbeschreibung
High Voltage Wire Plughole Corresponding Signal Explanation



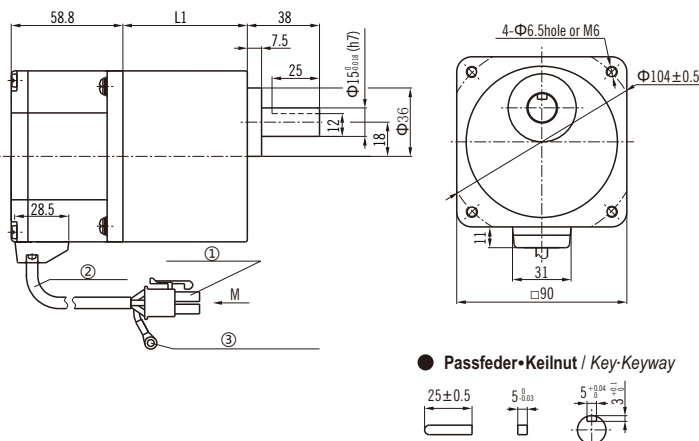
Cable Description									
1	2	3	4	5	6	7	8	9	10
Blue thick	Yellow thin	Yellow thick	Green thin	Green thick	Blue thin		Metal net	Red thin	Black thin
W	Hu	U	Hv	V	Hw			Vcc+5V	GND

120W

● Parallelwellengetriebe / Parallel Shaft Speed Reducer

Z5BLD120-□ GU-25S/5GU□K □ — Spannung / Voltage 24/36/48/110/220

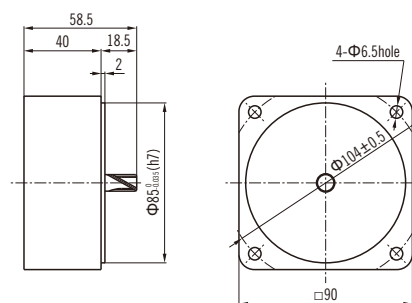
□ Übersetzungsverhältnisse / Velocity Ratio Value



① Connector: 5557-8R/10R (MOLEX) ② The sheath length of lead line 300mm ③ Round terminal: SRA-21T-4

● Dezimalgetriebe / Decimal Gearhead

5GU□XK

□ Übersetzungsverhältnisse allgemein 10
Velocity Ratio Value, Generally 10

Getriebe Modell Gearhead Model	Untersetzung Gear Ratio	L(mm) L Dimension
5GU□K	3~200	65.5

● Im Getriebemodell (□) ist der Wert des Übersetzungsverhältnisses
Enter the gear ratio in the box (□) within the model name

● Z5BLD60-□ GU-25S/5GU□K Zulässiger Moment (Einheit: N.m) / Z5BLD60-□ GU-25S/5GU□K Machine Allowable Torque (Unit: N.m)

Modell Model	Untersetzung Reduction Ratio Motor Drehzahl Motor Speed	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	50	60	75	90	100	120	150	180	200
Z5BLD60-□GU	200—1500RPM	0.72	0.87	1.21	1.45	1.81	2.17	2.41	3.02	3.62	4.34	4.35	5.44	6.53	7.83	9.83	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
	2000RPM	0.69	0.84	1.16	1.39	1.74	2.09	2.09	2.61	3.14	3.76	3.78	4.72	5.67	6.80	9.45	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
	2500RPM	0.56	0.67	0.93	1.11	1.39	1.67	1.67	2.09	2.51	3.01	3.03	3.78	4.54	5.45	7.56	9.08	10.0	10.0	10.0	10.0	10.0	10.0	10.0

● Z5BLD90-□ GU-25S/5GU□K Zulässiger Moment (Einheit: N.m) / Z5BLD90-□ GU-25S/5GU□K Machine Allowable Torque (Unit: N.m)

Modell Model	Untersetzung Reduction Ratio Motor Drehzahl Motor Speed	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	50	60	75	90	100	120	150	180	200
		200~1500RPM	1.09	1.30	1.81	2.18	2.72	3.26	3.62	4.53	5.43	6.52	6.53	8.16	9.79	11.8	14.7	17.7	20.0	20.0	20.0	20.0	20.0	20.0
Z5BLD90-□GU	2000RPM	1.04	1.25	1.74	2.09	2.61	3.13	3.14	3.92	4.71	5.65	5.67	7.09	8.51	10.2	14.2	17.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
	2500RPM	0.84	1.00	1.39	1.67	2.09	2.51	2.51	3.14	3.76	4.52	4.53	5.67	6.81	8.17	11.3	13.6	17.0	20.0	20.0	20.0	20.0	20.0	20.0

