

## MLFB-Ordering data 1FK7083-5AH71-1TG0

|                    |                   |
|--------------------|-------------------|
| Client order no. : | Item no. :        |
| Order no. :        | Consignment no. : |
| Offer no. :        | Project :         |
| Remarks :          |                   |

| Engineering data            |                               | Mechanical data          |                                                |
|-----------------------------|-------------------------------|--------------------------|------------------------------------------------|
| Rated speed (100 K)         | 4500 rpm                      | Motor type               | Permanent-magnet synchronous motor             |
| Number of poles             | 8                             | Motor type               | Compact                                        |
| Rated torque (100 K)        | 3.0 Nm                        | Shaft height             | 80                                             |
| Rated current               | 3.6 A                         | Cooling                  | Natural cooling                                |
| Static torque (60 K)        | 13.30 Nm                      | Radial runout tolerance  | 0.050 mm                                       |
| Static torque (100 K)       | 16.00 Nm                      | Concentricity tolerance  | 0.10 mm                                        |
| Stall current (60 K)        | 12.40 A                       | Axial runout tolerance   | 0.10 mm                                        |
| Stall current (100 K)       | 15.00 A                       | Vibration severity grade | Grade A                                        |
| Moment of inertia           | 27.300 kgcm²                  | Connector size           | 1                                              |
| Efficiency                  | 93.0 %                        | Degree of protection     | IP64                                           |
| Physical constants          |                               | Design acc. to Code I    | IM B5 (IM V1, IM V3)                           |
| Torque constant             | 1.05 Nm/A                     | Temperature monitoring   | KTY84 temperature sensor in the stator winding |
| Voltage constant at 20° C   | 67.0 V/1000*min <sup>-1</sup> | Electrical connectors    | Connectors for signals and power rotatable     |
| Winding resistance at 20° C | 0.17 Ω                        | Color of the housing     | without                                        |
| Rotating field inductance   | 2.9 mH                        | Holding brake            | without holding brake                          |
| Electrical time constant    | 17.00 ms                      | Shaft end                | Plain shaft                                    |
| Mechanical time constant    | 1.26 ms                       | Encoder system           | Resolver 2-pole                                |
| Thermal time constant       | 50 min                        |                          |                                                |
| Shaft torsional stiffness   | 105000 Nm/rad                 |                          |                                                |
| Net weight of the motor     | 14.0 kg                       |                          |                                                |

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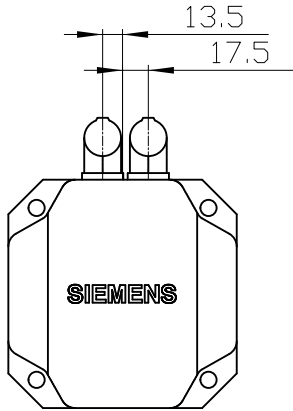
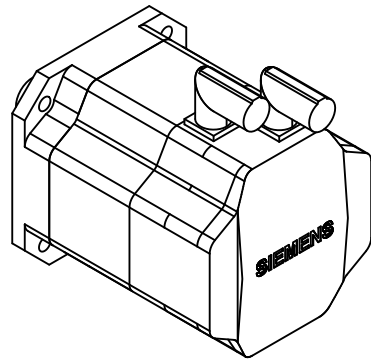
| Optimum operating point           |          | Recommended Motor Module |          |
|-----------------------------------|----------|--------------------------|----------|
| Optimum speed                     | 3000 rpm | Rated inverter current   | 18 A     |
| Optimum power                     | 3.3 kW   | Maximum inverter current | 36 A     |
| Limiting data                     |          | Maximum torque           | 37.70 Nm |
| Max. permissible speed (mech.)    | 6000 rpm |                          |          |
| Max. permissible speed (inverter) | 8600 rpm |                          |          |
| Maximum torque                    | 50.0 Nm  |                          |          |
| Maximum current                   | 52.0 A   |                          |          |

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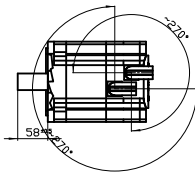
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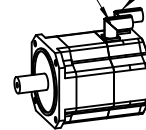
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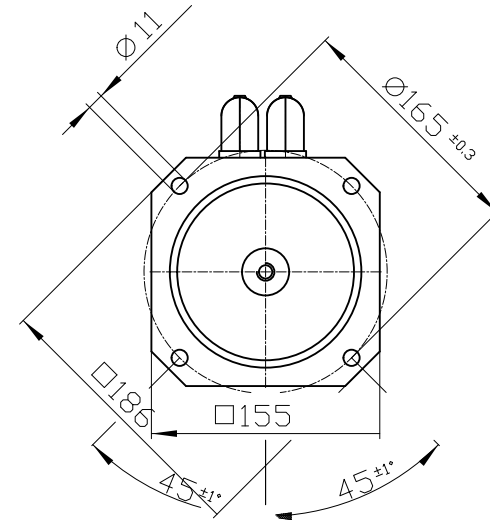
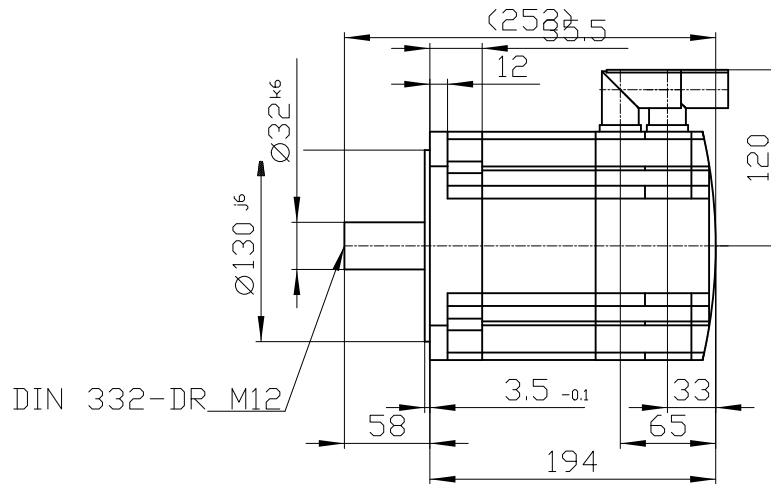
DIN 332-DR M12



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



Connector size M23, 12-pole



|            |         |                    |
|------------|---------|--------------------|
|            |         | -                  |
|            |         | -                  |
| Unit       | mm [in] | 1FK7083-5AH71-1TG0 |
| Date       | 7/13/23 |                    |
| SIEMENS AG |         | -                  |
| -          |         | DT                 |