

Question Answers for DWNTC1, Dated 02-17-2014 by Somfy

The operational description still is not clear on the details of operation to ensure compliance with FCC 15.231(e). Please provide details for each item below:

1. explain how they limit the duration of the automatic transmission to 0.42s (which would be a transmission of 3 frames) and the manual transmission to 0.29s (two frames)

In **Automatic mode**, transmission duration is 0.42s, and corresponds exactly to 3 frames.

Regarding **manual transmission**, the transmission does stop when the button is released after the completion of the frame, maximum 0.29 seconds after the release of the button. It means that if the key press duration is 2s, then the emission duration will be, maximum, 2s+0,29s, then 2,29s.

- Why three frames transmitted in automatic mode versus 2 in manual

See the explanation above. We limited to 3 frames in automatic mode (one salvo of 3 frames to send an order, without any repetition), not to use the channel more than allowed. In manual mode, it's not limited to 2 frames (see answer just below)

- Is two frames the maximum length? In **manual mode**, limitation is not a number of frame, but the key press duration.

2. explain how they ensure that the automatic transmissions are spaced more than $30 \times 0.42s$ apart (12.6 seconds).

- It may be something simple such as the programming only allows setting the time in minutes and does not allow for the different transmissions to occur in the same one minute window.

2 possibilities exist:

if the 2 transmissions are programmed at the same time (hour and minute) (which have no interest on a functional or user point of view): in that case the total duration of the automatic order (which is converted in the software as only one sequence), is 0,42s, plus a delay of 0,5s, and then new emission of 0,42s, means total emission of 1,34s. Then the next automatic order would be, soonest, the day after.

Otherwise, as the programming allows only to configure hour and minutes, and not seconds, the minimum duration between 2 automatic orders would be 1 minute in case the next automatic order is programmed 1 minute after the first one.

3. Explain either

- how they prevent more than one manual transmission in a period of 10s (10s being minimum time between transmissions in 15.231(e))

or

- justify that the manual transmissions only need meet 15.231(a) requirements since they are not at predetermined intervals - therefore the manual transmissions only have to meet the maximum duration of 5s (which should also be reflected in the test report)

For a manual operation, according to 15.231(a), "A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released" – in our case, in manual mode, the transmission will stop maximum 0,29s after key is released, so less than 5s.