



Figure similar

### MLFB-Ordering data

**1FK7083-5AF71-1AH5-Z  
J12**

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)      | 10.5 Nm                  | Shaft height             | 80                                                                               |
| Rated current             | 7.4 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)      | 8.60 A                   | Axial runout tolerance   | 0.10 mm                                                                          |
| Stall current (100 K)     | 10.40 A                  | Vibration severity grade | Grade A                                                                          |
| Moment of inertia         | 46.200 kgcm <sup>2</sup> | Connector size           | 1                                                                                |
| <b>Physical constants</b> |                          | Degree of protection     | IP65 and DE flange IP67                                                          |
|                           |                          | Design acc. to Code I    | IM B5 (IM V1, IM V3)                                                             |
|                           |                          | Temperature monitoring   | KTY84 temperature sensor in the stator winding                                   |
|                           |                          | Electrical connectors    | Connectors for signals and power rotatable                                       |
|                           |                          | Color of the housing     | Standard (Anthracite RAL 7016)                                                   |
|                           |                          | Holding brake            | with holding brake                                                               |
|                           |                          | Shaft end                | Plain shaft                                                                      |
|                           |                          | Encoder system           | Encoder IC2048S/R: incremental encoder sin/cos 1 Vpp 2048 S/R with C and D track |
|                           |                          |                          |                                                                                  |
|                           |                          |                          |                                                                                  |
| Recommended Motor Module  |                          |                          |                                                                                  |
| Rated inverter current    | 9 A                      |                          |                                                                                  |
| Maximum inverter current  | 18 A                     |                          |                                                                                  |
| Maximum torque            | 27.80 Nm                 |                          |                                                                                  |



Figure similar

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| Gearbox data                             |                       |                                   |              |
|------------------------------------------|-----------------------|-----------------------------------|--------------|
| Gearbox type                             | Planetary gearbox SP+ | Moment of inertia of gearbox      | 10.300 kgcm² |
| Designation                              | SP 140S-MF2           | Radial output shaft loading, max. | 9900 N       |
| Gearbox shaft end                        | With feather key      | Axial output shaft load, max.     | 9870 N       |
| Gear ratio + steps                       | 16 (2-step)           | Efficiency of gearbox             | 0.94         |
| Motor speed S3-60 %                      | 6000 rpm              | Torsional backlash                | 5 '          |
| Motor speed S1                           | 2900 rpm              | Gearbox weight                    | 17.00 kg     |
| Output torque S1                         | 461 Nm                |                                   |              |
| Rated output torque at duty type S3-60 % | 726 Nm                |                                   |              |

| Limiting data                     |          |
|-----------------------------------|----------|
| Max. permissible speed (mech.)    | 6000 rpm |
| Max. permissible speed (inverter) | 5900 rpm |
| Maximum torque                    | 50.0 Nm  |
| Maximum current                   | 37.0 A   |

| Holding brake         |                        |
|-----------------------|------------------------|
| Holding brake version | Permanent-magnet brake |
| Holding torque        | 22.0 Nm                |
| Power supply voltage  | DC 24 V ± 10 %         |
| Coil current          | 0.9 A                  |
| Opening time          | 200 ms                 |
| Closing time          | 60 ms                  |
| Highest braking work  | 1400 J                 |

| Special design |                                   |
|----------------|-----------------------------------|
| J12            | Mounting of SP+ planetary gearbox |