


INSTALLATION GUIDE

DI 112 EN B

Remote control RCT5




| | | | | |
|-------|------------|---|---------------|-------------|
| B | 2024/04/09 | Modification of the document Centre distance added, modification of the RCT5 logo, modification of the PPV | ITB | NC |
| A | 2023/07/21 | Creation of the document | TABTI-BENHARI | NC |
| Issue | Date | Nature of modifications | Written by | Approved by |

| | | | | |
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1. GENERAL RECOMMENDATIONS

IN ORDER TO AVOID ANY PROBLEMS CONCERNING THE INSTALLATION, THE USE AND THE MAINTENANCE OF THE EQUIPMENT, WHICH COULD CREATE UNTIMELY DYSFUNCTIONS,

PLEASE OBSERVE THE FOLLOWING RECOMMENDATIONS.


BEFORE ANY INTERVENTION, MAKE SURE THAT THE EQUIPMENT IS DE-ENERGIZED.

1.1. MECHANICAL RECOMMENDATIONS

- ⇒ Respect the recommendations of the instruction manual specifying the conditions of installation, use and maintenance of ATEX equipment (instruction manual delivered with the equipment).
- ⇒ Be sure to place the equipment in such a way as to facilitate its installation, use and maintenance by the workers (work ergonomics)
- ⇒ Be sure to orientate equipment with a display correctly. The display must be readable by the operator without difficulty.
- ⇒ Apply tightening torque appropriate to the size and material of the fastener unless otherwise specified on the layout drawings or in the installation records.
- ⇒ Mechanically protect the cables with corrugated sheathing if the cables are not ADR (corrugated sheathing adapted to "transport of dangerous goods by road" vehicles - hydrocarbons, LPG ... - and in compliance with the French standard NF R 13-903 or refer to the regulations in force).
- ⇒ Make sure that the cable glands and the cables are mechanically tight and that there is a good seal between the cable glands and the corrugated sleeves.
- ⇒ Respect the bending radii of the cables and sheaths.
- ⇒ Leave enough freedom to the conductors, to avoid all risks of tearing.
- ⇒ Allow the evacuation of water in the low loop (siphon) of the ringed ducts (no retention of water inside the ducts).

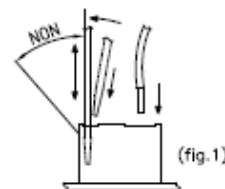



See § ADRIANE TURBINE MOUNTING AND SEALING ADVICE.

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1.2. ELECTRICAL RECOMMENDATIONS

- ⇒ With regard to the ATEX or the standards applicable in the country of destination, the degree of protection of the equipment must be adapted to the zone in which it is installed (explosive atmospheres).
- ⇒ Respect the recommendations of the instruction manual specifying the conditions of installation, use and maintenance of ATEX equipment (instruction manual delivered with the equipment).
- ⇒ Connect downstream of the circuit breaker, on the supply reserved for the measured distribution, the equipment supplies.
- ⇒ Install a 5A time-delayed protection upstream of the 24VDC power supply to protect the equipment in case of polarity inversion or overcurrent.
- ⇒ Use specific ADR cable, if this is not the case, use cable that is at least resistant to "RH" hydrocarbons and protect it mechanically with corrugated sheathing (corrugated sheathing adapted to "transport of dangerous goods by road" vehicles - hydrocarbons, LPG, etc. - and in compliance with the French standard NF R 13-903 or refer to the regulations in force)
- ⇒ Take care not to damage the terminal blocks of the various electronic boards when making connections.
 - Screw terminal : Do not damage the screw heads of the terminal blocks.
 - Use insulated cable lugs and ferrules suitable for the cable section.
 - Spring terminals: do not block the springs (blocking a spring on one of the terminals will result in the replacement of the electronic board).
 - Use a flat screwdriver 0.4x2.5 (see fig.1).
 - Insert the screwdriver at a slight angle, then push it in perpendicular to the terminal.
 - Do not go beyond the vertical when the screwdriver is pushed in to avoid blocking the spring.
 - Insert or remove the cable and remove the screwdriver.
- ⇒ Pass the power supply cables (24VDC truck) through the ferrites by making a loop (ALMA supply).
- ⇒ Do not use cables with a section greater than 1.5mm².
- ⇒ Do not insert more than one tip per terminal (unless specifically indicated by ALMA), use a double tip if necessary.
- ⇒ Strictly respect the polarities of the inputs/outputs when making connections, in accordance with the silk-screen printing on the cards and/or the indications in the installation file.
- ⇒ If possible, perform a wire test after wiring.
- ⇒ Respect, as far as possible, the location of the cables recommended in the installation file.
- ⇒ Connect each equipment (external ground) to the chassis ground.
- ⇒ Prefer the shielding of the shielded cables on 360° in the metallic cable glands (see doc. delivered with the equipment).
If not, connect the shields to the devices inside the equipment (earth terminal, earth bar, earth studs, etc.).



