SMART AIRCON ENERGY SAVER

AMI V1 CATALOGUE

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INTRODUCTION

The **AMI V1** device from **S4TECH** is an intelligent control system that improves the energy efficiency of air conditioning and refrigeration systems by adding an additional stage for compressor-based air conditioners in conventional refrigeration.

Most of the manufacturers do not consider the hydraulic work of the compressor; The compressor of a traditional cooling system continues running even if the hydraulic work is done and space is already at its desired temperature and the unit already reaches the saturation point, and this leads to energy waste, as 95% of the energy costs in the operating systems of air-conditioning and refrigeration systems come from the compressor itself.

APPLICATIONS

AMI V1 from **S4TECH** helps any space that uses air conditioning devices while keeping the space cooled without raised temperature, and by using less power energy.

It is suitable for all sectors such as

Hotels - restaurants - villas - residential buildings - labor accommodation - hospitals - schools and universities - commercial buildings and offices

AMI V1 From **S4TECH** is a French-designed technology that does not require maintenance and can be installed by any air conditioning technician who has sufficient experience within a short time or by our qualified engineers.

Reduce energy power consumption of your air conditioners and help reduce carbon emissions

HOW IT'S WORKS 1/2

Most of the manufacturers do not consider the hydraulic work of the compressor; The compressor of a traditional cooling system continues running even if the hydraulic work is done and space is already at its desired temperature and the unit already reaches the saturation point, and this leads to energy waste as **95%** of the energy costs in the operating systems of air-conditioning and refrigeration systems come from the compressor itself.

From here came the **AMI V1** unique design from **S4TECH**, as it adds an additional stage to the air conditioners by monitoring the compressor work, room temperatures, and supply air temperatures (Off coil Temperatures) and performing calculations through a complex and intelligent algorithm to know the desired temperature and reaching the air conditioner to the saturation point, the continuous working of the compressor in this point is considered wastes energy.

HOW IT'S WORKS 2/2

At this point, the **AMI V1** from **S4TECH** work comes by giving the command to disconnect the compressor as it already reached to saturation point and already maintained the desired temperature for the space.

We have developed the algorithm to take not only the supply, return temperatures and compressor operation but also consider the graphical chart curves and the compressor working cycles and optimize them by knowing the desired temperature and the times for the compressor to reach the saturation point so that any additional work of the compressor is a waste of energy and a waste of the compressor itself without justification.

AMI V1 From S4TECH is detecting the saturation point and stopped wasting energy and reduce the load on the compressor

MAIN FEATURES

- IP67 Device Rating
- Dual Water Proof Temperature Sensors
- Auto Detection of Air-condition On/Off
- Auto Detection of Air-conditioning Set Point
- Two Modes Selectable (Standard and Smart Mode)
- Built-in Data Logger
- SD Card slot to archive data if required
- 3 LED indicators (Power - compressor - Stand By)
- Errors LED indicator for faulty sensors
- Easy installation as a retrofit solution
- Ground line connection (Earth line)
- Software customization for special request
- Additional Sensor input for special request
- low voltage running inside the PCB
- Local isolation bypass on/off switch
- RoHS Components
- CE Certificated

MAIN BENEFITS

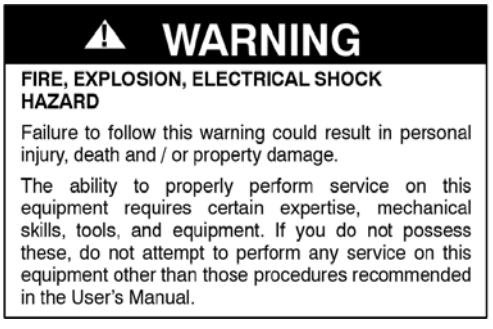
- Up To 40% of Energy Saving
- The latest high technologies
- Fast Return on investment
- Reduce carbon emission
- Reduce electricity Bills
- Improve cooling comfort
- Zero icing up or dripping
- Reduce the load on compressor
- Auto archive data with date and time
- Three Years warranty
- compatible with all air-conditions brands
- software update with service contract

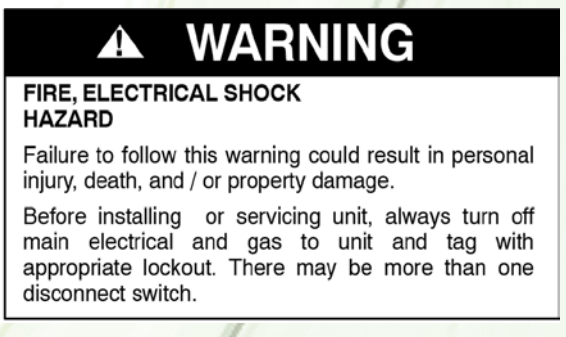
INSTALLATION GUIDE 1 / 2

Danger: Electrical current from power, telephone, and communication cables are hazardous.

