

ABB drives for HVAC  
ACH580-01, 0.75 to 250 kW  
Effortlessly simplified climate control



Climate control has to be intelligent and reliable to provide maximum energy efficiency. That's what our HVAC drives deliver: effortlessly simplified comfort, on your terms.



Power and productivity  
for a better world™



**Ventilation for operating theaters. Pumping for chilled and hot water loops. Climate control for buildings, data centers and refrigeration systems. Everything counts in HVAC.**

**Simplified climate control**

We are not only committed to simplifying your interaction with our drive, but your entire HVAC system. The ACH580's built-in features reduce on-site commissioning time, bring added value to existing control products and provide accessible diagnostics and troubleshooting.

Our menus allow you to program based on your applications and the functionality they require, not technological jargon. Sleep and timed functions are embedded to ensure that the drive doesn't run when you don't need it to.

The ACH580 integrates easily into your facility and the power grid during the best and worst environmental scenarios. Multiple control loops make processes approachable, whether it's fire control override, multi-pump control or motor preheat.

Installation into clean rooms, or dusty and wet environments, is made possible

by the drive's robust, wall-mountable construction in both IP21 and IP55 configurations.

Both setups can be placed side by side, in either horizontal or vertical installations. Protection against internal contaminants is accomplished through our standard coated circuit boards.

**Precise and reliable energy efficiency**

We wanted to give you a better understanding of the power and energy usage of your system, that's the reason we have a real-time clock and built-in energy calculators displaying, used and saved kWh, CO<sub>2</sub> reduction and money saved.

Additionally, we offer motor control for higher efficiency IE3/IE4 PM motors and IE4 SynRM motors. We will catch the motor on a spinning fan or pump and utilize the precise amount of energy needed to get it moving to the application's needs.

This is the innovation behind our new common, all-compatible architecture; it's designed to simplify operation, optimize energy efficiency and maximize output.



3AUJA0000182556 REV B 4.8.2015

Technical data	
Input voltage (U1)	3 phase, 380 to 480 V AC +10/-15%
Fundamental power factor (cosφ)	0.98 at nominal load
Output voltage/frequency	0 to U1 line voltage, 3-phase symmetrical; -500 to 500 Hz
Air temperature/relative humidity (operation)	-15 to +50 °C; 5 to 95% no condensation allowed
Installation site altitude	Rated current 0 to 1000 m; Reduced loadability 1000 to 4000 m
Degree of protection	IP21 or IP55
Analog inputs/outputs	
Quantity	Two (2) programmable inputs and outputs
Voltage/current reference	0 to 10 V; 0 to 20 mA
Digital inputs	
Quantity, signal level	Six (6) programmable digit inputs, 12 to 24 V DC, 24 V AC, Connectivity of PTC sensors supported by a single digital input
Relay outputs	
Quantity	Three (3) form C; 250 V AC/30 V DC/2 A switching capacity
Communication	
	BACnet MS/TP, Modbus RTU and N2 embedded as standard; EIA-485 connection
	BACnet/IP, LonWorks, Ethernet are available as plug-in options
Compliance	

EN 61800-5-1:2007; IEC/EN 61000-3-12; EN61800-3: 2004 + A1: 2012 Category C2 (1<sup>st</sup> environment restricted distribution); Safe torque off (EN 61800-5-2) as standard

For more information contact your local ABB representative or visit:

[www.abb.com/drives](http://www.abb.com/drives)

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