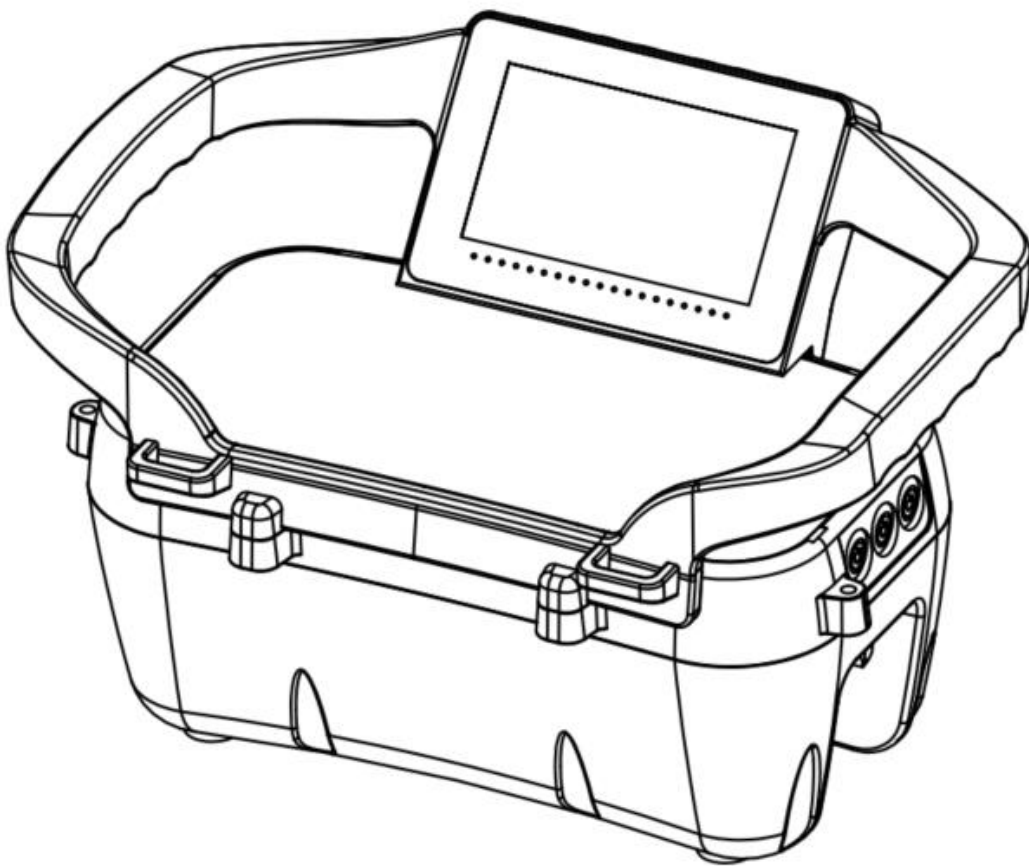


DL-RC01C-LL-SST02

Shoulder Strap Remote Control

technical protocol



V1.0 20250326

Technical Protocol

Protocol number:

一、Agreement supplies

Name: Wireless Remote Control

Model (Specification): DL-RC01C-LL-SST02

Product main components:

product	Model/Specification	unit	quantity
remote transmitter	DL-RC01C-LL-SST02(S)	tower	1
receiver of remote-control sytem	DL-RC01C-LL-SST02(R)	tower	1
suction cup antenna	433MHz	individual	1
lithium cell	4800mAh	block	2
braces	3.7 cm wide, 1.4 m long	root	1
Fast charging adapter	GS-W25A0529	individual	1
USB junctor	TYPE-C	root	1
instructions	/	portion	1

