




1. General

	<p>Transport / storage, mounting, commissioning, operation, maintenance / cleaning, decommissioning and disposal must be carried out by qualified technical personnel, only, who are familiar with and comply with the product information of the motor, add-on parts and the safety notes!! Furthermore the warning and instruction plates must necessarily be observed. In addition, national, local and installation-specific regulations must be complied with.</p> <p>It may be possible that the final product documentation according to the EU/UK guidelines is enclosed in parts, only. The according final product documentation as e.g. installation declaration or motor-type-referring manual/commissioning and maintenance instructions are available at www.baumueller.com/de/download/TechnischeDokumentation</p>
	<p>Any unauthorized reconstruction and changes (including damages) on the electric motor are not permitted due to reasons of safety and warranty. Safety installations may not be demounted or put out of operation at any time. Electric motors have dangers such as rotating, sharp-edged heavy electromagnetic and possibly live parts, even at standstill, as well as possible hot surfaces. Effective safety measures must be carried out. The specified motor characteristics explicitly for environmental, operating, transport and storage conditions must not be exceeded. Disregard or improper behavior can cause severe personal injury and property damage.</p>
	<p>All works must be carried out by qualified electric professionals, only! All works must be carried out only with the system disconnected from the power supply and secured against being switched on again (also auxiliary circuits)! Carry out works only at motor standstill. In DC motors with permanent magnet excitation, voltages > 50 V can occur at the motor contacts when the rotor is rotating. Special regulations for working in electrical systems / on machines must be observed.</p>

2. Intended use

These motors are intended for industrial installations/machines. Dependent of the motor type and characteristics the listed EU/UK directives and standards of the associated EU/UKCA Declaration of Incorporation and EU/UKCA Declaration of Conformity apply.

The operation of the machine or the system in its intended use must meet the safety requirements of the EU/UK EMC Directive. Proper installation (e.g. spatial separation of signal lines and power cables, shielded lines and cables, sufficient grounding, measures against bearing currents, etc.) is the responsibility of the installer of the system / the system provider. The EMC instructions of the motor, converter, encoder and brake manufacturers must be observed.

In all the work described below, the specifications belonging to the specific product, such as the "Start-up and maintenance, commissioning and maintenance instructions" or "operating instructions with safety information", supplement these "general operating instructions with safety information". Only after all this product information is fully known and applied the product may be used!

3. Transport, storage

For motors with cylindrical roller bearings, the rotor must be blocked at the shaft end with a transport lock to prevent transport damage. For transport, use suitable transport and load handling equipment which complies with the safety requirements. Remove any transport locks before commissioning. If motors are transported or stored temporarily, ensure that the environment is dry and free of dust and vibrations ($V_{\text{eff}} \leq 0.2 \text{ mm/s}$; bearing standstill damage). Suitable corrosion protection measures must be taken, as the standard packaging is only designed for delivery. In particular, the treatment recommendations for bearings, seals and collectors incl. carbon brushes must be implemented for intermediate storage.

4. Mounting → section 5 generally applicable

Accurate motor alignment is of major importance to avoid bearing damage, vibrations and material breakage. Ensure even support, level and friction-locked foot or flange mounting and exact shaft alignment. Avoid resonances caused by the structure, assess if necessary. Only mount or remove output elements (belt pulley, coupling, etc.) using suitable devices "without axial shaft force input" (e.g. heating) and cover them with a suitable protective device. Avoid inadmissible stresses (e.g. belt tension) (see catalog, Technical Specifications). The balancing variant is indicated on the shaft mirror or rating plate (H = half-wheel balancing, F = full-wheel balancing). Before mounting the output element, the required balancing condition (cf. DIN ISO 1940) must be matched from motor to the machine!

We recommend a protective cover for permissible designs with the shaft end pointing downwards; for shaft ends pointing upwards, measures may be necessary to prevent water from entering the bearing.

Do not interrupt the ventilation of the motor! Harmful (e.g. chemical) or harmful (e.g. temperature, humidity) circulating/exhaust air, also from neighboring units, must not be drawn in. For outdoor installation, the manufacturer must be consulted.

5. Commissioning, decommissioning

Work in the immediate vicinity is only permitted if the motors are permanently secured, fastened, at a standstill and de-energized!

This also applies to work on auxiliary circuits (e.g. standstill heating, brake, fan, etc.).

Due to the risk of fire, the connection must be made in such a way that a permanently safe electrical connection is maintained (e.g. observe TAM00714, avoid exposed wire ends, ensure proper crimping). Ensure a safe protective conductor connection. Maintain sufficient clearances between bare live parts and between them and earth.

There may be no loose parts, contamination or liquids in the terminal box. The terminal box must be securely closed.

For commissioning, decommissioning and operation of accessories (e.g. encoders, brakes, temperature sensors, air flow monitors, etc.), the relevant product information must be observed and, if necessary, requested from the manufacturer. In the case of motors with a brake, this must be checked for safe function before commissioning or operation.

Never start up or shut down a motor or operate it without the necessary protective equipment and monitoring. Check the direction of rotation in the uncoupled state. The motor may not be used in the danger zone of other equipment or machines. For test operation without output elements, keys must be secured against loosening.

6. Operation, failure → section 5 generally applicable

During operation within the range of the bearing positions in coupled state the vibration strength according to DIN ISO 10816 must be observed.

In case of deviations from normal operation - e.g. increased temperatures, noises, smoke, brush fires, vibrations - the motor must be switched off, the cause determined and, if necessary, the manufacturer must be consulted.

Condensation in the motor is generally harmful and must be prevented.

Brake and encoder function as well as motor temperature, if necessary coolant or air suitability must always be monitored and complied with.

7. Service, cleaning and maintenance

Depending on the dirt level incl. carbon abrasion, air ducts (if necessary filters, motor interior) and surfaces must be cleaned regularly and properly, and suitable safety measures must be agreed upon with the manufacturer. Explicitly, to commutators / carbons as well as bearings with the option of re-lubrication (oil / grease) or to seals, the information according to maintenance instructions, individual specifications (such as dimension sheet) and information signs on the motor are to be observed. Bearings with re-lubrication device must be re-lubricated if the motor is running.

8. Dispose

The motor including the accessories must be disposed according to the national and local regulations. This may apply to auxiliary materials such as coolants and lubricants, as well. The WEEE guideline is to be observed.