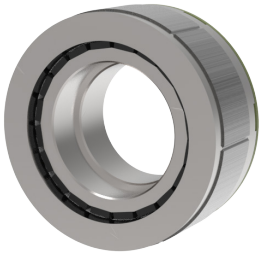

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BLDC 69

S12K - 48V MAXIMUM POWER DESIGN*

33.1.056D

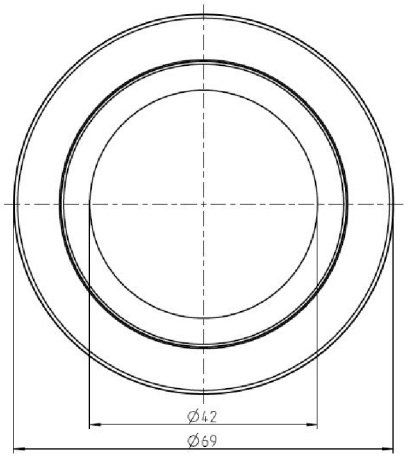
preliminary datasheet

Rated voltage [V]	No load speed**** [rpm]	Rated speed** [rpm]	Rated power** [W]	Rated torque** [mNm]	Rated current** [A]	Max. Efficiency [%]	Max. torque*** [Nm]
48	4100	3850****	185	460****	4.3	91.6	8

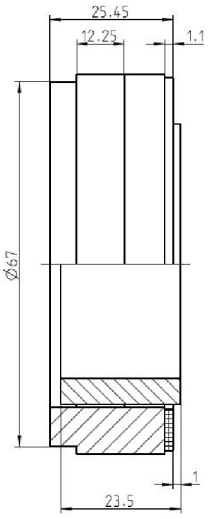
*) Rotor magnets are not protected against impacts
**) Based on heat test results with winding temperature rise of ΔT= 70K and no heat conduction to outside. Measured at 25°C ambient temperature (also valid for motor characteristics on 2nd page).
***) Theoretical stall current, Istall= 70 A
****) Highly dependent on installation situation

General Information

- Class of protection: IP20
- Duty cycle: up to 100 %
- Torque constant: 113.8 mNm/A
- Weight: 265 g
- Ambient Temp Range: 0 °C to +40 °C
- Insulation class for winding: B (130 °C)
- Max. Temp. Rise: 70 K
- Direction of Rotation: CW / CCW
- Number of Poles: 20
- Terminal resistance [Rph-ph]: 0.40 Ohm
- Terminal inductance [Lph-ph]: 230 µH
- Thermal resistance winding-air: 3.5 K/W



