

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data                      1FK7062-2AF71-1RG0

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

Item no. :  
Consignment no. :  
Project :

| Engineering data            |                                | Mechanical data          |                                                                                                                                                   |
|-----------------------------|--------------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Rated speed (100 K)         | 3000 rpm                       | Motor type               | Permanent-magnet synchronous motor                                                                                                                |
| Number of poles             | 8                              | Motor type               | Compact                                                                                                                                           |
| Rated torque (100 K)        | 6.0 Nm                         | Shaft height             | 63                                                                                                                                                |
| Rated current               | 4.0 A                          | Cooling                  | Natural cooling                                                                                                                                   |
| Static torque (60 K)        | 7.10 Nm                        | Radial runout tolerance  | 0.040 mm                                                                                                                                          |
| Static torque (100 K)       | 8.50 Nm                        | Concentricity tolerance  | 0.10 mm                                                                                                                                           |
| Stall current (60 K)        | 4.30 A                         | Axial runout tolerance   | 0.10 mm                                                                                                                                           |
| Stall current (100 K)       | 5.30 A                         | Vibration severity grade | Grade A                                                                                                                                           |
| Moment of inertia           | 11.200 kgcm <sup>2</sup>       | Connector size           | 1                                                                                                                                                 |
| Efficiency                  | 91.0 %                         | Degree of protection     | IP64                                                                                                                                              |
| Physical constants          |                                | Design acc. to Code I    | IM B5 (IM V1, IM V3)                                                                                                                              |
| Torque constant             | 1.60 Nm/A                      | Temperature monitoring   | Pt1000 temperature sensor                                                                                                                         |
| Voltage constant at 20° C   | 102.5 V/1000*min <sup>-1</sup> | Electrical connectors    | Connectors for signals and power rotatable                                                                                                        |
| Winding resistance at 20° C | 1.15 Ω                         | Color of the housing     | Standard (Anthracite RAL 7016)                                                                                                                    |
| Rotating field inductance   | 14.6 mH                        | Holding brake            | without holding brake                                                                                                                             |
| Electrical time constant    | 12.80 ms                       | Shaft end                | Plain shaft                                                                                                                                       |
| Mechanical time constant    | 1.49 ms                        | Encoder system           | Encoder AM20DQI: absolute encoder 20 bits (resolution 1048576, encoder-internal 512 S/R) + 12 bits multi-turn (traversing range 4096 revolutions) |
| Thermal time constant       | 35 min                         |                          |                                                                                                                                                   |
| Shaft torsional stiffness   | 37000 Nm/rad                   |                          |                                                                                                                                                   |
| Net weight of the motor     | 9.1 kg                         |                          |                                                                                                                                                   |



Figure similar

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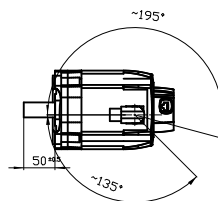
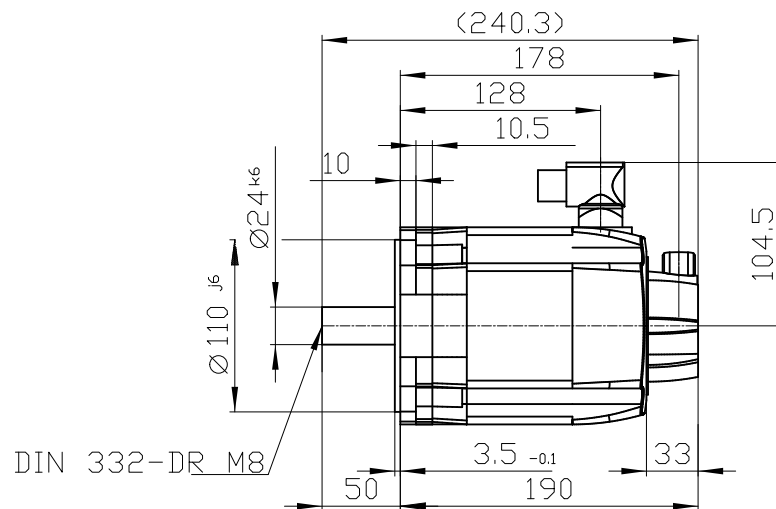
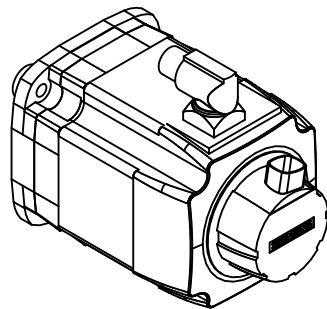
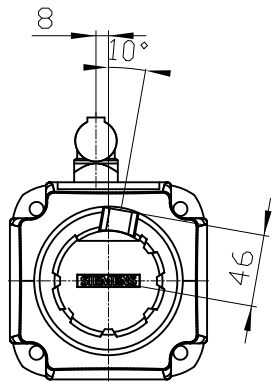
| Optimum operating point           |          | Recommended Motor Module |          |
|-----------------------------------|----------|--------------------------|----------|
| Optimum speed                     | 3000 rpm | Rated inverter current   | 5 A      |
| Optimum power                     | 1.9 kW   | Maximum inverter current | 15 A     |
| Limiting data                     |          | Maximum torque           | 22.10 Nm |
| Max. permissible speed (mech.)    | 7200 rpm |                          |          |
| Max. permissible speed (inverter) | 5600 rpm |                          |          |
| Maximum torque                    | 26.0 Nm  |                          |          |
| Maximum current                   | 19.2 A   |                          |          |

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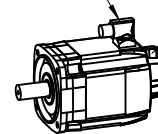
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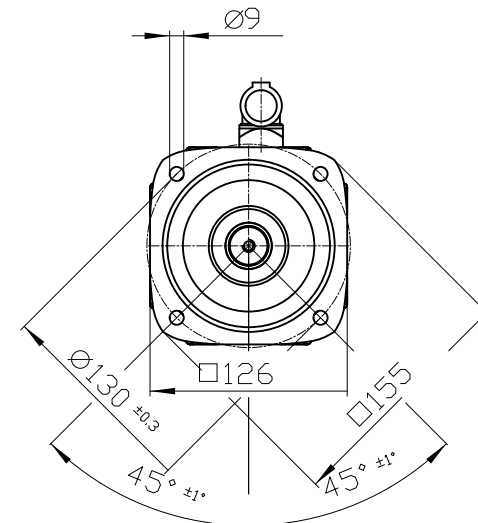
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Connector size 1 = M23;  
6-pole for power and brake



10-pole RJ45 socket



|            |         |                    |
|------------|---------|--------------------|
|            |         | -                  |
|            |         | -                  |
| Unit       | mm [in] | 1FK7062-2AF71-1RG0 |
| Date       | 2/8/23  |                    |
| SIEMENS AG |         | -                  |
| -          |         | DT                 |