Press Release

New features and functions available on ACS880 drives increase user benefits

A range of new features for ABB's all-compatible ACS880 industrial drives meet increasing market demands. The features are part of ABB's continuous development, providing additional user benefits, through increasing functionality and flexibility in the drives and their motor control technology.

The new features cover a wide range of customer needs, including low harmonic management and capturing regenerative energy in cabinet-built single drives, as well as the regenerative rectifier unit (RRU) for use in multidrives. Certifications for marine vessels and for explosive environments are available, and simplified drive service and information access can now be done through mobile devices.

Capture and regenerate braking energy with cabinet-built single drives
Capturing braking energy provides clear cost savings for the user. The new ACS880 cabinet-built regenerative single drives are complete compact regenerative drive solutions. The drive offers a power range from 250 to 3200 kW and voltage range from 380 to 690 V. Enclosure classes extend from IP22 as standard, with IP42 and IP54 available as options. Braking energy is regenerated and returned to the drive for further distribution forward to the supply network, instead of being lost as heat. This gives more efficient energy savings compared to mechanical and resistor braking. Direct torque control (DTC) technology seamlessly transitions between motoring and generating modes. The active supply unit boosts output voltage, which guarantees full motor voltage even when the supply voltage is below nominal. This regenerative drive can provide unity power factor, low network harmonics, and a wide selection of features including built-in application control programs.

Manage network harmonics with cabinet-built single drives
This new ACS880 cabinet-built low harmonic single drive produces a low level of harmonics. It is the first in the ACS880 drive series designed for weak supply networks where harmonics can be critical. The drive offers a power range from 250 to 3200 kW and voltages from 380 to 690 V. Enclosure classes extend from IP22 as standard, with IP42 and IP54 available as options. Compared to standard diode supply solutions, the drive produces exceptionally low harmonics, without needing external filters or multi-pulse transformers. By successfully managing harmonics the drive reaches unity power factor. The active supply unit in the drive can boost output voltage, which guarantees full motor voltage even when the supply voltage is below nominal. The low harmonic drive has a wide range of built-in features including ABB's premium direct torque control (DTC) technology.

Regenerative rectifier unit for multidrives
The new ACS880 regenerative rectifier unit (RRU) is the latest newcomer of supply units to the ACS880 multidrives series. It is intended for applications where regeneration is needed and harmonics of the diode supply are according to requirements. The RRU is equipped with a separate L-filter module. Compared to the IGBT supply unit (ISU) the RRU can get more power out of the same power modules. This is achieved by limiting IGBT switching to one pulse per cycle. As a result it gives a more cost-efficient solution for the regenerative supply. RRU operation is also reliable during voltage dips.

Marine certification as essential equipment on maritime vessels
Marine-type approval is available for the wall-mounted ACS880 single drives. Certification by leading classification societies (ABS, BV, CCS, DNV GL, Lloyd's Register, NK and RINA) ensures compliance with major international standards. The user gets clear benefits as all required tests have been performed for the drive's use in marine environments. Certified marine drives fulfill marine and offshore requirements for winches, cranes, pumps, compressors, HVAC, thrusters and propulsion systems. Marine vessels use drives to help save energy and fuel, reduce noise and enable accurate speed and torque control. Other benefits include increased reliability and reduced maintenance. This

drive is produced for demanding conditions and process control needs, and its compact size saves space onboard. Wall-mounted single drives offer three enclosure classes (IP20, IP21 and IP55), fulfilling requirements such as ambient temperature rating, vibration, voltage and frequency variations, EMC and harmonics. The drive's coated boards improve reliability in harsh marine environments.

Certification for explosive atmospheres
ABB motors for explosive atmospheres are type tested and ATEX and IECEx certified in variable speed operation together with ACS880 industrial drives. ABB's extensive experience with explosive atmospheres and comprehensive motor and drive testing helps users optimize drive selection without over-dimensioning. The drive's ATEX certified built-in protection functions, a wide range of options which are easy to program, and scalable control performance together with ABB motors make this an ideal choice for safe operation in explosive atmospheres.

Fast, easy service and information using mobile devices
The ACS880 industrial drives offer built-in service functionalities for gathering service information. By downloading ABB's new Drivebase app the user can easily link the drive to ABB's service support. Should a fault occur with the drive, a QR code is generated through the assistant control panel on the drive. The user can scan the QR code with a mobile device, which then accesses the ABB service site. This rapidly gives critical information about the error and troubleshooting recommendations, rather than having to page through a manual.

ABB continues to develop technology to both simplify drive use and ensure that the customers get increased added value from the products. Whatever the application, ABB has the right drive to boost reliability, productivity and efficiency.

ABB (www.abb.com) is a leader in power and automation technologies that enable utility, industry, and transport and infrastructure customers to improve their performance while lowering environmental impact. The ABB Group of companies operates in roughly 100 countries and employs about 145,000 people.

For help with any technical terms in this release, please go to: www.abb.com/glossary

For more information please contact:

ABB Oy
Marketing Manager
Ere Jääskeläinen
Low Power AC

P.O.Box 184
FI-00381 Helsinki
ere.jaaskelainen@fi.abb.com
Tel: +358 (0)10 22 22231

ABB Oy
Marketing Manager
Pasi Pohjalainen
Low Voltage High Power Drives

P.O.Box 184
FI-00381 Helsinki
pasi.pohjalainen@fi.abb.com
Tel: +358 (0)10 22 23820

Photo:

Caption: Cabinet-built regenerative single drive, ACS880-17

Photo:

Press Release

Caption: Cabinet-built low harmonic single drive, ACS880-37