Y Series

The MacroAir Y Series uses a proven industrial gearbox-driven power unit in combination with integrated network technology. Combine with one of our multi-fan network controllers, AirEffect temperature control, or AirLynk for Building Management Systems for advanced control. With a premium industrial gearmotor and advanced control platforms, you get more than fan, you get one of the most versatile cooling solutions available on the market.

STANDARD FEATURES

- Integrated Gearmotor
- Clearcoat anodized airfoil blades
- Variable Frequency Drive – Forward, reverse, variable speed and capable of Building Automation Integration (with AirLynk upgrade) and fire alarm
- Digital wall controller with fault code access
- Safety Components: safety cable, Universal Mount with guy wires, blade retainer links

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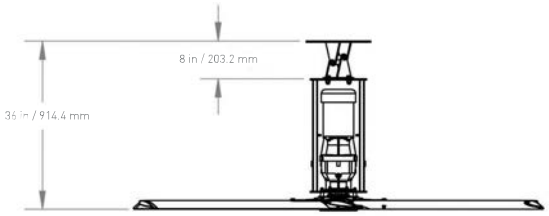

STEP 1: DIAMETERS

Item #	Diameter	Qty
MY08-0100-MA	8 ft Power Unit, 1.0 HP	
MY10-0100-MA	10 ft Power Unit, 1.0 HP	
MY12-0100-MA	12 ft Power Unit, 1.0 HP	
MY14-0100-MA	14 ft Power Unit, 1.0 HP	
MY16-0100-MA	16 ft Power Unit, 1.0 HP	
MY18-0100-MA	18 ft Power Unit, 1.0 HP	
MY20-0150-MA	20 ft Power Unit, 1.5 HP	
MY24-0200-MA	24 ft Power Unit, 2.0 HP	

STEP 2: VOLTAGE

Item #	Voltage Options	Qty
2xx1-MA	208-240V Single Phase, 50/60 Hz	
2xx3-MA	208-240V Three Phase, 50/60 Hz	
4xx3-MA	480V Three Phase, 50/60 Hz	

xx=horsepower

STEP 3: MOUNTING

Item #	Mount Options	Qty
60-90006-00	Series Universal Mount: I-beam Hardware Kit (Standard)	
60-40041-00	Glulam Hardware Kit (for Universal Mount)	

STEP 4: CONTROLS

Item #	Description	Qty
30-90308-00	Digital Remote Assembly (Standard)	
30-04006-00	Controller 4	
30-04007-00	Controller 4 + Temperature Sensor	
30-04030-00	Controller 30	
30-10012-00	AirLynk - BacNet (per fan)	
30-10011-00	AirLynk - LonWorks (per fan)	
30-90315-00	Local Override Remote (requires AirLynk-BacNet)	
30-04030-02	Dual Control Enabled Controller 30 (requires AirLynk-BacNet)	
10-04009-00	AirEffect (one per zone, up to 4 per Controller 30)*	

*Only compatible with Controller 30, pricing is per zone. Not compatible with Dual Control option.

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Y Series

OPTIONAL: EXTENSIONS

Item #	Length (ft/in)	Length (m)	Qty
51-80100-02	1 ft	0.30 m	
51-80200-02	2 ft	0.61 m	
51-80300-02	3 ft	0.91 m	
51-80400-02	4 ft	1.22 m	
51-80500-02	5 ft	1.52 m	
51-80600-02	6 ft	1.82 m	
51-80700-02	7 ft	2.13 m	
51-80800-02	8 ft	2.44 m	
51-80900-02	9 ft	2.74 m	
(51-8ftin-02)	Customization fee		

Y Series EXTENSIONS are an additional drop tube attached to the top of the frame. Without an **Extension**, the total drop for a **Y Series** fan is 3 ft (fan, frame, and mount)

Y Series fans can only be connected with a single-piece of custom length extension.

ft = length in **feet** (i.e. 04 for 4 feet, 10 for 10 feet)
in = length in **inches** (i.e. 05 for 5 inches, 10 for 10 inches)
To order Extension greater than 10 ft, please call MacroAir.

Do you have a custom color in mind? Custom powder coating is available for all our blades, mounts and drop lengths.

OPTIONAL: POWDER COATING

Item #	Diameter	Estimated Lead Time	Qty
60-10008-02	8 ft / 2.44 m	15 business days	
60-10010-02	10 ft / 3.05 m	15 business days	
60-10012-02	12 ft / 3.66 m	15 business days	
60-10014-02	14 ft / 4.27 m	15 business days	
60-10016-02	16 ft / 4.88 m	15 business days	
60-10018-02	18 ft / 5.49 m	15 business days	
60-10020-02	20 ft / 6.07 m	15 business days	
60-10024-02	24 ft / 7.32 m	15 business days	
Special Finishes			
Mounting Hardware & Frame	All Diameters	15 business days	
Extension (when applicable)	All Diameters	15 business days	

For powder coating colors, please refer to Appendix A.