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- ⇒ Locate, as far as possible, the cables and conductors according to the installation file in order to facilitate the various interventions after installation.
- ⇒ Respect a homogeneous color coding of the cables.
- ⇒ Colour coding according to DIN 47100.
- ⇒ Colour designation code in accordance with IEC 60757 (except french abbreviations) :

| FR | | | | EN | IT | ES | DE |
|----------------|------------|--|-----------------------|--------------|--------------|--------------------|-----------|
| Couleurs | Codes | | Norme CEI 60757 | Colours | Colori | Colores | Farbe |
| Blanc | Bc | | WH | White | Bianco | Blanco | Weiß |
| Marron | Mr | | BN | Brown | Marrone | Marrón | Braun |
| Vert | Vt | | GN | Green | Verde | Verde | Grün |
| Jaune | Jn | | YE | Yellow | Giallo | Amarillo | Gelb |
| Gris | Gr | | GY | Grey | Grigio | Gris | Grau |
| Rose | Rs | | PK | Pink | Rosa | Rosa | Lila |
| Bleu | Bl | | BU | Blue | Blu | Azul | Blau |
| Rouge | Rg | | RD | Red | Rosso | Rojo | Rot |
| Noir | Nr | | BK | Black | Nero | Negro | Schwarz |
| Violet | Vi | | VL | Violet | Viola | Violeta | Violett |
| Orange | Or | | OG | Orange | Arancio | Naranja | Orange |
| Vert/Jau ne | V/J | | GNYE | Green/Yellow | Verde/Giallo | Verde/Am arillo | Grün/Gelb |

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2. GENERAL PRESENTATION

The RCT5 remote control is to manage the MICROCOMPT+ remotely.



Its screen and the red, green and blue buttons allow the user :

- to navigate in the menus,
- to display the measurement information.


Safety functions such as emergency stop and deadman switch are controlled by the corresponding buttons.

3. NOMENCLATURE

3.1. SIMPLE NOMENCLATURE

| MATERIALS DELIVERED BY ALMA | | |
|-----------------------------|---|---------------------|
| Item | Material | Description |
| 1 |  | RCT5 remote control |
| 1 |  | Load support |
| 1 |  | GNSS antenna |

