# WMP Protocol Specification

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# Important User Information

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# 1. Overview

WMP protocol will allow third party applications to get in touch with the Intesis WMP through an IP connection using an ASCII protocol.
Among others, this protocol will allow control and monitoring of:

- On/Off
- Mode
- Set Point Temperature
- Room Temperature
- Fan Speed
- Vane Position

## About this document

This document contains the basis of the WMP protocol for the Intesis Home Automation devices (hereafter referred to as “Intesis WMP”) and assumes that the reader has deep knowledge on IP, ASCII, wireless and programming concepts.

## About the solution

The Intesis WMP stablish a TCP connection (Port 3310) between the Intesis WMP itself and the BMS, smart hub, home control or any other controller (from now on client) with IP connection enabled. Communication is done through ASCII telegrams.

The Intesis WMP works as a server. That means that it just waits for the client to ask for specific data and it serves this data. It allows up to two simultaneous TCP connections using the WMP protocol.

The Intesis WMP close the TCP communication if no communication is received for 1 minute. To avoid unexpected TCP communication losses with the Intesis WMP, it is highly recommended to periodically ping the Intesis WMP or demand a value (e.g. ambient temperature) with an appropriate period of time (30s ≤ t ≤ 1min).

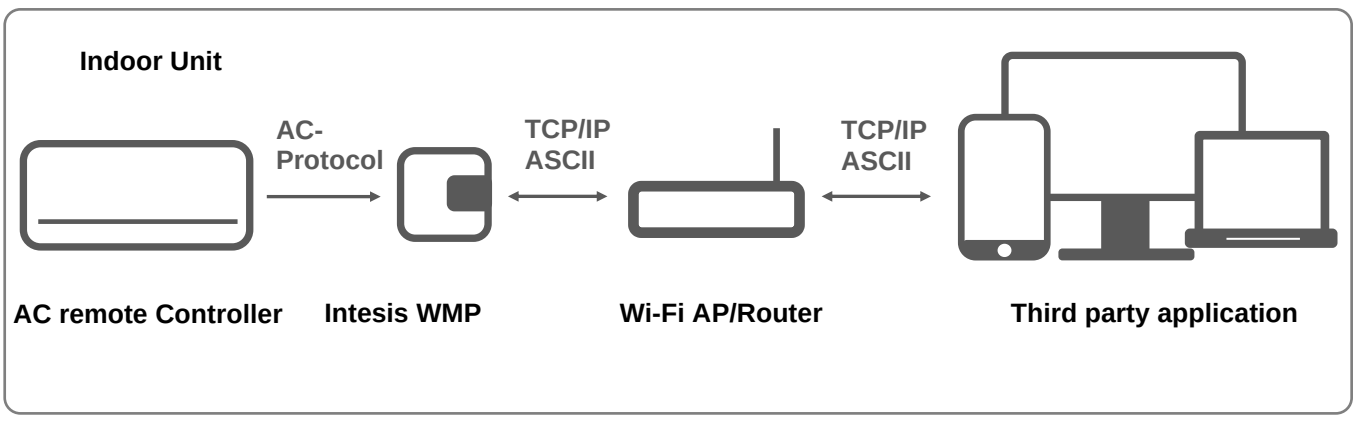


*Figure 1.- System figure*

### Physical connection

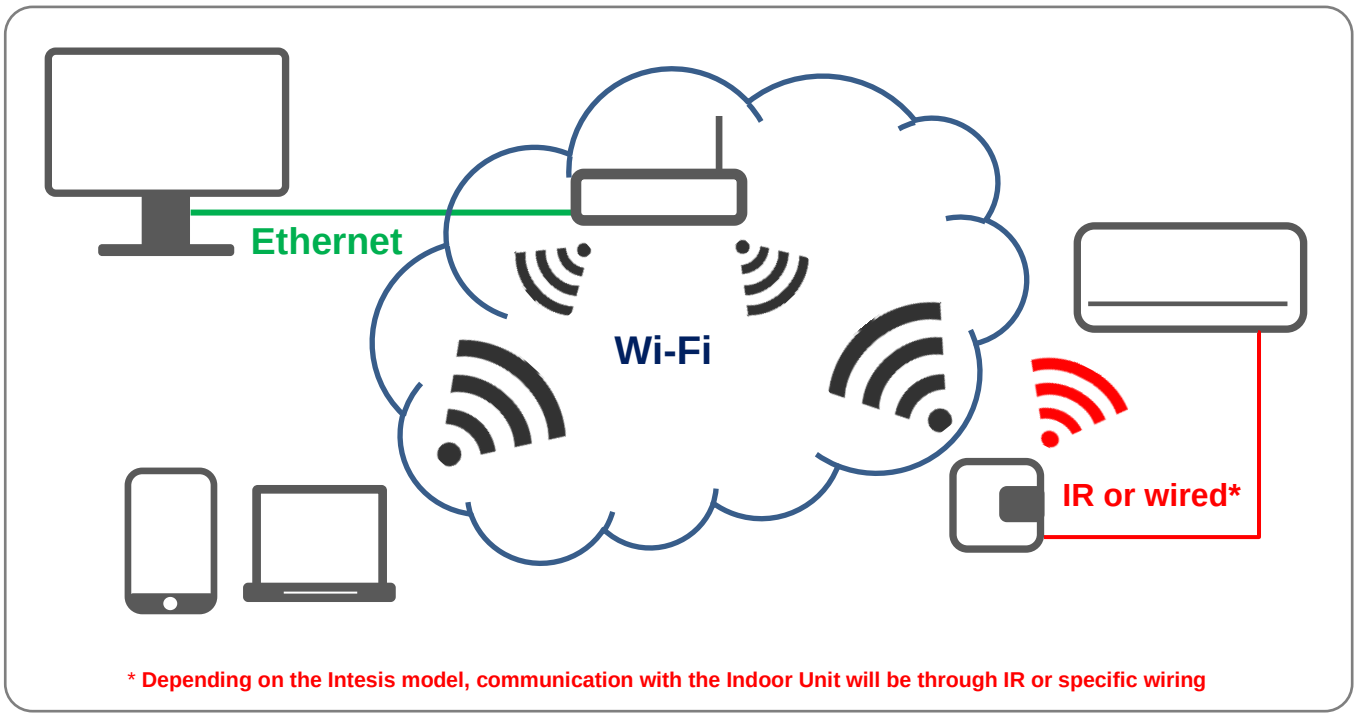


*Figure 2.- Intesis WMP description*

