

INSTALLATION GUIDE

DI 013 EN C

RC-FIOUL REMOTE CONTROL




C	2022/01/20	Evolution of the internal electronics. 4-keys transmitter	DSM	CHR
Issue	Date	Nature of modifications	Written by	Approved by

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1. GENERAL RECOMMENDATIONS

IN ORDER TO AVOID ALL THE PROBLEMS CONCERNING THE INSTALLATION, THE OPERATION AND THE MAINTENANCE OF THE EQUIPMENTS, BEING ABLE TO CREATE INOPPORTUNE FAILURE, PLEASE RESPECT THE FOLLOWING RECOMMENDATIONS.

BEFORE ANY WORK, MAKE SURE THAT THE EQUIPMENTS ARE NOT POWERED.

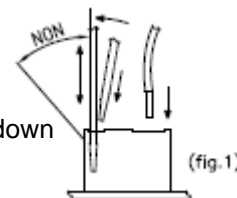
1.1. MECANICAL RECOMMENDATIONS


- ⇒ Respect the recommendations of the instruction manual specifying the installation, operation and maintenance conditions of the ATEX equipment (instruction manual supplied with the equipment).
- ⇒ Take care to place the equipment in order to facilitate their installation, operation and maintenance by the technicians (working ergonomics).
- ⇒ Take care to position properly the equipment; the display must be readable without any difficulty.
- ⇒ Apply a tightening torque suitable with size and material of the fixation element except particular specifications mentioned on the presentation drawing or in the installation guides.
- ⇒ Mechanically protect the cables with the corrugated conduit if the cables are not ADR (corrugated conduit adapted to vehicles used for 'carriage of dangerous goods of road' - hydrocarbons, LPG ... - and meet the requirements of French standard NF R13-903. Refer to the regulations in force).
- ⇒ Ensure there are a good mechanical strength and a good sealing between cable glands and cables, and between cable glands and corrugated conduit.
- ⇒ Respect cables and corrugated conduit radii of curvature.
- ⇒ Leave enough flexibility to wires in order to avoid any risk of stripping.
- ⇒ Allow the drainage of the water in the lower loop (siphon) of the corrugated conduit (not water retention inside the corrugated conduit).
- ⇒  See § INSTALLATION AND SEALING RECOMMENDATIONS ADRIANE TURBINE METER.

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1.2. ELECTRICAL RECOMMENDATIONS

- ⇒ According to the ATEX directive or any other regulations in force in the country of destination, the safety protection level of the equipment must agree with the installation area (potentially explosive atmospheres).
- ⇒ Respect the recommendations of the instruction manual specifying the installation, operation and maintenance conditions of the ATEX equipment (instruction manual supplied with the equipment).
- ⇒ Connect the supply of the equipment downstream cut-out, on the power supply reserved to the measured distribution.
- ⇒ Put a delayed protection of 5A upstream the 24VDC supply to protect equipment in case of reverse polarity or overcurrent.
- ⇒ Use ADR specific cable, if it is not the case, use at minimum a cable resisting to hydrocarbons. Mechanically protect this cable with a corrugated conduit (corrugated conduit adapted to vehicles used for 'carriage of dangerous goods by road' - hydrocarbons, LPG ... - and meet the requirements of French standard NF R13-903. Refer to the regulations in force).
- ⇒ Take care not to damage the terminals of the different electronic boards while wiring.
 - Screw terminals: do not damage the screw heads of the terminals.
 - Use insulated lugs and insulated wire ferrules adapted to the section of wires.
 - Spring terminals: do not block the springs (if a spring is blocked, the electronic board must be replaced).
 - Use flat screwdriver 0.4x2.5 (see fig.1).
 - Insert the screwdriver slightly tilted, then push it perpendicularly to the terminal.
 - Do not exceed the upright position when the screwdriver is down in order not to block the spring.
 - Insert or remove the wire and remove the screwdriver.
- ⇒ Pass the power supply cores (24VDC truck) through the ferrites by carrying out a loop (ALMA supply).
- ⇒ Do not use wires of section higher than 1.5mm².
- ⇒ Do not insert more than two wires in a terminal, if necessary use an insulated twin wire ferrule (unless otherwise indicated).
- ⇒ Strictly respect the polarities of the input/output when wiring, in accordance with serigraphy on the cards and/or with the installation guide indications.
- ⇒ Whenever possible, perform a wired test, after wiring and before powering.
- ⇒ Whenever possible, respect the locations of the cables specified in the installation guide.
- ⇒ Equipment must be connected to the frame ground (external ground connection).
- ⇒ Whenever possible, use shielded cables with a 360° connection through the metal cable glands (see the documentation delivered with the equipment).
Otherwise, connect the shields to devices inside the equipment (ground terminal, earth bar, earth boss...).