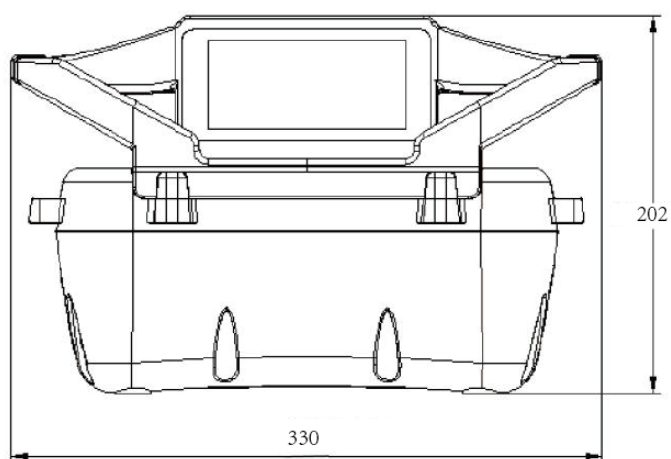
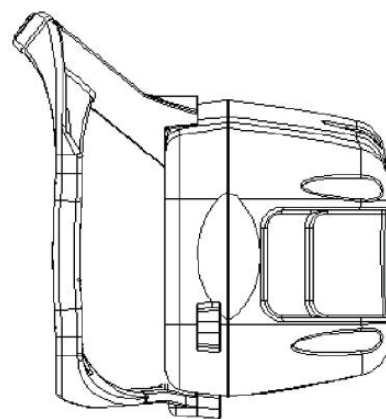
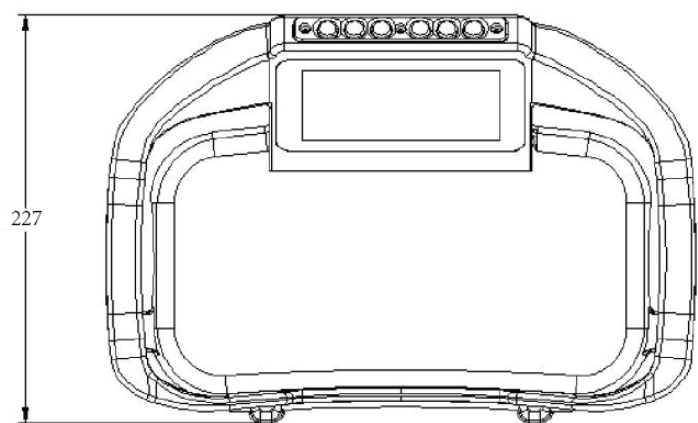
二、Main technical parameters of remote control