## 2. ASCII messages

Communication between the Intesis WMP and the client (third party control) is done though ASCII messages.

These messages are composed by a single line with '**\r**', '**\n**' or '**\r\n**' at the end of each line. Capital and non-capital letters are accepted, making no distinction between them.

Each message comes with an example of use.

**>** character indicates that the message in sent from the client (third party control).

**<** character indicates that the message is sent from the server (Intesis).

Notice that these characters are only shown for a better understanding of the examples and communication procedure, but those are never sent between the Intesis and the third-party control.

Next, you can find all different types of messages available.

### Considerations before integrating WMP protocol

i. The proper way to integrate the Intesis WMP is by opening a TCP socket and keep it open while there is something to communicate or to receive from the Intesis WMP. This way, we would be avoiding a continuous opening/closing TCP socket constantly.

ii. The Intesis WMP close a TCP socket if there is no communication for 1 minute. This time might be extended by sending any command to the Intesis WMP periodically (<1 min. period). Although any command might be used for this purpose, the following command might be used for this purpose, as there is no link between the command and the control of the Indoor Unit.

```
PING
```

iii. In any case, the time between opening/closing TCP sockets during the normal operation must be over 1 second. Decreasing this time during the normal operation of the Intesis WMP can cause malfunctioning of the Intesis WMP.

### ID

This command is used to obtain an identification from the Intesis WMP and is sent by the client.