To avoid a shock hazard:

- Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product before isolating the air-condition main breaker.
- Connect all power cords to a properly wired and grounded electrical outlet.
- Connect to properly wired outlets any equipment that will be attached to this product.
- Never turn on any equipment when there is evidence of fire, water, or structural damage.
- Connect and disconnect cables as described in the following table when installing, moving, or opening covers on this product or attached devices.





INSTALLATION GUIDE 2/2

Connect cables

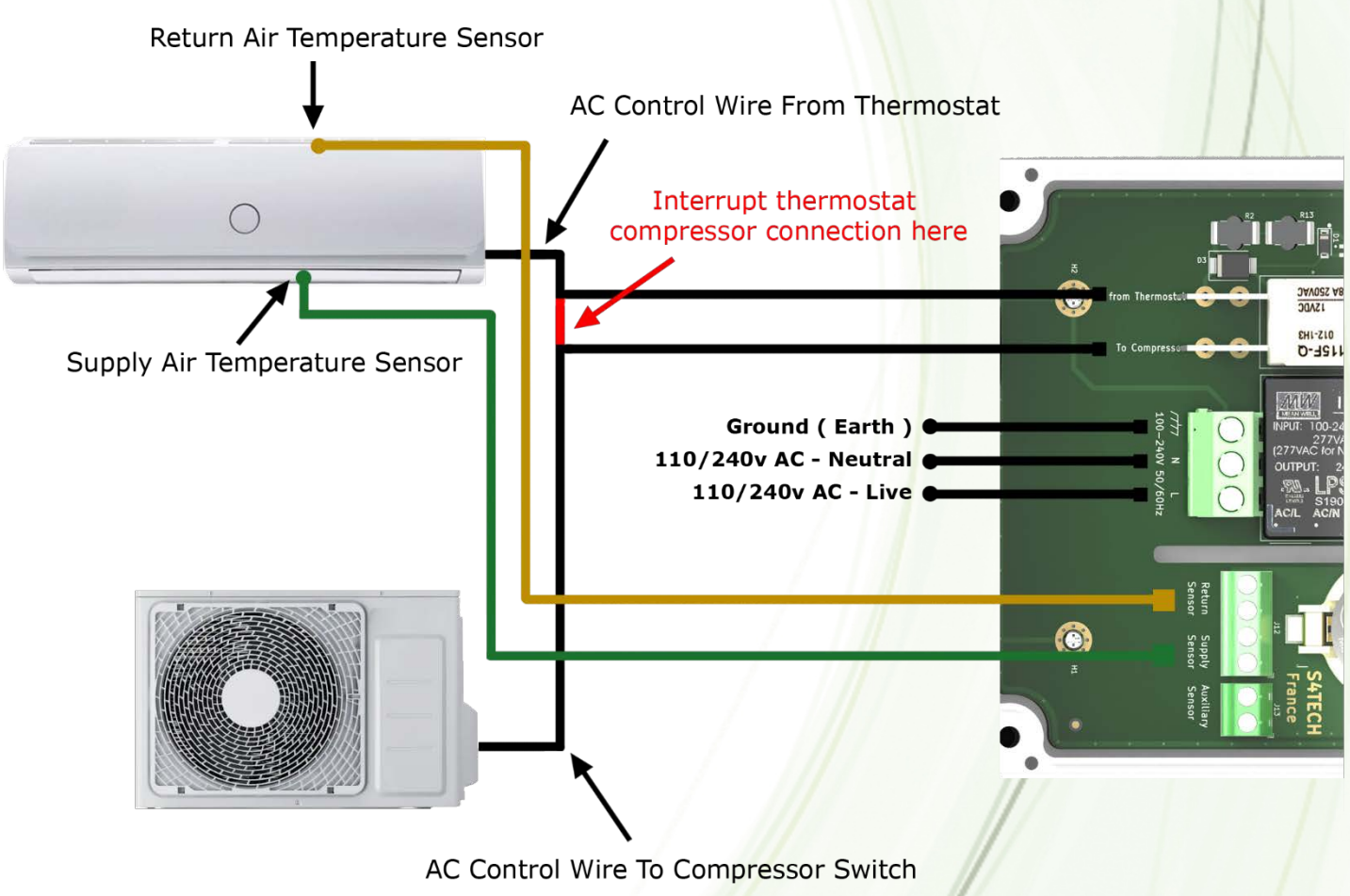
- Shut OFF all power sources and equipment to be attached to this product.
- Attach all cables to the devices.
- Attach signal cables to the connectors.
- Attach the temperature sensors.
- Install the SD card if required.
- Install the temperature sensors in correct locations
- Turn ON all the power sources.

