RFIDat - RFIDock/M - RFIDock/S - RFIDock/L - RFIDock/SA - USB/AL

are products made in Italy by

FCC ID: XKC-RFIDAT, XKC-RFIDOCK

For transmitters under FCC Part 15 Subpart C, class A or B classification is not applicable. The transmitter radiated emissions must meet the general limits of Part 15.209, and transmitter AC line-conducted emissions must meet the requirements of Part 15.207. Both limits are identical to the class B limits, but there is no provision for meeting a more relaxed limit like class A as would be allowed under Part 15 Subpart B for unintentional radiators.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

— Reorient or relocate the receiving antenna.
— Increase the separation between the equipment and receiver.
— Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
— Consult the dealer or an experienced radio/TV technician for help.

The *RFIDat* e *RFIDock* products are distribuited by:

Selesta Ingegneria S.p.A. – Via di Francia 28 – 16149 Genoa – Italy
Tel: +39.010.60291 – Fax: +39.010.6454548 – www.seling.it – www.rfidat.it

SELESTA INGEGNERIA S.p.A.

INSTRUCTION MANUAL

System components

A. **RFIDat:** hand held terminal able to read in RF (radiofrequency mode) TAGs

B. **TAG:** 125 Khz passive trasponder

C. **RFIDock/M: RFIDat** modular docking station unit (up to 8 slots with 7 additional **RFIDock/S**) for:
- data transfer from **RFIDat** memory to **RFIDock/M** temporary memory (more then 8.000 readings)
- transfer data to Personal Computer
- **RFIDat** internal batteries charging and recharging

D. **RFIDock /L: RFIDat** docking station unit (1 slot) for:
- data transfer from **RFIDat** to **RFIDock/L** temporary memory (more then 8.000 readings)
- transfer data to Personal Computer
- **RFIDat** internal batteries charging and recharging in RF mode

D. **RFIDock /SA:** unit to be used for:
- **RFIDat** internal batteries charging
  External power unit RFIDock/AL (220 V ac / 12 V cc) is required

E. **USB/AL:** adapter to connect and power **RFIDock/M** or **RFIDock/L** to/from a PC USB port

F. **RFIDock/AL:** power supply unit 220 V ac / 12 V cc for **RFIDock/M** and **RFIDock/SA** units

G. **RFID USB Reader**: pen for ID TAG code reading, connected to a PC USB port in keyboard emulation mode

H. **Ethernet-232**: RS232 / Ethernet converter

Technical assistance

To get further information and assistance, please contact the authorized local Reseller.

Equipment and battery disposal

End- of-life treatment of electric and electronic equipment

(applicable in all the Countries of the European Union and in other European Countries with diversified collection systems).

The products comply with the Directive 2002/96CE, related to disposal recycling of electric and electronic devices (RAAE):

• This symbol applied on the product or on the wrapping indicates that it doesn't have to be considered as a normal domestic refusal, but that it must be delivered to collection point suitable for the recycling of electric and electronic devices.

For more detailed information on the recycling of this product, please contact the City office, the local service of refusal disposal or the seller. Not respecting these dispositions can involve administrative sanctions and penalties.

Product components are conform to the Directive 2002/95/CE, related to the restrictions of use of certain dangerous substances in the electric and electronic equipments (RoHS), therefore they don't contain any harmful or dangerous substances in percentages higher than the tolerated limits.

Attention: don't expose the **RFIDat** and **RFIDock/M/S/AL** products to heat sources, direct solar light, humidity or rain. Avoid immersion in water or other liquids. Don't tamper with pierce or burn the system components. Don't leave the system components unguarded and to the reach of children or animals.

Attention: in case of possible operational anomalies or accidental damages to the system components, immediately interrupt its use and turn to the local authorized Retailer to ask for assistance.

Warranty

The products are warranted against any defect in material and workmanship, under normal use, for the designed warranty period. The warranty becomes effective from the date of shipment. In the event these products are found to be defectives within the warranty period, its will be repaired or replaced.

The warranty non cover wear and tear on covers or housing and batteries.

The warranty is void if the products :

• have been opened

• have been repaired, modified or altered or had work performed by not authorized service centre.

• was subjected to abuse, neglect, electrical fault, improper packaging, accident or acts of nature

• were installed improperly

No damage can be claimed for possible delays in repair time or replacement.

Every responsibility for possible damages that could, directly or indirectly, derive to people, goods or animals as a consequence of not observing the prescribed indications is declined.