**Command sent by the client:**

```
ID
```

**Answer from the Intesis WMP:**

```
ID:Model,MAC,IP,Protocol,Version,RSSI, DeviceName, SecurityLevel, Generation
```

Where:

- **Model:** Corresponds to the Intesis WMP model reference.
- **MAC:** Corresponds to the 6 bytes of the MAC address.
- **IP:** Corresponds to the IP address of the Intesis.
- **Protocol:** Corresponds to the external protocol supported.
- **Version:** Corresponds to the firmware version running in the Intesis WMP.
- **RSSI:** Corresponds to the **Received Signal Strength Indication** for the Wi-Fi connection.
- **DeviceName:** Corresponds to the name configured in the device
- **SecurityLevel:** Corresponds to the current device security level
- **Generation:** Corresponds to the device generation, first or second. If it doesn't appear, it is assumed is first generation.

**Example:**
Requesting identification details of the Intesis WMP.

```
> ID

< ID: INWMPUNI001I000,001DC9A2C911,192.168.100.246,ASCII,v1.0.2,-44, WMP_A2C911,N,1
```

Port can be configured using MAPS and the UDP used for discovering is also configured. Default port is 3310.

**Command sent by the client:**

```
ID
```

**Answer from the Intesis WMP:**

```
ID:Model,MAC,IP,Version,RSSI, GwName, SecurityLevel, Generation
```

Where:

- **Model:** Corresponds to the Intesis WMP model reference.
- **MAC:** Corresponds to the 6 bytes of the MAC address.
- **IP:** Corresponds to the IP address of the Intesis.
- **Version:** Corresponds to the firmware version running in the Intesis WMP.
- **RSSI:** Corresponds to the **Received Signal Strength Indication** for the Wi-Fi connection.
- **GwName:** Corresponds to the name configured in the device
- **SecurityLevel:** Corresponds to the current device security level
- **Generation:** Corresponds to the device generation, V6

**Example:**
Requesting identification details of the Intesis WMP.

```
> ID

< ID: PA-AC-MBS,001DC9A2C911,192.168.1.163,ASCII,v1.0.1.0,0,Name,N,V6
```

### INFO

This command is used to get information from the Intesis WMP and is sent by the client.

**Command sent by the client:**

```
INFO
```

**Answer from the Intesis WMP:**

```
> INFO
< INFO:RUNVERSION,
< INFO:CFGVERSION,
< INFO:WLANVERSION,
< INFO:DEVICEINFO,
< INFO:HASH,
```

Where:

- **RUNVERSION:** Corresponds to the runtime firmware version.
- **CFGVERSION:** Corresponds to the Configuration firmware version.
- **WLANVERSION:** Corresponds to the WiFi firmware version
- **DEVICEINFO:** Device information thrown on a byte array
- **HASH:** Corresponds to internal information of the Intesis WMP.

**Example:**
Requesting information details of the Intesis WMP.

```
> INFO
< INFO:RUNVERSION,1.0.6
< INFO:CFGVERSION,1.0.0.
< INFO:DEVICEINFO, 000D022FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF0053
< INFO:HASH, 2000:0201:004B:0002:56E5
```

In V6 devices

**Example:**
Requesting information details of the Intesis WMP.

```
> INFO
< INFO:VERSION,1.0.1.0
< INFO:PROTVERSION,1.0.0.0
< INFO:DEVICEINFO, FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF
< INFO:LICENSE,128
< INFO:SN,999K0021
```

Where:

- **VERSION:** Corresponds to the runtime firmware version.
- **PROTVERSION:** Corresponds to the hardware version
- **DEVICEINFO:** Device information thrown on a byte array
- **LICENSE:** Number of clients the license admits
- **INFO:** Serial number

### SET

This command is used to control the Indoor Unit thought the Intesis WMP and is sent by the client.

**Command sent by the client:**

```
SET,acNum:function,value
```

Where:

- **acNum:** Is the number of the Indoor Unit to control.[1]
- **function:** Is the name of the function we want to modify. It must be one of the following:
  - ONOFF: Turns the Indoor Unit On or Off.
  - MODE: Sets the mode (heat, cool, fan, dry or auto).[2]
  - SETPTEMP: Sets the set point temperature.[3]
  - FANSP: Sets the fan speed.[2]
  - VANEUD: Sets the Up/Down vane position.[2]
  - VANELR: Sets the Left/Right vane position.[2]
- **value:** Value that you want to apply to each function (See section 3).