(一) ejector

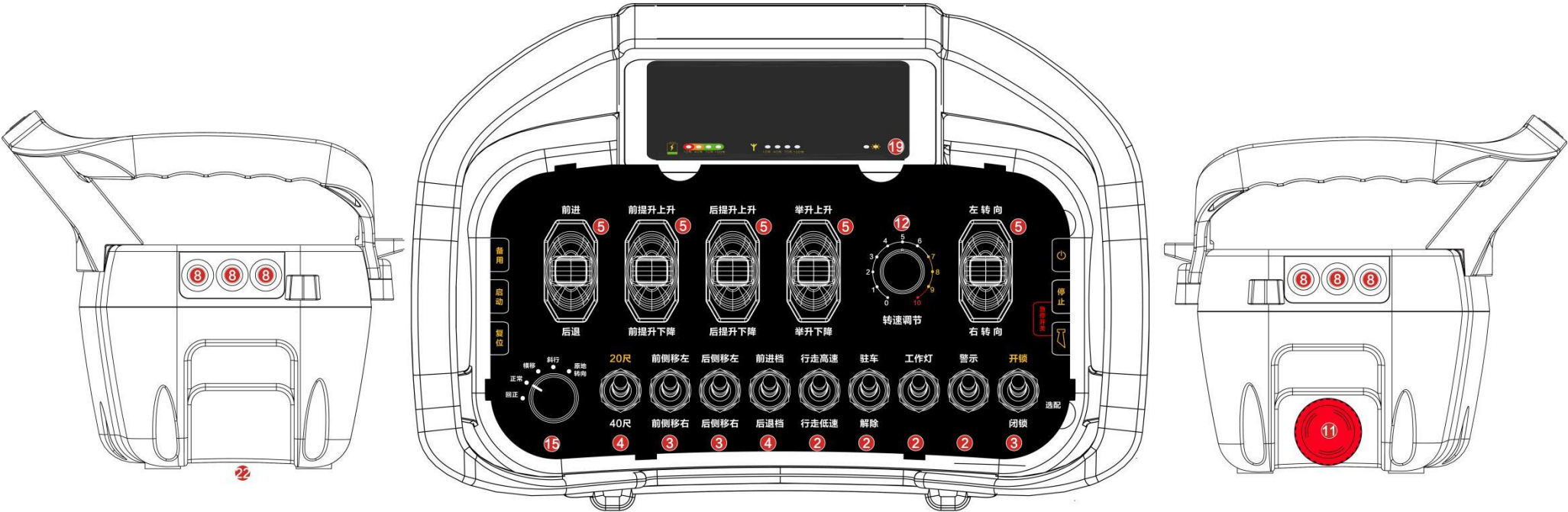
1. transmitter technical parameters

name	remote transmitter
model	DL-RC01C-LL-SST02 (S)
cell voltage	7.4 VDC
working temperature	-25℃ ~ 70℃
Storage temperature	-25℃ ~ 70℃
working humidity	0—97%, anti-coagulation
transmitter size	330*227*202mm
levels of protection	IP65
reference bandwidth	433MHZ
data conflict	automatic frequency hopping

2. Transmitter size:



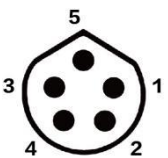
3. transmitter layout



code name	Device Description	quantity	code name	Device Description	quantity	code name	Device Description	quantity	code name	Device Description	quantity
1	two stage self-resetting torsion switch	0	7	bipolar cross handle	0	13	Three-position rotary switch	0	19	status indicator	1
2	two stage self-locking torsion switch	4	8	Reset button	6	14	four way rotary switch	0	20	Display program download port (M8)	0
3	three stage self-resetting torsion switch	3	9	locking press button	0	15	five-position rotary switch	1	21	Wired control interface (Lingke)	0
4	three stage self-locking torsion switch	2	10	emergency stop switch	1	16	single lockout key switch	0	22	Battery (4800mAh)	2
5	single axis linear handle	5	11	mains switch	0	17	Physical buttons on the display	0			
6	bipod universal handle	0	12	potentiometer knob	1	18	5-inch display	0			

4. Transmitter wiring method:

1) 5-inch display USB connector: 5-pin M8 male

PIN	Signal name	functional	
1	USB_D-	USB signal D-	
2	USB_D+	USB signal D+	
3	GND	USB the earth	
4	VBUS	USB source	
5	USB_ID	USB discriminate	

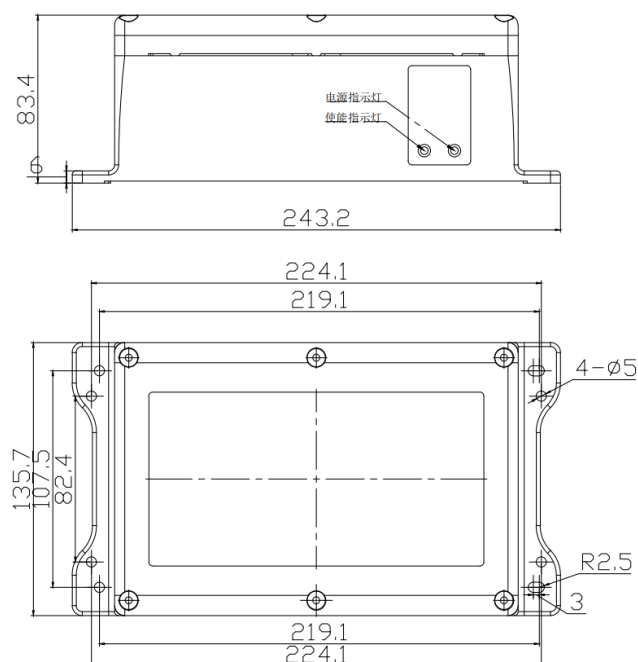
(二) acceptor

1. technical parameter

DL-RC01C-LL-SST02 (R)	
behaviour of electricity	
working voltage [V]	9 ~ 36 VDC
current loss [mA]	<200 (25°C) without load
Terminal resistance 120Ω	not have
structured data	
Size [mm]	242*135*83
weight [g]	740
sheathing material	ABS+PC
electrical interface	
protocol	CAN2.0B (optional)
Factory parameters	Baud rate: 250 kBit/s (optional) or 1 kBit/s to 1 MBit/s (adjustable) Node ID: 10 1-127 (Settable)
emergency stop relay	1NO1NC
output	12DO(MAX 3A)
short circuit and overload protection	have
pilot lamp	2 dual-color LED lights
junctor	PG head
going	
Working temperature [°C]	-40°C~85°C
Storage temperature [°C]	-40°C~85°C

levels of protection	IP67
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2、Receiver size