Motor Code: 1519-888-00013A

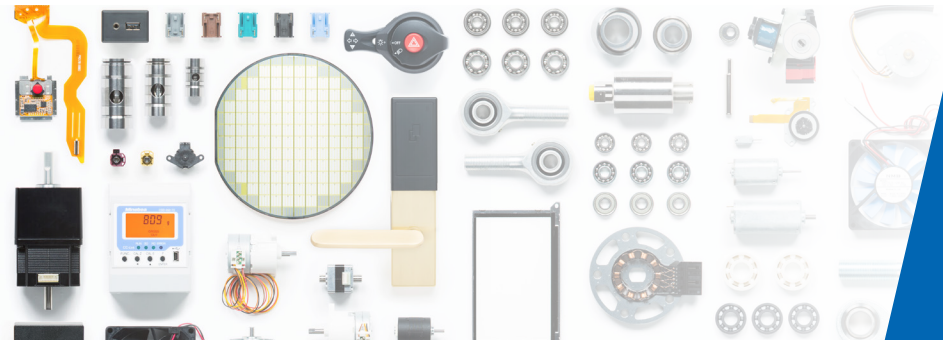


Features

- High power-to-volume ratio
- High efficiency at duty point
- High reliability

Options

- Sensorless Operation: Yes



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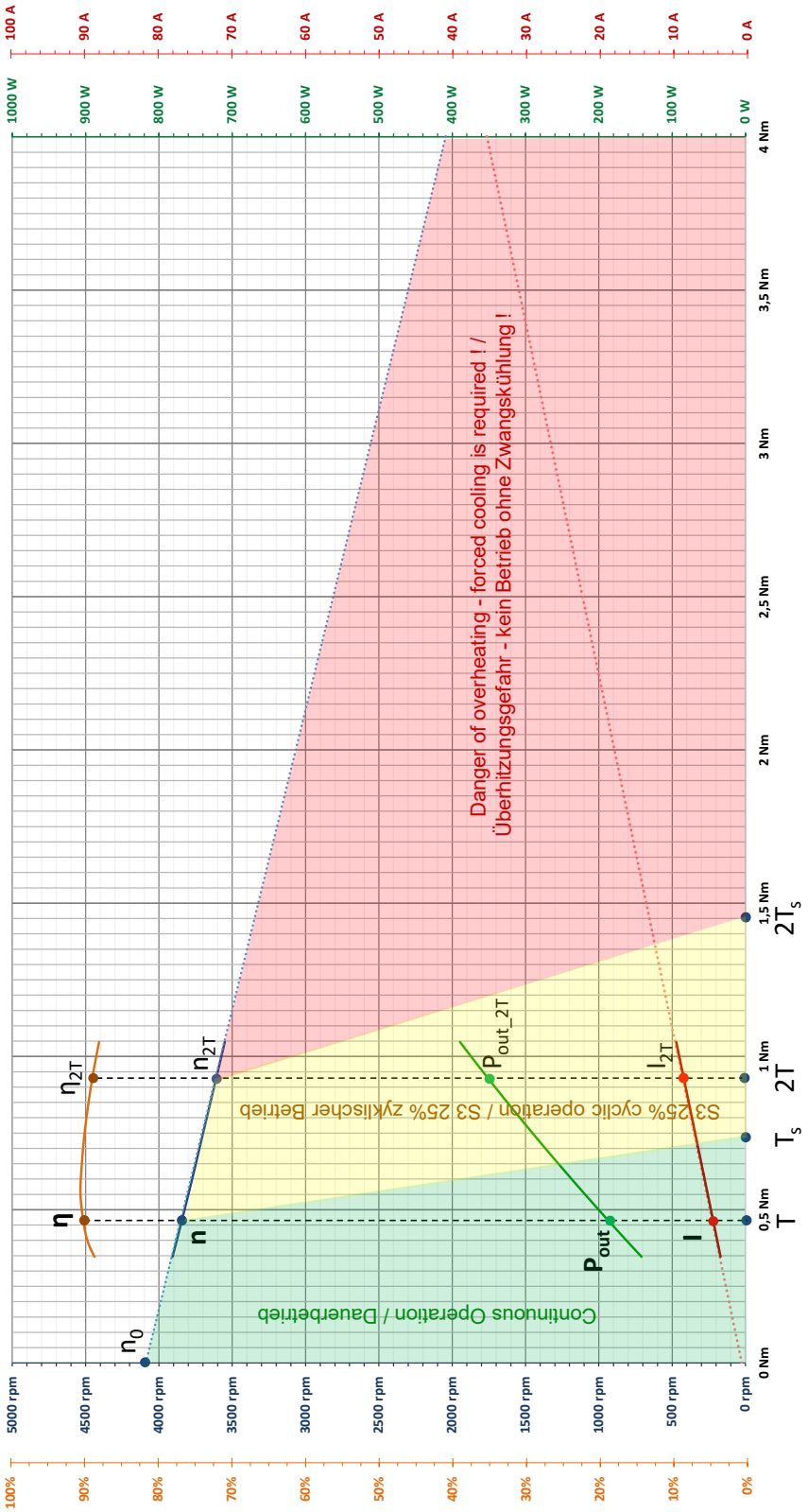


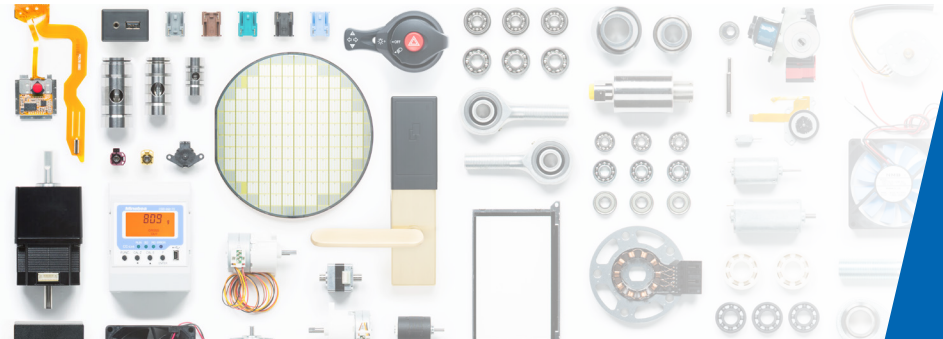
Volt	No Load	Rated operation mode						S3 25% Operation mode				
	Speed [n_0]	Efficiency [n_{max}]	Torque [T]	speed [n]	current [I]	Power [P_{out}]	Efficiency [n_{2T}]	Torque [2T]	speed [n_{2T}]	current [I_{2T}]	Power [P_{out_2T}]
48 V	4100 rpm	**90 %**	0.46 Nm	3850 rpm	4.3 A	185 W	89 %	0.92 Nm	3600 rpm	8.1 A	**350 W**

n_0 No load speed
n Rated rotation speed
n_{2T} Rated rotation speed in S3

P_{out_max} Max. Output Power
P_{out} Output Power

T Rated torque
T_s Stall torque

I Rated current
I_s Stall current



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