● Z5BLD120-□ GU-25S/5GU□K Zulässiger Moment (Einheit: N.m) / Z5BLD120-□ GU-25S/5GU□K Machine Allowable Torque (Unit: N.m)

Modell Model	Untersetzung Reduction Ratio Motor Drehzahl Motor Speed	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	50	60	75	90	100	120	150	180	200
		200—1500RPM	1.45	1.74	2.41	2.90	3.62	4.34	4.35	5.44	6.53	7.83	7.87	9.83	11.8	14.2	19.7	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Z5BLD120-  GU	2000RPM	1.39	1.67	2.32	2.78	3.48	4.18	4.18	5.23	6.27	7.53	7.56	9.45	11.3	13.6	18.9	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
	2500RPM	1.11	1.34	1.86	2.23	2.78	3.34	3.35	4.18	5.02	6.02	6.05	7.56	9.08	10.9	15.1	18.2	20.0	20.0	20.0	20.0	20.0	20.0	20.0

Hinweis / Note:

Der (graue) □ Teil der Tabelle zeigt an, dass die Drehrichtung der des Motors entspricht.

The (gray) □ in the table indicates that the rotation direction is consistent with the motor.

Das Drehmoment bei verschiedenen Drehzahl und Übersetzung wird vom ZD-Standardtreiber gemessen.

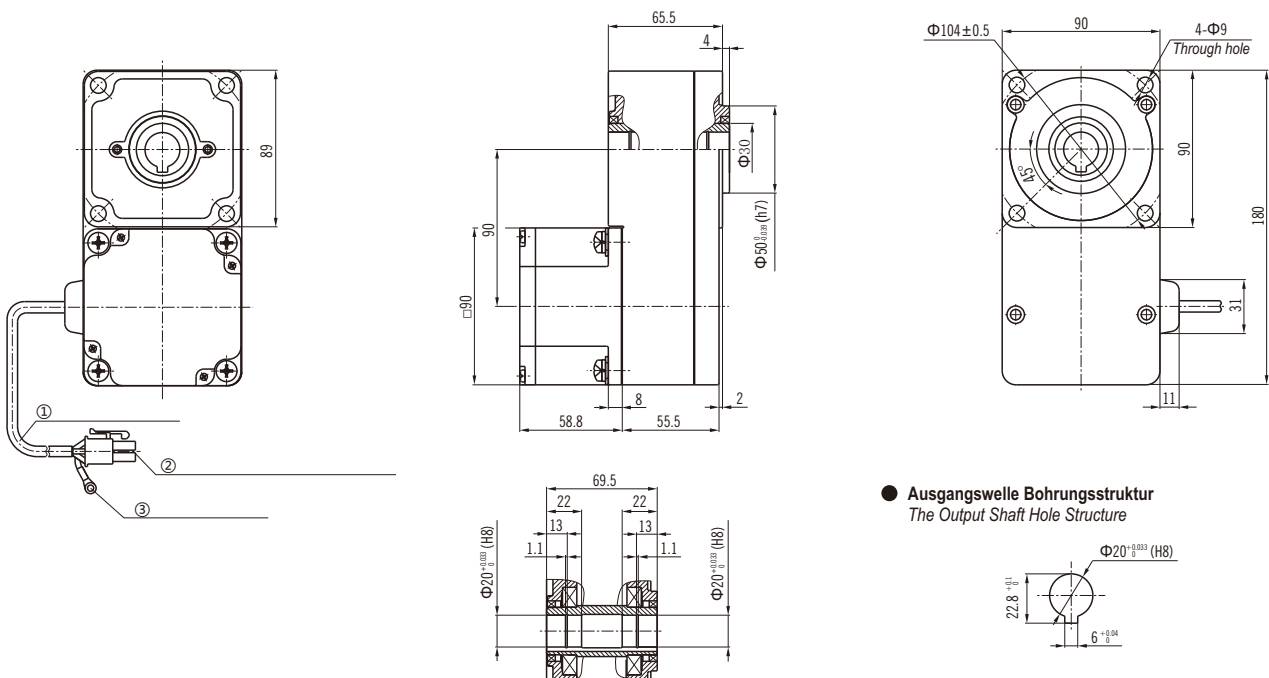
The torque under different speed and speed ratio is obtained under the ZD standard.)

