

Solution details for 3242G012BX4

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 | 48 | V |

Advanced settings

| | | |
|-------------------|----|---|
| Available current | 20 | A |
| Efficiency, min. | 10 | % |
| RTH2 Reduction | | % |

Your entries

| | | |
|----------------------|-------------------|-------|
| Load transmission | Direct rotational | |
| Required load speed | 5.500 | 1/min |
| Required load torque | 0,028 | Nm |

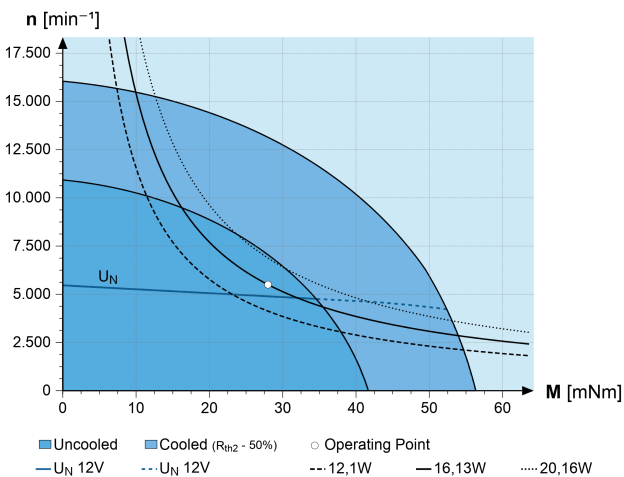
Results of the Load Calculation

| | | |
|---------------------------|-------|-------|
| Load current | 1,61 | A |
| Load voltage | 13,06 | V |
| Motor winding temperature | 67,73 | °C |
| Motor housing temperature | 61,31 | °C |
| Required motor torque | 28 | mNm |
| Required motor speed | 5.500 | 1/min |
| Output power | 16,13 | W |
| Efficiency (over all) | 76,91 | % |

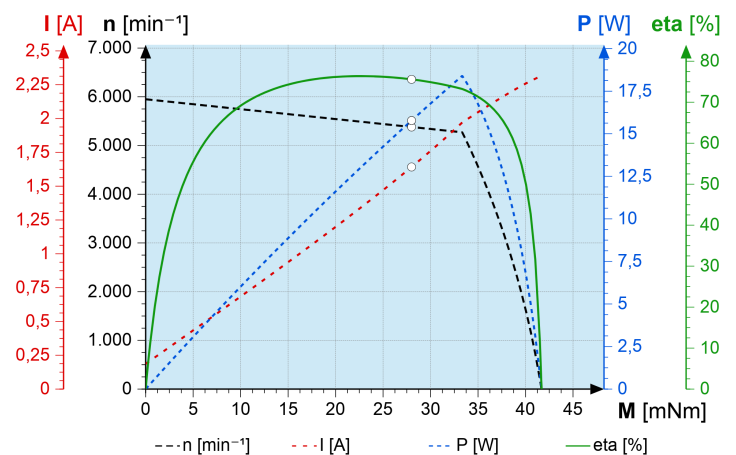
Overall Dimensions

| | | |
|----------|------|----|
| Diameter | 32 | mm |
| Length | 44,2 | mm |
| Mass | 179 | g |

Operating Area



Characteristic curves



Motor Characteristic Data

| | | | |
|--------------------------|---------------------|-------|------------------|
| Nominal voltage | U_N | 12 | V |
| Terminal resistance | R | 920 | m Ω |
| Torque constant | k_M | 20,7 | mNm/A |
| No load speed | n_0 | 5.600 | 1/min |
| Stall torque | M_H | 268,7 | mNm |
| Speed constant | k_n | 461 | 1/min/V |
| Rotor inductance | L | 60 | μ H |
| Slope of n-M curve | $\Delta n/\Delta M$ | 20,5 | 1/min/mNm |
| Rotor inertia | J | 30 | gcm ² |
| Mechanical time constant | τ | 6,4 | ms |
| RTH2 Reduction | | 30 | % |
| Efficiency max. | η_{max} | 78 | % |

Contact

Do you have any questions regarding FAULHABER Products, our Services, or other Drive System related issues?
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