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- ⇒ Whenever possible, label the cables and cores according to the installation guide to facilitate the later maintenance operations.
- ⇒ Respect a homogeneous wire color code.
- ⇒ Color code according to DIN 47100.
- ⇒ Code for designation of colours according to IEC 60757 (except FR codes):

FR				EN	IT	ES	DE
Couleurs	Codes		Standard codes 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/Jaune	V/J		GYNE	Green/Yellow	Verde/Giallo	Verde/Amarillo	Grün/Gelb

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1.3. PNEUMATIC RECOMMENDATIONS

- ⇒ Air must be filtered – from 40 to 20µm. Specific recommendations may be added in the installation guides or on the presentation drawings.
- ⇒ The air lubrication must be permanent and correct to avoid any damage on the pneumatic components.
- ⇒ The air supply pressure to the inlet of the equipment must be at least 6 bar and max 8 bar. Specific recommendations may be added in the installation guides or on the presentation drawings.
- ⇒ The pneumatic supply pipes (6/4) must be cut straight (no slanting cut) and should not be crushed after cutting to prevent leakage on fittings.
- ⇒ Respect the radii of curvature of the pneumatic pipes indicated by the manufacturer.
- ⇒ Use colored pneumatic pipes to ease maintenance operation.
- ⇒ In no case the exhaust holes of the pneumatic organs should be plugged, obstructed, unless if that is clearly specified in the installation guides or on presentation drawings.
- ⇒ The use of muffler is not allowed under any circumstances (fouling, frost...). Put a pneumatic pipe of sufficient length, pointed downwards, so that its end is placed in a protected area (L = 100 mm min.).
- ⇒ Pressure unit conversion:

PRESSURE UNIT CONVERSION				
Unités	Bar	PSI	Pascal	kg/cm ²
1 Bar =	1	14,5	100 000 (1x10 ⁵)	1,0197
1 PSI =	0.069	1	6894,5	0,07031
1 Pascal =	1x10 ⁻⁵	14,5x10 ⁻⁵	1	1,0197x10 ⁻⁵
1 kg/cm ² =	0,98	14,22	98066,5	1

PSI = Pound per Square Inch (livre par pouce carré)

1 bar = 100 kPa = 0.1 MPa (1 MPa = 10 bar)

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2. GENERAL PRESENTATION

2.1. INSTALLATION OF THE RC-FIOUL REMOTE CONTROL RECEIVER

The RC-FIOUL REMOTE CONTROL RECEIVER can be installed outside (IP68) or inside the driver's cab.

However, some driver's cabs interfere with the reception of the RC-FIOUL transmitter signal.



If that is the case, the RC-FIOUL REMOTE CONTROL RECEIVER must be installed outside.



THE DRIVER'S CAB MUST NOT INTERFERE WITH THE SIGNAL RECEPTION.

Test the reception of the RC-FIOUL transmitter signal before you set the RC-FIOUL REMOTE CONTROL RECEIVER.

3. PART LIST

EQUIPMENTS INCLUDED IN THE MEASURING SYSTEM DELIVERED BY ALMA				
Item	Equipment	Designation	Qty	Option*
1		RC-FIOUL REMOTE CONTROL RECEIVER	1	
2		RC-FIOUL REMOTE CONTROL TRANSMITTER 4 keys (Provided with mural holder)	1	
Option*: equipment sold as an option by ALMA, it must be installed on the measuring system if required by the certificate.				

Non-contractual pictures

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4. RC-FIOUL REMOTE CONTROL

RECEIVER

Dimensions: 10, 13, 4, 4.3, 239, 97, 11, 106, 153, 251, 268.

M6 (SS A4) through hole ground

TRANSMITTER

Dimensions: 177.5, 91.5, 68.5, 24.5.

WALL MOUNTING CRADLE

Dimensions: 4, 6, 40, 2.4, 45, 78, Ø8.