**Answer from the Intesis WMP:**

```
< CHN,acNum:function,value
```

Where:

- **CHN:** Corresponds to the change message identifier.
- **acNum:** Corresponds to the Indoor Unit we are controlling.
- **function:** Corresponds to the function controlled.
- **value:** Corresponds to the value applied (See section 3).

**Example:**
Setting the function ON in the Indoor Unit 1.

```
< SET,1:ONOFF,ON
< ACK
< CHN,1:ONOFF,ON
```

**Note:** The "<CHN, 1:ONOFF,ON" message will only appear if the status really changes**.**

### CHN

This command is used to get notifications of changes in the status of a specific function of the Intesis WMP. This message is sent spontaneously by the Intesis WMP itself.

**Message sent from the Intesis WMP (only if change is applied):**

```
CHN,acNum:function,value
```

[1] Currently only 1 is enabled.
[2] Availability for each mode will depend on your Indoor Unit. Please check your AC user manual for more information.
[3] Valid temperature values may depend on your Indoor Unit. Please check your AC user manual for more information.

Where:

- **acNum:** Corresponds to the Indoor Unit we are controlling.
- **function:** Corresponds to the function monitored. It must be one of the following:
  - ONOFF: Shows the Indoor Unit On or Off.
  - MODE: Shows the mode (heat, cool, fan, dry or auto).[4]
  - SETPTEMP: Shows the set point temperature.
  - FANSP: Shows the fan speed.[4]
  - VANEUD: Shows the Up/Down vane position.[4]
  - VANELR: Shows the Left/Right vane position.[4]
  - AMBTEMP: Shows the ambient temperature.
  - ERRSTATUS: Shows if any error occurs. Responds is “OK” if there is not error, “ERR” if any error occurs. (Not available for INWMPUNI001I000).
  - ERRCODE: Shows the error code. (Not available for INWMPUNI001I000).
- **value**: Corresponds to the current value (See section 3).

**Example:**
Setting a notification when the ambient temperature of the Indoor Unit 1 is on 275.

```
< CHN,1:AMBTEMP,275
```

### GET

This command is used to get the status of a specific function. It is sent by the client.

**Command sent by the client:**

```
GET,acNum:function
```

**Answer from the Intesis WMP:**

```
> GET,acNum:function
< CHN,acNum:function,value
```

Where:

- **acNum:** Corresponds to the Indoor Unit we are controlling.
- **function:** Corresponds to the function monitored. It must be one of the following:
  - ONOFF: Shows the Indoor Unit On or Off.
  - MODE: Shows the mode (heat, cool, fan, dry or auto).[5]
  - SETPTEMP: Shows the set point temperature.
  - FANSP: Shows the fan speed 7.
  - VANEUD: Shows the Up/Down vane position 7.
  - VANELR: Shows the Left/Right vane position 7.
  - AMBTEMP: Shows the ambient temperature.
  - ERRSTATUS: Shows if any error occurs. Responds is “OK” if there is not error, “ERR” if any error occurs. (Not available for INWMPUNI001I000).
  - ERRCODE: Shows the error code. (Not available for INWMPUNI001I000).
  - *: Show all previous function status.
- **value** corresponds to the current function value (See section 3).

[4] Availability for each mode, fan speed or vane positions will depend on your Indoor Unit. Please check your AC user manual for more information.
[5] Availability for each mode will depend on your Indoor Unit. Please check your AC user manual for more information.

**Example:**
Getting the status of the mode from the Indoor Unit 1.

```
> GET,1:MODE
< CHN,1:MODE,AUTO
```

### STATUS

This command is used to ask the current status for all variables and is sent by the client.

**Command sent by the client:**

```
STATUS,acNum
```

**Answer from the Intesis WMP:**

```
> STATUS,acNum
< STATUS,acNum:function1,value;function2,value2; function3,value3…
```

Where:

- **acNum:** Corresponds to the Indoor Unit we are controlling.
- **function:** Corresponds to the function monitored. It must be one of the following:
  - ONOFF: Shows the Indoor Unit On or Off.
  - MODE: Shows the mode (heat, cool, fan, dry or auto).[6]
  - SETPTEMP: Shows the set point temperature.
  - FANSP: Shows the fan speed 7.
  - VANEUD: Shows the Up/Down vane position 7.
  - VANELR: Shows the Left/Right vane position 7.
- **value** corresponds to the current function value (See section 3).

