

Solution details for 0816D012SR + 08/2 1518:1

Your comments

Your Requirements

Motor and Gearhead Preselection (optional)

Motor series	All
Gear series	All

Global settings

Ambient temperature	22	°C
Available diameter	100	mm
Available length	400	mm
Available supply voltage	24	V

Advanced settings

Available current	5	A
Efficiency, min.	10	%
RTH2 Reduction		%

Your entries

Load transmission	Direct rotational
Required load speed	1 1/min
Required load torque	15 mNm

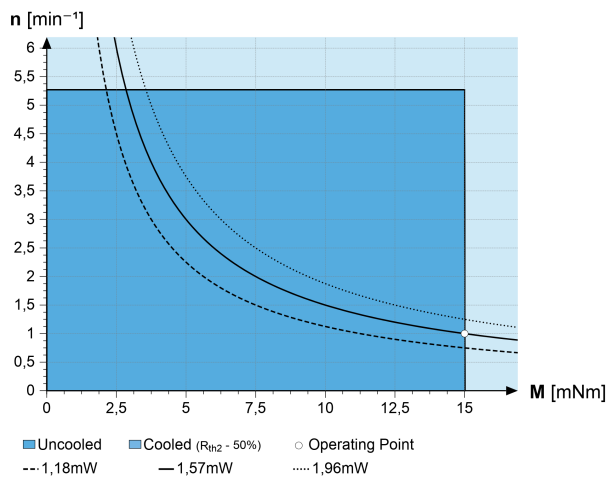
Results of the Load Calculation

Load current	5,59	mA
Load voltage	1,97	V
Motor winding temperature	22,48	°C
Motor housing temperature	22,41	°C
Required motor torque	15,17	μNm
Required motor speed	1.517,66	1/min
Output power	1,57	mW
Efficiency (over all)	14,28	%

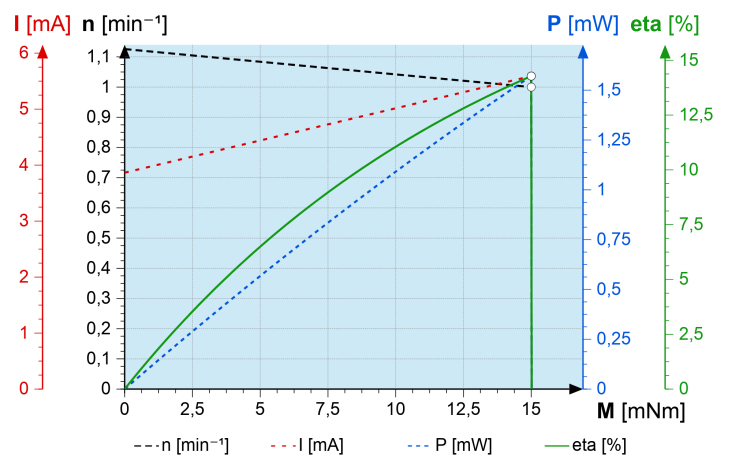
Overall Dimensions

Diameter	8	mm
Length	40,1	mm
Mass	9,1	g

Operating Area



Characteristic curves



Motor Characteristic Data

Nominal voltage	U_N	12	V
Terminal resistance	R	101,8	Ω
Torque constant	k_M	8,8	mNm/A
No load speed	n_0	12.600	1/min
Stall torque	M_H	1	mNm
Speed constant	k_n	1.085	1/min/V
Rotor inductance	L	1,03	mH
Slope of n-M curve	$\Delta n/\Delta M$	12.553	1/min/mNm
Rotor inertia	J	0,049	gcm ²
Mechanical time constant	τ	6,5	ms
RTH2 Reduction		0	%
Efficiency max.	η_{max}	67	%

Gearhead Characteristic Data

Housing material	metal		
Geartrain material	metal		
Backlash at no load	5		°
Bearings on output shaft	sintered bearings, ball bearings		
Shaft load, max. radial	800		mN
Shaft load, max. axial	1.000		mN
Shaft press fit force, max.	5		N
Number of gear stages	9		
Reduction ratio	1.518		:1
Calculated reduction	1517.6624821604		:1
Continuous torque	15		mNm
Mass	4,6		g
Efficiency, max.	66		%
Gearshaft diameter	1,5		mm
Gearhead diameter	8		mm

Contact

Do you have any questions regarding FAULHABER Products, our Services, or other Drive System related issues?
Please contact your local representative or fill out our contact form.
<https://www.faulhaber.com/contact/>

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