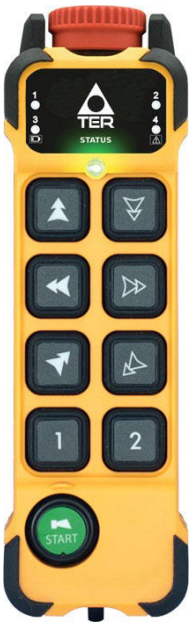
RCK
Radio remote control



Radio remote control with handheld transmitter suitable for cranes, crane trucks and overhead travelling cranes. Ergonomic, compact and lightweight.

FEATURES

- Quick and easy installation by wireless pairing procedure using the keyboard pushbuttons.
- Supplied as standard with a primary working frequency and a secondary working one: by Automatic Channel Switching (ACS), in case of radio interference, the radio communication automatically switches to the secondary frequency, allowing continuous operation for the user.
- Transmitter with 5 LEDs: 2 LEDs (red - high brightness) to indicate the battery level and the error code for anomalies, 2 (orange) to indicate the input of auxiliary functions e 1 (green) to show the active status of the remote control.
- Transmitter featuring "Data Feedback" function: 4 LEDs are programmable to see the actual status of each relay of the receiver.
- Receiver equipped with red and green LEDs to warn receiving - transmission status between the transmitter and the receiver unit by signaling via pulse code.
- IP protection degree: RCK is classified IP65.
- Extreme temperature resistance: from -25°C to +55°C.
- Case in nylon PA6 (GF 30%).
- Featuring "Zero-G" function to prevent the uncontrolled input of commands in specific emergencies: the G sensor can detect if the transmitter receives a hard impact, drops or is trown and deactivate either the complete radio system or only the safety-relevant function relays..
- Activation of the transmitter protected by an electronic key-code and by an auto shut-off programmable option.
- Featuring "Black Box" function to collect the usage data of both transmitter and receiver.

OPTIONS

- Available in configurations from 2 to 12 buttons, 1 or 2 speeds, Start button and EMO mushroom (Stop) or in configurations from 2 to 8 buttons, 1 or 2 speeds, a potentiometer to adjust the output from 0 to 10 volts, Start button and EMO mushroom (Stop).
- Receiver equipped with pull-out terminals for an easy wiring to any system by means of 4 corner brackets, or through fastening to the center nut.
- Receiving antenna easily suitable to be screwed onto the SMA type connector. On request it's possible to mount an external antenna with 2 or 5 meters cable with a magnetic base.
- Programmable to work with special functions that can be integrated via software. (see table at page 5).
- Supplied with protective case, wrist and shoulder strap, 1 set of 1.5 V alkaline batteries + 1 spare set and replacement standard button labels.
- Available on request with **QI wireless charging pad**, trasparent pouch, shoulder belt, programming cable, optional labels, 230 V battery charger with 2 sets 2600 mA rechargeable batteries and 230 V - 12/24 V battery charger with USB socket and 2 sets 2400 mA rechargeable batteries.

CERTIFICATIONS

- CE Marking.
- FCC Certification.
- Performance Level Categoria 3 PL d.

Manufactured by Juuko Srl - Distributed by TER Tecno Elettrica Ravasi Srl.

CERTIFICATIONS

Conformity to Community Directives	2006/42/CE Machinery Directive
	2014/30/UE Electromagnetic compatibility (EMC)
	2014/53/EU Radio Equipment Directive (RED)
Conformity to CE Standards	EN ISO 12100 Safety of machinery - General principles for design - Risk
	EN ISO 60204-32 Safety of machinery - Electrical equipment of machines - Requirements for hoisting machines
	EN ISO 13849-1 Safety of machinery - Safety-related parts of control systems - General principles for design (Emergency Stop Function: PL d, Category 3)
	ETSI EN 300 220-1 Short Range Devices (SRD) operating in the frequency range 25 MHz to 1000 MHz - Technical characteristics and methods of measurement
	ETSI EN 300 220-2 Short Range Devices (SRD) operating in the frequency range 25 MHz to 1000 MHz; Harmonised Standard for access to radio spectrum for non specific radio equipment
	EN 301 489-1 ElectroMagnetic Compatibility (EMC) standard for radio equipment and services - Common technical requirements - Harmonised Standard for ElectroMagnetic Compatibility
	EN 301 489-3 ElectroMagnetic Compatibility (EMC) standard for radio equipment and services - Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 246 GHz - Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU
	EN 62479 Assessment of the compliance of low-power electronic and electrical equipment with the basic restrictions related to human exposure to electromagnetic fields (10 MHz to 300 GHz)
Markings and homologations	CE FC