ADDITIONAL OPTIONS

Item #	Description	Qty
-FD	Food-Grade / Stainless Steel - 1.0 HP*	
-EX	Explosion Proof Motor* -1.0 HP (Separate Motor and Gearbox)	

*Only available for 8ft-18ft

Y Series

BASIC SPECIFICATIONS

AIRFOIL DIAMETER	8ft	10ft	12ft	14ft	16ft	18ft	20ft	24ft
Airfoil Style	7.375¨ Extruded Anodized Aluminum Airfoil							
Number of Airfoils	6							
PERFORMANCE								
Max Speed	202 RPM	162 RPM	129 RPM	103 RPM	84 RPM	70 RPM	70 RPM	62 RPM
Recommended Spacing*	50 ft [15.2 m]	60 ft [18.3 m]	65 ft [19.8 m]	70 ft [21.3 m]	85 ft [25.9 m]	90 ft [27.4 m]	100 ft [30.5 m]	110 ft [33.5 m]
Max Affected Area	3,600 ft^2 [336 m^2]	6,000 ft^2 [557 m^2]	8,000 ft^2 [743 m^2]	10,000 ft^2 [929 m^2]	12,000 ft^2 [1,115 m^2]	14,000 ft^2 [1,301 m^2]	18,000 ft^2 [1,673 m^2]	20,000 ft^2 [1,858 m^2]
Sound Level dBA at Max Speed**	58	58	58	58	58	58	61	61
HANGING REQUIREMENTS								
Hanging Weight	171 lbs [77.56 kg]	178 lbs [80.74 kg]	189 lbs [85.73 kg]	195 lbs [88.45 kg]	202 lbs [91.63 kg]	208 lbs [94.35 kg]	217 lbs [98.43 kg]	270 lbs [122.5 kg]
Max Torque	18 lbf/ft [24 Nm]	24 lbf/ft [33 Nm]	31 lbf/ft [42 Nm]	43 lbf/ft [58 Nm]	40 lbf/ft [54 Nm]	58 lbf/ft [79 Nm]	88 lbf/ft [119 Nm]	126 lbf/ft [171 Nm]
Max Thrust in Reverse	4 lbs [1.8 kg]	6 lbs [2.7 kg]	9 lbs [4.1 kg]	14 lbs [6.4 kg]	15 lbs [6.8 kg]	21 lbs [9.5 kg]	31 lbs [14.1 kg]	44 lbs [20 kg]
MOTOR AND DRIVE TRAIN								
Motor Type	AC induction Motor with a sealed 2-stage helical gear box							
Equivalent Horsepower Rating	1.0 HP (8-18ft) / 1.5 HP (20ft) / 2.0 HP (24ft)							
Operating Temp Range	16°F [-10C°] - 104 F° [40C°]							
MAX AMP DRAW								
208-240V Single Phase	20.2A							
208-240V Three Phase	10.8A							
480V Three Phase	4.3A							
POWER AND CONTROLS								
Power Source	Single Phase 208-240 VAC 50/60 Hz / Three Phase 208-240 VAC 50/60 Hz / Three Phase 480 VAC 50/60 Hz							
Control Options	Digital Touchpad, MacroAir Controller 4, Controller 30, AirLynk - BacNet / LonWorks							
INSTALLATION								
Mounting Hardware	Universal Mount Hardware							
Extension	Optional extensions are available in 1ft increments; all drop lengths require guy wires							
RATINGS AND COMPLIANCE								
Fire and Sprinkler	NFPA Compliant							
Wash Down Duty Rating***	IP55							
Certifications	UL 507							

*For spacing between fan units based on the dimensions of a specific space please refer to https://macroairfans.com/airviz.

**Sound testing taken with the sensor 5 ft above the ground and 20 ft from the center of the fan at 20 ft high.

***Applicable to the fan unit only, does not include controller and control panel.

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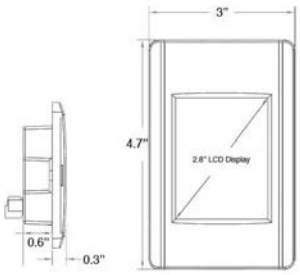
MacroAir Controllers - Digital Remote

- Standard on all MacroAir fan models (Except Z Series)
- Simple and intuitive control
- Easy ground-level troubleshooting and diagnostics