Components technical characteristics

RFIDat: hand held terminal

RFIDat	Passive trasponder (TAG) reader
TAG reading mode	Contactless in RF (Radio Frequency)
TAG type	125 kHz passive, class EM4102 (or compatible)
Memory capacity	Up to 8.000 transactions
Display	LCD 128 x 64 points matrix for the visualization of: - Assigned name to RFIDat - Date and Time - Number of readings done - Battery level
Clock	Self - powered quartz, max. drift: 10 sec . / month (at 20 – 30 °C)
Power-on	With tactile retro-lighted key
Reading done signal	Buzzer and blue LED in the key
Data transmission to **RFIDock/x**	In RF (Radio Frequency), two way
Modes of operation	"single reading" - "continuous reading" - "Master" See points a), b) and c)
Batteries	Metalhydrated Nickel
Batteries autonomy	Minimum 60 days (in **single** reading mode) or 3.000 readings (in **continuous** reading mode)
Complete battery recharging time	At least 30 hours through lodging in **RFIDock** unit. When the **RFIDat** readers are in storage, is required to perform one complete recharging cycle at least every 5 months.
Mechanical resistance	50 cm. fall on concrete
Dimensions and weight	59 x 44 x 14 mm. - 38 g

RFIDat reads, in Radio Frequency mode, the internal ID code of passive trasponders (TAGs) and, at each reading, records in its memory: date, time, TAG ID code and **RFIDat** identification code.

RFIDat is equipped with a long life and rechargeable Metalhydrated Nickel batteries, an LCD display and a key with LED indicator.
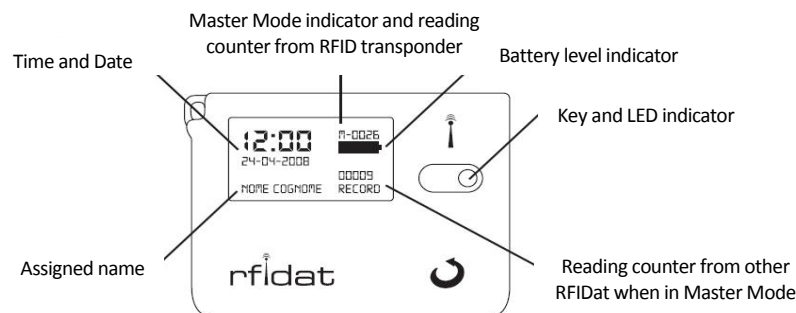
RFIDock/x: docking station units

RFIDock/M/S and RFIDock/L are the docking station units used to transfer data recorded in the *RFIDat* memory to a PC equipped with a specific software product.

RFIDock/M *RFIDock/S*	**Modular docking station unit with:** - temporary memory with 8.000 readings capacity **and function for:** - communication management between *RFIDat* and *PC* - *RFIDat* batteries recharging
Types of connection to PC	- Serial (EIA RS232C) - USB - Ethernet
LED indicators	- Power on - Data transmission in progress - *RFIDat* reader inside docking unit
RFIDat readers battery charging and recharging	With induction technology
Power source	12VDC, 700mA from RFIDock/AL
Available configurations	1, 2, 4, 8 docking units (up to 7 **RFIDock/s**)
Installation	On desk or wall
Dimensions and weight	Single module: 55 x 48 x 83 mm, 74 g
PC connections	- *USB/AL* - USB adapter, powered from USB - *Ethernet/232* - RS232C / Ethernet converter - *USB/232* - RS232/USB cable converter

The indicator placed on the *RFIDat* display shows with good approximation the battery level.

Attention: the *RFIDat*'s are shipped with the internal battery partially charged (about 30%) to preserve its conditions.

Attention: it is **MANDATORY** to charge the *RFIDat* batteries for at least 30 hours before its first use or its storage

Attention: every 5 months it is necessary to completely recharge (at least 30 hours) the *RFIDat* battery also in case it has been stored. This operation allows to maintain the battery in good state of efficiency. This time can be reduced in case of storage at high temperature.

Attention: in case of non complete recharging cycle (for instance if only 1 hour), a NOT reliable value for the battery level could be visualized on the *RFIDat* display.

Maintenance and Safety

The *RFIDat*, under correct conditions of use, doesn't require any maintenance operation. Nevertheless, periodic cleaning operations are recommended. These must be done using a soft and not abrasive cloth, slightly dampened with water.

Attention: the improper use of the system components or not respecting the instructions reported in this manual, can involve damages to people, animals and/or goods. The producer declines any responsibility.

Attention: the use of the products could have restrictions imposed by the norms of the Country where they are used. The user is therefore bound to verify the possible restrictions and to respect the current national norms.

c) – " Master"

This mode, besides allowing **RFIDat** to read a **TAG** (see "Reader" mode), allows the acquisition of the readings performed by other **RFIDat**'s configured either in "single reading" or in "continuous reading" modes. To transfer the readings from another **RFIDat**, proceed as follows:

1. Activate **RFIDat** configured in the "Master" mode by pressing the key with LED indicator. The **RFIDat** activation is confirmed by the flashing of the blue LED, **RFIDat** waits for the reading of another **RFIDat** for about ten seconds.

