



The AL50RC portable console is a control device designed for the remote operation of industrial lifting machines, materials handling and aerial platforms equipped with the radio receiver RDC EVO and/or a CAN bus network.

The device allows to have maximum versatility both in the usage phase, thanks to the ergonomics of the product and the double system connection (both wired and radio), and in the design phase, as it is developed to handle up to 2 double-axe proportional joysticks, up to 10 pushbutton, up to 12 led and an emergency pushbutton with dry contacts. The operator layout is fully customizable.

The hamming security code and the packet communication protocol allow for a reliable radio connection and continuous work without any interruptions caused by radio interference on the 434 or 868 MHz band.



## TECHNICAL FEATURES

MASTER CODE	AL50RC.453	
POWER SUPPLY	EXTERNAL POWER SUPPLY: 9-30 VDC BATTERY: INTEGRATED NI-MH AUTONOMY: UP TO 8 HOURS IN CONTINUOUS TRANSMISSION (MAX 4 HOURS FOR A COMPLETE CHARGE)	
COMMUNICATION PORTS	NETWORK: CAN BUS 2.0B COMPLIANT – (11, 29 BIT) – ISO 11898-2 UP TO 1Mbit/s RADIO: 868 MHz / 434 MHz BAND	
RADIO FEATURES	BAND: 868 MHz (869.700-870.00 MHz) / 434 MHz (433.050-434.790 MHz) CHANNELS: 12 ( AUTOMATIC FREQUENCY SCAN) MODULATION: 2-GFSK\	
RADIO PROTOCOL	PACKET TRANSMISSION PROTOCOL (PROPRIETARY) BIDIRECTIONAL LINK HAMMING DISTANCE = 4 SAFETY STOP INTERVENTION TIME < 0,5s	
CONNECTIONS	MAIN: SOURIAU CONNECTOR with DUST COVER CAP for external p.s., battery charge, CAN bus communication and Emergency button NC dry contact BATTERY CHARGER: jack connector for battery charger 220VAC-12VDC adapter	
CASE	BLACK PA	
HANDLING	Waist belt/ shoulder strap	
TEMPERATURE	BATTERY SPECS: CHARGING T.: 0+45°C STORAGE T.: -20+45°C OPERATING: -10+ 60°C	ELECTRONIC SPECS: OPERATING T.: -25+70°C STORAGE T.: -40+70°C
PROTECTION	IP65	





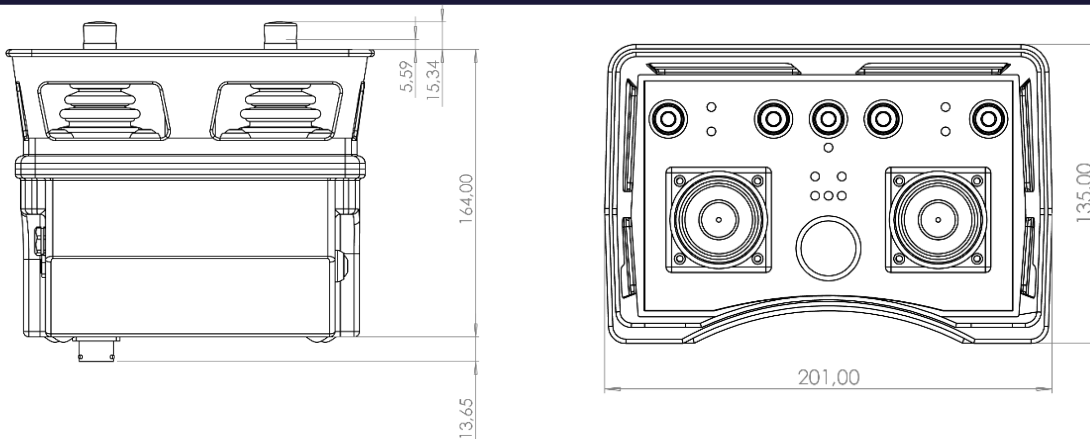
## ELECTRONIC FEATURES

<b>CAN BUS PROTOCOLS</b>	CAN OPEN protocol (CIA DS401 DEVICE PROFILE FOR GENERIC I/O MODULE, WITH DS306 EDS FILE) Baud rate: 10, 20, 50, 100, 125, 250, 500, 1000 kbps (Default = 250 kbps)
<b>PROGRAMMING</b>	FIRMWARE UPLOAD BY CAN BUS WITH ALOADER SOFTWARE TOOL