### LOGIN

This command is used to start secure communication between the Intesis WMP and the client, the command is sent by the client.

Notice that secure communication is **only required** if an extra security encryption mode is required apart from the Wi-Fi standard encryption used by the Wi-Fi access point or router.

**Command sent by the client:**

```
LOGIN:password
```

Where:

- **password:** Stands for a 128 bits number expressed in hex mode.

[6] Availability for each mode will depend on your Indoor Unit. Please check your AC user manual for more information.

**Answer from the Intesis WMP:**

```
> LOGIN:3B673FB91600D7E42FB5A59BA3DDB5F8
< M0:858AB0E03E80BC069E292A78047575FF
> M1:56435713ECA6546A7E250504BEE059D5
< OK
```

### LOGOUT

This command is used to close the secure session opened between the Intesis WMP and the client, the command is sent by the client.

**Command sent by the client:**

```
LOGOUT
```

**Answer from the Intesis WMP:**
If there was an opened session, Intesis WMP will ask with an OK. Otherwise, it will answer with an ERR.

```
> LOGOUT
< OK
```

### CFG

This command is used to get or modify configuration parameters. It is sent by the client.

**Command sent to modify a configuration parameter is:**

```
CFG:configItem,value
```

Where:

- **configItem:** Corresponds to the configuration item.
- **value:** Corresponds to the current value on the configuration item (See section 3).

**Command sent by the client to get a configuration parameter:**

```
CFG:configItem
```

| Item | Value | Description |
|---|---|---|
| RDOMAIN [7] | FCC | FCC Regulation Domain<br>Channels 1 to 11 |
| | ETSI | ETSI v1.8.1 Regulation Domain<br>Channels 1 to 13 |
| | JAPAN | Japan Regulation Domain<br>Channels 1 to 14 |
| | Default | FCC Regulation domain |
| PIN | Any 8 decimal digit combination | PIN to be used when starting the session |
| | * | Special value to stablish the default PIN |
| SECURITYLEVEL | NONE | Security not enabled. |
| | CFGONLY | Security enabled only for configuration messages |
| | ALL | Security enabled for all messages |
| DATETIME | DD/MM/YYYY HH:NN:SS | Current date and time, without time zone |

**Examples:**
Setting a new PIN.

```
> CFG:PIN,12345678
< OK
```

Setting the default PIN.

```
> CFG:PIN,*
< ACK
```

Getting the current Regulation Domain.

```
> CFG:RDOMAIN
< CFG:RDOMAIN,ETSI
```

Getting the current time stamp.

```
> CFG:DATETIME
< CFG:DATETIME,17/07/2015 09:38:44
```

**NOTE:** Default PIN is provided along with the Intesis WMP and is individual for each Intesis WMP.

[7] The Intesis WMP needs to be reset to apply this setting. Simply unplug and plug the Intesis WMP so the new settings apply.

**IMPORTANT:** Changing the security level implies having a secure communication stablished by the login procedure.

### SETCAL

This command is used to set the configuration of the weekly calendar.
The calendar must be configured in a module of 7, from DAY 1 (Monday) to DAY 7 (Sunday), the configuration will be executed cyclically every week as it is defined per day.

The actions of every day can be set per TIME (Hour and minute). A maximum of 20*7 actions can be set.

| DAY (value) | Weekday |
|---|---|
| 1 | Monday |
| 2 | Tuesday |
| 3 | Wednesday |
| 4 | Thursday |
| 5 | Friday |
| 6 | Saturday |
| 7 | Sunday |

**Command sent to set a calendar action:**

```
SETCAL,acNum:DAY,d;TIME,HhM;function,value;…
```

Where:

- **acNum:** Corresponds to the Indoor Unit where we are setting the action.
- **d:** Corresponds to the number of the weekday.
- **H:** Corresponds to the hour (0 to 23).
- **M** Corresponds to the minute (0 to 59).
- **function:** Corresponds to the function monitored. It must be one of the following:
  - ONOFF: Shows the Indoor Unit On or Off.
  - MODE: Shows the mode (heat, cool, fan, dry or auto).[8]
  - SETPTEMP: Shows the set point temperature.
  - FANSP: Shows the fan speed.[7]
  - VANEUD: Shows the Up/Down vane position.[7]
  - VANELR: Shows the Left/Right vane position.[7]
- **value:** is the value that you want to apply to each function (See section 3).

