# ABB Drives for HVAC
## ACH580 E-Clipse Bypass

Comfort touches every area of our lives. In every space, there is a high demand to have cool, clean, and comfortable air. The ACH580 E-Clipse Bypass ensures continuous operation for all your critical cooling requirements. Furthermore, our extensive range of bypass options will allow you to customize to your systems, ensuring peace of mind.

**ABB**

# ABB E-Clipse Bypass
## What our customers are saying

> " As the U.S. HVAC Market Leader and the world's largest manufacturer of Variable Frequency Drives, I know that ABB will be here in 10 years time and beyond. This is the most important guarantee you can give me. "

**Facility manager** —

"Seismic certification is important to me. I wish all of my electrical equipment was seismic tested and certified."

"The supervisory controller means my cooling tower or pumping application is still functioning even if the VFD isn't."

"ABB has thoroughly researched smoke control applications and embedded the correct response to all smoke emergency situations into this unit. UL type enclosures and seismic certification means I can apply the ABB E-Clipse Bypass in almost any application."

**Contractor** —

"Individual safety annunciations makes troubleshooting start up issues a breeze."

"Having BACnet, GP1, ModBus, and N2 on board as standard means no additional cost or option modules for most communications projects."

**System integrator** —

"Communiations directly to the bypass means no failed point on my network even if the VFD is out for maintenance or service."

**Specifying engineer** —

"The intelligent bypass and keypad diagnostics makes start up a snap. The bypass status LEDs and keypad messages let me know instantly if I have a VFD, a bypass, or an external issue."

When issues arise, an intelligent bypass system is key to facilitate solutions. The ACH580 E-Clipse Bypass offers a microprocessor-controlled "intelligent" system within a UL (NEMA) type enclosure.

# ABB E-Clipse Bypass
## Features and Applications

**Intelligent, microprocessor-based advanced features**
- Microprocessor receives and processes all inputs for advanced features such as damper and smoke control
- Supervisory control of pumps and cooling towers
- UL Listed motor overload protection

**Bypass communications**
- BACnet MS/TP, GP1, ModBus, and N2 protocols on board
- Over 45 points of bypass data/control
- Monitors amps, kWHrs, operating mode, and more – in bypass mode
- Option cards available for BACnet/IP and LON

**Regulated power supply**
- Tolerates +30, -35% voltage fluctuations
- Welded contactor indication and action
- Open contactor protection with diagnostics
- Uses 120 Vac contactor coils
- No contactor chatter

**Proof-of-flow (broken belt) annunciation and action**
- Programmable proof-of-flow trigger
- Proof-of-Flow indication on keypad

**Protections**
- Single-phase protection
- Single-phase motor protection - VFD and bypass included in every ABB E-Clipse Bypass

**Seismic qualification certificate**
- Tested to ICC-ES AC156
- Designated Seismic System
- Meets HCAI (formerly OSHPD) preapproval

**Smoke control**
- Two available overrides
- Non-programmable Smoke Control override designed to comply with UL864/UUKL
- Second override may be field programmed to meet local AHJ

**Stand-alone operation**
- Communications still active, even with VFD removed
- Full bypass control without VFD
- Supervisory control of application in bypass mode
- Monitor all digital inputs and monitor and command all relay outputs
- Monitor volts, amps, kWHrs and much more - even in bypass mode

**Advanced "plain English" bypass keypad**
- System status LEDs
- Superior system diagnostics
- Advanced system programming
- Sophisticated yet simple user interface in bypass mode

**Individual safety annunciation**
- Up to 4 individual safeties
- Unique name for each
- Plain English display
- Safety annunciation over communications protocols

**Pass through I / O**
- Command 5 bypass relay outputs
- Monitor and display which safety interlock is open
- Control external devices (such as dampers and valves) via communications
- 24 free I/O points - counting VFD

**Typical Applications**
- Supply fans
- Return fans
- Cooling towers
- Chilled water pumps
- Condenser water pumps

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