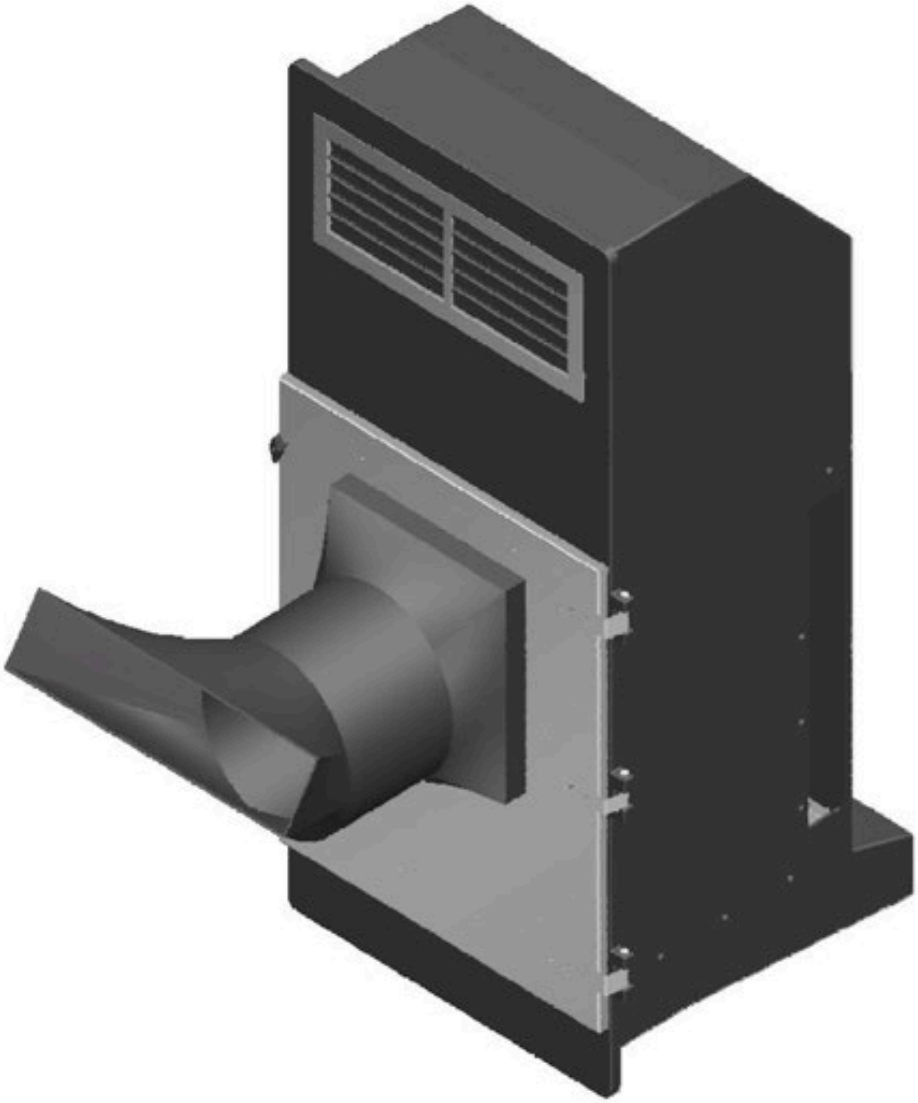
AVI ⇄ AIR

AVI35 EC 0-10 volts



Installation and User Manual

Designed and assembled in Canada by Distribution Avi-Air Inc.

Model : AVI35EC

Intake ventilator: 60Hz 240V 2,8A / 360 watts RPM 3300
Contrôlable en 0-10 volt ou MODBUS.

Exhaust ventilator 60Hz 240V 2,8A / 360 watts RPM 3300
Contrôlable en 0-10 volt ou MODBUS.

Patent Pending USPTO 62/366,657

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450 531 9865
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Electrician's Notes and Connection Diagram

The manufacturer recommends that the electrical connection be performed by a qualified electrician.

Warnings and precautions

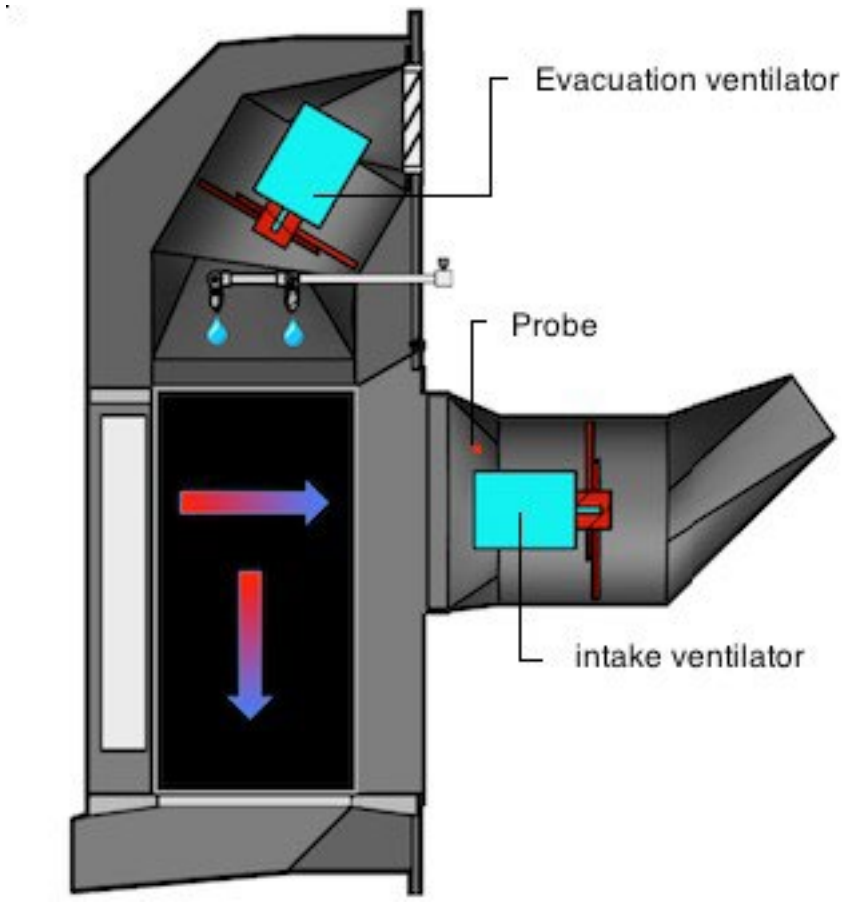
Recovery probe

Only one probe per stage is used per regulator. The probe is assigned to the INTAKE ventilator of the recuperator.

