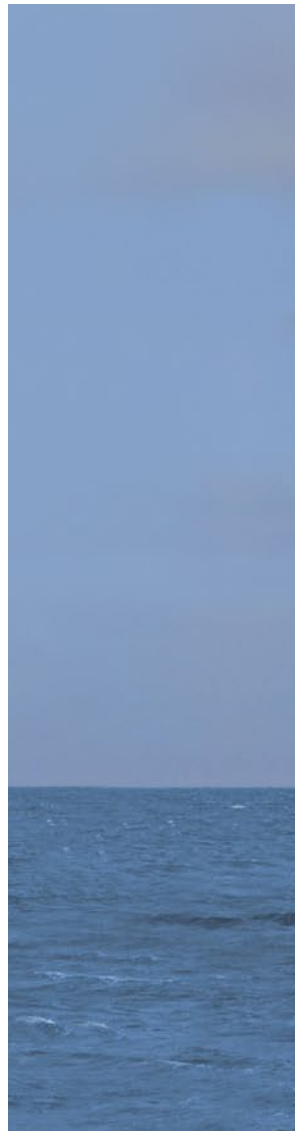


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For more information, please contact
your local ABB representative or visit

new.abb.com/drives/segments/winches
new.abb.com/motors-generators/segments/marine



MARINE

Drives and motors for electrically driven deck machinery and offshore winches



Performance. Speed. Reliability. Safety.

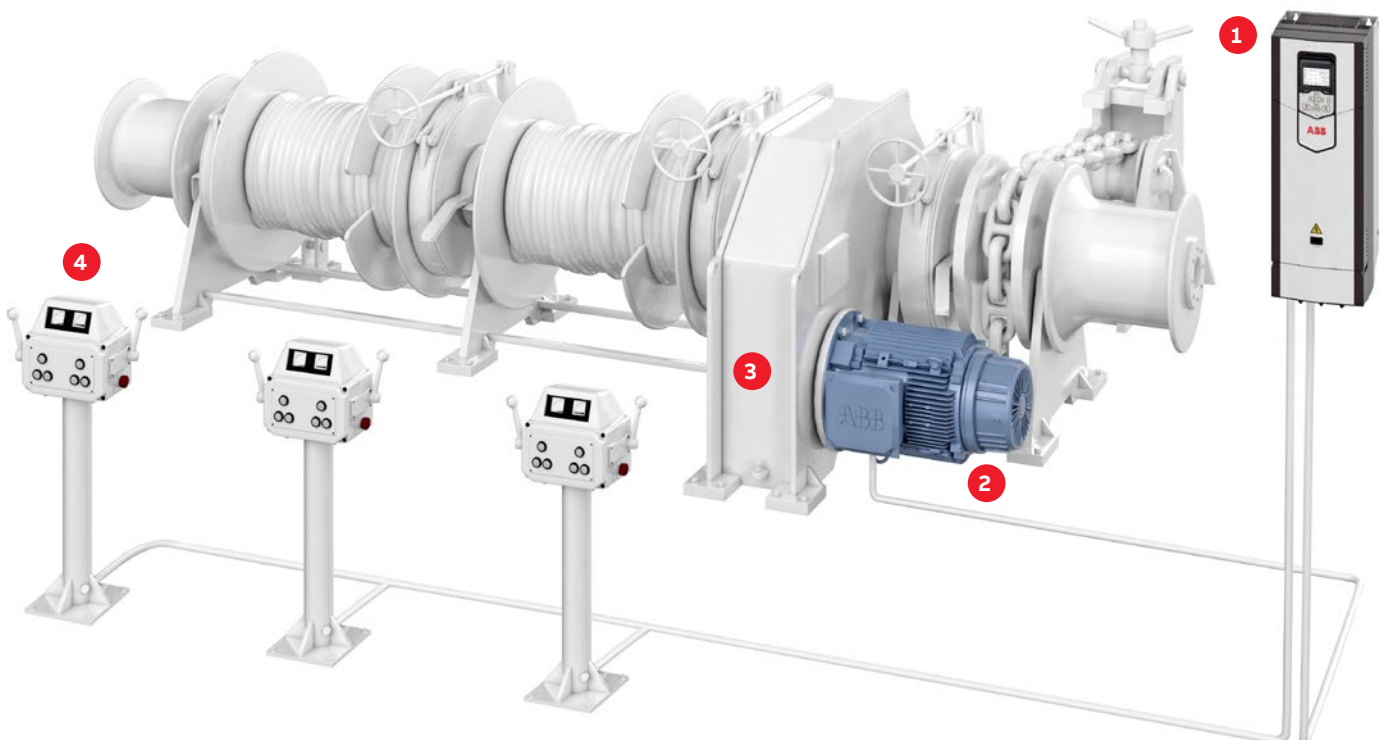
Everything counts.

