

# Alco Controls

## Minimize Noise With Pressure Actuated Condenser Fan Speed Control

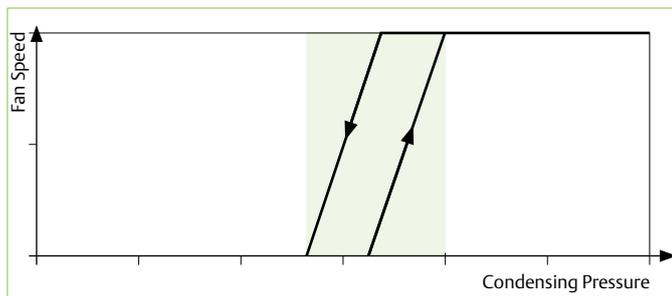
The Most Economical Solution For Highly Efficient, Low Energy Consumption Electronically Commutated (EC) Motors

Air-cooled condensers are used widely in air conditioning and refrigeration systems. They are a reliable and easy solution for transferring heat to the ambience. Silent fan operation can be achieved and head pressure maintained by using pressure actuated condenser fan speed control modules. The Emerson FSE control modules are simple and economical devices that provide analogue 0 ... 10 V electrical signals based on condensing pressure changes. They have been optimized to meet the requirements of air-cooled condensers. Additional conditioning of the output signal is not necessary.

### Features And Benefits

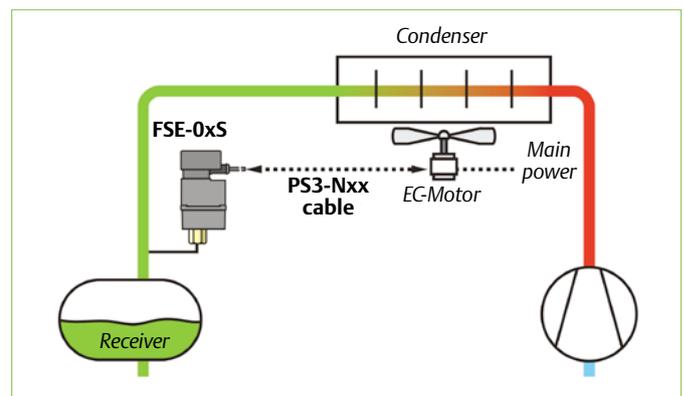
- Suitable for any size of EC fan motors
- Direct wiring to EC-motor for easy installation
- IP 65 protection with PS3-Nxx cable assemblies for locating FSE close to fan motor
- Characteristics of pressure versus fan speed optimized for condenser fan speed control
- Simple adjustable set point for head pressure
- Compact dimensions
- Silent fan rotation at low ambient temperatures (night)
- Three versions for optimized operation with most refrigerants:  
FSE-01S     R134a  
FSE-02S     R22, R404A, R407C, R507  
FSE-03S     R410A
- EMC filtering not required for FSE

### Characteristics Of Condensing Pressure Versus Fan Speed



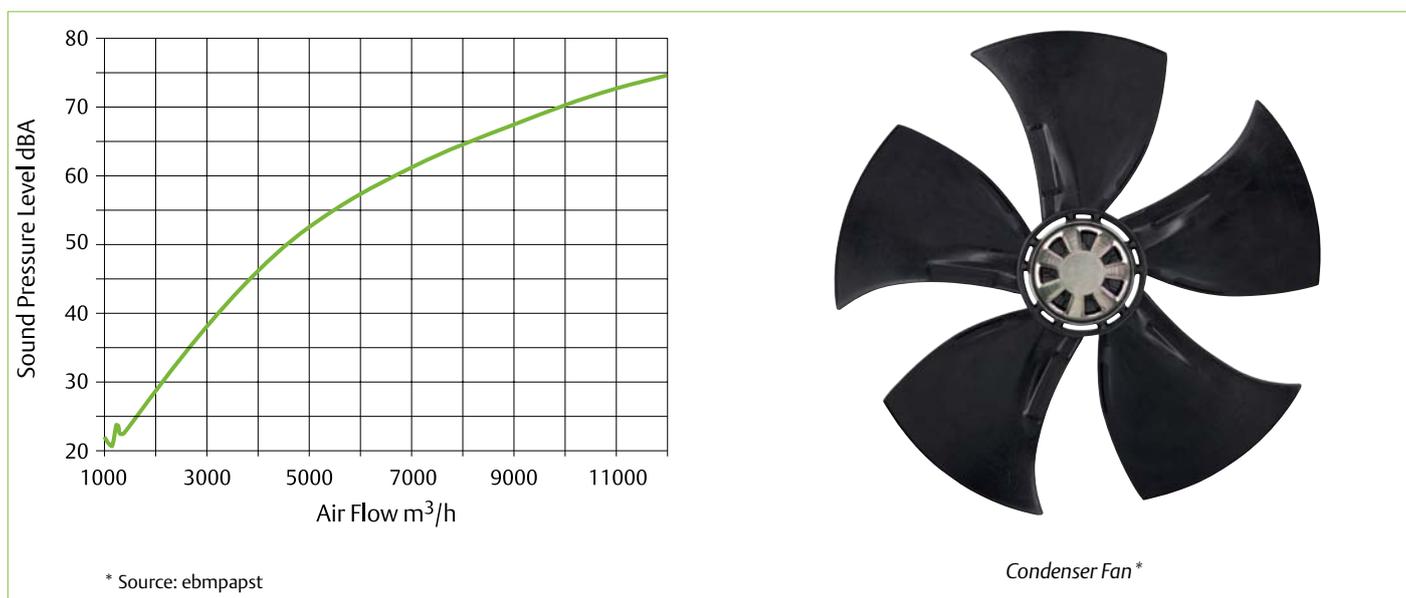
FSE Control Modules

### Typical Condensing Unit With EC-Motor Fan Speed Control





### Noise Level Of Fans With EC-Motors Depending On Air Flow Volume\*



DEC147-EN-1209

For more details, see [www.emersonclimate.eu](http://www.emersonclimate.eu)

**Emerson Climate Technologies GmbH - Alco Controls** - Heerstraße 111, 71332 Waiblingen, Germany  
Phone: +49(0)7151 509 0 - Fax: +49(0)7151 509 200 - Internet: [www.emersonclimate.eu](http://www.emersonclimate.eu)

The Emerson Climate Technologies logo is a trademark and service mark of Emerson Electric Co. Emerson Climate Technologies Inc. is a subsidiary of Emerson Electric Co. Copeland is a registered trademark and Copeland Scroll is a trademark of Emerson Climate Technologies Inc.. All other trademarks are property of their respective owners. Emerson Climate Technologies GmbH shall not be liable for errors in the stated capacities, dimensions, etc., as well as typographic errors. Products, specifications, designs and technical data contained in this document are subject to modification by us without prior notice. Illustrations are not binding.  
© 2012 Emerson Climate Technologies, Inc.



**EMERSON. CONSIDER IT SOLVED.™**