The INTAKE fan will be activated based on this probe when the Avi35 is in recovery mode.

If more than one recuperator is connected in series to the regulator, the manufacturer recommends to place the probe on the Avi35 recuperator which will be used during the departure of a flock, or the one which will work in the first place.

The manufacturer recommends installing the probe at one end of the INTAKE fan leg support. The probe should be secured at a minimum distance of 8 cm from the motor.



Warnings and precautions

Automated defrost system

Relay for defrosting in Avi28 and Itouch and maximus controls.

An Avi-28 or Maximus relay is associated with the inversion of the intake fans. One per fan group if more than one exchanger group is used.

An evac polarity relay from the Genius Itouch is associated with the inversion of the input fans. One per fan group if more than one exchanger group is used.

Automatic reversal of the rotation of the Input fans will not occur if the 0-10 volt variable card switch associated with the Intake fans is not positioned in automatic mode.
The manufacturer recommends checking the Intake fan rotation reversal functions when first turning on the Avi35

The red and yellow low voltage wires are united and connected to one terminal of the reversing relay and the brown to the other terminal of the reversing relay. See diagram.

Warnings and precautions

Automated rinsing system

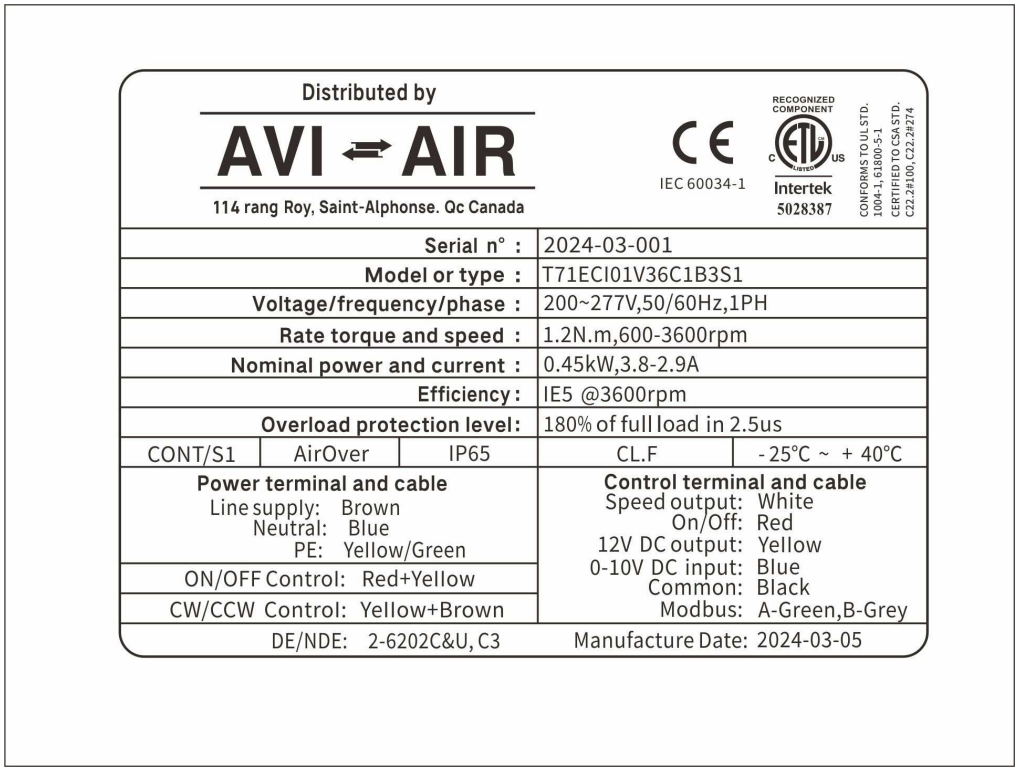
The manufacturer recommends the use of a centrifugal booster pump (not included) providing a minimum of 10 gpm at 50 psi to provide sufficient water to the flushing system.

All regulators in the same building use the same centrifugal booster pump.

Each solenoid valve 240V must be connected to a single ON / OFF relay of the regulator. Each valve has its own circuit to the controler.

If the valve is supplied with 24 volt DC coil, connect the valve with the provided a40 v ac to 24 dc transformer.

AVI-AIR EC MOTOR SPECIFICATION



Distributed by

AVI ⇄ AIR

114 rang Roy, Saint-Alphonse. Qc Canada

IEC 60034-1

RECOGNIZED COMPONENT

Intertek 5028387

CONFORMS TO UL STD. 1004-1, 61800-5-1 CERTIFIED TO CSA STD. C22.2#100, C22.2#274

Serial n° :			2024-03-001	
Model or type :			T71ECI01V36C1B3S1	
Voltage/frequency/phase :			200~277V,50/60Hz,1PH	
Rate torque and speed :			1.2N.m,600-3600rpm	
Nominal power and current :			0.45kW,3.8-2.9A	
Efficiency :			IE5 @3600rpm	
Overload protection level:			180% of full load in 2.5us	
CONT/S1	AirOver	IP65	CL.F	-25°C ~ +40°C
Power terminal and cable Line supply: Brown Neutral: Blue PE: Yellow/Green			**Control terminal and cable** Speed output: White On/Off: Red 12V DC output: Yellow 0-10V DC input: Blue Common: Black Modbus: A-Green,B-Grey	
ON/OFF Control: Red+Yellow				
CW/CCW Control: Yellow+Brown				
DE/NDE: 2-6202C&U, C3			Manufacture Date: 2024-03-05	

Warnings and precautions

INTAKE AND EXHAUST VENTILATORS

The manufacturer recommends consulting the regulator installation guide for connection to the 0-10 volt variable board and the ON / OFF relays.

The manufacturer recommends a maximum of **FOUR** Avi35 pickups by Gev2 accessory card amplifier for Genius Itouch and AVI-28.

The functions of the low voltage strands

- White: speed signal return (not used)
- YELLOW; 12 Volt DC output
- Red stop / start
- Black: common
- Blue: 0-10 volts
- Brown: reverse rotation
- Green: MODBUS A. (not used)
- Gray: MODBUS B. (not used)

Red and brown are united to always be in departure mode. The black and blue are connected to the 0-10 volt relay. When the fan receives less than 1.7 volts, it stops. When the fan receives more than 2 volts, it starts at minimum. When the intake fan needs to reverse, the controller sends 0 volts to cause it to stop, then energizes the relay so that brown touches yellow and red. See connection diagram.