With the help of application expertise gained over many years, we've developed drives and motors that enable precise, smooth, dependable and safe winch operation, while reducing wear on the ropes and winch. Because everything counts.

Anchoring/mooring winches

Built-in winch control program includes features like anchor control, hand mooring mode, automooring mode, mechanical brake control, and master-follower operation for controlling multiple winches.

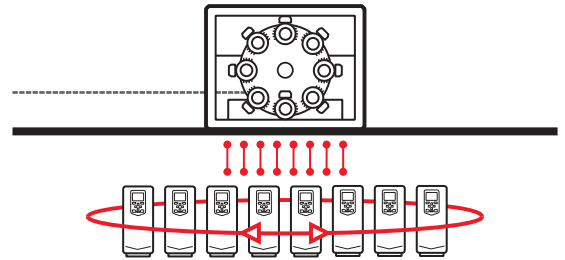
- 1 Winch control included in the drive**
– no need for external controllers
- 2 Full control of speed and torque**
without a shaft encoder
- 3 Automooring is possible**
without a load cell sensor
- 4 Multiple control stands**
connect directly to the drive





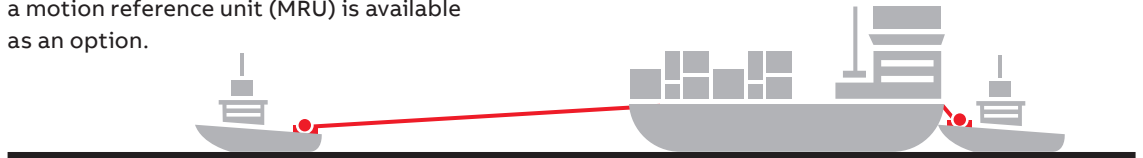
Multi-motor winches with redundant master-follower control

Multiple drives can communicate with each other in fully redundant control mode via a D2D link. Master and followers can be changed on the fly to ensure seamless winch operation. Mechanical brake control also works in redundant mode.



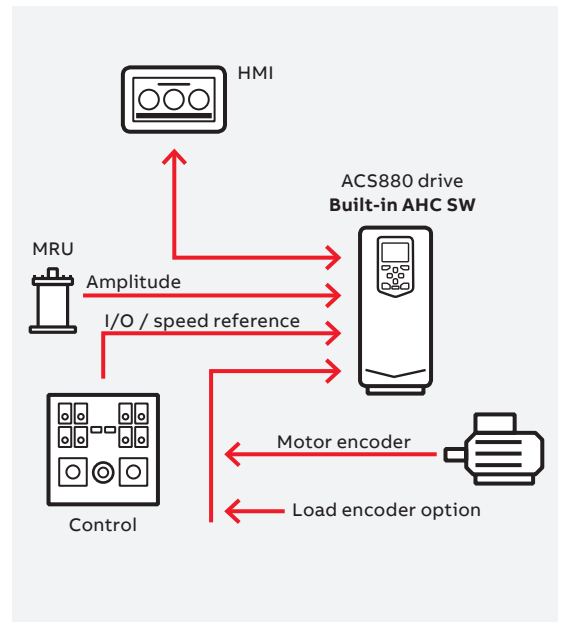
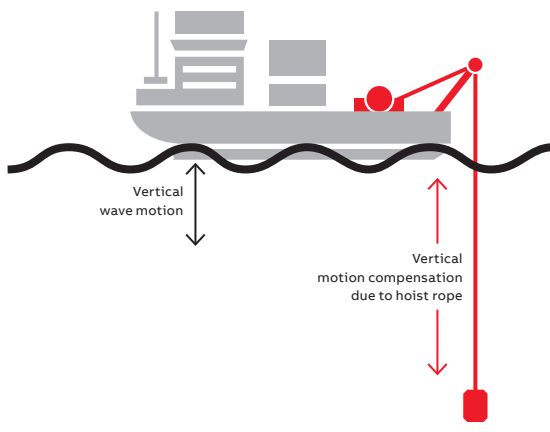
Tugboat towing winches

Escort and push mode operations for safe tugboat control. Roll compensation with a motion reference unit (MRU) is available as an option.



Active Heave Compensation (AHC)

AHC built into the drive for controlling remotely operated vehicle (ROV) and launch and recovery system (LARS) winches. MRU is connected directly to the drive via Ethernet interface.



ACS880 drives with built-in winch control software

Minimize your engineering time

Our marine-certified ACS880 drives provide reliable operation and performance where it's needed the most. They offer accurate speed and torque control for wide range of motor types, and are suitable for new installs and retrofits of existing winches.