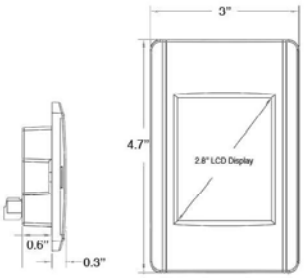


Features	Digital Touchpad Remote
Item #	30-90308-00
# Fans Controlled	1 fan
Display	2.8 TFT
Resolution	240x320x16 pixels
Backlight life time	20,000 hours
Backlight brightness	160 cd/m2
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6
Rating (front)	IP 40 / NEMA 1
Weight (incl. enclosure)	375 g
Communication Protocol	RS 485
Power Supply	24V from fan
Size (incl. enclosure)	91.2 x 135.5 x42.0
Operating Temperature	-4° to 158°F / -20° to +70°C
Storage Temperature	-22° to 176°F / -30° to +80°C

Note: Only one type of controller can be used when selecting Controller 4, Digital Remote Assembly or Analog Remote Assembly. AirLynk (BacNet) can be used as a stand alone, or paired with a Dual Control Enabled Controller 30 (see Dual Control page) or with Local Override Remotes for some fan models (see Local Override page)

MacroAir Controllers - Controller 4

- Available upgrade for all MacroAir fan models (Except Z Series)
- Control up to 4 fans from a single point
- Control fans individually, independent of speed & direction
- Simple and intuitive control
- Temperature sensor (optional upgrade) starts and stops the fan(s)



Features	Controller 4	Controller 4 with temperature sensor
Item #	30-04006-00	30-04007-00
# Fans Controlled	Up to 4 fans, individually	
Display	2.8 TFT	
Resolution	240x320x16 pixels	
Backlight life time	20,000 hours	
Backlight brightness	160 cd/m2	
Shock	IEC 60068-2-27	
Vibration	IEC 60068-2-6	
Rating (front)	IP 40 / NEMA 1	
Weight (incl. enclosure)	375 g	
Communication Protocol	RS 485	
Power Supply	24V from fan	
Size (incl. enclosure)	91.2 x 135.5 x42.0	
Operating Temperature	-4° to 158°F / -20° to +70°C	
Storage Temperature	-22° to 176°F / -30° to +80°C	

Note: Only one type of controller can be used when selecting Controller 4, Digital Remote Assembly or Analog Remote Assembly. AirLynk (BacNet) can be used as a stand alone, or paired with a Dual Control Enabled Controller 30 (see Dual Control page) or with Local Override Remotes for some fan models (see Local Override page)

MacroAir Controllers - Controller 30

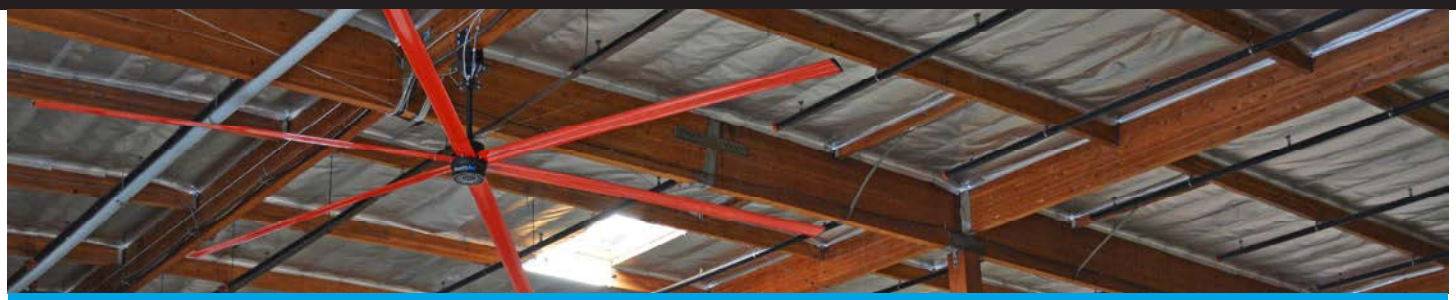
STANDARD FEATURES

- Available upgrade for all MacroAir fan models (except Z Series)
- Provides a single point for individual or group fan control
- Enables run time, scheduling, grouping, and fan naming
- Secure remote login to controller via smart device or computer
- Optional auto mode available with AirEffect
- Password protection capabilities for scheduling, naming, and temperature/humidity (with upgrade to AirEffect)

Features	Controller 30
Item #	30-04030-00
# Fans Controlled	30 fans
Display	10.1" (16:9), TFT-LCD with LED backlight
Resolution	1024x600 pixels
Backlight life time	50000 hours
Backlight brightness	500 cd/m2
Shock	15g, half-sine, 11ms according to IEC60068-2-27
Vibration	1g, according to IEC 60068-2-6, Test Fc
Sealing front	IP65, NEMA 4X/ 12 and UL Type 4X/ 12
Sealing back (excl. enclosure)	IP20
Weight (incl. enclosure)	10 lb / 4.5 kg
Communication Protocol	MODBUS RS485
Ethernet Port	2x100 Mbit
USB Port	2
Power Supply	110-240 V
Size (incl. enclosure)	10.7 x 13.0 x 3.7 in (W x H x D) / 272 x 330 x 84 mm (W x H x D)
Operating Temperature	14° to 140°F / -10° to +60°C
Storage Temperature	-4° to 158°F / -20° to +70°C
Languages	English, Spanish, French, Malay

