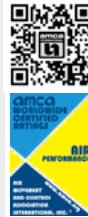


Experience the power and efficiency of MacroAir's AVD5, a cutting-edge direct-drive fan for industrial and commercial spaces. The captivating five-blade AVD5 is a perfect composition of purposeful design, superior performance, and cost efficiency. Elevate your projects with the AVD5, a commanding revelation in air movement.

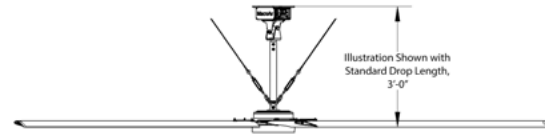


STANDARD FEATURES:

- 1.0 HP (equivalent) Direct Drive motor, rated for indoor/outdoor use*
- Clearcoat anodized airfoil blades
- Industry leading onboard electronics for unmatched reliability
- Forward, reverse, variable speed
- Optional Integrated VFD/Mount Enclosure
- Safety Components: safety cable, Universal Mount with guy wires, blade retainer links



**



STEP 1: POWER UNIT

Item #	Options	Qty
M500-0025-MA	8-14 ft Power Unit, 1.0 HP Equivalent	
M500-0035-MA	16-18 ft Power Unit, 1.0 HP Equivalent	
M500-0050-MA	20-24 ft Power Unit, 1.0 HP Equivalent	

STEP 2: BLADES

Item #	Diameter	Qty
60-80008-00	8 ft / 2.44 m	
60-80010-00	10 ft / 3.05 m	
60-80012-00	12 ft / 3.66 m	
60-80014-00	14 ft / 4.27 m	
60-80016-00	16 ft / 4.88 m	
60-80018-00	18 ft / 5.49 m	
60-80020-00	20 ft / 6.07 m	
60-80024-00	24 ft / 7.32 m	

STEP 3: VOLTAGE/PHASE

Item #	Options	Qty
35-22017-00	208-240V Single Phase, 50/60 Hz AVD5 SCHNEIDER CONT PNL (drive in remote enclosure, off board)	
35-22038-00	208-240V Three Phase, 50/60 Hz AVD5 SCHNEIDER CONT PNL (drive in remote enclosure, off board)	
35-42038-00	480V Three Phase, 50/60 Hz AVD5 SCHNEIDER CONT PNL (drive in remote enclosure, off board)	
33-22017-00	208-240V Single Phase, 50/60 Hz AVD5 DROP ENCL (drive integrated above UMH mount, on board)	
33-22038-00	208-240V Three Phase, 50/60 Hz AVD5 DROP ENCL (drive integrated above UMH mount, on board)	
33-42038-00	480V Three Phase, 50/60 Hz AVD5 DROP ENCL (drive integrated above UMH mount, on board)	

STEP 4: MOUNTING

Item #	Options	Qty
60-50161-00	AVD Universal Mount with I-beam Hardware Kit (Standard option, drive in remote enclosure, off board)	
60-50151-00	AVD Universal Mount with I-beam Hardware Kit (drive integrated above mount, on board)	
60-50158-00	Rapid Mount Industrial with I-Beam Hardware Kit (drive in remote enclosure, off board, no guy wires)	
60-40049-00	Glulam Hardware Kit	

STEP 5: CONTROLS

Item #	Options	Qty
30-90308-00	Digital Remote Assembly (Standard)	
30-04006-00	Controller 4	
30-04007-00	Controller 4 + Single Temperature Sensor	
30-04030-01	Controller 30	
30-10012-00	AirLynk - BacNet	
30-10011-00	AirLynk - LonWorks	
30-04030-02	Dual Control Enabled Controller 30 (requires AirLynk-BacNet)	

*Motor unit only

** MacroAir Technologies, Inc. certifies that the model AVD5 (diameters 8'-24') shown herein are licensed to bear the AMCA seal. The ratings shown are based on the tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program.

STEP 6: STOCK DROP LENGTHS

Item #	Length (ft/in)*	Length (m)	Qty
51-X0200-02	2 ft**	0.61 m	
51-X0300-02	3 ft (Standard)	0.91 m	
51-X0400-02	4 ft	1.22 m	
51-X0500-02	5 ft	1.52 m	
51-X0600-02	6 ft	1.83 m	
51-X0700-02	7 ft	2.13 m	
51-X0800-02	8 ft	2.44 m	
51-X0900-02	9 ft	2.74 m	
51-X1000-02	10 ft	3.05 m	
51-Xftin-02	Customization fee		

* Lengths are +/- 1" depending on power unit selection/fan diameter.