The manufacturer recommends a maximum of two Avi35 recuperators per 15 amp circuit.

The manufacturer recommends installing a bipolar mechanical switch to each fan.

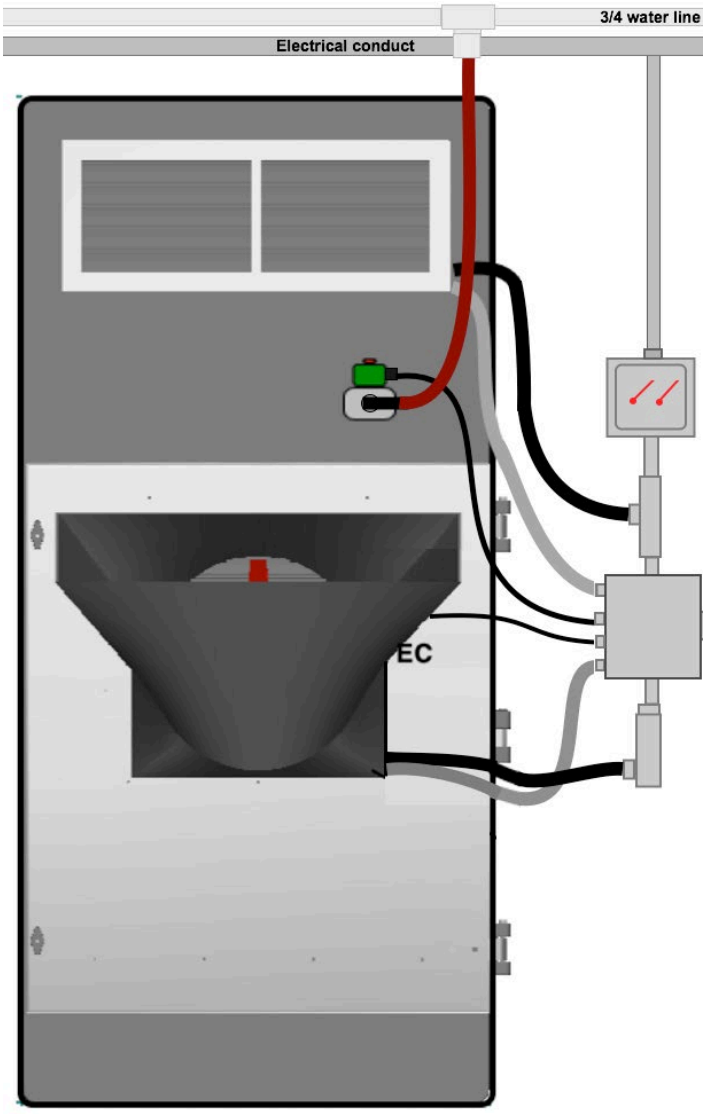
The manufacturer recommends using the same common L2 for the 230V solenoid valve of the wash system. The L1 of the valve comes from a relay in the controller

The manufacturer recommends installing a two-pole mechanical switch at each fan to cut off the high voltage.

The manufacturer recommends a 3-wire cable to connect the solenoid valve.

The gauge of the wires must respect the electrical code in force in your area.

