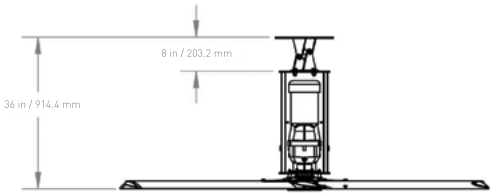
AirVolution

The MacroAir AirVolution uses a proven industrial gearbox-driven power unit in combination with integrated network technology. Combine with one of our multi-fan network controllers 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.

Fan Shown with Optional Custom Color Powder Coating

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



**

Intertek
Conforms to UL Std 507
Certified to CSA Std C22.2 No. 113

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 (Use 10,15, or 20 for 1 HP, 1.5HP and 2.0 HP respectively. HP based on diameter selection from step 1 above)

STEP 3: MOUNTING

Item #	Mount Options	Qty
60-90006-00	AirVolution 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 + Single 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)	

** MacroAir Technologies, Inc. certifies that the model AirVolution (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.

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		

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

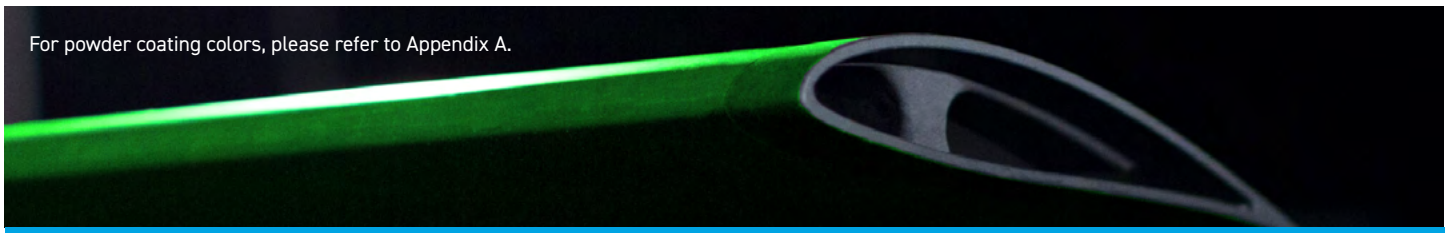
AirVolution fans can only be connected with a single-piece of custom length extension.

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	



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, Please see FDA, Stainless, and Explosion Proof specification sheets for more information

AirVolution

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	204 RPM	162 RPM	129 RPM	103 RPM	84 RPM	74 RPM	70 RPM	65 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 ft² [336 m²]	6,000 ft² [557 m²]	8,000 ft² [743 m²]	10,000 ft² [929 m²]	12,000 ft² [1,115 m²]	14,000 ft² [1,301 m²]	18,000 ft² [1,673 m²]	20,000 ft² [1,858 m²]
Sound Level dBA at Max Speed**	58	58	58	58	58	58	61	61
Carrier/Switching Frequency**	10,000Hz							8,000Hz
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 ft-lb [24 Nm]	24 ft-lb [33 Nm]	31 ft-lb [42 Nm]	43 ft-lb [58 Nm]	40 ft-lb [54 Nm]	58 ft-lb [79 Nm]	88 ft-lb [119 Nm]	126 ft-lb [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	4.10A	4.61A	4.97A	4.78A	4.39A	4.62A	5.43A	8.83A
208-240V Three Phase	4.10A	4.61A	4.97A	4.78A	4.39A	4.62A	5.43A	8.83A
480V Three Phase	4.10A	4.61A	4.97A	4.78A	4.39A	4.62A	5.43A	8.83A
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	ETL/INTERTEK - Conforms to UL Std 507 / Certified to CSA Std C22.2 No. 113							
Warranty	15 years mechanical (blades, hub, and frame), 7 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. Please see Carrier Frequency section of this guide for more information.

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

AirVolution

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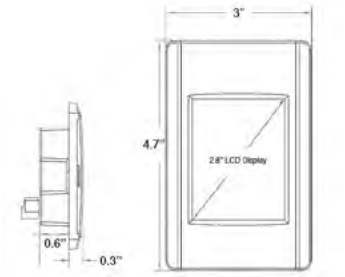
MacroAir engineers of air™