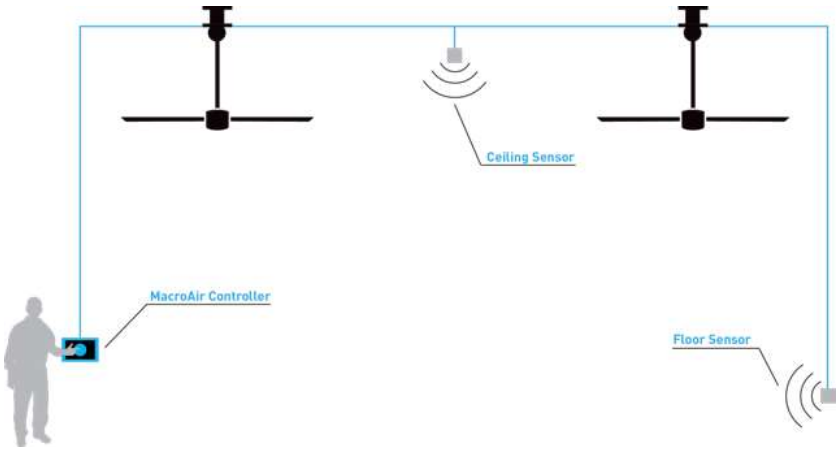
Note: Only one type of controller can be used when selecting Controller 4, Digital Remote Assembly or Analog Remote Assembly. AirLynk (BacNet) can be used as a stand alone, or paired with a Dual Control Enabled Controller 30 (see Dual Control page) or with Local Override Remotes for some fan models (see Local Override page)

AirEffect Temperature Control



STANDARD FEATURES

AirEffect (only available with Controller 30) is an optional control system that senses and automatically maintains a desired room temperature. AirEffect gages the heat index by measuring the temperature and humidity at the ceiling and floor. To achieve the desired temperature, AirEffect takes the heat index and calculates the fan's ideal operating speed and direction and runs the fans accordingly. Simply setup AirEffect to the desired temperature range and enjoy a consistently comfortable environment.



- Senses and maintains desired room temperature
- Measurers temperature and humidity at two points (ceiling & floor)
- Calculates heat index through temperature and humidity calculations
- Runs fans in reverse or forward direction in response to heat index
- Compatible with all fans (except Z Series)
- Independent, external sensors allow the controllers to be mounted in a different room than the fans and sensors
- Password protected screen for scheduling, naming, and temperature set point

Features	AirEffect (up to 4 zones)
Item #	30-04009-00
Number of Sensors	2 (1 floor & 1 ceiling)
Measured temperatures	-40 through +125 °C (±2 to ±4 %)
Measured humidity	0 through 100% RH (±2 to ±4 %)
Communication Protocol	MODBUS RS485

*Controller not included

AirLynk BMS Integration

Gives the ability to control your fans through BACnet® (MS/TP or IP) and LonWorks®.

BACnet and LonWorks are both protocols used to automate or manage buildings systems (commonly called a BMS or BAS). Our fans use MODBUS to communicate and the correct use of AirLynk, MacroAir's interface, will allow the integration of our fans into a BMS/BAS. A BMS/BAS enables you to run the fans in conjunction with your HVAC system to help save energy costs.

Our proven solution is AirLynk, an external, high-performance building automation multi-protocol interface that is pre configured to communicate between any MacroAir fan and various building automation protocols including: BACnet®MS/TP, BACnet/IP, Modbus TCP/IP, and LonWorks®.

Successful integration of any MacroAir fan with a BMS/BAS is dependent upon following **these guidelines**:

- **Identify the BMS and its protocol** before the purchase order is placed. This allows the fans to be pre programmed, dramatically reducing installation errors and integration time.

- Strictly adhere to the included installation manual to eliminate issues that will occur from wrong types of wire, improper wire terminations or wire routing.

- We highly recommend engaging our Controls Engineers to visit the site for fan start-up to ensure a smooth and successful integration. Our experience has found that many installers are unfamiliar with the subtle but critical differences between BMS systems, interfaces, fan models, connection methods and best practices. For a nominal fee plus travel expenses, one of our Controls Engineers can be on site to ensure a smooth and successful start-up. For more information about this service, please inquire with our Technical Services Department.