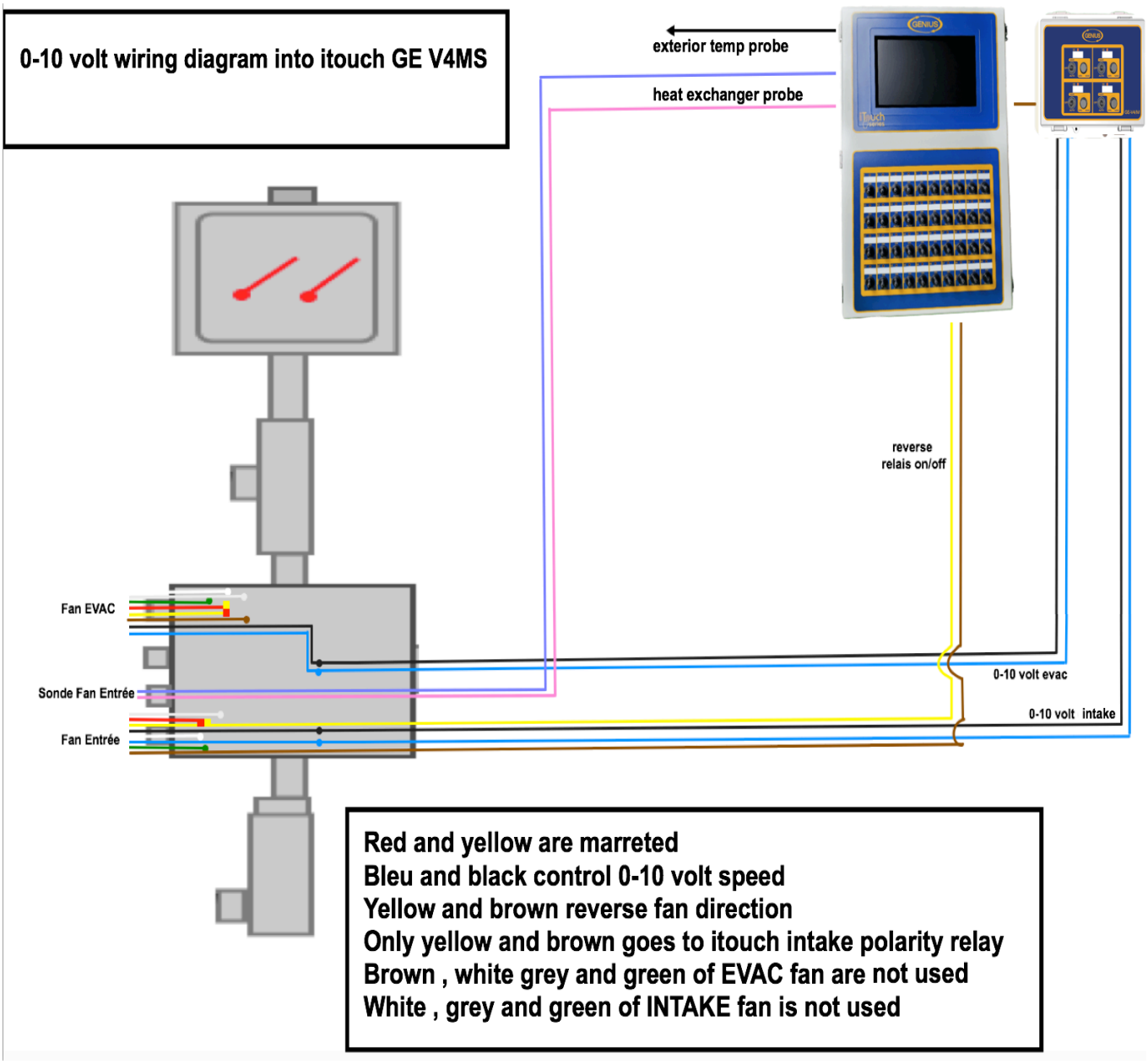
INSTALLATION AND ELECTRICLAL DIAGRAM



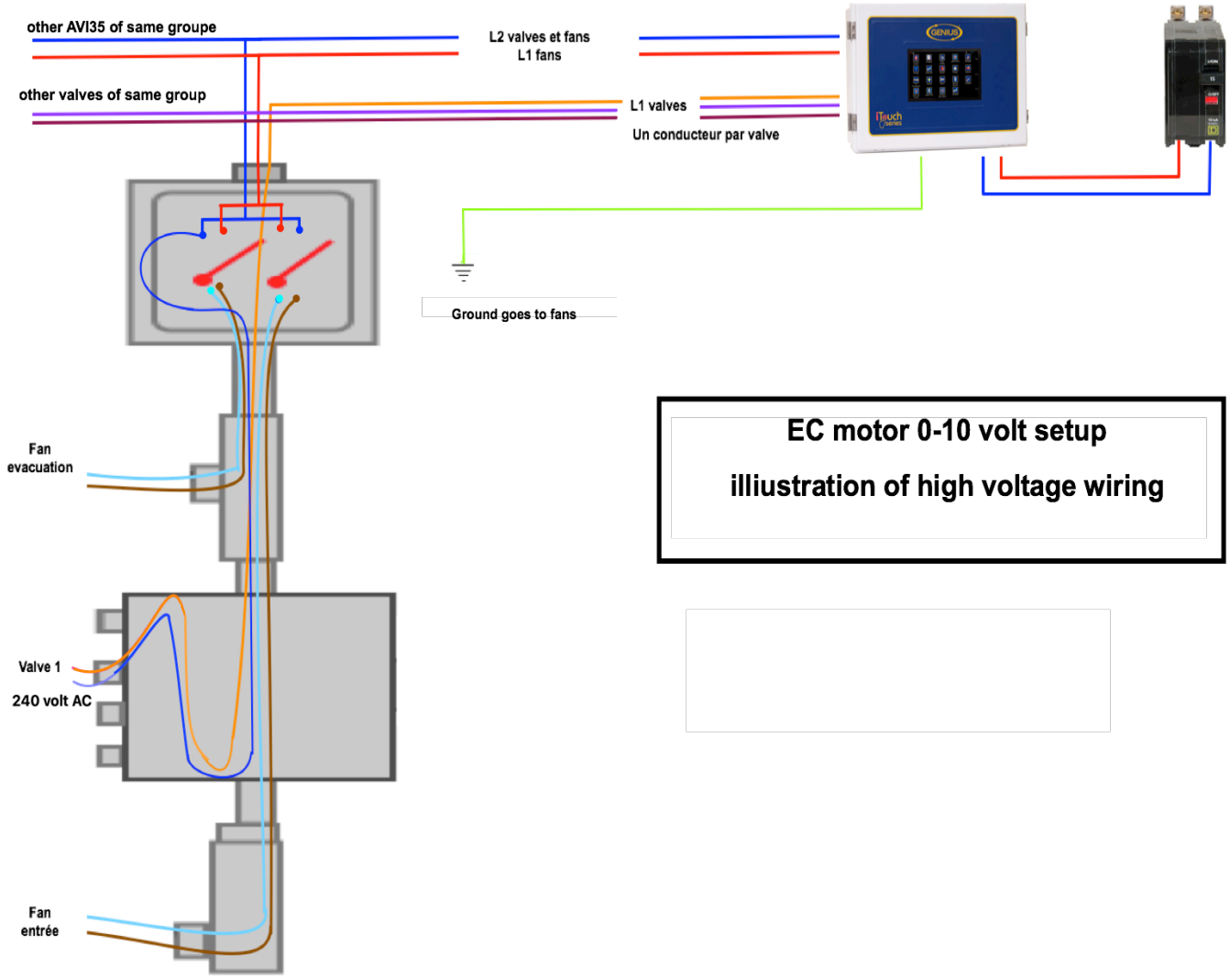
The connection of high voltage wires is done on the bipolar switches. The low voltage wires from the two fans and the probe are connected with terminal block or jacks in a 6 by 6 or 8 by 8 junction box as illustrated. The valve is also connected in a junction box.

ITOUCH LOW VOLTAGE CONNECTION DIAGRAM

Each solenoid valve 240V must be connected to a single ON / OFF relay of the regulator.
Each valve has its own circuit to the controler.