- ☞ Enable indicator light: When it stays on, the receiver is activated and the safety relay has engaged, allowing normal operation.
- ☞ Power indicator light: The green light remains on, indicating the receiver is powered on. The green indicator light flashes, indicating the receiver has received a signal (flashing frequency: 2Hz).

2. receiver wiring method

1) External controller:

order	Signal name	pigment	functional description
1	Power	red	Power supply positive
2	GND	black	Power supply negative
3	CAN1_H	hispid	CAN highway H
4	CAN1_L	white	CAN highway L
5	NO	ash	emergency stop normally
6	COM	olivine	Emergency stop public
7	NC	palm	normally closed emergency
8	Out1	Lan	left-hand drive
9	Out2	purple	Turn right

3、Remote Control Instructions

1. The communication distance is safe and reliable: more than 150 meters in open areas.
2. When the handle and button switches are not in the initial position, the device will enter a startup protection mode upon power-on, preventing normal operation. It will display 'Automatic diagnostic mode initiated' with a 2Hz buzzer sound, and the device will fail to start.
3. The communication is seriously interfered or beyond the normal communication distance, all the bus data in 1 second is restored to the zero state;
4. Press  key 1s to power on,  then press and hold key 20 to enter pairing mode. The buzzer will sound continuously while the receiver undergoes power-on and power-off cycles. Upon successful pairing, the transmitter's LED status indicator will flash rapidly.

4、remote control partial protocol

Heartbeat frame (receiver or transmitter----->external controller) (send cycle 100ms)					
CAN_ID	BYTE0	BYTE1	BYTE2	BYTE3	BYTE4
700+Node_ID	Wireless heartbeat	Node_ID	Power indicator and signal strength	channel number	CAN heartbeat
BYTE0 is the heartbeat signal from the wireless transmitter to the receiver, ranging from 0 to 0xff. The heartbeat value increments by 1 each time the receiver receives a data packet from the transmitter. BYTE1 is the Node_ID The bits 0-3 of byte2 indicate battery level (0xX0-0xxA), where 0-10 represents the battery power level. The bit4 to bit7 of byte2 indicates signal strength, where 0x0X to 0xAX corresponds to a signal intensity ranging from 0 to 10 levels. BYTE3 is the wireless channel number, ranging from 1 to 35. Byte4 CAN heartbeat frame 0 and 1 transitions.					

Receiver (or wired mode of transmitter) -----> external controller							
	COBI D	BYTE	Bit	codoma in	defined instruction	explanatory note	explain
	180+NOD	0	0	0/1	starting up		No boot verification

Send PDO 1	EID (Send cycle 100ms)		1	0/1	firing		No boot verification
			2	0/1	reset		No boot verification
			3	0/1	20 feet		initial median
			4	0/1	Move left front		initial median
			5	0/1	Move forward and right		
			6	0/1	Move left		initial median
			7	0/1	Move right		
		1	0	0/1	drive		No boot verification
			1	0/1	Back		No boot verification
			2	0/1	High-speed driving		No boot verification
			3	0/1	Walk at low speed		No boot verification
			4	0/1	parking		No boot verification
			5	0/1	remove		No boot verification
			6	0/1	work light		No boot verification
			7	0/1	caution		No boot verification
		2	0	0/1	unblinking		initial median
			1	0/1	shutting		
			2	0/1	suona		No boot verification
			3	0/1	40 feet		No boot verification
			4	0/1	sidesway		No boot verification
			5	0/1	diagonal		No boot verification
			6	0/1	pivot steering		No boot verification
			7	0/1	Reversion		No boot verification
		3	0	0/1	preliminary ascent		initial median