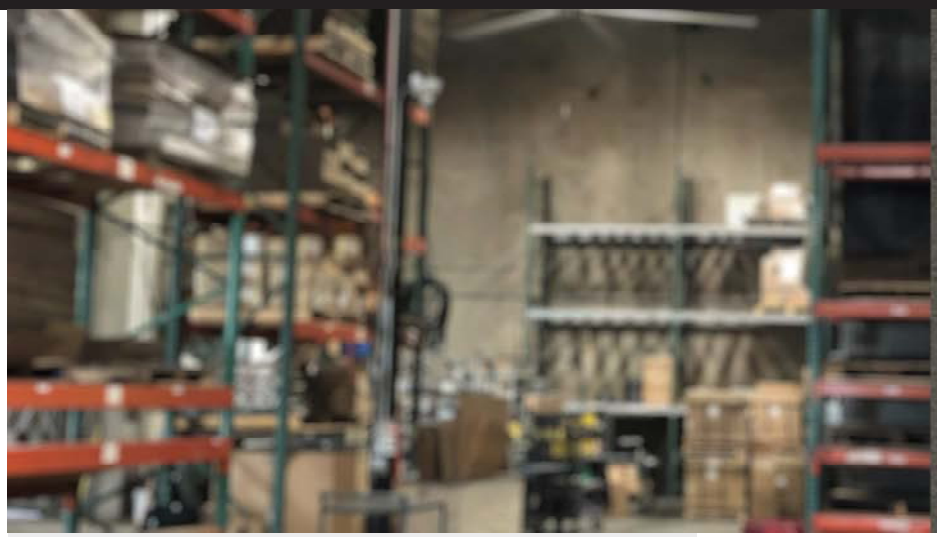
To Order BMS enabled fans and AirLynk please do the following:

- Identify the BMS network
- Discuss your network with MacroAir's Control Engineers
- Order one AirLynk to connect up to 30 fans
- Order one Repeater per every five AirVolution-D 370 fans connected to AirLynk

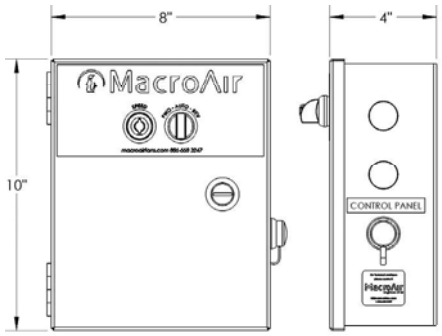
Item #	Description
30-10010-00	AirLynk - BACnet, (Works on all Fan Lines, except Z Series), Up to 30 Fans per AirLynk
30-10011-00	AirLynk - LonWorks, (Works on all Fan Lines, except Z Series), Up to 30 Fans per AirLynk
30-90315-00	Local Override Remote (each fan) for BMS (Works on all Fan Lines, except Z Series and AVD 370)
30-04030-02	Dual Control Enabled Controller 30 (Works on all Fan Lines, except Z Series) Up to 30 Fans per AirLynk
10-80632-00	Repeater (Only required for AirVolution-D 370 Fans; 1 for every 5 fans)

Note: Only one type of controller can be used when selecting Controller 4, Digital Remote Assembly or Analog Remote Assembly. AirLynk (BacNet) can be used as a stand alone, or paired with a Dual Control Enabled Controller 30 (see Dual Control page) or with Local Override Remotes for some fan models (see Local Override page)

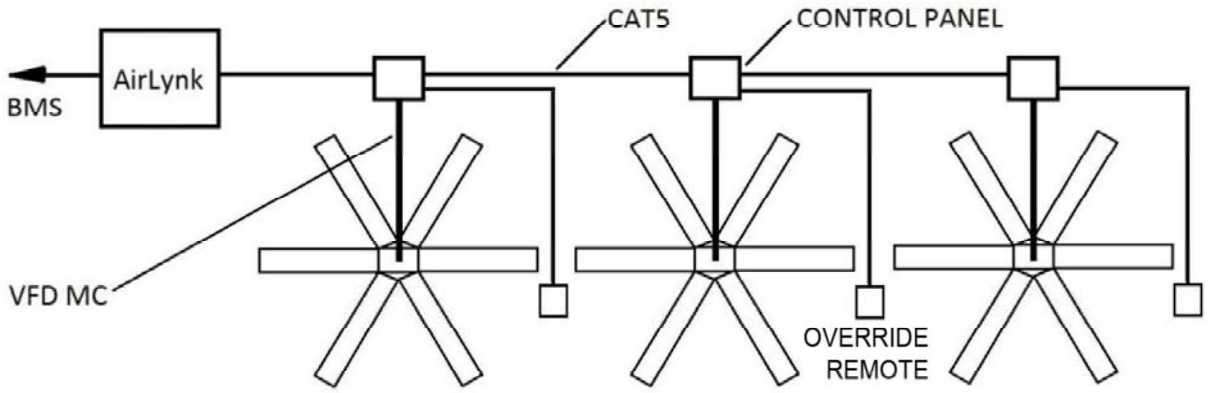
Local Override Remote for BMS Integration