2. Place the **RFIDat** configured in the "Master" mode near the other **RFIDat** (that must be in stand-by condition), as shown in the figure:
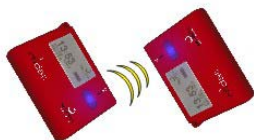
3. The acquisition of the readings is confirmed by the emission of a beep signal and by a brief lighting of the LED indicator. The number of readings got, shown on the display of the **RFIDat**, configured in the "Master" mode, is consequently increased.

4. The possible emission of two beep indicates that the **RFIDat** reader from which it is desired to transfer the reading doesn't contain any data, or that all records have correctly transferred. At the end of the operation, the **RFIDat** configured in the "Master" mode automatically returns to stand-by condition.

Battery recharging

The autonomy of the **RFIDat** readers depends on their configuration. If **RFIDat** is used in "single reading" mode, the duration of its battery is more then 60 days; if it's used in "continuous reading" mode its battery allows about 3.000 readings.

The battery life depends on environmental factors such as temperature, humidity, ecc.

To charge the battery it's neccesary to lodge the RFIDat in the powered RFIDock/M/S or RFIDock/L units.

RFIDock/L	**Single docking station unit with** **-** temporary memory with more then 8.000 readings capacity **and function for:** - communication management between *RFIDat* and *PC* - **RFIDat** battery recharging
Connection to PC modes	- Serial (EIA RS232C) - USB - Ethernet
LEDs indicators	- power on - data transmission in progress - RFIDat inside docking unit
RFIDat battery charging	With induction technology
Power source	12 Vdc, 700 mA from RFIDock/AL or USB/AL
Installation	On desk or at wall
Dimensions and weight	Single module: 65x 74 x 23 mm, 58 g
PC connections	- **USB/232:** RS232/USB cable converter - **USB/AL:** USB adapter powered by USB port - **Ethernet/232** – RS232C / Ethernet converter

RFIDock/SA unit

RFIDock/SA	**Unit** for: - charging and recharging RFIDat batteries
LEDs indicators	- power on - **RFIDat** inside unit - full batteries charge
RFIDat battery charging	With induction technology
Power source	From **RFIDock/AL** unit
Installation	On desk or at wall
Dimensions and weight	Single module: 65x 74 x 23 mm, 58 g

Used to charge **RFIDat** batteries when **RFIDock/M** - **RFIDock/L** are not available.

Connecting RFIDock/M and RFIDock/L units to PC

These units can be connected to a PC in different modes :

1. To a USB port using the USB/232 adapter cable and external power supply (**RFIDock/AL**)

2. to a USB port using the adapter cable **USB/AL**

3. through LAN Ethernet using serial/Ethernet converter **Ethernet-232**

Installation and activation

Prerequisites: Personal Computer with serial or USB or Ethernet port and Windows Operating System

Operations:

- install **RFICom** software or other specific software product for the initial **RFIDat** configuration;

- connect **RFIDock/M** or **RFIDock/L** unit to PC ;

- the lighting of the green LED, placed on the unit, shows that the unit is correctly powered;

- start **RFICom**, or other specific software product, to implement the initial configuration of the **RFIDat** (the instructions are attached to the software product);

- put the **RFIDat** in the "first" **RFIDock** slot to configure it according to the Application requirements.

RFIDat operating modes

RFIDat can be initially configured to operate in one of these 3 different modes:

a) - "single reading"

To perform a single TAG reading, proceed as follows:

1. Power on **RFIDat** by pressing the key with LED indicator. The starting of the reader is confirmed by the flashing of the LED indicator. During the flashing, the reader waits for the TAG reading about 10 seconds

2. Move the **RFIDat** close to the TAG, as shown in the figure:

3. The TAG reading completion is confirmed by a short beep with the blue LED "on" for three seconds. Consequently, the number of readings performed, shown on the display, is increased by 1.

4. at the end of the reading operation, **RFIDat** automatically returns in stand-by conditions at the expiration of the **timeout** (default about **8** seconds) or when placed in the **RFIDock**.

b) – "continuous reading"

This mode is used when it is necessary to perform several TAG readings in a short time. Such mode doesn't require to power on **RFIDat** for each new reading of a TAG transponder.

To read a **TAG**, proceed as follows:

1. Power on **RFIDat** by pressing the button placed on it. The lighting is confirmed by the flashing of the indicative LED.

2. Move the **RFIDat** close to the TAG (as shown in the figure for the "Reader" mode). The reading is confirmed by the emission of a short acoustic signal and by the continuous lighting of the blue LED for about 3 seconds. Consequently, the number of performed readings, shown on the display, is increased.

3. To read another **TAG**, repeat the operation described in the preceding point.

Attention: the use of **RFIDat** in "continuous reading" mode requires a high energetic consumption. When used in this mode, it is recommended to lodge **RFIDat** in the **RFIDock** unit at the end of every day of use, allowing battery recharging.