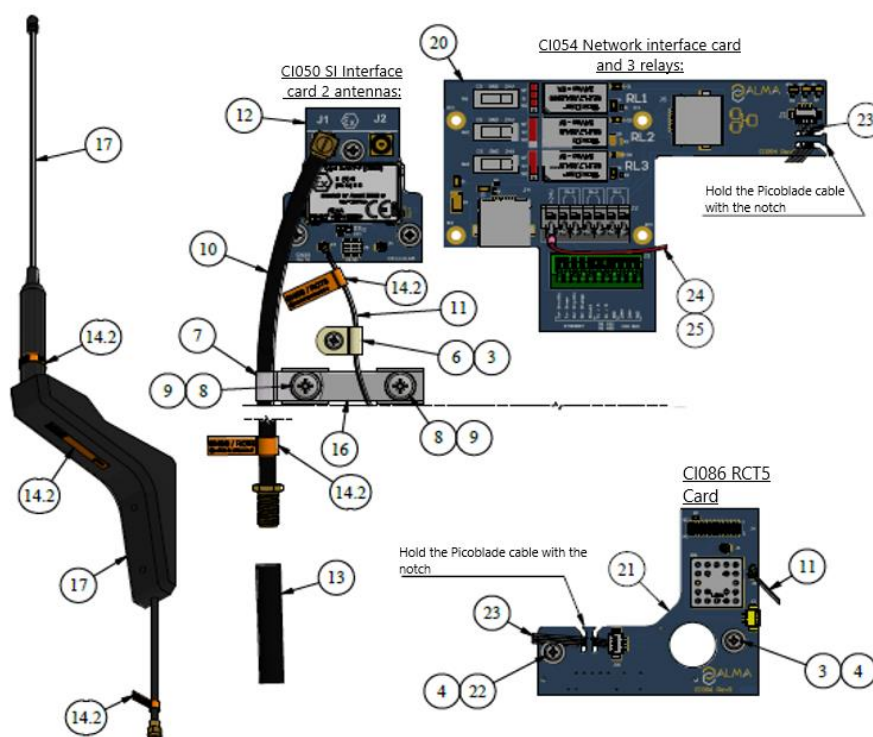
Non-contractual photos

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4. RCT5 INSTALLATION PLAN


4.1. SETTING UP THE RCT5

NOTE : The RCT5 can only be fitted to MICROCOMPT+ without an integrated RCT5 option.



| Rep | Qty | Article description |
|------|-----|---|
| 3 | 5 | CBLZ screw M3x6 (ISO 7045-Z) |
| 4 | 5 | M3 corrugated washer (DIN 137) |
| 6 | 1 | Cable ties Ø1.6mm |
| 7 | 1 | Cable ties Ø4.8mm |
| 8 | 2 | CBLZ screw M5x8 (ISO 7045-Z) |
| 9 | 2 | DEC washer M5x8 (ISO 7045-Z) |
| 10 | 1 | Coaxial cable 50OHM SMA(M) angled/SMA (F) 500mm |
| 11 | 1 | 50OHM U.FL 200mm coaxial cable |
| 12 | 1 | CI050 card |
| 13 | 1 | Thermo. Adhesive, 4:1 shrinkage, diam. 11mm, 1g, 65mm |
| 14.2 | 5 | GNSS/RCT5 label |
| 16 | 1 | Anti-rotation cable clamp |
| 17 | 1 | GNSS/RCT5 antennas |
| 20 | 1 | CI054 network interface card and 3 relays |
| 21 | 1 | CI086 LORA RCT5 extension board |
| 22 | 1 | CBLZ screw M3x10 (ISO 7045-Z) |
| 23 | 1 | 4-wire picoblade cable Length: 300mm |
| 24 | 2 | 0.34mm2 pre-insulated wire end cap |
| 25 | 1 | Flexible wire 0.34 mm2 red |

NOTE : GNSS/RCT5 antenna has a center distance of 50 mm and can be mounted on a flat surface using the dowels and screws supplied.

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The GNSS/RCT5 antenna must have a clear view of the sky. Following the GNSS/RCT5 antenna, 3m of cable and a 2m extension cable are available.

Fitting the RCT5 module into a Microcompt+

Can be fitted with 1 PE: KIT BAD 20 N20 EP ON (3924) or equivalent

CI086 RCT5 board assembly:

COM interface card (PV1958)

Run the UFL cables through the AFSEC+ slot

CI086 connection:

UFL GNSS/RCT5 cable J2 to J3 on CI050

Picoblade cable to J1 on CI054

Hold the Picoblade cable with the notch

CI050 SI interface card assembly 2 antennas:

CI054 Network Interface card and 3 relays assembly :

Remove the CI052 (network interface card) and replace it with the CI054.

Connections :

GNSS/RCT5 SMA cable

UFL GNSS/RCT5 cable

Connect the ribbon cable to J5

Red flexible wire: +24V terminal of J2 on CI054 to '+' terminal of B1 on the AFSEC+ card.

