



RM3200RF

Application Data Objects

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Revision history

Revision	Date	Changes
0.1.0	2016/06/10	Preliminary release

PRELIMINARY

1. Scope

This document defines the supported API application data objects for the RM3200RF load controller.

2. Targeted audience

This document was created for professionals with a good knowledge of communication protocols and embedded systems programming.

3. Legal / Confidentiality

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4. References

- 1) GT125 Public API Specifications

5. Application data objects

Output Intensity

DataID	0x00001000
Name	Output Intensity
Accept Read	Yes
Accept Write	Yes
Accept Report	No
Size	1 bytes
Format	8 bit unsigned integer
Scale	1 = 1%
Range	0 = OFF 100 = ON
Description	Output state 0 = relay OFF 100 = relay ON

Mode

DataID	0x00001009
Name	Mode
Accept Read	Yes
Accept Write	Yes
Accept Report	No
Size	1 byte
Format	Enum.
Scale	See description
Range	See description
Description	Mode

“Auto” mode is available only if the device has received the current time. Otherwise, the device will set the mode to “Manual”.

Value	Description
1	Manual (Hold) The device keeps the output fixed to the actual output intensity.
2	Auto (Schedule) The output intensity follows the schedule.
3	Random The device performs a simulation of presence
130	Bypass Auto The device is in temporary hold until the next scheduled period.

Keyboard Lock

DataID	0x00000902						
Name	Keyboard lock						
Accept Read	Yes						
Accept Write	Yes						
Accept Report	No						
Size	1 byte						
Format	Enum						
Scale	See description						
Range	See description						
Description	<p>Configure the device keyboard lock.</p> <p>When the keyboard is locked, the user cannot change the device output's intensity. Changes through the wireless interfaces (API or Web) are still allowed.</p> <table><thead><tr><th>Value</th><th>Description</th></tr></thead><tbody><tr><td>0</td><td>Unlocked</td></tr><tr><td>1</td><td>Locked</td></tr></tbody></table>	Value	Description	0	Unlocked	1	Locked
Value	Description						
0	Unlocked						
1	Locked						

Actual Power

DataID	0x00000D02
Name	Actual Power
Accept Read	Yes
Accept Write	No
Accept Report	No
Size	2 bytes
Format	16 bit unsigned integer
Scale	1 = 1 Watt
Range	0 @ 15000
Description	<p>Actual Power</p> <p>Represents the actual power consumed by the load in Watts.</p>

Connected Load

DataID	0x00000D00
Name	Connected Load
Accept Read	Yes
Accept Write	No
Accept Report	No
Size	2 bytes
Format	16 bit unsigned integer
Scale	1 = 1 Watt
Range	0 @ 15000
Description	<p>Connected load</p> <p>Represents the external load connected to the product.</p> <p>The connected load value is only updated when the load consume power.</p> <p>Return 0 until load consumed energy at least once.</p>

Local Time

DataID	0x00000600
Name	Local Time
Accept Read	Yes
Accept Write	Yes
Accept Report	Yes
Size	3 bytes
Format:	Struct
[Byte 0] Seconds	8 bit unsigned integer
[Byte 1] Minutes	8 bit unsigned integer
[Byte 2] Hours	8 bit unsigned integer
Scale:	
Seconds	1 = 1 second
Minutes	1 = 1 minute
Hours	1 = 1 hour
Range:	
Seconds	0 @ 59
Minutes	0 @ 59
Hours	0 @ 23 (Normal), 128 @ 151 (DST active)
Description:	Local time in 24h format.
	Must be sent every 24h.
Hours	The msb (bit 7) in the "Hours" byte is used to distinguish between standard (0) or Daylight Saving Time (1).

Local Date

DataID	0x00000601
Name	Local Date
Accept Read	Yes
Accept Write	Yes
Accept Report	Yes
Size	4 bytes
Format:	Struct
[Byte 0] Day of week	Enum
[Byte 1] Day of month	8 bit unsigned integer
[Byte 2] Month	8 bit unsigned integer
[Byte 3] Year	8 bit unsigned integer
Scale:	See description
Day of week	1 = 1
Day of month	1 = 1
Month	1 = 1
Year	1 = 1
Range:	
Day of week	0 @ 6
Day of month	1 @ 31
Month	1 @ 12
Year	0 @ 99

Description:

Day of week

Year

Local date.