**Answer from the Intesis WMP:**
If the action is properly set the Intesis WMP will replay ACK. Otherwise, it will answer with an ERR.

```
> SETCAL,acNum:DAY,d;TIME,HhM;function,value

< ACK
```

[8] Availability for each mode, fan speed or vane positions will depend on your Indoor Unit. Please check your AC user manual for more information.

**Example:**
Setting a calendar action (turn on, cool mode, setpoint 240) of the Indoor Unit 1 for Thursday at 15:48.

```
> SETCAL,1:DAY,4;TIME15h48;ONOFF,ON;MODE,COOL;SETPTEMP,240
< ACK
```

### GETCAL

This command is used to get the configuration of the calendar. It is sent by the client.

**Command sent by the client:**

```
GETCAL,acNum
```

**Answer from the Intesis WMP:**

```
GETCAL,1:[DAY,d;TIME,HhM;function,value],…,[DAY,d;TIME,HhM;function,value]
```

Where:

- **acNum:** Corresponds to the Indoor Unit where we are setting the action.
- **d:** Corresponds to the number of the weekday.
- **H:** Corresponds to the hour (0 to 23).
- **M** Corresponds to the minute (0 to 59).
- **function:** Corresponds to the function monitored. It must be one of the following:
  - ONOFF: Shows the Indoor Unit On or Off.
  - MODE: Shows the mode (heat, cool, fan, dry or auto).[9]
  - SETPTEMP: Shows the set point temperature.
  - FANSP: Shows the fan speed.[8]
  - VANEUD: Shows the Up/Down vane position.[8]
  - VANELR: Shows the Left/Right vane position.[8]
- **value:** Corresponds to the current function value (See section 3).

**Example:**
Getting the information of the calendar actions from the Indoor Unit 1.

```
> GETCAL,1
< GETCAL,1:[DAY,1;TIME,5h25;ONOFF,ON;MODE,COOL];[DAY,1;TIME,18h56;ONOFF,OFF]
```

### DELCAL

This command is used to delete one, seral or all calendar actions. It is sent by the client.

**Command sent by the client:**

```
DELCAL,acNum:DAY,d;TIME,HhM
```

[9] Availability for each mode, fan speed or vane positions will depend on your Indoor Unit. Please check your AC user manual for more information.

**Answer from the Intesis WMP:**
If the Calendar is deleted successfully the Intesis WMP will replay ACK. Otherwise, it will answer with an ERR.

```
DELCAL,acNum:DAY,d;TIME,HhM
< ACK
```

Where:

- **acNum:** Corresponds to the Indoor Unit where we are setting the action.
- **d:** Corresponds to the number of the weekday.
- **H:** Corresponds to the hour (0 to 23).
- **M** Corresponds to the minute (0 to 59).
- *: Wildcard accepted for the values of hour and minutes.

| Time expression | Meaning |
|---|---|
| *h30 | Any hour at minute 30 |
| 14h* | Hour 14, at any minute |
| * | Any hour at any minute |
| *h* | Equivalent to expression above |

| Day expression | Meaning |
|---|---|
| 4 | Thursday |
| * | Any weekday |

| Expression | Meaning |
|---|---|
| DAY,3;TIME,12h* | Wednesday, hour 12 at any minute |
| DAY,3;TIME,* | Wednesday at any time |
| DAY,*;TIME,*h30 | Any day at any hour at minute 30 |
| DAY,*;TIME,* | Any day at any time (it will match all calendar entries) |

| Conditions on invocation | Matching calendar entry | Message |
|---|---|---|
| No wildcard specified | True | ACK |
| No wildcard specified | False | ERR |
| At least one wildcard specified | True | ACK |
| At least one wildcard specified | False | ACK |

**Examples:**
Deleting calendar action of the Indoor Unit 1 on Friday at 15:40.

```
> DELCAL,1:DAY,5;TIME,15h40
< ACK
```

Deleting all calendar action of the Indoor Unit 1 on Friday.

```
> DELCAL,1:DAY,5;TIME,*
< ACK
```

Deleting all calendar actions of the Indoor Unit 1 every day.

```
> DELCAL,1:DAY,*;TIME,*
< ACK
```

### CALEXECUTED

This message is sent from the Intesis WMP when a calendar is executed.