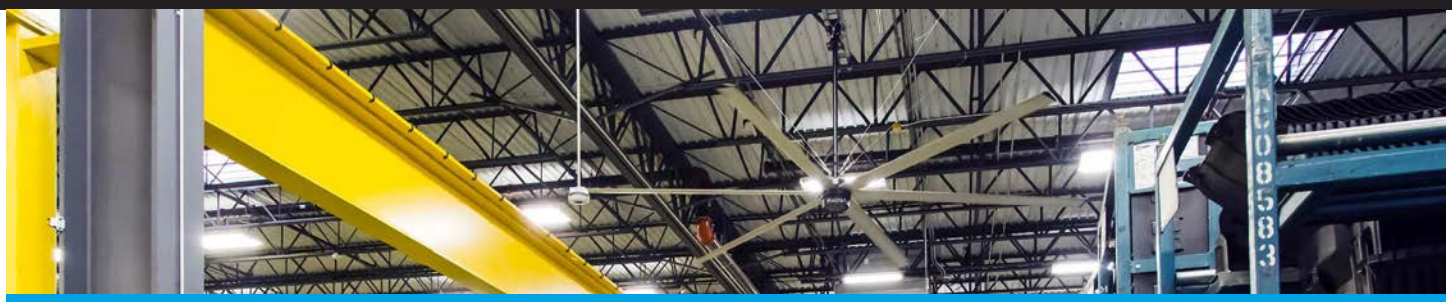
- Works with X Series, Y Series, AVD 780, AVD 550, and AVD3 fans when paired with AirLynk
- Allows local user to control speed and direction when in FWD or REV Mode
- Allows Building Management System to control speed and direction when in Auto Mode
- Takes last known command from BMS when returned to Auto Mode
- Simple and intuitive control
- 3-Year-Warranty



Features	Local Override for BMS
Item #	30-90315-00
# Fans Controlled	1 to 1 fan control by Local Override Remote, up to 30 by BMS/AirLynk
Rating	NEMA/EEMAC Type 1
Communication Protocol	0-10V Wall Mounted Override Remote, Modbus/BACnet AirLynk
Operating Temperature	-4° to 140°F / -20° to +60°C