X= substitute D for drops with UMH mount, F for drops with Rapid Mount Industrial (i.e. 51-F0500-02 describes a 5' drop for use with a Rapid Mount Industrial).

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)

**2 ft is the shortest allowed drop length for AVD5. Lengths shorter than the standard drop length are not recommended and will not work for some fan diameters. Consult MacroAir for more details.

DROP LENGTH is the distance from fan mounting point to the blades.

AVD5 fans can only be connected with a single-piece of custom length drop tube.

Measure the distance from the fan's mounting point down to the desired fan blade position and provide this information with the fan order to receive the correct custom drop length.

For custom drop lengths to the inch, order a length longer and MacroAir will cut it down to the requested length. Estimated lead time is 10 business days.

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
60-80008-02	8 ft / 2.44 m	15 business days	
60-80010-02	10 ft / 3.05 m	15 business days	
60-80012-02	12 ft / 3.66 m	15 business days	
60-80014-02	14 ft / 4.27 m	15 business days	
60-80016-02	16 ft / 4.88 m	15 business days	
60-80018-02	18 ft / 5.49 m	15 business days	
60-80020-02	20 ft / 6.07 m	15 business days	
60-80024-02	24 ft / 7.32 m	15 business days	

For powder coating colors, please refer to Appendix A.



ADDITIONAL OPTIONS

Item #	Description	Qty
10-60200-00	AVD Fuse Disconnect*	

*IEC Compliance requires a fused disconnect switch. Fuse selection is input voltage specific, so fuses are not provided with purchase of a disconnect.

BASIC SPECIFICATIONS

AIRFOIL DIAMETER	8ft	10ft	12ft	14ft	16ft	18ft	20ft	24ft
Airfoil Style	7.375" Extruded Anodized Aluminum Airfoil							
Number of Airfoils	5							
PERFORMANCE								
Max Speed	200 RPM	190 RPM	130 RPM	99 RPM	78 RPM	73 RPM	70 RPM	50 RPM
Recommended Spacing*	57 ft [17.4 m]	62 ft [18.9 m]	67 ft [20.4 m]	77 ft [23.5 m]	82 ft [25.0 m]	87 ft [26.5 m]	97 ft [29.6 m]	105 ft [32.0 m]
Max Affected Area	4,950 ft² [460 m²]	6,150 ft² [571 m²]	8,100 ft² [752 m²]	10,300 ft² [957 m²]	11,875 ft² [1,103 m²]	14,200 ft² [1,319 m²]	18,475 ft² [1,716 m²]	20,350 ft² [1,891 m²]
Sound Level dBA at Max Speed**	61	59	60	56	53	53	57	56
Carrier/Switching Frequency**	16,000Hz							
HANGING REQUIREMENTS								
Hanging Weight	138.8 lbs [63.0 kg]	140.9 lbs [63.9 kg]	143.1 lbs [64.3 kg]	145.2 lbs [65.8 kg]	155.8 lbs [70.7 kg]	157.9 lbs [71.6 kg]	173.6 lbs [78.7 kg]	177.8 lbs [80.6 kg]
MOTOR AND DRIVE TRAIN								
Motor Type	Gearless Direct Drive							
Equivalent Horsepower Rating	1.0 HP (8ft - 24ft)							
Operating Temp Range	16°F [-10C°] - 140 F° [60C°]							
MAX AMP DRAW								
208-240V Single Phase	3.8	6.5	5.1	4.4	3.7	4.5	5.4	4.3
208-240V Three Phase	2.2	3.8	2.9	2.5	2.1	2.6	3.1	2.5
480V Three Phase	1.6	2.7	2.1	1.8	1.5	1.8	2.2	1.8
POWER AND CONTROLS								
Power Source	Single Phase or Three Phase 208-240 VAC +/-5%, 50/60 Hz, Three Phase 480 VAC +/-5%, 50/60 Hz							
Control Options	Digital Touchpad, MacroAir Controller 4, Controller 30, AirLynk - BacNet							
INSTALLATION								
Mounting Hardware	Universal Mount, Rapid Mount Industrial							
Drop Length	In addition to the standard drop length supplied, optional drop lengths are available in 1ft increments; all drop lengths require guy wires except when used with the Rapid Mount Industrial							
RATINGS AND COMPLIANCE								
Fire and Sprinkler	NFPA Compliant							
Outdoor Rating***	Rated for outdoor use							
Warranty	15 years mechanical (blades, hub, and frame), 10 years electrical (motor, controls, and remote), 1 year of labor coverage.							