Pass the cables through their cable ties

Secure the ribbon cable and the Picoblade cable with the cable clamp

| | | | | | | | | | | | |
|--|--|---|------------|-----|-----|-------|---|--|--|--|--|
| Service Développement 13127 Vitrolles Mat: Tol : ISO 2768-mK Ech: 1:22 Code: 12280 N° de plan associé du dossier CET concerné Métro : ATEX: | | Equipped RCT5 module eMicrocompt | | | | | Description of modification N°829 Removal of the 2 antennas box, new antenna references, Creation of the RCT5 module and the 4G/GNSS and RCT5 module Modified on 12/04/2023 By CHR Verified by DRA Created on 23/03/2017 CC SR | | | | |
| | | 981a | PV1962.2 | D | 1 | 6/12 | | | | | |
| | | N° Dev | Drawing N° | Rev | Ind | Folio | | | | | |

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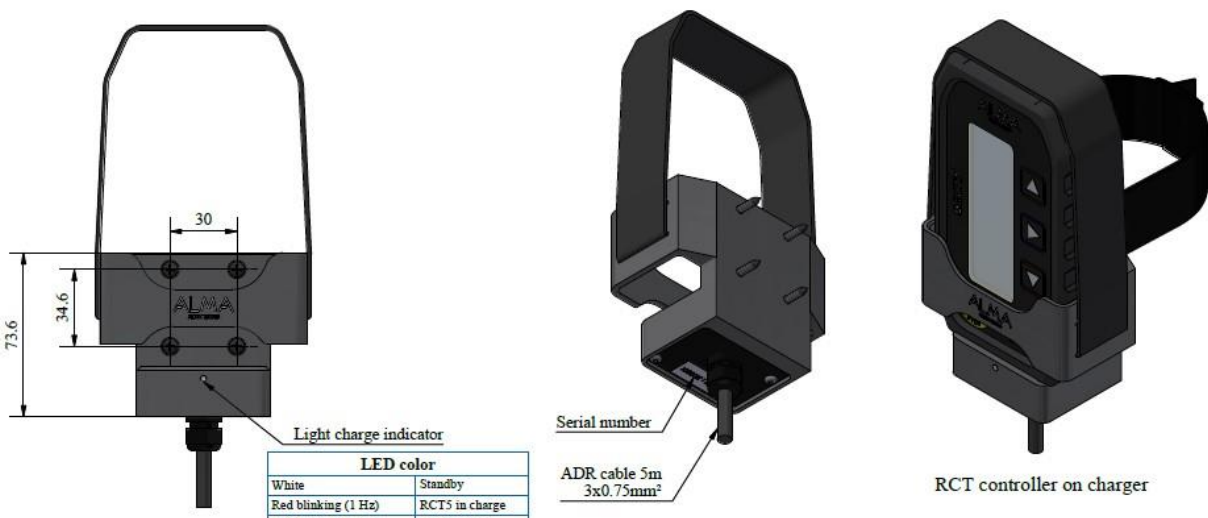
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4.2. SETTING UP THE RCT5 REMOTE CONTROL CHARGER BASE

The RCT5 remote control charger cradle must be located at the front of the vehicle.
The connection between the charger cradle and the vehicle is made using two wires:

- ⇒ Yellow (+24V)
- ⇒ White (0V)


NOTE : The green wire is not connected.



| LED color | |
|---------------------|----------------|
| White | Standby |
| Red blinking (1 Hz) | RCT5 in charge |
| Red blinking (5 Hz) | Charger error |

| Features | |
|-----------------------------|----------------|
| Wireless power transfer max | 5W |
| Input voltage supply range | 9V to 36V |
| Input current supply max | 0.6A |
| Operating temperature | -20°C to +50°C |

| Wire connection | | |
|-------------------|--------|--|
| Power supply + | Yellow | Vsupply min+ = 9V ; Vsupply max+ = 36V |
| Power supply - | White | Ground - |
| Open drain output | Green | Vout max = 36V ; Iout max = 0.1A |
| | | Vout high (transistor open) : no RCT5 on the charger |
| | | Vout low / Vout high at 1 HZ : RCT5 in charge |



