Product datasheet

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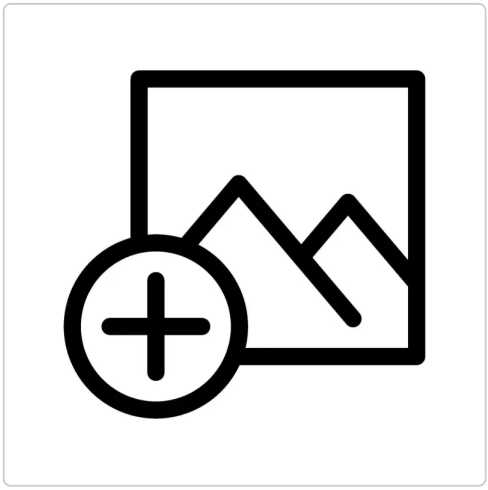
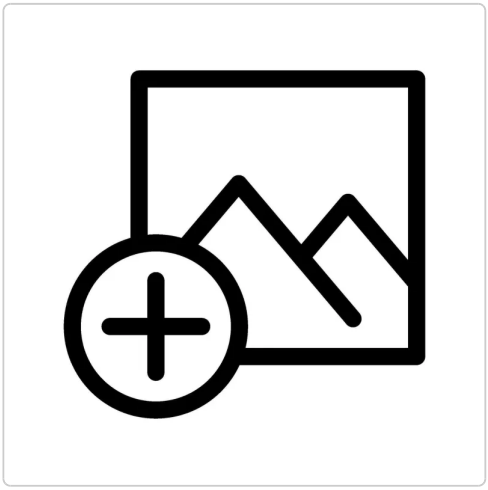
MOTENERGY - ME1004 - 48V DC Motor 8kW





Reference : MOT-ME1004-48V-8KW

Brand : MOTENERGY

Options :

No variants

3D Model : Available

EAN-13 : 3765304839066

The MOTENERGY ME1004, also identified as the ME1910, is a 48V brushed DC motor based on permanent-magnet PMDC technology, intended for simple traction architectures where 8 kW, 200 A continuous current and 400 A for 60 seconds are required. With a rated speed of 3100 rpm, a maximum speed of 3700 rpm and a 1-inch output shaft, this 48V DC motor is suited to light electric conversion projects, replacement of an existing power unit and integration into utility machines or electrified lawn tractors.

This 48V DC motor combines brushed construction, a possible supply range from 12 to 48 V DC and a deliberately simple integration logic. The MOTENERGY ME1004 / ME1910 can be implemented in a straightforward traction chain with battery, fuse and contactor, making it a relevant 48V conversion motor when the main goal is to secure a mechanical and electrical replacement without imposing a complex control architecture from the first phase of the project.

Direct 48V traction

48V DC motor, 8 kW, for electric conversion

The ME1004 / ME1910 is positioned as a high-current 48V DC motor for integrators looking for a traction component that is readable, robust and relatively straightforward to connect. In this configuration, the 200 A continuous rating and the 400 A allowed for 60 seconds should not be seen as simple catalogue values: they determine the full sizing of the battery, upstream protection, cable sections, connections and the main contactor. For an engineering project, the value of the product lies in this architectural clarity: a 48V 8 kW DC motor that remains usable in a simple electric conversion logic, provided that current handling and start-up transients are treated seriously.

Functionally, this is a 48V brushed permanent-magnet motor intended for traction or replacement of an existing power unit on a light machine. This distinction is important to set the product apart from other 48V motorizations based on very different technologies or power levels. Here, the positioning is that of a high-current 48V PMDC motor designed for straightforward integration, with a power and current level consistent with more demanding technical conversions than

light small-mobility uses.

Motor references

Brand	MOTENERGY
Main model	ME1004
Associated designation	ME1910
Motor type	Brushed DC motor
Technology	Permanent-magnet PMDC motor
Rated voltage	48 V DC
Input voltage range	12 to 48 V DC
Continuous current	200 A
Maximum current	400 A for 60 seconds
Power	8000 W
Rated speed	3100 rpm
Maximum speed	3700 rpm
Maximum efficiency	88 %
Output shaft	1 inch
Weight	13.80 kg
TARIC code	85013200
Country of manufacture	China
Explicitly mentioned use	Conversion of lawn and garden tractors to electric propulsion
Minimum integration architecture	Battery, fuse, contactor

1-inch shaft

48V motor with 1-inch shaft for existing drivetrains

One of the most practical strengths of the Motenergy ME1004 motor lies in its 1-inch shaft. In a lawn tractor conversion project, a small utility vehicle or equipment with an existing drivetrain, this often reduces adaptation work on the pulley, hub or coupling side. This advantage must not hide the necessary checks: full drivetrain alignment, control of radial loads, compatibility of the reduction ratio with 3100 rpm rated speed and 3700 rpm maximum speed, and validation of the motor support interface. In practice, a 48V motor with a 1-inch shaft is only truly valuable if the full mechanical adaptation avoids misalignment and parasitic loads on the shaft.

