



OPERATING INSTRUCTION FOR DC-MOTORS

Please keep attention to the fact, that working on the DC-Motors must be done from an electrical specialist per VDE with experiences on DC-Motors and their special dangers.

If the DC-Motor is used in explosive atmosphere keep attention to the appropriate requirements!!! Use original parts from the manufacturer only!!!

Technical data:

- **General:**

- The motor must be directly connected to VDC (nominal voltage +/- 5% range A +/- 10% range B per EN 60034-1).
- if the sinusoidal wave is not free from upper waves, the full load during continuous operation is not possible (thermal overload).
- The exciting of the motor will be done from permanent magnets (depending on motor type the magnets can be spilled) or from field windings. The direct switching „on“ without the use of field exciting or without starting electronic is allowed with manufacturer allowance only
- If the motor has one preferred direction of rotation, it is not allowed to use the other direction. If this is necessary, the brushholder must be adjusted under load from the manufacturer for the other direction (if that does not happen, all warranty and garanty claims will expire).
- The ambient temperature must be higher than 0 °C and lower than 40 °C.
- The location of the motor must not reach 1000 m above sea level. In the case that that the location is above 1000 m or the ambient temperature is higher than 40 °C the full load during continuous operation is not possible (thermal overload).



Transport and storage:

- The lifting and transport must be done in a way, that a damage is excluded.
- Every DC-Motor leaves the company after final testing in good condition.
Before starting the motor must be inspected for damage during transport:
 - visual inspection for damaged parts
 - The rotor must be slightly moveable by hand
- If the motor will not be used after delivery it must be stored carefully.
- After storage above 2 years the bearing must be changed.
- The insulation resistance must be checked per DIN VDE 702-1.
- The brushes must be lifted from the commutator.

• Installation of the motor:

- Keep attention to the data on the name plate in any case!
- During installation of the motor you have to guaranty the insulation class and the enviroment is in coincidence with the regulations.
- If the motor uses a fan, guaranty free entrance and exit for the air.
- Avoid all types of vibrations and hits.
- Please keep attention to the fact, that working on the DC-Motors must be done from an electrical specialist with sufficient experiences and the suitable tools.

• Electrical connection:

- The electrical connection must be done in accordance with the titles of the connection per DIN/VDE 0530-8 (keep attention to the direction of rotation!).
- Motors with a preferred direction of rotation can be used in the other direction after a change of the brush adjustment through the manufacturer only.
- All connection work must be done from an electrical specialist with special knowledges from DC-Motorts.