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Service
Development
13127 Vitrolles

PRESENTATION DRAWING DFFV156

Description of amendment N° 919

RCT5 controller modification

DEV N° : 9547

Code : 12447

Drawing N° associated with the related CET file

9547

PPV156

B

1

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Modified on : 31/01/2024

by

ALB

verified by

BEB

DRA

Metro :

ATEX :

Dev N°

Drawing N°

Rev

Ind

Folio

Created on : 17/05/2023

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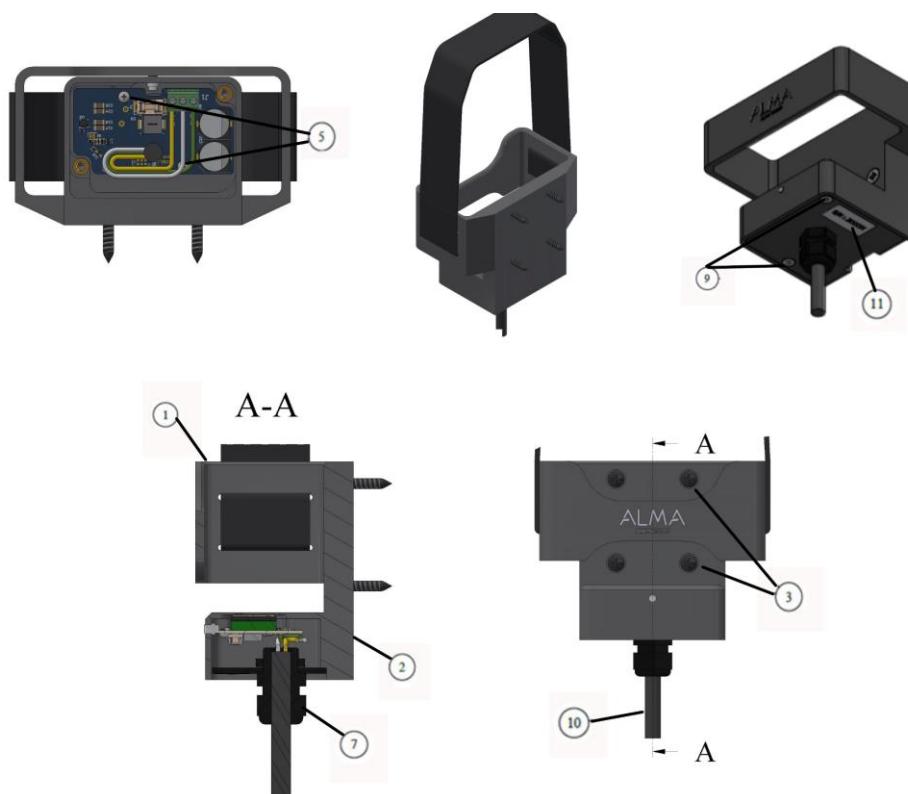


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| Rep | Qty | Description |
|-----|-----|-----------------------------------|
| 1 | 1 | RCT5 charger support |
| 2 | 1 | Charger support plate RCT5 |
| 3 | 4 | Machine screws |
| 4 | 1 | Wired circuit CI090 RCT5 charger |
| 5 | 2 | Button-head screw CBLZ ST 2.2X4.5 |
| 7 | 1 | ISO12 polyamide cable gland Black |
| 8 | 1 | 2.5mm light guide |
| 9 | 4 | M3x8 FHC screw |
| 10 | 1 | 5m prepared cable |
| 11 | 1 | SN charger label RCT5 |