Power chain

Battery, fuse and contactor for a 48V 200A motor

The fact that this 48V DC motor can be used in a minimum architecture with battery, fuse and contactor materially changes the project scope. In a simple conversion, this makes it possible to move quickly on an initial power chain without immediately imposing a sophisticated controller. In return, the absence of fine control reduces the possibilities for speed modulation, acceleration ramping and active current limiting. For this reason, the 48V 200A motor must be

considered as a simple but demanding traction component: the more the application involves loaded starts, abrupt torque variations or repeated restarts, the more the quality of electrical sizing becomes decisive for connection thermal behaviour and operating stability.

Duty cycle

88% efficiency and heavy-load operation

The stated maximum efficiency of 88% strengthens the relevance of the product in applications where a simple conversion chain is desired while limiting losses. This performance must nevertheless be read in the actual operating context. On a 48V brushed PMDC motor, useful service life also depends on cooling quality around the motor, time spent at low speed under heavy load, the repetition of peaks close to 400 A and the condition of the brushes and commutator over time. In other words, the Motenergy ME1910 should not be selected solely on its 8 kW power, but on its compatibility with the mission cycle, the protection strategy and the maintenance accessibility expected on the final machine.

Target machines

Electric conversion of lawn tractors and light machines

In the electric conversion of a lawn tractor or a light machine, this 48V replacement motor provides a straightforward response to a common need: retaining an existing or similar drivetrain while moving to a DC architecture that is easier to understand and protect. The combination of 48 V, 200 A, 8 kW and a 1-inch shaft forms a coherent set for projects that prioritize integration clarity, the availability of simple power components and a gradual system validation process.

The ME1004 / ME1910 is also suitable for light utility platforms or simple handling equipment, provided that a low-complexity traction chain is acceptable and that the power supply is correctly sized. Its value lies less in covering every possible use than in properly addressing a specific need: a 48V DC motor for simple traction, with high current capability, useful mechanical reference points and possible implementation without sophisticated control electronics from the outset. For an engineering office, the real benefit of the product also lies in its readability during test phases. The 200 A continuous rating and 400 A for 60 seconds give a clear framework for choosing the contactor, defining protection, setting cable section and checking battery capability. This direct reading saves time when the goal is first to validate mechanical behaviour and replacement feasibility before refining control, energy management or user ergonomics.

Contactor, battery, shaft

Which contactor should be specified for this 48V DC motor?
The contactor choice must be consistent with 200 A continuous operation and peaks that may reach 400 A for 60 seconds. Sizing must be based on the real duty profile, not on nominal voltage alone.

Can this 48V DC motor be used without a controller?
Yes, in a simple replacement architecture with battery, fuse and contactor. However, this limits fine control of start-up, speed and current surges.

Why is the 1-inch shaft important?
This dimension makes adaptation easier on existing or similar drivetrains, especially in lawn tractor or light machine conversion. It does not remove the need to validate alignment, radial loads and the reduction ratio.

Which battery should be used to supply a 48V 200A motor?

The battery must above all be able to withstand start-up current surges, because the motor can be used without a controller. Battery discharge capability, connection robustness, main fuse rating and voltage drop under load must therefore all be checked.

The MOTENERGY ME1004 / ME1910 is a relevant 48V DC motor for projects seeking a simple, readable and technically workable traction chain built around a high-current 8 kW brushed motor. Its real value depends not only on nominal characteristics but on the consistency of the full integration between drivetrain, battery, protection, cabling and actual duty cycle. Final validation before commissioning must therefore always be carried out on the complete system, under the responsibility of the integrator.

Frequently associated searches for this product: 48V electric motor, 48V motors, 48V traction motor, 48V permanent magnet motor. See the corresponding category

Sheet written by **Camille F.** and reviewed by the EVEA Distribution technical team — Last updated on 03/04/2026.