*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. Carrier frequency will be audible to some listeners and is considered normal during operation. Supplemental information on Carrier Frequency and Decibel levels are supplied with the full product selection guide.

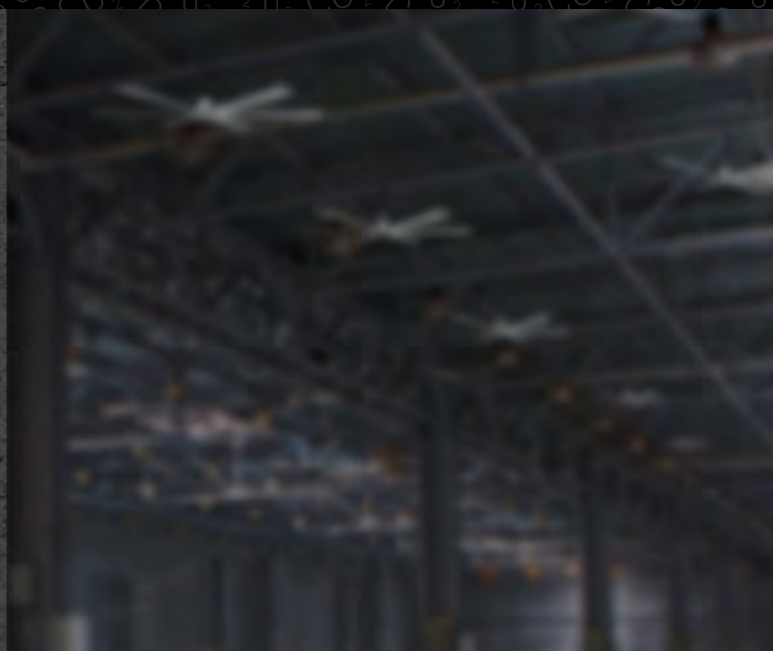
***Applicable to the fan unit only, does not include controller, control panel and accessories.



