

ABB drives for HVAC ACH550 E-Cclipse Bypass



Since introducing the world's first E-bypass design in 1999, ABB has continued to develop this product to meet current and future customer and market requirements.



Power and productivity
for a better world™



ABB E-Clipse Bypass

Features and Applications

Intelligent - Microprocessor-Based Advanced Features

- Microprocessor receives and processes all inputs for advanced features such as damper control/proof and smoke control
- Supervisory control of pumps and cooling towers
- UL Listed motor overload protection

Bypass Serial Communications

- BACnet, FLN, ModBus, and N2 protocols on board
- First in the industry
- Over 45 points of bypass data/control
- Go to bypass mode with no failed point on the communication network
- Serially monitor amps, kWhrs, operating mode, and more – even in bypass mode

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 serial communications
- 24 free I/O points - counting VFD

Regulated Power Supply

- Tolerates +30, -35% voltage fluctuations
- Welded contactor indication and action
- Open contactor protection with diagnostics
- Uses 115Vac contactor coils
- No contactor chatter

Single Phase Protection

- Single phase motor protection - VFD and bypass
- Included in every ABB E-Clipse Bypass
- No need for expensive add-on voltage monitors, circuits and relays

Seismic Qualification Certificate

- Tested to ICC-ES AC156
- Designated Seismic System
- Works even after seismic event
- IBC and OSHPD

Proof-of-Flow (Broken Belt) Annunciation and Action

- Programmable proof-of-flow trigger
- Proof-of-Flow indication on keypad
- Proof-of-Flow in both VFD and bypass modes
- No need for expensive, failure prone programmable current transmitters/relays

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
- Becomes an integral part of your smoke control system

Stand Alone Operation

- Serial 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 serial communicators

Applications

Feature	Hospitals	Universities K-12	Airports Labs
Intelligent - Microprocessor Based Advanced Features	■	■	■
Serial Communications	■	□	■
Run Permissive Damper Control & Proof	■	■	■
Regulated Power Supply	□	□	□
No Contactor Chatter	□	■	■
Single Phase Motor Protection	■	■	■
Seismic Certification	□	■	□
Advanced Smoke Control	□	□	□
Stand Alone Operation	□	■	□
Advanced Keypad Status & Diagnostics	■	□	■
Individual Safety Annunciations	■	■	□

■ = important
□ = critical

ABB E-Clipse Bypass

What our customers are saying

“As the U.S. HVAC Market Leader and the world’s largest manufacturer of Adjustable 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 Managers say...

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

“Individual safety annunciation means no more chasing down which interlock has opened.”

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

Specifying Engineers say...

“The built-in communications suite means that I can have intelligent drive and bypass applications regardless of which temperature control contractor is successful on the project.”

“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.”

“With the VFD’s 5% swinging choke and the VFD and bypass’ RFI / EMI immunity, plus the regulated power supply (which means no issues during my monthly generator tests), the ABB E-Clipse Bypass is the only bypass I consider specifying in sensitive applications such as hospitals, airports, and laboratories.”

Contractors say...

“The ABB E-Clipse Bypass is bullet proof. It even tells me in plain English if I have mis-wired the application and the fan is going to spin in reverse.”

“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.”

“Individual safety annunciations makes troubleshooting start up issues a breeze.”

Temperature Control Contractors say...

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

“Serial communications directly to the bypass means no failed point on my network even if the VFD is out for maintenance or service.”

“Onboard proof-of-flow indication and action means I no longer have to purchase expensive, prone to fail current transformers and relays.”



Contact us

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

www.abb.com/drives

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