ACS880 drives are available in the 0.5-5,600 kW range and voltages of 400, 440, 500 and 690 V. Enclosure class options are IP20, IP21 and IP55.



Removable memory unit

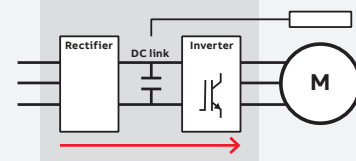
Stores the drive's software and settings for fast and easy commissioning and maintenance.

ACS880 marine winch control software ordering codes

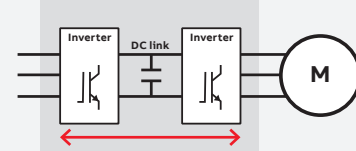
- For deck machinery, anchoring/mooring and multi-motor winches: +N5100 (multi-motor version available as limited release).
- For offshore, tugboat and AHC winches: +N5800 (limited release).

Braking options

Dynamic braking/resistors



Regenerative braking



Key benefits of ACS880 drives for marine and offshore winches

- Built-in anchor, hand mooring and automooring parameter sets with +N5100 software, tugboat and AHC parameter sets with +N5800 software.
- Stand-alone operation with a single winch system, and master-follower operation for controlling multiple winches.
- Smooth winch startup, eliminating motor startup voltage and current peaks on the vessel's electrical network.
- Stepless speed and torque operation reduces winch noise.
- Adaptive block programming inside the drive for creating custom features.
- Control various motor types including induction, permanent magnet and synchronous reluctance motors.
- Fulfills marine and offshore requirements, and the design and operation comply with regulations from all major classification societies, including ABS, BV, CCS, ClassNK, DNV GL, KRS, Lloyd's Register and RINA. You can download the marine type approval certificates issued for ACS880 drives from our website:

new.abb.com/drives/segments/marine/marine-type-approvals



Compact HES880 drives for harsh conditions

With its high vibration tolerance and IP67 rating, the liquid-cooled HES880 heavy-duty electric drive offers a robust solution when maximum efficiency, redundancy, weight and size are critical. The drives include a built-in control for mechanical brake and they accept feedback from incremental encoders. Main winch application software shall be programmed in an external PLC.



HES880 drives are available with power range up to 600 kW and voltages of 230 - 500 V.