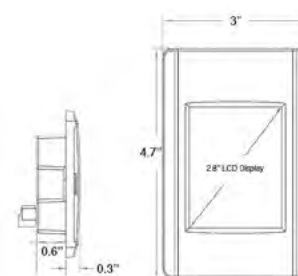
PERFORMANCE SPECIFICATIONS

Fan Diameter (Ft)	Fan Speed (% of max RPM)	Fan Speed (RPM)	Voltage/ Phase/ Frequency	Standby Power (Watts)	Electrical Input Power (Watts)	Airflow Rate (CFM)	CFEI 40	CFEI 100	Direction	Reverse Operation?
8	20	39.29	230/Single Phase/60Hz	6	63.29	6221.01	1.589	1.464	Forward	Yes
	40	79.64	230/Single Phase/60Hz		109.07	15001.26			Forward	Yes
	60	119.65	230/Single Phase/60Hz		203.40	23043.86			Forward	Yes
	80	159.80	230/Single Phase/60Hz		370.00	31189.61			Forward	Yes
	100	199.77	230/Single Phase/60Hz		664.34	39768.88			Forward	Yes
10	20	37.73	230/Single Phase/60Hz	6	63.00	11726.79	1.73	1.268	Forward	Yes
	40	75.68	230/Single Phase/60Hz		132.17	25903.45			Forward	Yes
	60	113.70	230/Single Phase/60Hz		311.58	40512.75			Forward	Yes
	80	151.78	230/Single Phase/60Hz		642.76	54234.86			Forward	Yes
	100	189.82	230/Single Phase/60Hz		1232.83	67986.16			Forward	Yes
12	20	26.04	230/Single Phase/60Hz	6	57.21	14043.54	1.815	1.317	Forward	Yes
	40	52.58	230/Single Phase/60Hz		110.14	30699.24			Forward	Yes
	60	78.87	230/Single Phase/60Hz		246.81	48317.31			Forward	Yes
	80	105.23	230/Single Phase/60Hz		515.62	65055.76			Forward	Yes
	100	130.47	230/Single Phase/60Hz		952.33	80552.38			Forward	Yes
14	20	20.09	230/Single Phase/60Hz	6	50.98	15424.58	1.907	1.323	Forward	Yes
	40	40.55	230/Single Phase/60Hz		95.86	35554.07			Forward	Yes
	60	61.15	230/Single Phase/60Hz		215.12	56722.08			Forward	Yes
	80	81.47	230/Single Phase/60Hz		451.72	76620.52			Forward	Yes
	100	98.81	230/Single Phase/60Hz		791.15	93049.60			Forward	Yes
16	20	15.67	230/Single Phase/60Hz	6	49.64	17501.58	2.024	1.448	Forward	Yes
	40	30.83	230/Single Phase/60Hz		85.12	39296.79			Forward	Yes
	60	47.26	230/Single Phase/60Hz		170.21	60301.63			Forward	Yes
	80	62.98	230/Single Phase/60Hz		341.23	82064.17			Forward	Yes
	100	78.74	230/Single Phase/60Hz		626.63	103761.76			Forward	Yes
18	20	15.09	230/Single Phase/60Hz	6	49.49	21289.21	2.092	1.334	Forward	Yes
	40	29.37	230/Single Phase/60Hz		92.31	49972.45			Forward	Yes
	60	44.22	230/Single Phase/60Hz		198.93	76482.90			Forward	Yes
	80	59.03	230/Single Phase/60Hz		423.14	103765.95			Forward	Yes
	100	73.72	230/Single Phase/60Hz		802.18	130918.37			Forward	Yes
20	20	13.83	230/Single Phase/60Hz	6	56.41	29309.47	2.07	1.376	Forward	Yes
	40	27.68	230/Single Phase/60Hz		107.50	63586.72			Forward	Yes
	60	41.77	230/Single Phase/60Hz		236.85	97829.49			Forward	Yes
	80	55.80	230/Single Phase/60Hz		493.18	131927.32			Forward	Yes
	100	69.88	230/Single Phase/60Hz		985.79	167290.66			Forward	Yes
24	20	9.86	230/Single Phase/60Hz	6	51.95	33160.85	2.223	1.419	Forward	Yes
	40	19.74	230/Single Phase/60Hz		92.80	72814.06			Forward	Yes
	60	29.69	230/Single Phase/60Hz		195.97	114369.90			Forward	Yes
	80	39.76	230/Single Phase/60Hz		404.79	153678.67			Forward	Yes
	100	49.78	230/Single Phase/60Hz		769.30	193647.41			Forward	Yes

Digital Remote



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



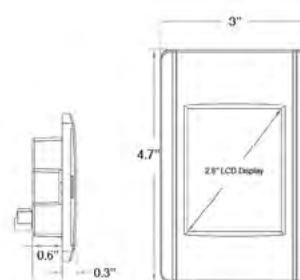
Features	Digital Touchpad Remote
Item #	30-90308-00
# Fans Controlled	1 fan
Display	2.8 TFT
Resolution	240x320x16 pixels
Backlight life time	20,000 hours
Backlight brightness	160 cd/m2
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6
Rating (front)	IP 40 / NEMA 1
Weight (incl. enclosure)	375 g
Communication 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)

Controller 4



- Available upgrade for all MacroAir fan models (Except AirLegacy)
- 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)
- 3-Year-Warranty



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. AirLink (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)

Controller 30



STANDARD FEATURES

- Available upgrade for all MacroAir fan models (except AirLegacy)
- 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
- Password protection capabilities for scheduling, naming



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)

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.