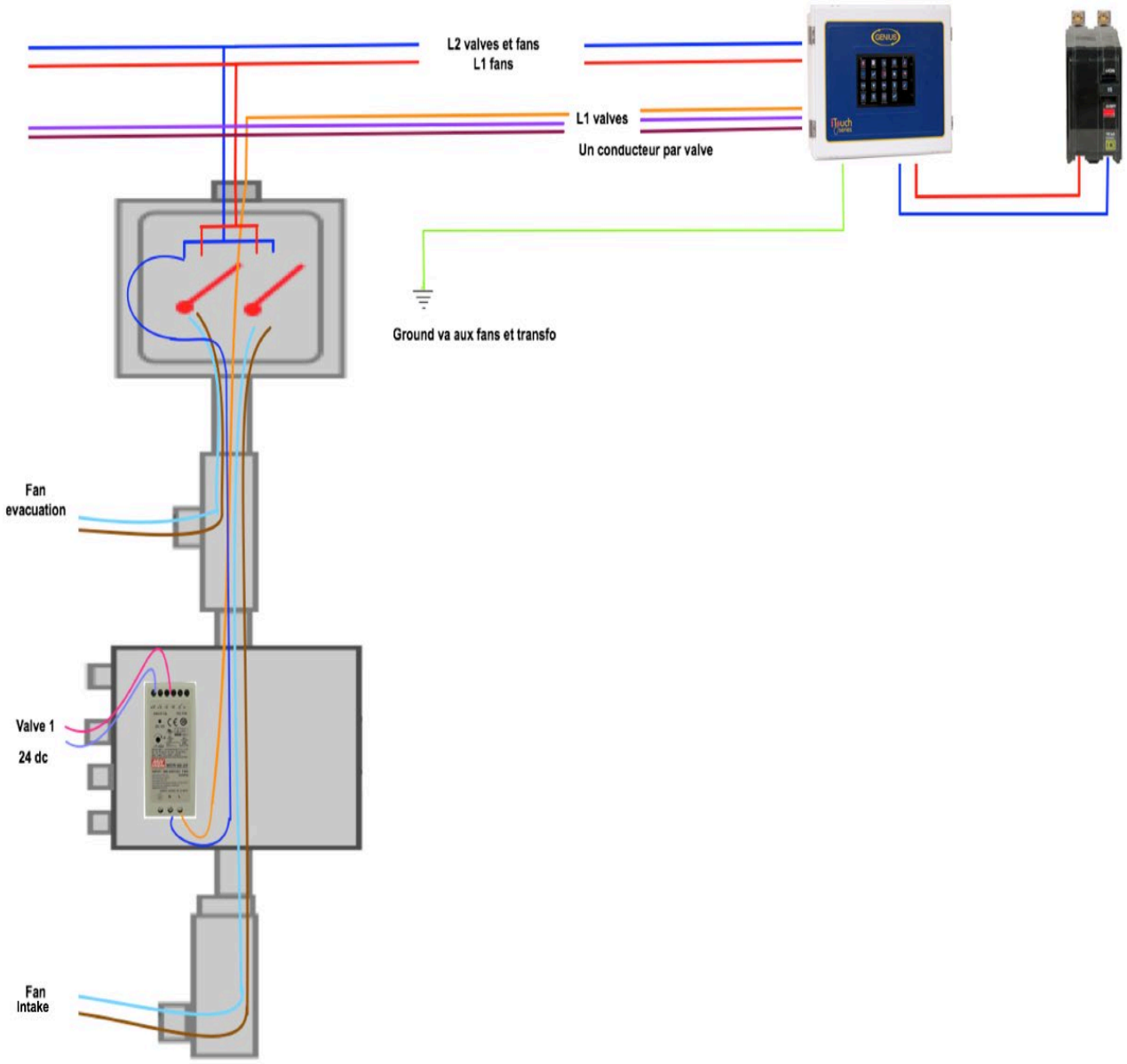
I TOUCH CONNECTION 240V AC DIAGRAM



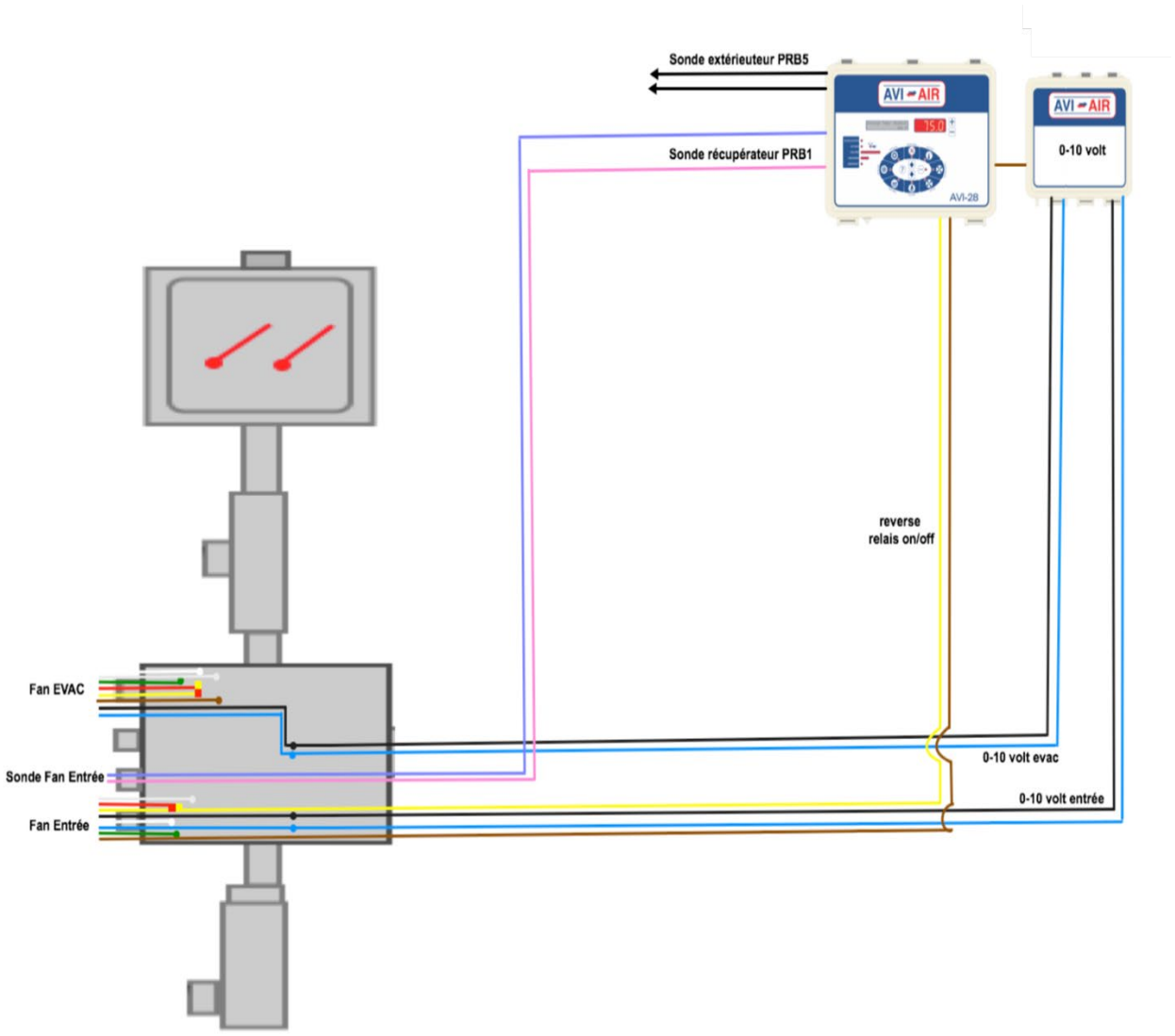
EC motor 0-10 volt setup

illiustration of high voltage wiring

I TOUCH CONNECTION 240V AC WITH 24V DC VALVE TRANSFORMER DIAGRAM

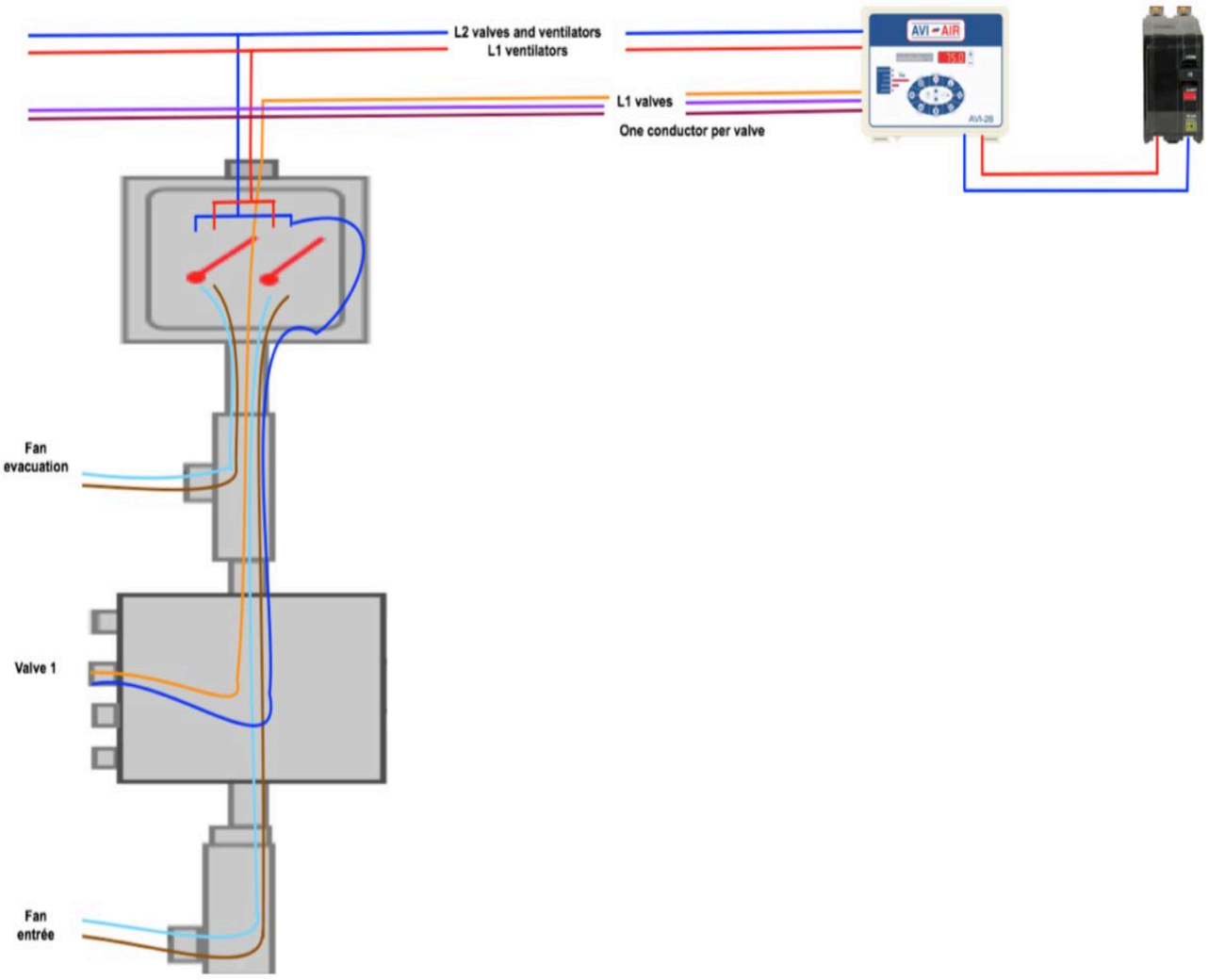


AVI28 CONNECTION DIAGRAM LOW VOLTAGE

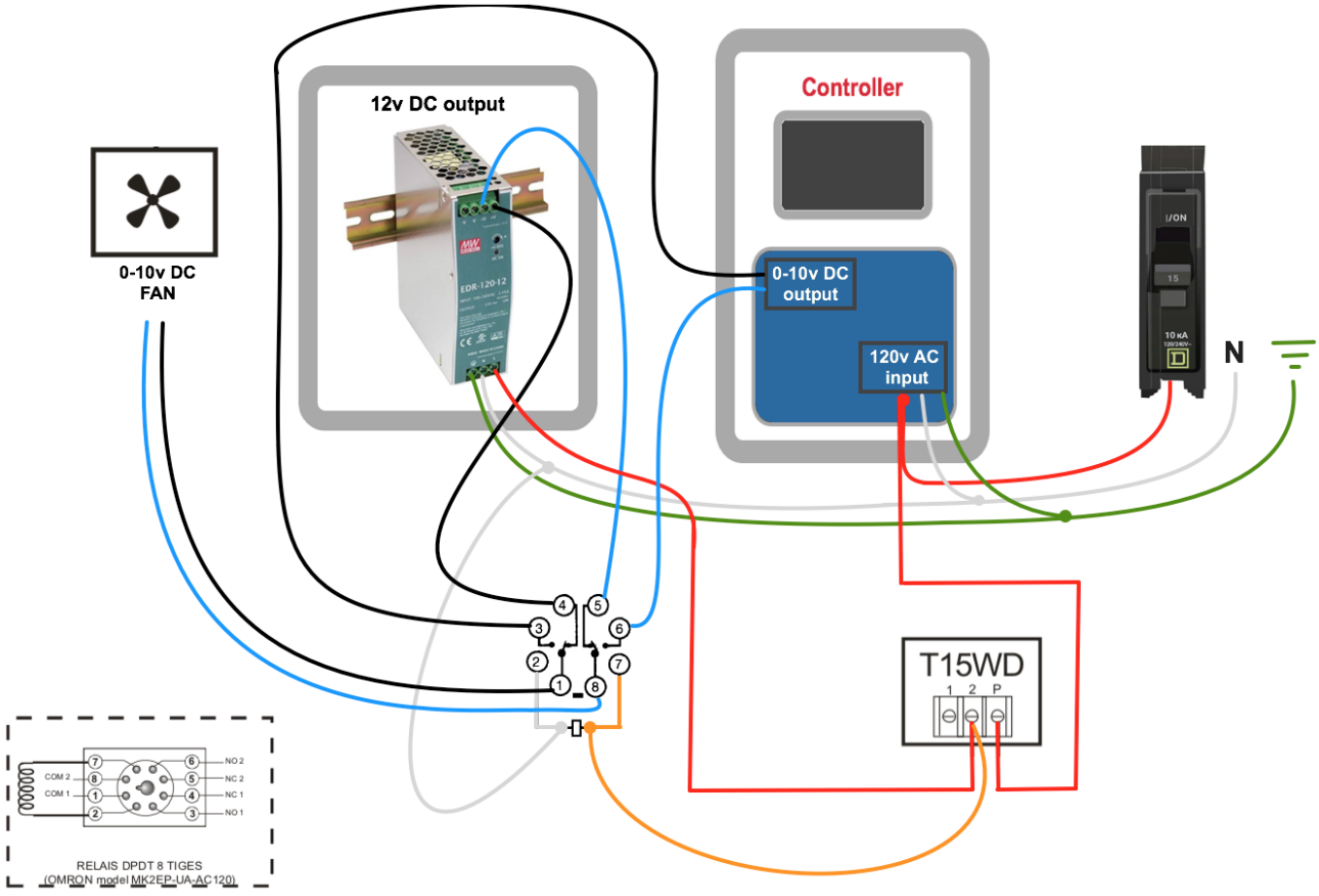


Red and yellow are marreted
Bleu and black control 0-10 volt speed
Yellow and brown reverse fan direction
