

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data 1FK7034-5AK71-1AG0



Client order no. :  
Order no. :  
Offer no. :  
Remarks :

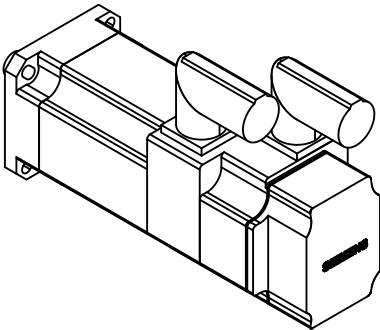
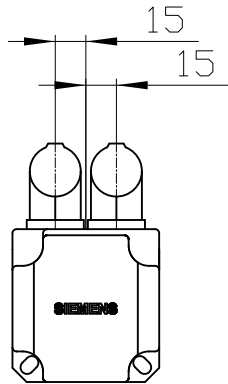
Item no. :  
Consignment no. :  
Project :

| Engineering data            |                               | Mechanical data          |                                                                                  |
|-----------------------------|-------------------------------|--------------------------|----------------------------------------------------------------------------------|
| Rated speed (100 K)         | 6000 rpm                      | Motor type               | Permanent-magnet synchronous motor                                               |
| Number of poles             | 6                             | Motor type               | Compact                                                                          |
| Rated torque (100 K)        | 1.0 Nm                        | Shaft height             | 36                                                                               |
| Rated current               | 1.3 A                         | Cooling                  | Natural cooling                                                                  |
| Static torque (60 K)        | 1.35 Nm                       | Radial runout tolerance  | 0.035 mm                                                                         |
| Static torque (100 K)       | 1.60 Nm                       | Concentricity tolerance  | 0.08 mm                                                                          |
| Stall current (60 K)        | 1.60 A                        | Axial runout tolerance   | 0.08 mm                                                                          |
| Stall current (100 K)       | 1.90 A                        | Vibration severity grade | Grade A                                                                          |
| Moment of inertia           | 0.900 kgcm²                   | Connector size           | 1                                                                                |
| Efficiency                  | 88.0 %                        | Degree of protection     | IP64                                                                             |
| Physical constants          |                               | Design acc. to Code I    | IM B5 (IM V1, IM V3)                                                             |
| Torque constant             | 0.86 Nm/A                     | Temperature monitoring   | KTY84 temperature sensor in the stator winding                                   |
| Voltage constant at 20° C   | 55.0 V/1000*min <sup>-1</sup> | Electrical connectors    | Connectors for signals and power rotatable                                       |
| Winding resistance at 20° C | 4.50 Ω                        | Color of the housing     | without                                                                          |
| Rotating field inductance   | 16.5 mH                       | Holding brake            | without holding brake                                                            |
| Electrical time constant    | 3.70 ms                       | Shaft end                | Plain shaft                                                                      |
| Mechanical time constant    | 1.60 ms                       | Encoder system           | Encoder IC2048S/R: incremental encoder sin/cos 1 Vpp 2048 S/R with C and D track |
| Thermal time constant       | 30 min                        |                          |                                                                                  |
| Shaft torsional stiffness   | 5500 Nm/rad                   |                          |                                                                                  |
| Net weight of the motor     | 3.7 kg                        |                          |                                                                                  |

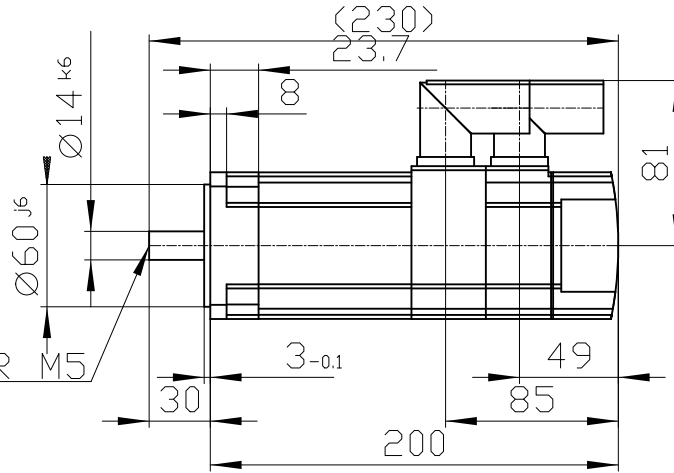
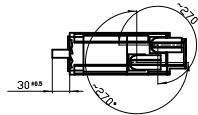
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| Optimum operating point           |           | Recommended Motor Module |         |
|-----------------------------------|-----------|--------------------------|---------|
| Optimum speed                     | 6000 rpm  | Rated inverter current   | 3 A     |
| Optimum power                     | 0.6 kW    | Maximum inverter current | 6 A     |
| Limiting data                     |           | Maximum torque           | 4.90 Nm |
| Max. permissible speed (mech.)    | 10000 rpm |                          |         |
| Max. permissible speed (inverter) | 10500 rpm |                          |         |
| Maximum torque                    | 6.5 Nm    |                          |         |
| Maximum current                   | 8.0 A     |                          |         |

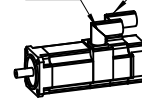
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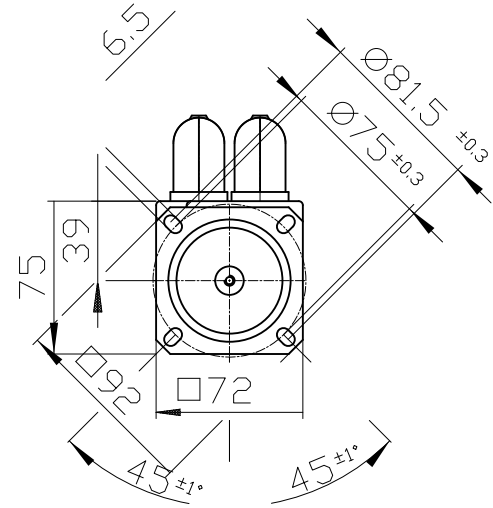
DIN 332-DR M5



Connector size 1 = M23;  
6-pole for power and brake



Connector size M23, 17-pole



|            |          |                    |
|------------|----------|--------------------|
|            |          | -                  |
|            |          | -                  |
| Unit       | mm [in]  | 1FK7034-5AK71-1AG0 |
| Date       | 12/22/22 |                    |
| SIEMENS AG |          | -                  |
| -          |          | DT                 |