● **L-Typ Getriebe / L Type Speed Reducer**

Z5BLD120- □GUL-25S/5GU□LC

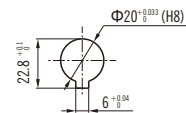
□—Spannung / Voltage 24/36/48/110/220

□Untersetzungsverhältnisse / Velocity Ratio Value



①Lead wire length 300mm ②Connector: 5557-8R/10R (MOLEX) ③Round terminal: SRA-21T-4 (Low ground)

● **Ausgangswelle Bohrungsstruktur**
The Output Shaft Hole Structure



● **Z5BLD60-□GU-25S/5GU□LC Zulässiger Moment (Einheit: N.m) / Z5BLD60-□GUL-25S/5GU□LC Machine Allowable Torque (Unit: N.m)**

Motor Drehzahl Motor Speed	Untersetzung Reduction Ratio	5	10	15	20	30	50	100	200
200~1500RPM		1.09	2.18	3.26	4.35	6.53	10.9	21.8	43.5
2000RPM		0.92	1.84	2.76	3.68	5.52	9.20	18.4	36.8
2500RPM		0.84	1.67	2.51	3.35	5.02	8.37	16.7	33.5

● **Z5BLD90-□GUL-25S/5GU□LC Zulässiger Moment (Einheit: N.m) / Z5BLD90-□GUL-25S/5GU□LC Machine Allowable Torque (Unit: N.m)**

Motor Drehzahl Motor Speed	Untersetzung Reduction Ratio	5	10	15	20	30	50	100	200
200~1500RPM		1.63	3.26	4.90	6.53	9.79	16.3	32.6	65.3
2000RPM		1.38	2.76	4.14	5.52	8.28	13.8	27.6	55.2
2500RPM		1.25	2.51	3.76	5.02	7.53	12.5	25.1	50.2

● **Z5BLD120-□GUL-25S/5GU□LC Zulässiger Moment (Einheit: N.m) / Z5BLD120-□GUL-25S/5GU□LC Machine Allowable Torque (Unit: N.m)**

Motor Drehzahl Motor Speed	Untersetzung Reduction Ratio	5	10	15	20	30	50	100	200
200~1500RPM		2.41	4.83	7.24	9.65	13.1	21.8	43.5	68.0
2000RPM		2.04	4.08	6.13	8.17	11.0	18.4	36.8	66.6
2500RPM		1.67	3.35	5.02	6.69	10.0	16.7	33.5	60.5

Hinweis / Note:

Die Tabelle zeigt an, dass die entgegengesetzte Richtung der des Motors entspricht.

All gearbox output turn direction in form are opposite as motor turn direction.

(Das Drehmoment bei verschiedenen Drehzahl und Übersetzung wird vom ZD-Standardtreiber gemessen.)

The torque under different speed and speed ratio is obtained under the ZD standard.)

● 90°Spiralkegelrad Getriebemotor / Arc Cone Right Angle Speed Reducer Motor

Z5BLD120- □GU-25S/5GU□RC

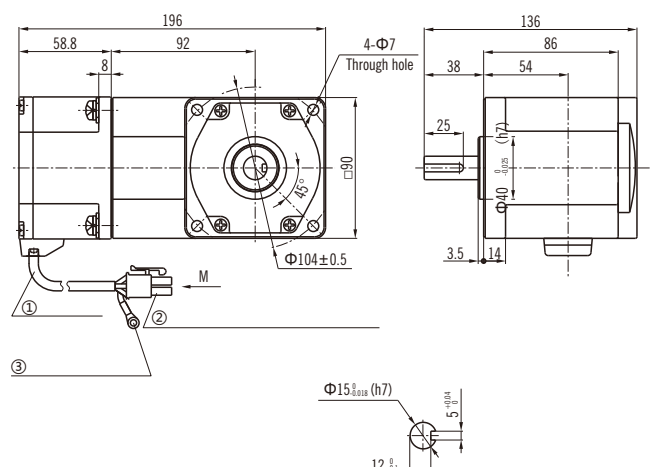
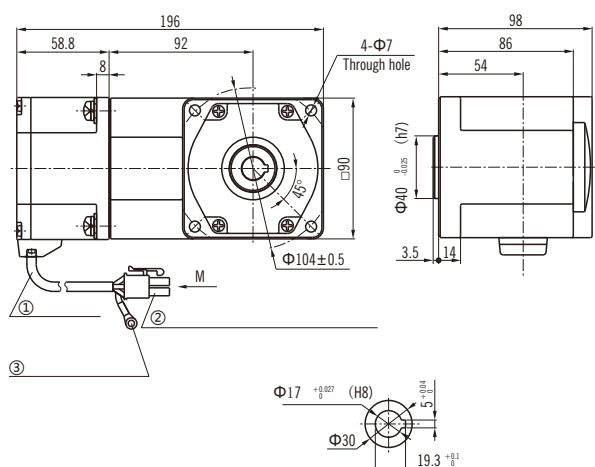
□ —Spannung / Voltage 24/36/48/110/220

