

Article No. : 1FK2204-5AK01-2MA0-Z  
C21+M00+R04



Figure similar

Client order no. :  
Order no. :  
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Remarks :

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| Basic data of geared motor                                     |                                                                                                   |
|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| Motor type                                                     | Permanent-magnet synchronous motor, Planetary gearbox, Natural cooling, Degree of protection IP65 |
| Motor type                                                     | Compact                                                                                           |
| Static torque at output $M_{2,0}$                              | 8.50 Nm                                                                                           |
| Static current $I_0$                                           | 4.4 A                                                                                             |
| Maximum torque at output $M_{2max}$                            | 27.00 Nm                                                                                          |
| Maximum output speed $n_{2max}$                                | 1,675 rpm                                                                                         |
| Moment of inertia motor + gearbox (related to the input) $J_1$ | 1.37 kgcm <sup>2</sup>                                                                            |
| Mass $m$                                                       | 4.47 kg                                                                                           |
| Lubrication                                                    | Standard                                                                                          |

| Rated data of geared motor                       |          |
|--------------------------------------------------|----------|
| SINAMICS S210, 3AC 400V                          |          |
| Rated speed related to the gear output $n_{2N}$  | 375 rpm  |
| Rated torque related to the gear output $M_{2N}$ | 6.60 Nm  |
| Rated power $P_N$                                | 0.259 kW |

| Basic data of gearbox                                                                |                          |
|--------------------------------------------------------------------------------------|--------------------------|
| Gearbox type and size                                                                | Planetary gearbox NLC060 |
| Transmission ratio $i$                                                               | 1 : 4 (Output to input)  |
| Number of gear stages $z$                                                            | 1                        |
| Output torque (fatigue strength) $M_{2N,G}$                                          | 38.0 Nm                  |
| Maximum permissible output torque (short-time, end of fatigue strength) $M_{2max,G}$ | 61.0 Nm                  |
| Emergency off output moment (1000 cycles) $M_{2Em,Off}$                              | 88.0 Nm                  |
| Torsional backlash related to the output $\varphi_2$                                 | 10 '                     |
| Torsional stiffness related to the output $c_{T2}$                                   | 4.2 Nm/'                 |
| Maximum static radial force $F_{Rmax}$                                               | 3,200 N                  |
| Max. average radial force for 20000 h $F_{Req}$ <sup>3)</sup> <sub>20k</sub>         | 3,200 N                  |
| Maximum static axial force $F_{Amax}$                                                | 4,400 N                  |
| Max. average axial force for 20000 h $F_{Aeq}$ <sup>4)</sup> <sub>20k</sub>          | 4,400 N                  |
| Max. average breakdown torque $M_K$                                                  | Nm                       |
| Max. bending moment on the flange to the motor $M_B$                                 | 8 Nm                     |
| Efficiency $\eta_G$                                                                  | 0.97                     |
| Degree of protection gearbox                                                         | IP65                     |
| Gearbox shaft end                                                                    | Plain shaft              |

| Basic motor data                                                                     |                                                             |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------|
| Maximum average torque (incl. derating due to mounted gearing) $M_{0,M}$             | 2.13 Nm                                                     |
| Maximum average continuous current (incl. derating due to mounted gearing) $I_{0,M}$ | 3.91 A                                                      |
| Maximum acceleration torque $M_{max,M}$                                              | 6.82 Nm                                                     |
| Maximum short-time permissible current $I_{max,M}$                                   | 14.20 A                                                     |
| Degree of protection motor                                                           | IP65                                                        |
| Connection type                                                                      | OCC for S210                                                |
| Connector size                                                                       | M17                                                         |
| Encoder system                                                                       | Encoder AM22DQC: Absolute encoder 22 bit + 12 bit multiturn |
| Color of the housing                                                                 | Standard (Anthracite, similar to RAL 7016)                  |

<sup>3)</sup>based on an output speed of 100 rpm and a force application point in the center of the shaft  
<sup>4)</sup>based on an output speed of 100 rpm