4.3. PAIR THE RCT5 REMOTE CONTROL

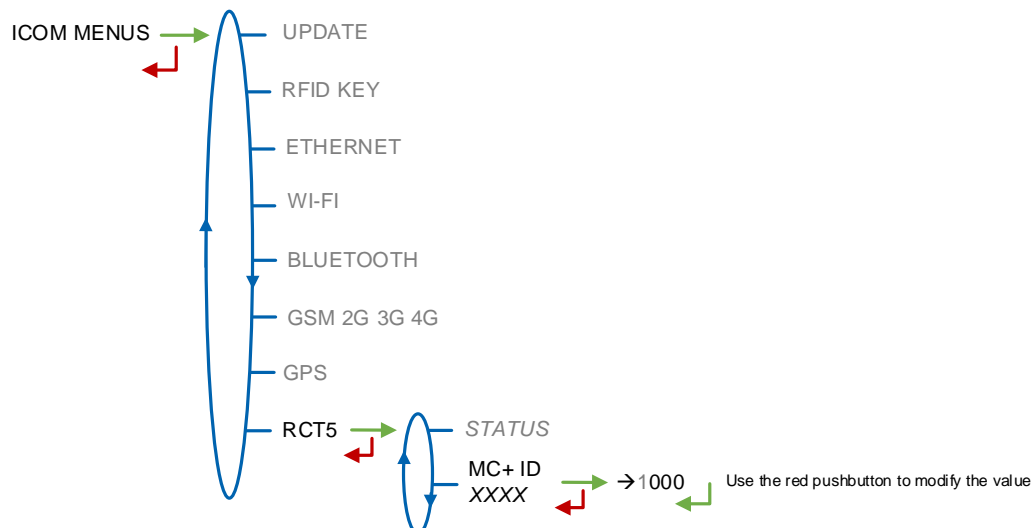
On the MICROCOMPT+ with a blue RFID key :

SUPERVISOR>ICOM MENUS>RCT5>ID : Check if the ID of the MICROCOMPT+ is similar to its batch number.

If it is not the case, enter the four digit ID of the MICROCOMPT+. Use the red pushbutton to change the value.

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SUPERVISOR>ICOM MENUS>RCT5>RESET : Reset the pairing with the green pushbutton.

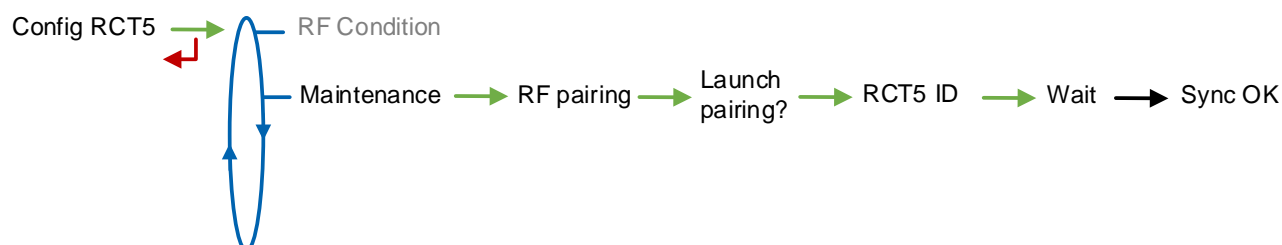


On the RCT5 :

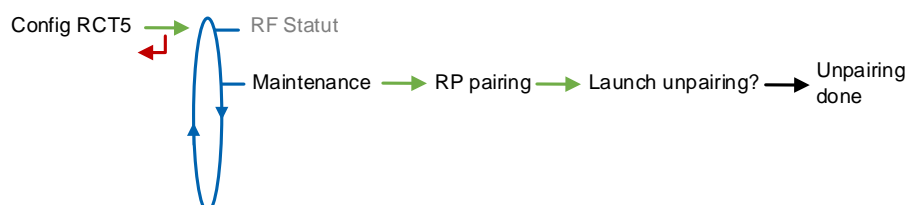
Config RCT5>Maintenance>RF Pairing : enter the batch number of the MICROCOMPT+.

If the remote control is not paired, the message *Launch new pairing ?* appears (very quickly).

The message « Pairing Done » appears when the pairing has been done. Otherwise, the message « Pairing Fail » will appear.



When the remote control is already paired



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