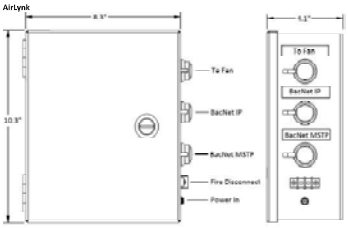


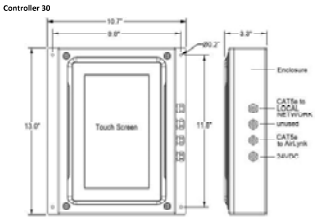
Dual Control for BMS Integration

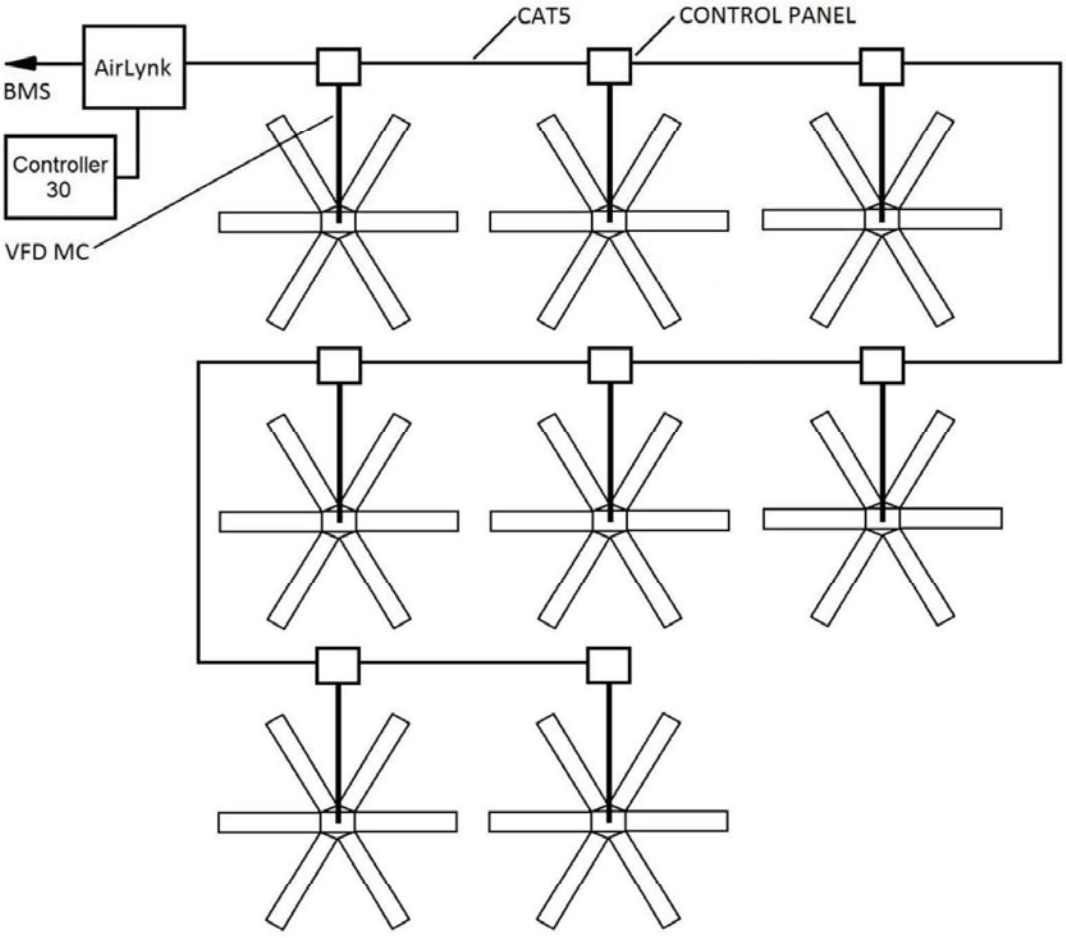


STANDARD FEATURES

- Seemless integration of a building management system and local fan network
- Fans take last known command, be it from the BMS, the Dual Control enabled Network Controller 30 screen(s), or VNC enabled smart devices
- Provides a single point of local control of up to 30 fans
- Enables grouping and fan naming
- Password protection capabilities for operation, naming, and grouping
- Requires AirLynk (BacNet) and Dual Control Enabled Controller 30*







*AirEffect is not compatible with Dual Control. Temperature monitoring by BMS can regulate fan operation.

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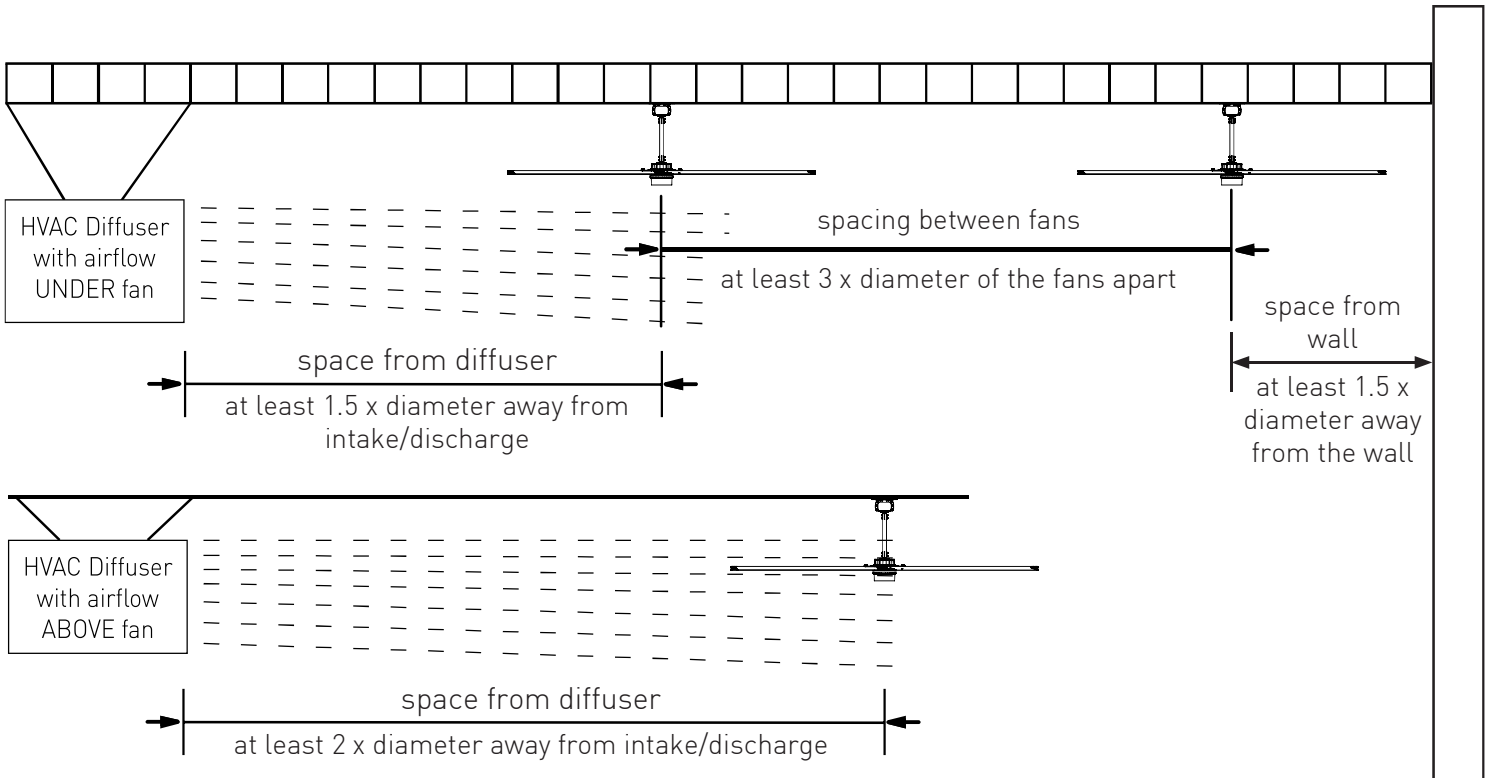
Fan Placement & Clearance