Only yellow and brown goes to itouch intake polarity relay
Brown , white grey and green of EVAC fan are not used
White , grey and green of INTAKE fan is not used

AVI28 CONNECTION 240V AC DIAGRAM



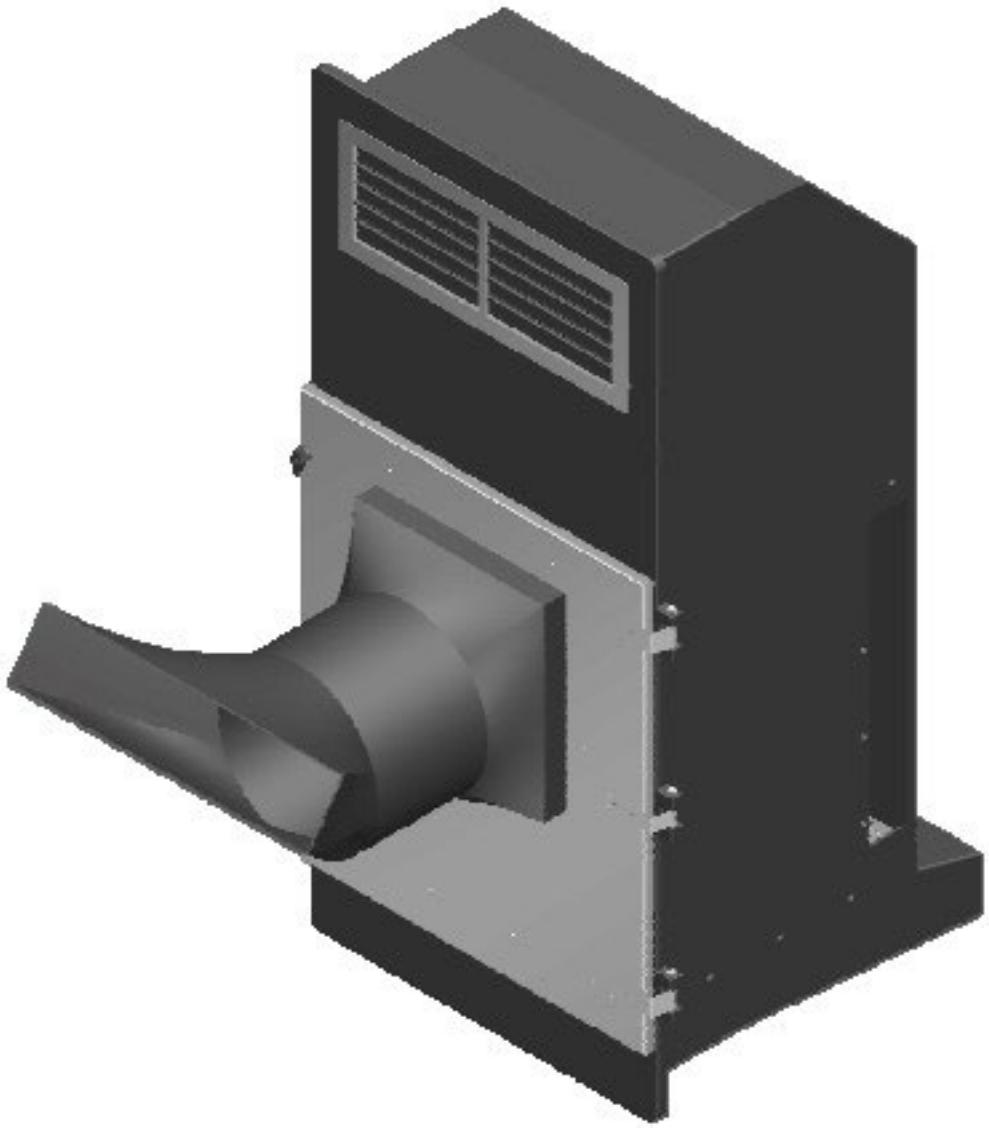
Back up safety DPDT relay



A T15WD thermostat closes the 120v AC circuit to power the ***MeanWell 120AC-12DC*** transformer and an 8-pin backup relay (DPDT)

The emergency relay (DPDT) is connected to the controller's 0-10v DC power source during normal operation and will connect to the external ***MeanWell 120AC-12DC*** twelve volt DC power source if the building temperature increases above the T15WD setting point.

Installation Guide



Warnings and precautions

The manufacturer recommends installing the recuperators in the wall of the building. Ideally, the Avi35 should not be installed directly above each other to prevent ice build-up above the unit on the lower floor. Also, plan for a large accumulation of ground ice at the exit of the recuperator during winter.