**Command sent by the client:**

```
CALEXECUTED,acNum:DAY,d;TIME,HhM
```

Where:

- **acNum:** Corresponds to the Indoor Unit where we are setting the action.
- **d:** Corresponds to the number of the weekday.
- **H:** Corresponds to the hour (0 to 23).
- **M** Corresponds to the minute (0 to 59).

**Example:**
Execution message of the calendar action from the Indoor Unit 1 on Tuesday at 7:40.

```
CALEXECUTED,1:DAY,2TIME,7h40
```

### LIMITS

This command is used to get or modify the data point ranges. It is sent by the client.

**Command for modifying the ranges:**

```
LIMITS:function,range
```

**Command for getting the ranges:**

```
LIMITS:function
```

Where:

- **function:** Corresponds to the function to limit.
- **range:** Corresponds to limit value for each function.

| Function | Type | Example | Description |
|---|---|---|---|
| ONOFF | ENUM | [OFF,ON] | ON and OFF values |
| MODE | ENUM | [AUTO,HEAT,COOL] | AUTO,HEAT and COOL values |
| FANSP | ENUM | [AUTO,1,2] | AUTO,1 and 2 values |
| VANEUD | ENUM | [AUTO,SWING] | AUTO and SWING values |
| VANELR | ENUM | [AUTO,SWING] | AUTO and SWING values |
| SETPTEMP | SCALAR | [160,280] | Inferior limit (16ºC) and superior limit (28ºC), both included |

**Answer from the Intesis WMP:**

```
LIMITS:function,range
```

**Examples:**
Set point limitation between 18ºC and 28ºC.

```
> LIMITS:SETPTEMP,[180,280]
< ACK
```

Horizontal vanes can only be set from 1 to 5 positions, with Swing and Auto.

```
> LIMITS:VANELR,[AUTO,1,2,3,4,5,SWING]
< ACK
```

Find out the horizontal vanes' limits.

```
> LIMITS:VANELR
< LIMITS:VANELR,[AUTO,1,2,3,4,5,SWING]
```

### DISCOVER

This command is used to discover the Intesis WMP in the same network. Notice that this command uses UDP, so UPD ports should be enabled. The specific port where the Intesis WMP is listening to is the 3310, so messages need to be sent into that port.
The discover message is sent by the client.

**Command sent by the client:**

```
DISCOVER
```

**Answer from the Intesis WMP:**

```
> DISCOVER
< Model,MAC,IP,Protocol,Version,RSSI
```

Where:

- **Model:** Corresponds to the Intesis WMP model reference.
- **MAC:** Corresponds to the 6 bytes of the MAC address.
- **IP:** Corresponds to the IP address of the Intesis WMP.
- **Protocol:** Corresponds to the external protocol supported.
- **Version:** Corresponds to the firmware version running in the Intesis WMP.
- **RSSI:** Corresponds to the **Received Signal Strength Indication** for the Wi-Fi connection.