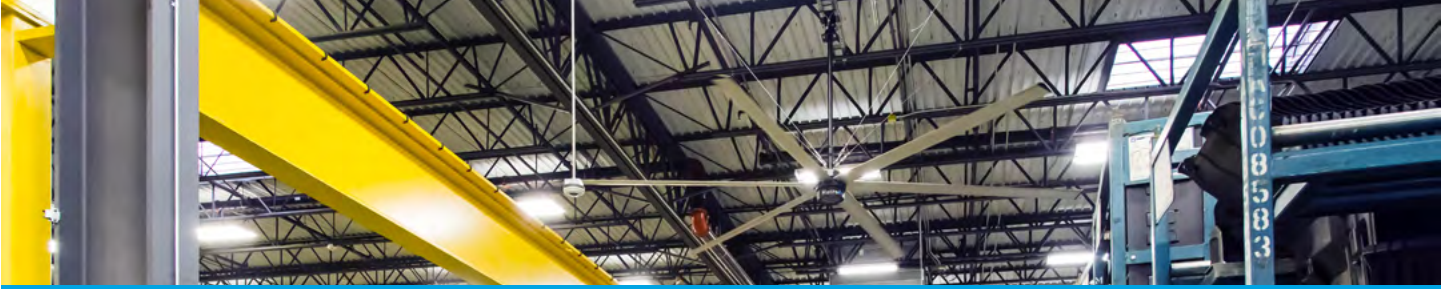
To Order BMS enabled fans and AirLynk please do the following:

- Identify the BMS network
- Discuss your network with MacroAir's Control Engineers
- Order one AirLynk to connect up to 30 fans

Item #	Description
30-10012-00	AirLynk - BACnet, (Works on all Fan Lines, except AirLegacy), Up to 30 Fans per AirLynk
30-10011-00	AirLynk - LonWorks, (Works on all Fan Lines, except AirLegacy), Up to 30 Fans per AirLynk
30-90315-00	Local Override Remote (each fan) for BMS (Works on all Fan Lines, except AirLegacy and AVD 370)
30-04030-02	Dual Control Enabled Controller 30 (Works on all Fan Lines, except AirLegacy) Up to 30 Fans per AirLynk
10-80632-00	Repeater (required for some older model fans; contact your sales rep for details)

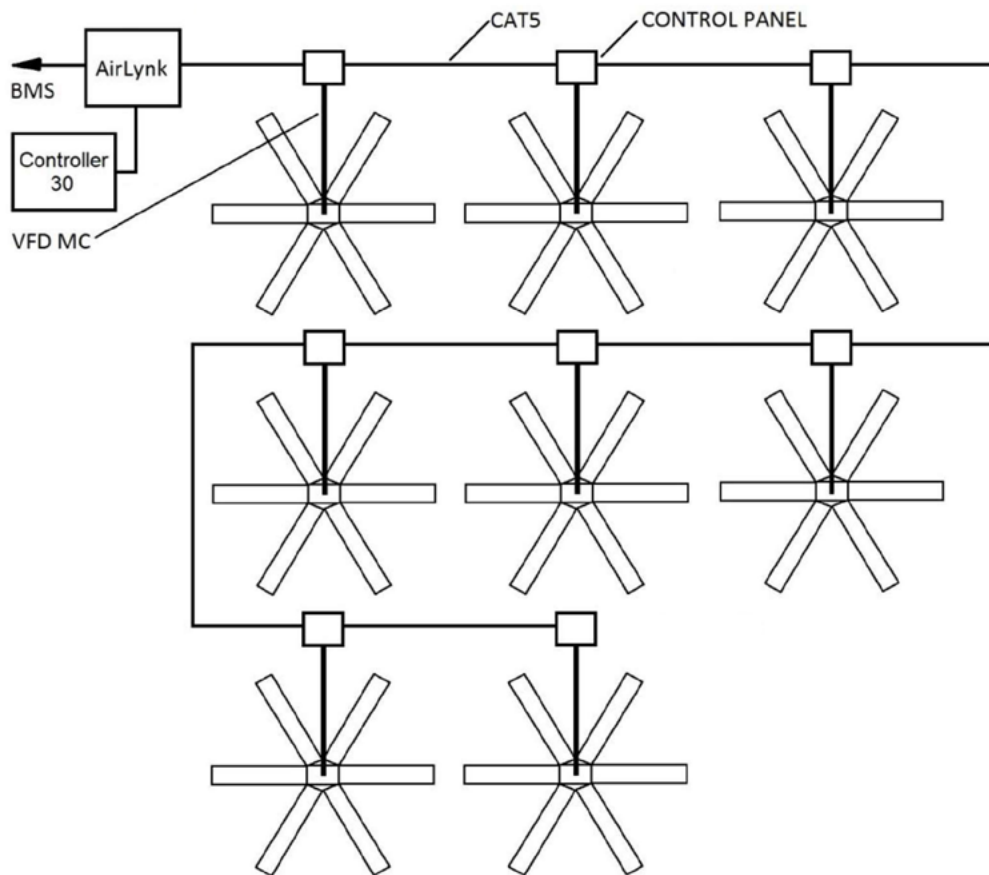
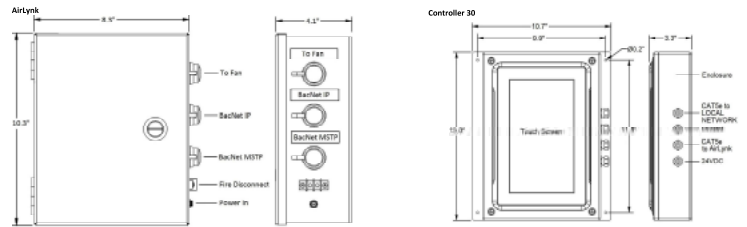
Note: Only one type of controller can be used when selecting Controller 4, Digital Remote Assembly or Analog Remote Assembly. AirLynk (BacNet) can be used as a stand alone, or paired with a Dual Control Enabled Controller 30 (see Dual Control page) or with Local Override Remotes for some fan models (see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