Low voltage marine motors for winches

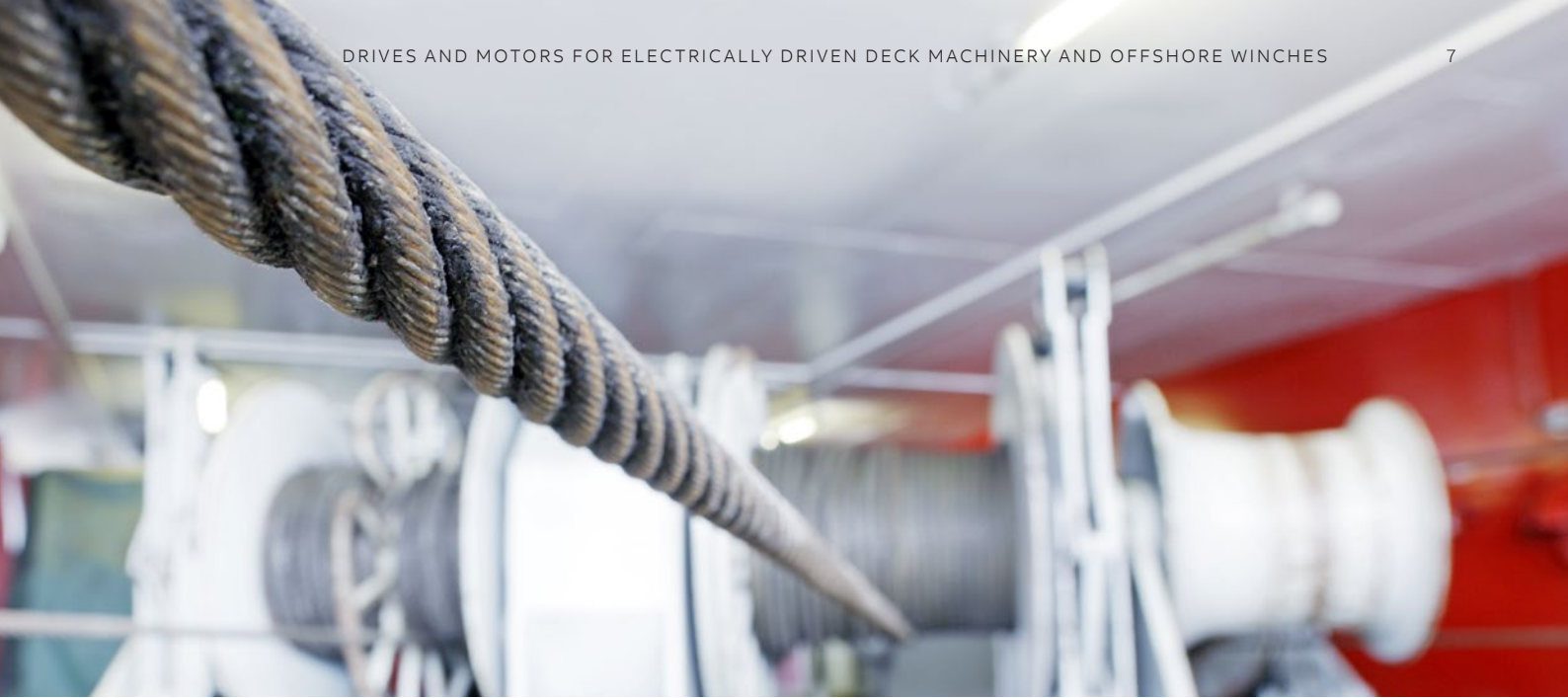
Made to last in demanding conditions

Our range of open-deck motors are designed to withstand salt, humidity and waves washing over the deck. They deliver reliably high performance for your winches, day after day.

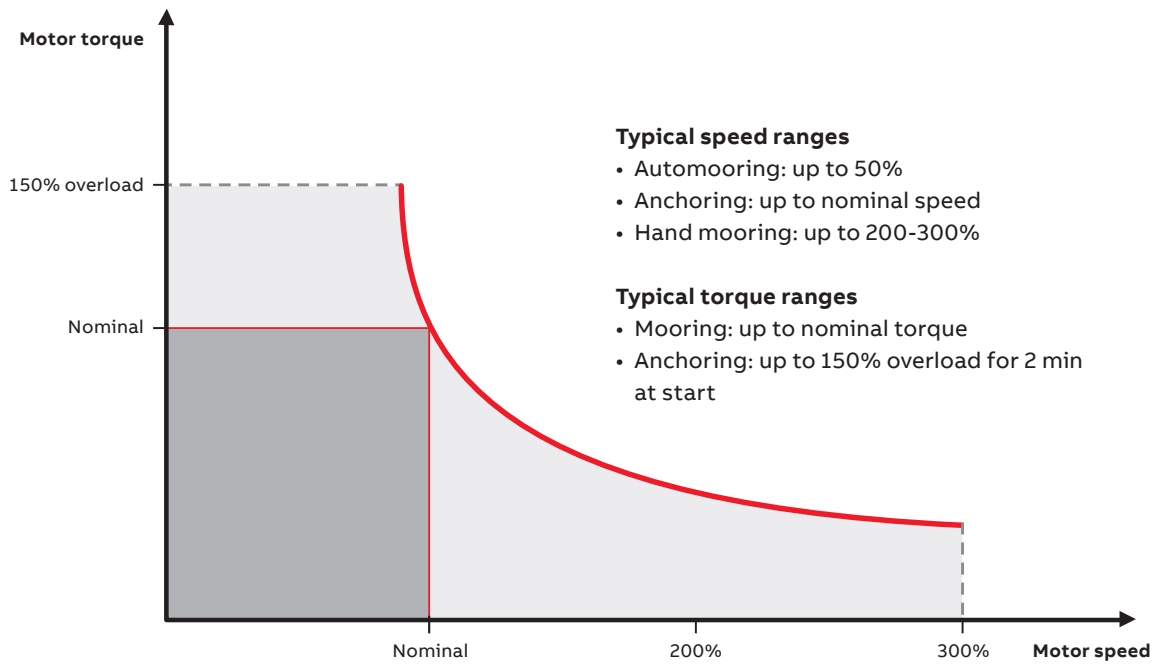


Key benefits of ABB's low voltage brake motors for winches

- Our motors are designed to comply with stringent safety criteria while providing the highest reliability. At the same time, special attention is paid to marine classification requirements.
- ABB Marine Process Performance brake motors consist of three flexible designs for customized configurations: 1) totally enclosed non-ventilated TENV (IEC 410); 2) totally enclosed fan cooled TEFC (IEC 411); 3) enclosed forced ventilated TEFV (IEC 416).
- IP56 open deck protection (highest protection class for motors, standard IP56 is not adequate).
- Built-in marine IP67 brake options from all major brake manufacturers.
- Selection of encoders designed for harsh marine and offshore conditions.
- Wide range of painting systems, including the NORSOK-approved system.
- Availability of watertight enclosure IP67 open deck-type terminal box.
- Robust, low-temperature-resistant designs can be supplied for vessels that operate in Arctic or Antarctic waters. Ex-protected versions are also available.



Typical electrically driven winch motor performance



Available motor technologies for winches – induction, permanent magnet and SynRM motors

