



LOW VOLTAGE AC DRIVES

ACH580-01 IP66/Type 4X drive, 5.5 to 22 kW

Built for extreme environments



Your facility and applications are built to endure, so why settle for less when it comes to your HVACR control equipment? Designed for extreme conditions, the ACH580 IP66/Type 4X drive offers reliability, ease of installation, and peace of mind.



Designed for harsh environments

Designed for operation in rain, heat, cold, salt spray, dust and other extreme environments, this drive is fully sealed, providing protection against external elements. Its design offers exceptional corrosion resistance to biocides typical for cooling tower applications. Additionally, the ACH580-01 is UV-resistant.

Cost savings

Typical applications for this package include rooftop air handling units, cooling towers, exterior exhaust fans, outdoor pump skids and more. Mounting the IP66 drive close to your application can reduce site installation costs and minimize system downtime due to its integrated outdoor-rated design.

Bluetooth capability

With ABB's optional Bluetooth control panel for HVACR, easily commission and monitor the drive from a distance. This not only improves convenience but also enhances safety by allowing staff to work with the drive from a safe location.

**ENGINEERED
TO OUTFIT**

Technical data

ACH580 with +B063 option	
Power range	5.5 to 22 kW
Voltage	3-phase, 380 to 480 V, +10%/-15%
Frequency	50/60 Hz ±5%
Mains choke	DC choke
Harmonic mitigation	According to EN 61000-3-12: 2011
Degree of protection	IP66/ UL Type 4X drive Sun shield required outdoors when in direct sunlight *) Drive is UV resistant
Ambient conditions	-20 to 50 °C Keypad display: -15 to 50 °C 40 to 50 °C with derating
Compliance	UL, CSA, cUL, CE, EAC, EIP, UKCA, KC, TÜV Nord (safety functions)
Safety functions	Safe Torque Off (STO) according to EN/IEC 61800-5-2, SIL 3, PL e (TÜV Nord certified)
EMC	According to EMC Directive 2014/30/EU, EN 61800-3:2004 + A1 2012. Class C2 as standard
Control connections	Two analog inputs, two analog outputs, six digital inputs, three relay outputs, EIA-485 (BACnet MS/TP, Modbus RTU and N2), Safe Torque Off (STO), Bluetooth via control panel
Control and communication options	
Fieldbus adapters	Modbus TCP, BACnet/IP (BTL certified), LonWorks, DeviceNet, PROFIBUS DP, Ethernet, PROFINET IO
Optional I/O extension modules	CMOD-01: External +24 V AC/DC • Two relay outputs • One digital output CMOD-02: External +24 V AC/DC and isolated PTC input CHDI-01: 115/230 V AC digital input • Six digital inputs • Two relays CAIO-01: Bipolar analog I/O extension • Three bipolar analog inputs • Two unipolar analog outputs
PC tools	Drive Composer entry, available for free via ABB website . Drive Composer pro
Control panel options	ACH-AP-H, assistant control panel (standard delivery) ACH-AP-W, assistant control panel with Bluetooth

*) The sun shield is not supplied by ABB and can be ordered from local vendors.

Dimensions and weight, IP66 (UL Type 4X)				
Power	Height	Width	Depth	Weight
5.5 kW	522 mm	208 mm	249 mm	11.8 kg
7.5 kW, 11 kW	606 mm	208 mm	260 mm	14.5 kg
15 kW, 22 kW	647 mm	277 mm	260 mm	26.4 kg

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

new.abb.com/drives
new.abb.com/drives/drivespartners

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Highlights

Applications

- Rooftop air handlers
- Cooling towers
- Outdoor pump skids
- Exterior exhaust fans
- Outdoor chiller units

HVACR specific software

- Standard application specific primary settings
- Dedicated HVACR software features used
throughout the ACH580 drive series (override,
flying start, multi-pump control, freezestat,
resonance monitoring and more).

Hardware features

- DC choke for harmonic mitigation
- Integrated EMC C2 filter
- Coated boards
- Safe Torque Off (STO)
- Two option slots for expanded IO or
Fieldbus communications

User interface and connectivity

- Optional Bluetooth Hand/Off/Auto control panel
 - Backup, Restore and Diagnostic functions are
built into the control panel
 - Access drive remotely from a safe location
 - The Drivetune app offers the same primary
settings and menus available on the drive's
control panel
- RS-485 BACnet MS/TP, Modbus RTU, N2
communication terminal as standard
- The Drive Composer PC tool offers synchronized
setup, commissioning, and monitoring.

Learn more from the ABB variable frequency drives,
motors and PLCs for HVACR website.