Dual Control for BMS Integration



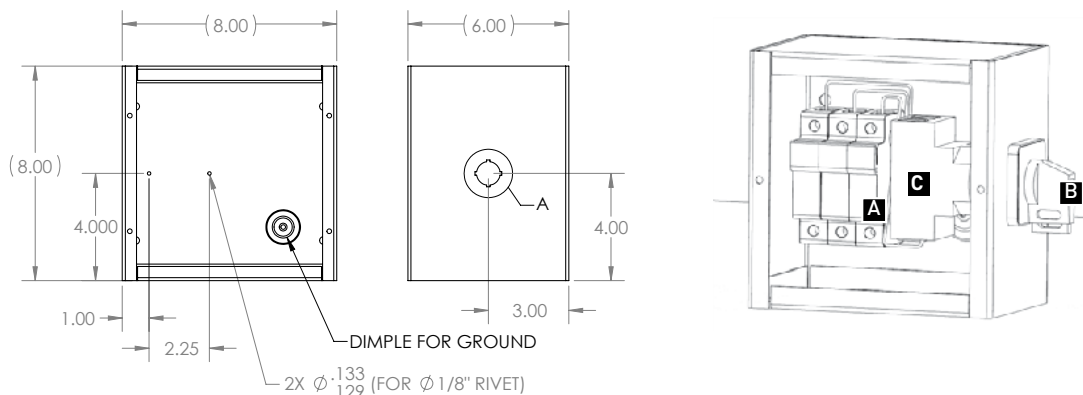
STANDARD FEATURES

- Seamless 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*



MacroAir Fused Disconnect

To meet national and international codes (such as the NEC and IEC directives), all HVLS fans need a means of disconnect on the incoming power for emergency and maintenance purposes, typically within line of site of the fan. MacroAir HVLS fan models with an off-board control panel include this disconnect within the panel enclosure. Models with a VFD enclosure mounted directly on the fan require an additional disconnect. MacroAir offers an optional disconnect package for AVD fans, but fuses are not included as they depend on the field's power supply. Recommendations for fuse sizing and sourcing are found in each fan model's installation manual.



Part Number 10-60200-00	AVD Fuse Disconnect Switch
Enclosure Dimensions	8" x 6" x 8"
(A) Fuse Pole Block	IEC 60269-2 COMPLIANT (USED ON 480V 3PH; 240V 3PH)
(B) Rotary Handle, ON/OFF	Lock-out/Tag-out capable, replacement part number 10-50716-00
(C) Disconnect Switch	SCHNEIDER VLS3P025D1, Rohs Compliant
(D) Fuses	Class CC or gG Fast Acting Fuses (Not provided, reference fan installation manual for recommended size)

NOTE: Ensure that there is no power when installing this component.

Means for disconnection with contact separation at least 3mm.

4.1.1: Mount the fuse disconnect switch outside of the swept area of the fan airfoils.

4.1.2: Wire the power cable from the fan to the bottom of the fuse block. Then wire the incoming power source to the disconnect switch.

4.1.3: In the diagram below, a three phase system is shown. For a single phase system, phase 1 would be connected to L1, neutral would be connected to L2, and L3 would be left not terminated.