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	40.86	230/Single Phase/60Hz	6	55.15	6959.39	1.633	1.17	Forward	Yes
	40	81.34	230/Single Phase/60Hz		108.04	15013.71			Forward	Yes
	60	121.46	230/Single Phase/60Hz		218.55	22455.17			Forward	Yes
	80	163.51	230/Single Phase/60Hz		428.59	30162.63			Forward	Yes
	100	204.18	230/Single Phase/60Hz		734.75	37221.12			Forward	Yes
10	20	32.54	230/Single Phase/60Hz	6	55.10	10500.73	1.644	1.18	Forward	Yes
	40	64.75	230/Single Phase/60Hz		113.88	22149.13			Forward	Yes
	60	96.40	230/Single Phase/60Hz		238.45	32978.38			Forward	Yes
	80	129.93	230/Single Phase/60Hz		473.50	44105.04			Forward	Yes
	100	162.15	230/Single Phase/60Hz		841.49	55472.72			Forward	Yes
12	20	25.15	230/Single Phase/60Hz	6	52.43	13723.66	1.755	1.252	Forward	Yes
	40	51.82	230/Single Phase/60Hz		109.89	29529.47			Forward	Yes
	60	76.78	230/Single Phase/60Hz		250.28	45959.71			Forward	Yes
	80	103.25	230/Single Phase/60Hz		512.40	61999.82			Forward	Yes
	100	128.77	230/Single Phase/60Hz		919.43	77056.64			Forward	Yes
14	20	20.71	230/Single Phase/60Hz	6	53.90	17014.96	1.799	1.287	Forward	Yes
	40	41.37	230/Single Phase/60Hz		108.15	36659.93			Forward	Yes
	60	61.43	230/Single Phase/60Hz		238.72	56183.44			Forward	Yes
	80	82.52	230/Single Phase/60Hz		498.03	76953.94			Forward	Yes
	100	102.88	230/Single Phase/60Hz		878.81	94965.37			Forward	Yes
16	20	16.78	230/Single Phase/60Hz	6	55.27	20454.35	1.737	1.257	Forward	Yes
	40	33.44	230/Single Phase/60Hz		109.40	42699.14			Forward	Yes
	60	49.94	230/Single Phase/60Hz		228.18	64749.67			Forward	Yes
	80	67.13	230/Single Phase/60Hz		451.52	86412.55			Forward	Yes
	100	83.78	230/Single Phase/60Hz		796.32	108267.74			Forward	Yes
18	20	14.68	230/Single Phase/60Hz	6	65.66	24216.28	1.642	1.257	Forward	Yes
	40	29.41	230/Single Phase/60Hz		120.93	51186.04			Forward	Yes
	60	44.18	230/Single Phase/60Hz		241.41	77795.25			Forward	Yes
	80	59.21	230/Single Phase/60Hz		511.04	104720.26			Forward	Yes
	100	73.91	230/Single Phase/60Hz		846.05	130659.74			Forward	Yes
20	20	14.08	230/Single Phase/60Hz	6	53.80	30312.40	1.975	1.303	Forward	Yes
	40	27.83	230/Single Phase/60Hz		114.45	64025.35			Forward	Yes
	60	41.47	230/Single Phase/60Hz		261.89	98472.59			Forward	Yes
	80	55.83	230/Single Phase/60Hz		553.33	132198.53			Forward	Yes
	100	69.32	230/Single Phase/60Hz		1019.53	165684.28			Forward	Yes
24	20	13.18	230/Single Phase/60Hz	6	66.24	47864.71	1.82	1.258	Forward	Yes
	40	26.07	230/Single Phase/60Hz		177.54	101936.09			Forward	Yes
	60	38.97	230/Single Phase/60Hz		442.91	153923.53			Forward	Yes
	80	52.39	230/Single Phase/60Hz		955.74	208822.53			Forward	Yes
	100	65.09	230/Single Phase/60Hz		1790.63	261870.74			Forward	Yes

Digital Remote

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

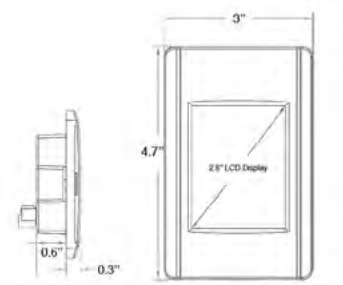


Features	Digital Touchpad Remote
Item #	30-90308-00
# Fans Controlled	1 fan
Display	2.8 TFT
Resolution	240x320x16 pixels
Backlight life time	20,000 hours
Backlight brightness	160 cd/m2
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6
Rating (front)	IP 40 / NEMA 1
Weight (incl. enclosure)	375 g
Communication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

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:

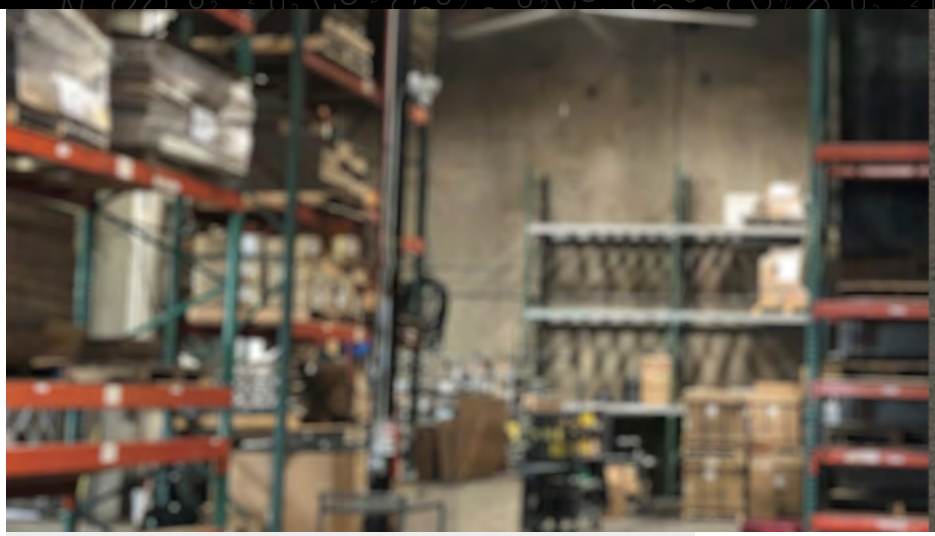
- Identify the BMS network
- Discuss your network with MacroAir's Control Engineers
- Order one AirLynk to connect up to 30 fans

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)

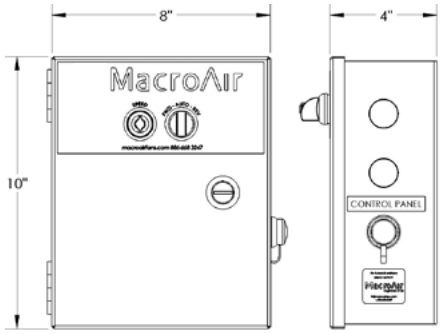
Note: Only one type of controller can be used when selecting Controller 4, Digital Remote Assembly or Analog Remote Assembly. AirLynk (BacNet) can be used as a stand alone, or paired with a Dual Control Enabled Controller 30 (see Dual Control page) or with Local Override Remotes for some fan models (see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

Local Override Remote

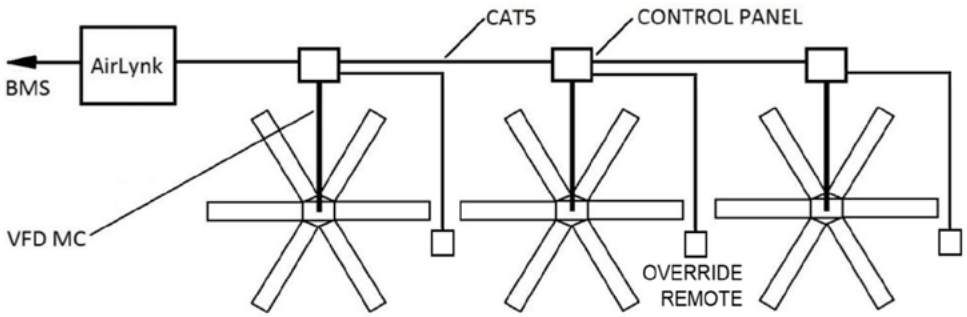
for BMS Integration



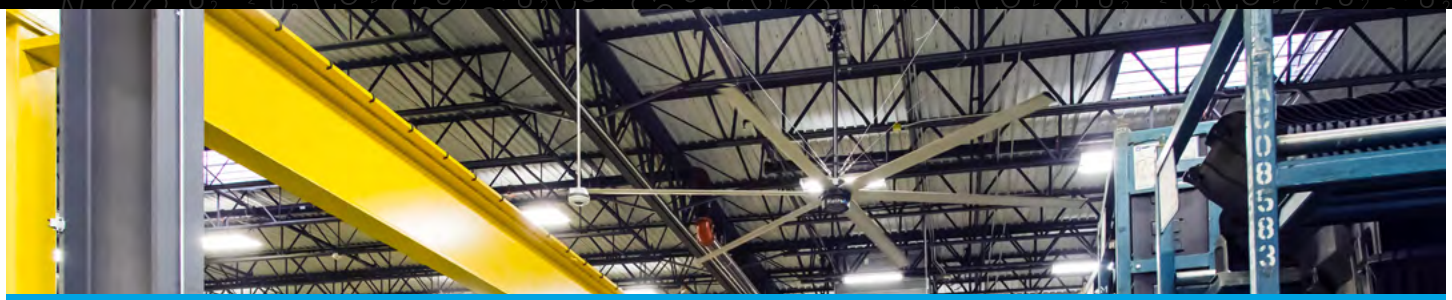
- Works with AVDX and AirVolution fans when paired with AirLynk
- Allows local user to control speed and direction when in FWD or REV Mode
- Allows Building Management System to control speed and direction when in Auto Mode
- Takes last known command from BMS when returned to Auto Mode
- Simple and intuitive 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

- 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*