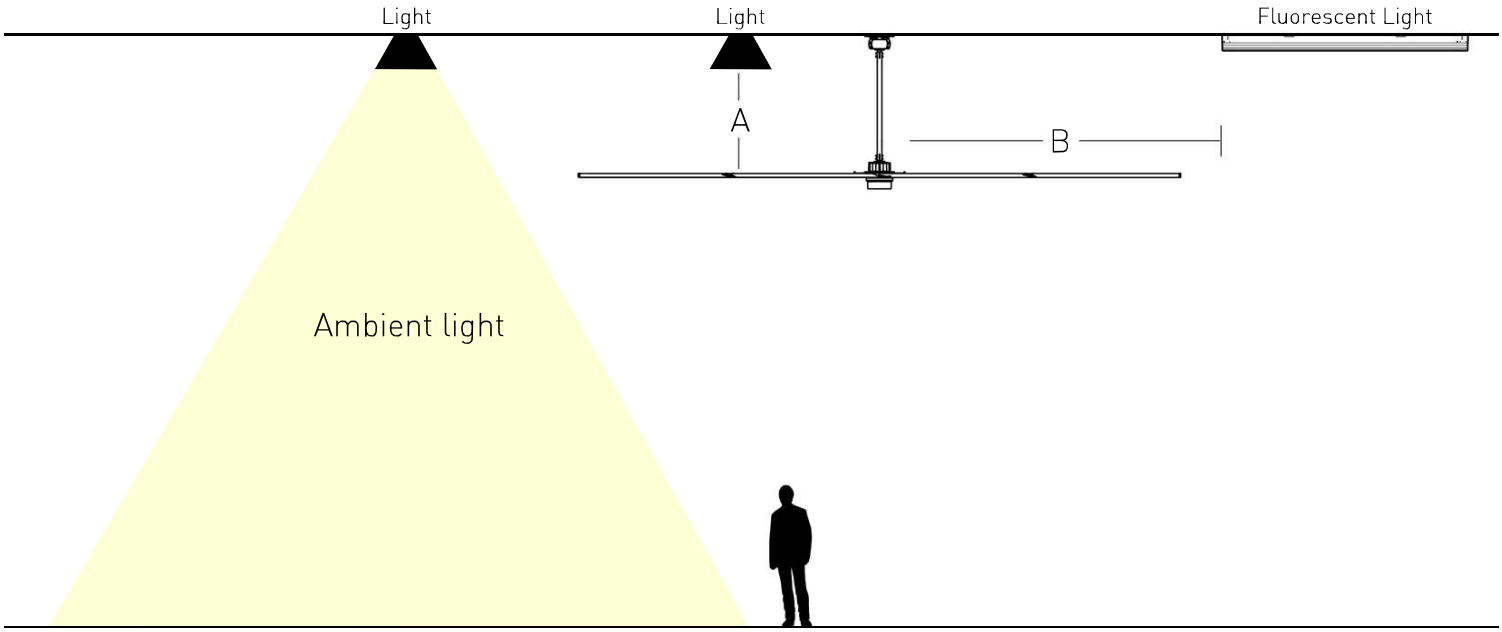
General Notes:

Dimension "A": The smaller the distance between the light and the blade, the higher concentration and frequency of shuttering. So the greater distance "A" is from the fan blade, the less the shuttering effect.

Dimension "B": The closer the light is located to the center of the fan, the higher the frequency of shuttering.

Ambient light: Another variable increasing the shuttering effect is the amount of ambient light available. The more lights, the less the effect. As shown, the more overlapping patterns the less shuttering/strobing. The type of light can also influence the effect. For example, a domed light is more sensitive than a fluorescent tube.

Summary: Variables that affect strobing are (1) blade to light height, (2) the fan center to light dimension, and (3) the amount of ambient light within the space. To minimize the possible negative effects of strobing, follow all MacroAir installation instructions including clearance requirements.



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