Wireless Charging Station for SmarTag GNSS User Manual

Part No. ICS12_V2R1

Version: 2.2

1. Introduction

This document contains the user manual for Wireless Charging Station for SmarTag GNSS.

The Wireless Charging Station is a charging station that provides dedicated wireless charging for 12 SmarTag GNSS units simultaneously. This design not only provides a space-saving solution but is also easily scalable to needs. The charging station is a standalone unit, requiring only a connection to the main power line for operation.

2. Installation

To install the charging station, connect the provided power cable to the standard (IEC60320) socket located on the back of the device and then to the mains. The Wireless Charging Station can be turned on/off using the rocker switch next to the power connector, which is illuminated when on.

3. Charging

The Wireless Charging Station wirelessly charges thr SmarTag GNSS units (QI-compatible). Wireless charging greatly simplifies the tasks related to picking up and returning the SmarTag GNSS units, as charging starts automatically by simply placing them in their dedicated slots.

Another benefit of wireless charging technology is the robustness of the units. Due to the absence of sockets and connecting cables (i.e., contact), there is no risk of failure from dirt and wear caused by increased use, and the surface of the charger is easily cleanable with various chemicals.

The charging status of the SmarTag GNSS units is indicated by the LEDs located at each slot:

Status	LED indicator
No SmarTag GNSS unit in the slot	Off
SmarTag GNSS unit in the slot is charging	Blue
Charging paused in all slots due to overheating	Red

The Wireless Charging Station automatically controls the speed of the built-in cooling fans based on the temperature data measured at various points to ensure the charger operates correctly within the full temperature range specified on the datasheet.

Due to the nature of the charging process, the charging electronics associated with certain slots may switch off and then on again (in this case, the LED indicator will temporarily be off, even though there is a SmarTag GNSS unit in the slot). This behavior is part of the normal operation, which is controlled by the control unit built into the charging station, depending on the charging process.

4. Troubleshooting

Sometimes the charging stops beyond normal operation; in such cases, it is recommended to restart the entire charging station (complete power off and back on). If such an action does not solve the issue, a few simple steps can be taken to narrow down the source:

- If the SmarTag GNSS unit causes a red LED indicator in another slot as well (while the correct operation is verified with another SmarTag GNSS unit), probably the SmarTag GNSS unit is faulty. Its further use should be suspended, and the issue should be reported to the operator.
- If the SmarTag GNSS unit is functioning correctly in another slot, the specific slot of the Wireless Charging Station is likely faulty. Its further use should be suspended, and the issue should be reported to the operator.

5. Safety Precautions

DANGER

Any modification or alteration not expressly approved by the manufacturer is strictly prohibited, life-threatening, and results in voiding the warranty!

DANGER

Danger to life due to electric shock when the Wireless Charging Station for SmarTag GNSS is not handled properly!

- Never use a flawed or damaged charger!
- Never use a charger with a damaged or flawed power cable!
- Never open or modify the charger!
- Do not expose the charger to water, excessive moisture, or humidity!
- Regularly inspect the charger connection lead for any signs of damage. If anything unusual is occurring in operation, disconnect the plug from the mains supply immediately!

Warning

To avoid hazardous situations, be aware of the following:

- Only outlets with official approval may be used with the charger.
- Never use the charger on easily combustible surfaces like paper or textiles or in a flammable environment.
- In the event of smoke or flames appearing, disconnect the plug from the mains supply immediately.
- Since the charging process generates heat, it requires free ventilation for safe operation; covering the charger is fire-hazardous!
- Do not expose to direct sunlight or excessive heat, and keep the surrounding area clean, dry, and dust-free!
- Under no circumstances throw the charger into fire!

6. Technical Details

Electrical Data	
Input voltage	90V … 264V AC, 47-63 Hz
Power consumption	max. 70W (with 12 SmarTag GNSS charging)
Wireless charging	WPC 1.2.4 (Qi) compliant
Ambient temperature	0 … +45°C / 32 … 113°F
Humidity	5% … 95% r.H. (non condensing)

Connections	
Input AC connector	IEC60320 socket
External interfaces	RS485, Ethernet

Mechanical Data	
IP rating	IP40
Outer dimensions	445mm x 294mm x 70mm / 17,91” x 11,58” x 2,78”
Weight	2,65 kg / 5,84 lbs

Dimensions