**Example:**
Discovering the Intesis WMP with its information details connected in the network.

```
> DISCOVER
< INWMPUNI001I000,001DC9A2C911,192.168.100.246,ASCII,v0.0.1,-44
```

# 3. Functions and Values

| Function | Value | Description |
|---|---|---|
| ONOFF | ON | Indoor Unit ON |
| | OFF | Indoor Unit OFF |
| MODE | AUTO | AUTO mode |
| | HEAT | HEAT mode |
| | DRY | DRY mode |
| | FAN | FAN mode |
| | COOL | COOL mode |
| SETPTEMP | See note [10] | Set Point Temperature (Temp values are multiplied by 10) |
| FANSP | AUTO | Fan Speed AUTO |
| | 1 | Fan Speed 1 |
| | 2 | Fan Speed 2 |
| | 3 | Fan Speed 3 |
| | 4 | Fan Speed 4 |
| | 5 | Fan Speed 5 |
| | 6 | Fan Speed 6 |
| | 7 | Fan Speed 7 |
| | 8 | Fan Speed 8 |
| | 9 | Fan Speed 9 |
| VANEUD | AUTO | Vertical Vane Position AUTO |
| | 1 | Vertical Vane Position 1 |
| | 2 | Vertical Vane Position 2 |
| | 3 | Vertical Vane Position 3 |
| | 4 | Vertical Vane Position 4 |
| | 5 | Vertical Vane Position 5 |
| | 6 | Vertical Vane Position 6 |
| | 7 | Vertical Vane Position 7 |
| | 8 | Vertical Vane Position 8 |
| | 9 | Vertical Vane Position 9 |
| | SWING | Vertical Vane Position Swing |
| VANELR | AUTO | Horizontal Vane Position Auto |
| | 1 | Horizontal Vane Position 1 |
| | 2 | Horizontal Vane Position 2 |
| | 3 | Horizontal Vane Position 3 |
| | 4 | Horizontal Vane Position 4 |
| | 5 | Horizontal Vane Position 5 |
| | 6 | Horizontal Vane Position 6 |
| | 7 | Horizontal Vane Position 7 |
| | 8 | Horizontal Vane Position 8 |
| | 9 | Horizontal Vane Position 9 |
| | SWING | Horizontal Vane Position Swing |
| AMBTEMP | See note [11] | Ambient Temperature (Temp values are multiplied by 10) |

[10] Valid temperature values may depend on your Indoor Unit. Please check your AC user manual for more information.

[11] This is a read-only register.

# 4. FAQs and Troubleshooting

### What if a non-existing command is sent to the Intesis WMP?

If a non-existing command is sent or if there is a mistake on the syntaxis, the Intesis WMP will discard this command and will not notify this error.

### What if a non-valid value is sent to the Intesis WMP?

If a non-valid value is sent, the Intesis WMP will discard this command and will report an error message.

**Example:**
Setting a non-valid function to the Indoor Unit 1.

```
> SET,1:ONOFF,Hello
< ERR
```

### Which is the meaning of the RSSI values?

The RSSI value will provide information about the signal level at the Intesis WMP location. If RSSI is lower than “Good”, we would recommend you change the Intesis WMP location or to improve the Wi-Fi signal with a Wi-Fi repeater.

| RSSI Value | Meaning |
|---|---|
| <-96 | Bad |
| -86 to -95 | Weak |
| -81 to -85 | Good |
| -71 to -81 | Very Good |
| > -70 | Excellent |

### What if a write request is sent to a read only function?

If a write request is sent to a read only function the Intesis WMP will answer as if it was a non-valid value sent.

**Example:**
Setting a write request to a read function of the Indoor Unit 1.

```
> SET,1:AMBTEMP,210
< ERR
```

### Is it possible to set multiple commands at the same time?

No, currently you need to set each command individually. That means that if you want to set the Indoor Unit ON at 21°C you need to send one command to turn the Indoor Unit ON and another one to set the Set Point temperature at 21°C.

### Is it possible to disable the spontaneous messages sent from the Intesis WMP?

No, currently the spontaneous messages generated by the Intesis WMP can't be disabled. That means that all changes on the Indoor Unit will always be reported from the Intesis WMP to the client.

### Do I need to set the limits every time the Intesis WMP loses connection or power?

No, limit values are stored in a non-volatile memory, so no need of setting them again after a power failure is required.

### How to prevent the Intesis WMP to end the TCP communication?

Currently, the Intesis WMP close the TCP communication if no communication is received for one minute. To avoid unexpected TCP communication losses, you can ping the Intesis WMP or periodically demand a value (for instance, every 30 seconds demand ambient temperature to the Intesis WMP).
This TCP connection lost is usually linked to user error messages (connection lost…).