## STANDARDS

<b>ELECTROMAGNETIC (EMC)</b>	ACCORDING TO DIRECTIVE 2014/30/EU: EN 61000-6-4 EN 61000-6-2 EN 50498
<b>ROAD VEHICLES</b>	ISO 7637-2: 2011 ISO 11452-1: 2005
<b>INFORMATION TECHNOLOGY EQUIPMENT – SAFETY</b>	EN 60950-1
<b>RADIO SPECTRUM MATTERS (RED)</b>	ACCORDING TO DIRECTIVE 2014/53/EU: ETSI EN 300.220-1 ETSI EN 300.220-2 ETSI EN 301.489-1 ETSI EN 301.489-3
<b>PERFORMANCE AND SAFETY INTEGRITY LEVEL</b>	EN ISO 13849-1 PLC – SIL1 (SINGLE-CHANNEL INTERNAL SCHEME)
<b>EMEGENCY STOP BUTTON (manufacturer's specification)</b>	EN60947-5-1 EN60947-5-5

## SIZE (mm)



Sizes may change based on the controllers layout

## COMPATIBLE RADIO RECEIVER UNIT

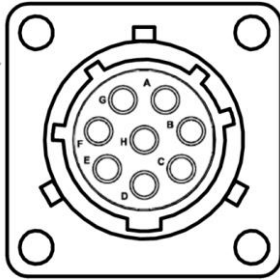
<b>MASTER CODE</b>	RDC EVO (SEE THE DATASHEET FOR MORE INFORMATION)
<b>POWER SUPPLY</b>	9 - 30 VDC
<b>COMMUNICATION</b>	NETWORK: CAN BUS 2.0B COMPLIANT – CANOPEN PROTOCOL RADIO: 868 MHz / 434 MHz BAND
<b>CONNECTIONS</b>	MAIN: TE DEUTSCH DTF13-6P ANTENNA: SMA socket
<b>CASE</b>	ENCAPSULATED IN PUR RESIN - UL94 (V0)





## CONNECTOR PINOUT

### MAIN CONNECTOR



PIN	DESCRIPTION
A	POSITIVE power supply
B	GND power supply
C	CAN H
D	CAN L
E	Dry contact (emergency button)
F	Dry contact (emergency button)

### MATING CONNECTOR CODES

SOURIAU P/N: UTG608P and UT00128SH FPM

### BATTERY CHARGER CONNECTOR



**VEHICLE CHARGER WITH CIGARETTE LIGHTER CONNECTOR (12/24 VDC)**

P/N:  
ALNWR.276.CB.S01



**BATTERY CHARGER 220 VAC ELECTRICAL SOCKET**

P/N:  
ALNWR.276.CB.S03



### AVAILABLE CONTROL ELEMENTS

<b>EMERGENCY STOP BUTTON</b>	MUSHROOM BUTTON WITH ROTATING RELEASE USAGE CONDITIONS ON DRY CONTACTS: 3 A a 120 V, AC-15, B300 1,5 A a 240 V, AC-15, B300 0,1 A a 250 V, DC-13, R300 0,22 A a 125 V, DC-13, R300
<b>JOYSTICK</b>	UP TO N.4 ANALOG INPUT FOR: → No. 4 SINGLE-AXLE JOYSTICK (X-X) with out-from-center detect input or → No.2 DOUBLE-AXES JOYSTICK (X-Y) with out-from-center detect input
<b>PUSHBUTTONS</b>	N.1 BUTTON FOR DEVICE POWER ON UP TO 10 DIGITAL INPUTS FOR - PUSHBUTTON - TOGGLE SWITCH - ROCKER SWITCHES - OTHERS ON REQUEST
<b>SPOTLIGHT LED</b>	N. 5 LEDs for the indication of the operating status, the battery charge level and coded messages UP TO 7 MONOCROMATIC LED FOR CUSTOMER USAGE
<b>BUZZER</b>	optional



## SAMPLE LAOUT

FULLY CUSTOMIZABLE

**CONSOLE STATUS LED**

Custom led integrated on the graphic label

side buttons can be installed for custom applications e.g., for duplicates the functionality of each button or DMS function

**EMERGENCY STOP BUTTON**

WAIST BELT/ SHOULDER STRAP INCLUDED

**CUSTOMIZABLE GRAPHIC LABEL**

**PUSHBUTTON AVAILABLE ON COLORS:**  
Blue, Dark blue, Black, Green, Grey, Yellow 6 Red, White, Bright chrome, Orange, Satin chrome

**SINGLE-AXLE JOYSTICK**

**LOW PROFILE SINGLE-AXLE JOYSTICK**

**2-AXES JOYSTICK**

## JOYSTICK FEATURES

### 2-AXES

- HALL effect proportional manipulators 2 axes (x and y) with square/cross/diamond/circular limitation.
- Operating angle: 36°
- On request: cross limitation is done via software within 35s of the drive.
- Spring back to center.
- Output: Gain 40% (0.5-4.5V)
- Operating force 1.3N (max 400N)

### SINGLE-AXLE

- HALL effect proportional manipulators
- Operating angle 25 mm
- Spring back to center.
- Available low profile (in shape) or high profile (out of shape)
- Output: Gain 40% (0.5-4.5V)
- Operating force: 75N