			1	0/1	preliminary ascent and descent		initial median
			2	0/1	posterior elevation		
			3	0/1	posterior elevation and descent		
			4	0/1	Lift and raise		initial median
			5	0/1	lift and drop		
			6	0/1	left-hand drive		initial median
			7	0/1	Turn right		
		4	0	0/1	A1	Handle (Forward): 7E...00 Median: 7F Handle down (back): 80...FF	initial median Power-on self-test
		5	1..8	0..FF	E1	Speed adjustment: 00-FF indicates 0-10.0 range	No boot verification
		6	1..8	0..FF			
		7	0	0/1	cease		No boot verification
			1	0/1	reserve		No boot verification
			2	0/1	RES		
			3	0/1	RES		
			4	0/1	RES		
			5	0/1	RES		
			6	0/1	communication sign	During communication (including emergency) Stop) is 1; 0 when not communicating	
			7	0/1	STOP	Stop signal (emergency stop, toggle from 0 to 1)	

CAN data format

1. Take a photo when the vehicle stops abruptly (when the stop relay is de-energized)

order number	COBID	DL	data	state
1	0x180+nodeID	0x08	00 00 00 00 7F 00 00 C0	Press the emergency stop button during communication
2	0x180+nodeID	0x08	00 00 00 00 7F 00 00 80	No communication status
3	0x180+nodeID	0x08	00 00 00 00 7F 00 00 40	Normal communication

				status
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★SDO command for remote control parameter modification

1. Modify PDO cycle (external controller-----> receiver or transmitter)

CAN_ID	BYTE 0	BYTE 1	BYTE 2	BYTE 3	BYTE 4	BYTE 5	BYTE 6	BYTE 7
600+Node_ ID	2B	0	18	1	64	0	0	0
580+Node_ ID	60	0	18	1	0	0	0	0
BYTE3 indicates the PDO sequence number, while BYTE4 and Byte5 represent the newly modified cycle (default value 100ms), with the low byte preceding the high byte. BYTE3--1 corresponds to PDO1. Byte 3--2 corresponds to PDO2. BYTE3--3 corresponds to PDO3. Bytes 3-4 correspond to PDO4. BYTE3--0 corresponds to the heartbeat cycle, Note: This will not take effect immediately. Save the command with the parameters to apply it.								

2. Adjust baud rate (external controller-----> receiver or transmitter)

CAN_ID	BYTE 0	BYTE 1	BYTE 2	BYTE 3	BYTE 4	BYTE 5	BYTE 6	BYTE 7
600+Node_ ID	2F	0	20	0	3	0	0	0
580+Node_ ID	60	0	20	0	0	0	0	0
BYTE4 is the serial number for the new baud rate (default is 3) 2--500kbps; 3--250kbps 4--125kbps Note: This will not take effect immediately. Save the command with the parameters to apply it.								

3. Change node number (external controller-----> receiver or transmitter)

CAN_ID	BYTE 0	BYTE 1	BYTE 2	BYTE 3	BYTE 4	BYTE 5	BYTE 6	BYTE 7
600+Node_ ID	2F	1	20	0	1	0	0	0
580+Node_ ID	60	1	20	0	0	0	0	0

BYTE4 is the newly modified node ID (default: 0x01)

Note: This will not take effect immediately. Save the command with the parameters to apply it.

4. Save parameters (external controller-----> receiver or transmitter)

CAN_ID	BYTE 0	BYTE 1	BYTE 2	BYTE 3	BYTE 4	BYTE 5	BYTE 6	BYTE 7
600+Node_ ID	23	10	10	1	73	61	76	65
580+Node_ ID	60	18	5	0	0	0	0	0
Save all parameter configurations								

5. factory data reset ;

CAN_ID	BYTE 0	BYTE 1	BYTE 2	BYTE 3	BYTE 4	BYTE 5	BYTE 6	BYTE 7
600+Node_ ID	23	10	10	1	6C	6F	61	64
580+Node_ ID	60	18	6	0	0	0	0	0
Send this command to restore the factory configuration and save the parameter settings. No parameter save command is required.								

5、FCC Warning

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 1: 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.

NOTE 2: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.