Features

- Frequency : 868MHz
- Range : 1000m
- Operating temperature : -10 to +50°C

RECEIVER :

- Enclosure : ABS black (Non ATEX)
- Protection classification : IP68
- Supply : 12-32Vcc
- Outputs : 4 relays, 10A 28Vcc (NO-COM-NC), Cable glands : 4 (cable Ø6.5 to Ø12)
- Mass : 1 kg

TRANSMITTER :

- Enclosure ABS black (Non ATEX)
- Protection classification : IP68
- Battery type : 3xAAA (supplied)
- Switch : 4
- Mass : 0.123 kg


Presentation Drawing: PPN710
Remote Control: RC-FIOUL

Service Development		Code : 0338		DEV N° : 907		Drawing N° associated with the related CEF file	
ALMA www.alma-aima.fr							
13127 Vitrolles							
Metro :							

Description of the amendment N° 764 :
Update of transmitter : add of battery led and wifi led on keyboard

Modified on : 01/03/2021
Created on : 16/01/2014
by BEB
verified by CHR

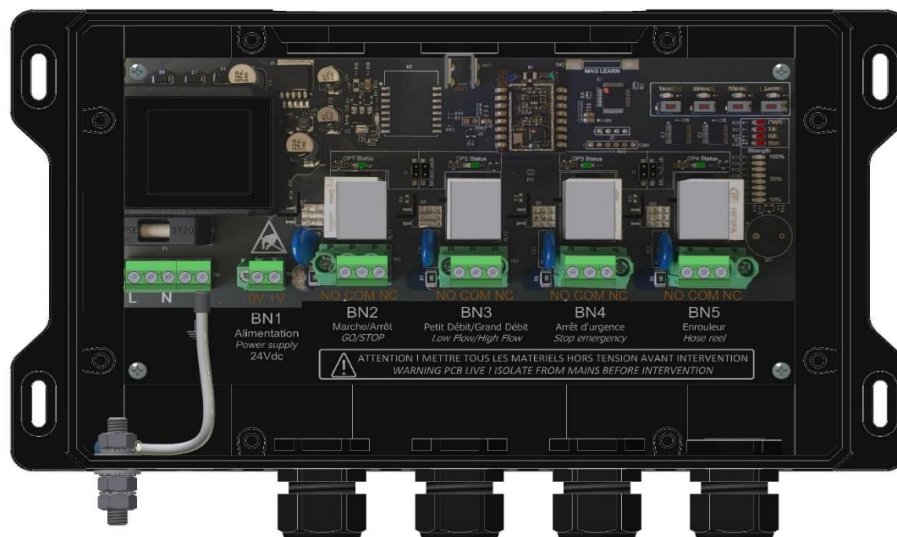
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4.1. ELECTRICAL WIRING REMOTE CONTROL RECEIVER

Connect the ground to the through-hole ground terminal of the RC-FIOUL receiver

TERMINAL ASSIGNMENT OF THE ELECTRONIC BOARD



EQUIPMENTS CONNECTED TO THE RC-FIOUL REMOTE RECEIVER								RECEIVER ELECTRONIC BOARD					
Option	Equipment	Cable (for information)				Function	Colour or No.	Block	Terminal	Fonction		Observation	
		No.	CG*	Alma	Type								
	POWER SUPPLY TRUCK				ADR 2x1	0V		BN1	0V	0V	Poxer supply		
						24VDC			+V	24VDC			
	MICROCOMPT+				ADR 2x1	Run / Stop		BN2	NO	0V	Run / Stop	No input on COM	
										COM			
						LF/HF		BN3	NO	0V	Low flow / High flow	No input on COM	
									COM				
	EMERGENCY STOP RELAY				ADR 2x1	E.S.		BN4	NO		Emergency stop	Potential-free contact	
									COM				
									NC				
	HOSE REEL CONTROL				ADR 2x1	Ctrl		BN5	NO		Control	Potential-free contact	
									COM				
									NC				

*Refer to the Cable Glands Installation Instructions

4.2. CONFIGURATION OF THE RC-FIOUL REMOTE CONTROL

Synchronisation of the transmitter keys with the receiver relays:

- ⇒ Select the "FM" transmission mode by pressing the MODE-key successively, the R30-LED must be lit
- ⇒ Synchronize the transmitter keys to the relays according to table below (Fig.1)
Note: The antennas on the receiver and transmitter boxes are not required for synchronization
- ⇒ Tap but not hold the LEARN-key (Fig.2)
The LEARN-LED and the relays-green LEDs are blinking
- ⇒ Tap LEARN many times to choose the relay to be synchronised (the relevant green led is blinking then)
- ⇒ Tap but not hold the transmitter key to be synchronised with this relay
- ⇒ Synchronisation is done when the LEARN-LED stops blinking after 2 blinks
- ⇒ Repeat the above steps until complete synchronisation according to table below (Fig.1)
- ⇒ A key can control several relays as well as a relay can be controlled by several keys

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