

## Bluetooth Products - Precautions for Product Installation and Operation

1. We recommend the distance between a smartphone and a Bluetooth device to be around 10m. However, please kindly take note that it is very much dependent on the Bluetooth capability of a smartphone or a tablet and environmental factors.
2. The communication range between two Hytronik Bluetooth units can be affected by the surrounding and obstacles such as concrete walls and sheet steel. Other forms of interference which may affect the range include Wi-Fi routers, microwave ovens and other such sources which emit strong wireless signals should be taken into consideration when installing. The Bluetooth transmission range can be up to 30m indoor and 50m outdoor. We recommend to always carry out communication tests under conditions with various signal disturbing sources. Due to the nature of Bluetooth mesh network, communication between Bluetooth devices can be relayed to extend end-to-end communication range. Meanwhile, we still recommend the distance between Bluetooth units to be around 5m to 6m to ensure network reliability with good user experience.
3. For Bluetooth products, we highly recommend to calibrate device real time every 6 or 12 months by simply accessing to the app and connecting to the Bluetooth network. The main purpose is to eliminate accumulating time deviation error and make sure that all time-related functions to work well.
4. The maximum number of Hytronik Bluetooth devices per network should not exceed 100 units, while the number of networks does not have to be considered. Meanwhile, we have a few tips to enhance the network's performance and efficiency:
  - Try to use as much dedicated light sensor as possible to reduce data transmission.
  - In case external daylight sensor is required, we suggest to be less than 20 external daylight sensors within one network.
  - Try to disable the relay feature of some nodes. However, please kindly take note that in real application it depends on the distance between Bluetooth nodes to determine how many pieces of relay nodes are needed for the space.