□Untersetzungsverhältnisse / Velocity Ratio Value

Z5BLD120- □GU-25S/5GU□RT

□ —Spannung / Voltage 24/36/48/110/220

□Untersetzungsverhältnisse / Velocity Ratio Value



①The sheath length of lead line 300mm ②Connector: 5557-8R/10R (MOLEX) ③Round terminal: SRA-21T-4 (Low ground)

● Z5BLD60-□GU-25S/5GU□RC/RT Zulässiger Moment (Einheit: N.m) / Z5BLD60-□GU-25S/5GU□RC/RT Machine Allowable Torque (Unit: N.m)

Modell Model	Untersetzung Reduction Ratio Motor Drehzahl Motor Speed	7.5	9	10	12.5	15	18	20	25	30	36	50	60	75	90	100	120	150	180
Z5BLD60- □GU	200~1500RPM	1.81	2.17	2.41	3.02	3.62	4.34	4.35	5.44	6.53	7.83	9.83	10.0	10.0	10.0	10.0	10.0	10.0	10.0
	2000RPM	1.57	1.88	2.09	2.61	3.04	3.76	4.18	5.23	6.27	6.81	9.45	10.0	10.0	10.0	10.0	10.0	10.0	10.0
	2500RPM	1.25	1.51	1.67	2.09	2.51	3.01	3.35	4.18	5.02	5.45	7.56	9.08	10.0	10.0	10.0	10.0	10.0	10.0

● Z5BLD90-□GU-25S/5GU□RC/RT Zulässiger Moment (Einheit: N.m) / Z5BLD90-□GU-25S/5GU□RC/RT Machine Allowable Torque (Unit: N.m)

Modell Model	Untersetzung Reduction Ratio Motor Drehzahl Motor Speed	7.5	9	10	12.5	15	18	20	25	30	36	50	60	75	90	100	120	150	180
Z5BLD90- □GU	200~1500RPM	2.72	3.26	3.62	4.53	5.43	6.52	6.53	8.16	9.79	11.8	14.7	17.7	20.0	20.0	20.0	20.0	20.0	20.0
	2000RPM	2.36	2.83	3.14	3.93	4.71	5.65	6.28	7.85	9.42	10.2	14.2	17.0	20.0	20.0	20.0	20.0	20.0	20.0
	2500RPM	1.88	2.24	2.50	3.12	3.74	4.93	4.99	6.24	7.49	9.04	11.3	13.6	17.0	20.0	20.0	20.0	20.0	20.0

● Z5BLD120-□GU-25S/5GU□RC/RT Zulässiger Moment (Einheit: N.m) / Z5BLD120-□GU-25S/5GU□RC/RT Machine Allowable Torque (Unit: N.m)

Modell Model	Untersetzung Reduction Ratio Motor Drehzahl Motor Speed	7.5	9	10	12.5	15	18	20	25	30	36	50	60	75	90	100	120	150	180
Z5BLD120- □GU	200~1500RPM	3.62	4.34	4.35	5.44	6.53	7.83	7.87	9.83	11.8	14.2	19.7	20.0	20.0	20.0	20.0	20.0	20.0	20.0
	2000RPM	3.14	3.76	4.18	5.23	6.27	7.52	8.36	10.5	12.5	13.6	18.9	20.0	20.0	20.0	20.0	20.0	20.0	20.0
	2500RPM	2.50	3.01	3.35	4.18	5.02	6.02	6.69	8.37	10.0	10.9	15.1	18.2	20.0	20.0	20.0	20.0	20.0	20.0

Hinweis / Note:

Der (graue) □ Teil der Tabelle zeigt an, dass die Drehrichtung der des Motors entspricht.

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Das Drehmoment bei verschiedenen Drehzahl und Übersetzung wird vom ZD-Standardtreiber gemessen.

The torque under different speed and speed ratio is obtained under the ZD standard.)