Disconnect cables

- Shut OFF all power sources and equipment to be attached to this product.
- For AC systems, remove all power cords from the power terminal
- Remove the Temperature sensors.
- Remove the signal cables from the connectors.
- Remove all cables from the devices.

INSTALLATION WIRING DIAGRAM

All Air-conditioning Units have a control wire running from the thermostat from the indoor unit to the compressor switch in the outdoor unit, we only need to identify this wire and interrupt it to get the connection from the indoor unit thermostat to our device thermostat relay connection and connect in our device compressor relay to the outdoor compressor relay as follows:



TROUBLESHOOTING 1 / 2

Please check the table below carefully

Trouble	Problem Cause	Corrective Action
All Device indicator lights are off	There is no power feeding the device	• Check the power cables from two ends physically • Use the multimeter to check the AC voltage in two wire ends
Red Led Light Indicator blinking once each 10 seconds	The Return temperature sensor is disconnected	• Check the sensor terminal connector • Replace the temperature sensor
Red Led Light Indicator blinking 2 times rapidly every 10 seconds	The Return temperature sensor is bridged	• Check the sensor terminal connector • Replace the temperature sensor
Red Led Light Indicator blinking 3 times rapidly every 10 seconds	The Supply temperature sensor is disconnected	• Check the sensor terminal connector • Replace the temperature sensor

TROUBLESHOOTING 2/2

Trouble	Problem Cause	Corrective Action
Red Led Light Indicator blinking 4 times rapidly every 10 seconds	The Supply temperature sensor is bridged	• Check the sensor terminal connector • Replace the temperature sensor
Red Led Light Indicator blinking every 5 seconds	The SD Card not Detected or Faulty	• Check the SD card installation. • Check the SD card Formation (Should be FAT 32)
Red Led Light Indicator blinking every one seconds	The Air-condition is not cooling and the supply temperature is too high	• Clean the Air-condition indoor unit filter • Clean the Air-condition outdoor unit condenser • Check the Air-condition Gaz pressure

FAQ 1 / 3

Q. What Type of air conditioner is compatible with AMI V1 device?

A. The AMI V1 is compatible with Window, Split and Package Units

Q. What is the minimum savings you can get when installing AMI V1?

A. The guaranteed energy saving is **15% annually**

Q. If the AC package units have 2 compressors, how many AMI V1 devices required

A. It's needs 2 devices (one device for each compressor)

Q. Can I change the set point or it should be a static point?

A. You are free to use your Aircon however you like without no effects

Q. Is AMI V1 Have any effect on the compressor or any other Aircon parts?

A. The AMI V1 has no effects on the compressor or any other parts due to it has 3 minute's delay to protect the compressor from frequency ON/OFF

Q. What is the standard Three years warranty covers?

A. The warranty covers defect in workmanship and materials (subject to normal storage, handling and installation conditions)

FAQ 2 / 3

Q. How Much time needs to install the device?

A. It's need about 30-60 minutes with qualified engineer.

Q. Is AMI V1 eliminates the function of the air conditioner temperature sensor

A. No, The AMI V1 is adding an additional stage to the Aircon stages.

Q. What is the data we can download from SD card?

A. You will get (time, date, supply air temperature, return air temperature, compressor running time with 10 seconds interval and error log file.

Q. How much the SD card space required to store data for one year?

A. If the aircon working for 24/7 its need 182.5 MB only a year.

Q. What is the SD card format?

A. The SD Card must format on FAT32 only.

Q. How we can calculate the energy savings?

A. In the collected data you have compressor running hours and from that you can calculate estimated saving between saving and bypass mode.

FAQ 3 / 3

Q. What is standard saving mode?

A. The standard saving mode is collecting data from supply air temperature sensor and compressor status only to calculate the best time to switch on/off the compressor, consider the aircon is on lowest set point.

Q. What is the smart saving mode?

A. The smart saving mode is collecting data from supply air temperature, return air temperature and compressor status to know the setpoint temperature to calculate the best time to switch on/off the compressor.

Q. Is the device needs maintenance?

A. No need any maintenance.

Q. What you offer in the service contract?

A. We will offer software update if available and collect the data from the SD card to prepare a report for each Aircon separately where it's will show you the exact (Room Temperature, Supply temperature and compressor running time on daily, weekly and monthly basis)

Q. is the device coming with SD card?

A. No, the device is coming without SD card and the client should supply it or we can supply it with an extra cost.

We'd love to hear from you

Whether you have a question about features, trials, pricing, need a demo, or anything else, our team is ready to answer all your questions

We are happy to assist you in

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