Values for the day of week:

Value	Description
0	Monday
1	Tuesday
2	Wednesday
3	Thursday
4	Friday
5	Saturday
6	Sunday

Years are represented as starting from the 2000s.

Subscription Level

DataID	0x00000F01
Name	Subscription Level
Accept Read	Yes
Accept Write	Yes
Accept Report	No
Size	16 bytes
Format:	Array
[Byte 0] Relay Turn-ON	8 bit unsigned integer
[Byte 1] Relay Turn-OFF	8 bit unsigned integer
[Byte 2] Reserved	8 bit unsigned integer
[Byte 3] Reserved	8 bit unsigned integer
[Byte 4] Reserved	8 bit unsigned integer
[Byte 5] Reserved	8 bit unsigned integer
[Byte 6] Reserved	8 bit unsigned integer
[Byte 7] Reserved	8 bit unsigned integer
[Byte 8] Reserved	8 bit unsigned integer
[Byte 9] Reserved	8 bit unsigned integer
[Byte 10] Reserved	8 bit unsigned integer
[Byte 11] Reserved	8 bit unsigned integer
[Byte 12] Reserved	8 bit unsigned integer
[Byte 13] Reserved	8 bit unsigned integer
[Byte 14] Reserved	8 bit unsigned integer
[Byte 15] Reserved	8 bit unsigned integer
Scale	1 = 1
Range	0@2
Description	<p>Subscription level</p> <p>Configure the device to send a message when events occur.</p> <p>The subscription level message is used to enable or disable the option of sending messages when events occur.</p> <p>The subscription level message contains 16 bytes.</p> <p>Each byte is associated to an event.</p> <p>Each event can have one of the following subscription level:</p>

Value	Description
0	No message
1	Subscription timer active
2	Always send a message

The table below indicates the generated Data Notification Message and associated DataID:

Events	DataID	Name
Relay Turn-ON	0x00001000	Output Intensity
Relay Turn-OFF	0x00001000	Output Intensity

Subscription Timer

DataID	0x00000F00
Name	Subscription Timer
Accept Read	Yes
Accept Write	Yes
Accept Report	No
Size	1 bytes
Format	8bit unsigned integer
Scale	1 = 1minute
Range	0-255
Description	<p>Subscription timer enables/disables the Subscription Level 1 messages to be sent.</p> <p>The value read or written represent the time in minutes for which the subscription will remain active.</p> <p>0 = Subscription Level 1 disabled</p> <p>1-255 = Remaining time in minutes for which Subscription Level 1 is enabled</p>

6. Implementation details

Schedule

Currently, the schedule can only be set using our neviweb® interface.

However, it is possible to run the device's schedule when the mode is set to AUTO. It is also required that the time is sent to the devices.

Subscription

Subscriptions allow the device to send a message when a pre-determined event occurs on the device.

The Subscription mechanism allows operating "On Events" instead of "Polling".

A list of events is available for each product.

The RM3200RF events are:

- Relay Turn-ON
- Relay Turn-OFF

The subscriptions are enabled / disabled by writing the Subscriptions Level message. The available subscription levels are:

- No message
- Subscription timer active
- Always send a message

No message:

Subscription is disabled and no message is sent when the event occurs.

Subscription timer active

A message is sent when the event occurs AND when the subscription timer is active.

This subscription level is intended to activate a temporary "On Events" operation. This is well suited for applications that temporarily display information of a device, for example a web page displaying device statuses.

To enable this subscription level, the Subscription Timer must be written with the number of minutes to remain active.

Always send a message

A message is sent when the event occurs.

An enabled event subscription will trigger a message to be sent when the event occurs. The message associated to an event is predetermined.

For example, the message sent by a RM3200RF when the event "Relay Turn-ON" occurs is message type "Data Notification Message" containing "Output Intensity 100%".

The message sent by a RM3200RF when the event "Relay Turn-OFF" occurs is message type "Data Notification Message" containing "Output Intensity 0%".

See the Subscription Level message for more details.