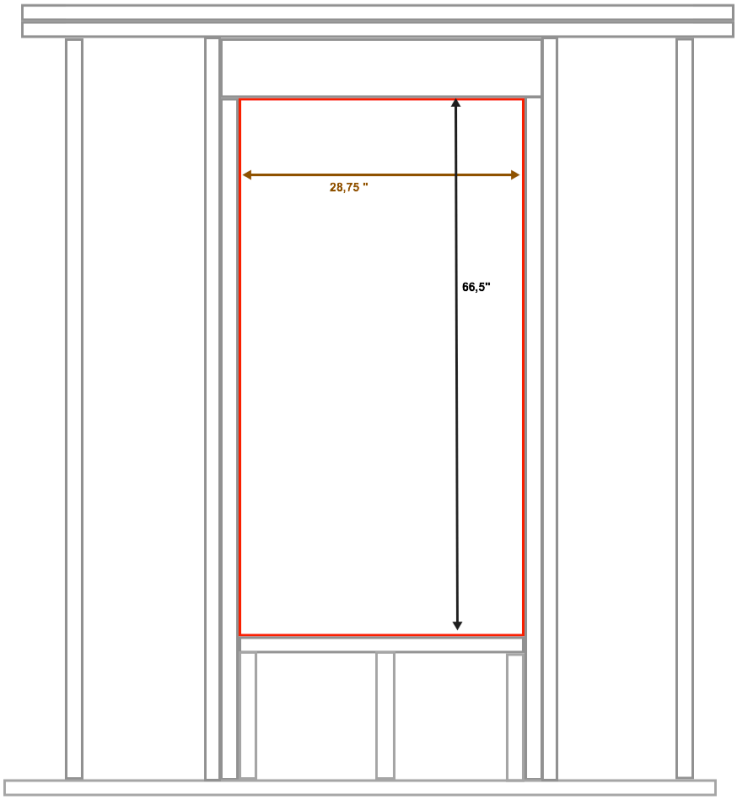
The manufacturer also recommends that a distance of at least 7 meters be maintained between the Avi35 recuperator and another standard building exhaust fan. The aim is to prevent a return of stale and dusty air from other standard exhaust fans in the Avi35 fresh air INTAKEs.

Make an opening 28.75 inches wide by 66.5 inches high. See diagram 1. Fix the device to the wall by aiming into the pre-drilled holes in the facade. Screw both sides of the device into the wall frame into the interior walls of the Avi35. Diagram 1

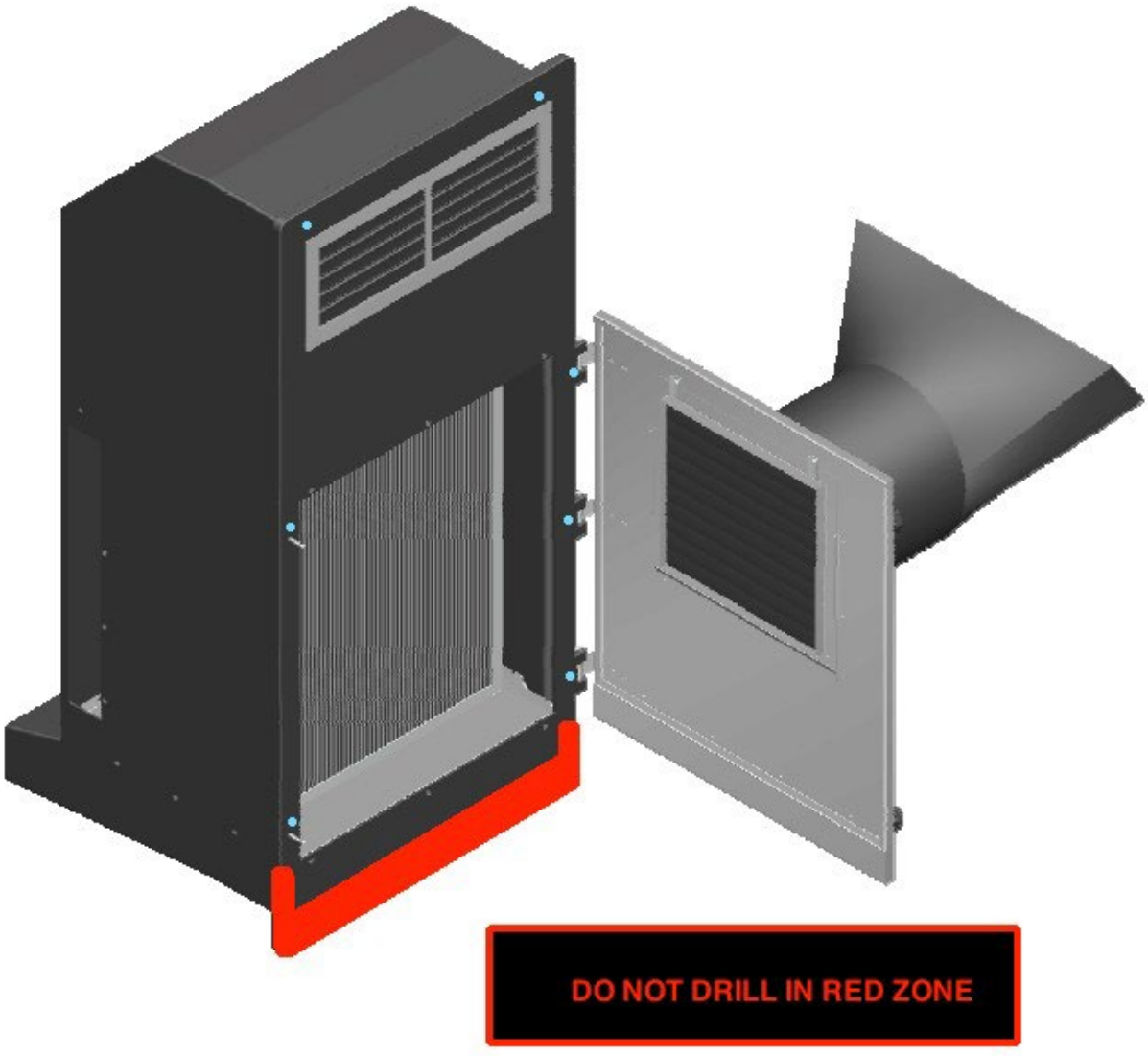
Do not drill holes in the bottom of the Avi35 (RED ZONE). See installation diagram 3

Secure the unit to the wall by aiming through the pre-drilled holes in the facade. Screw both sides of the unit into the wall frame. See installation diagram 3.

Installation diagram 1



Installation diagram 2



Limited warranty

The assembled product and individual components are subject to rigorous inspection and verification to ensure maximum product reliability and quality. However, the possibility of breakage and / or malfunction may exist. Contact your supplier for service. The warranty is for a period of three years from the date of sale. Proof of purchase is required to validate the warranty.

In any case, the warranty applies only to manufacturing defects and specifically excludes any damage caused by overload, short circuit, misuse, vandalism, unforeseen event, deluge, fire, hail or natural disaster. Any modification and repair not authorized by the manufacturer on this product automatically void the warranty and relieves the manufacturer of any liability.

The manufacturer assumes only the aforementioned obligations, excluding any other warranties or obligations. This warranty states that in all cases the manufacturer will be responsible only for the replacement of defective parts and will not be liable for any personal injury, damage, loss of profit, stoppage of operations, fines for contravention of the law or damage to the production of BUYER. The BUYER takes over the defense and holds the innocent manufacturer in any of the legal or extralegal procedures or request of the customer or by a third party and in respect of any legal or extralegal expenses and fees occasioned by such damage.