TECHNICAL SPECIFICATIONS OF THE TRANSMITTER UNIT

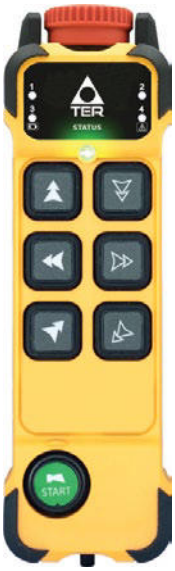
Ambient temperature	Storage -40°C/+85°C
	Operational -25°C/+55°C
IP protection degree	IP 65
Pushbuttons configuration	1 Start pushbutton + 1 EMO (STOP) mushroom + 2 ÷ 12 single or double step pushbuttons
	1 Start pushbutton + 1 EMO (STOP) mushroom + 1 potentiometer 0 ÷ 10V + 2 single step pushbuttons
	1 Start pushbutton + 1 EMO (STOP) mushroom + 1 potentiometer 0 ÷ 10V + 4 or 8 double step pushbuttons
Command response time	~ 50 ms
Frequency band	315 / 418 / 429 / 433 / 447 / 470 / 915 MHz / 2.4 GHz
Channel space	12.5 kHz
Radio communication	Bi-directional
Antenna impedance	50 Ohm
Maximum operating distance	100 meters (free field)
Hamming distance	≥ 15
Power supply	LR6 (AA) 1.5V / NiMH (AA) 1.2V x 2

TRANSMITTER UNITS OVERALL DIMENSIONS

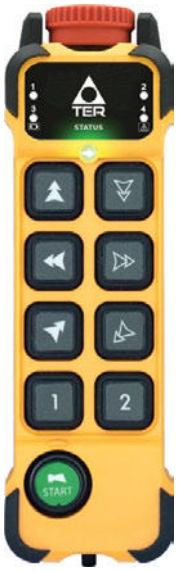
2 ÷ 12 single or double step pushbuttons

2 pushbuttons
193 x 57 x 51 mm
325 g

4 pushbuttons
193 x 57 x 51 mm
325 g

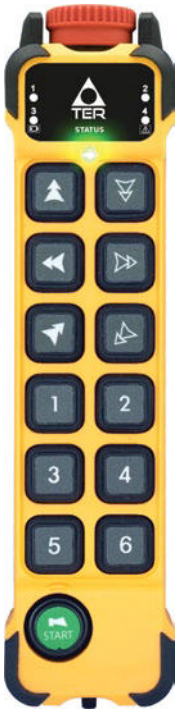


6 pushbuttons
193 x 57 x 51 mm
325 g



8 pushbuttons
193 x 57 x 51 mm
325 g

10 pushbuttons
242 x 57 x 51 mm
389 g



12 pushbuttons
242 x 57 x 51 mm
389 g

2 ÷ 8 single or double step pushbuttons with potentiometer

2 pushbuttons + potentiometer
193 x 57 x 51 mm
305 g

4 pushbuttons + potentiometer
193 x 57 x 51 mm
305 g

8 pushbuttons + potentiometer
242 x 57 x 51 mm
400 g

POSSIBLE TRANSMITTER - RECEIVER COMBINATIONS

Transmitters	Receivers				
	H C4/C2	HS C2	HM C2	HV MOSFET	HS-R
2 single step pushbuttons	X	X		X	
2 double step pushbuttons	X	X		X	
4 single step pushbuttons	X	X		X	
4 double step pushbuttons	X	X		X	
6 single step pushbuttons	X	X		X	
6 double step pushbuttons		X		X	
8 single step pushbuttons		X		X	
8 double step pushbuttons		X			
10 single step pushbuttons		X		X	
10 double step pushbuttons		X	X		
12 single step pushbuttons		X		X	
12 double step pushbuttons			X		
2 ÷ 8 pushbuttons with potentiometer					X

TECHNICAL SPECIFICATIONS OF THE RECEIVER UNITS

Type	H C4/C2	HS C2	HM C2
Ambient temperature	Storage -40°C/+65°C		
	Operational -20°C/+55°C		
IP protection degree	IP 65		
Frequency	433.0525 ÷ 434.7775 MHz		
Modulation	4GFSK		
Sensitivity	-112 dBm at 1.2 Kbps		
Control system	PLL		
Antenna impedance	50 Ohm		
Command response time	50 ÷ 100 mS		
Power supply	C4: 24/264 Vac/dc	24/264 Vac/dc	24/48 Vac/dc
	C2: 90/460 Vac/dc	12 Vdc (optional)	12 Vdc (optional)
	12 Vdc (optional)	-	-
Power consumption	AC: 8.3 W / DC: 12.8 W		AC: 10.4 W / DC: 22.4 W
Antenna	External		
Standby current consumption	0.97 W		1.13 W
Emission power	+ 10 dBm		
Relays	C4: 8 function	2 stop + max. 13 function (1 NO 5 A 250 Vac)	2 stop + max. 19 function (1 NO 5 A 250 Vca)
	C2: 2 stop + 5 function (1 NO 5 A 250 Vac)	-	-
Housing material	Nylon and glass fiber		

Type	HV MOSFET	HS-R
Ambient temperature	-	Storage -40°C/+65°C
	Operational -10°C/+75°C	Operational -20°C/+55°C
IP protection degree	IP 65	
Frequency	433.0525 ÷ 434.7775 MHz	434.040 ÷ 434.790 MHz
Modulation	4GFSK	
Sensitivity	-112 dBm at 1.2 Kbps	
Control system	PLL	
Antenna impedance	50 Ohm	
Command response time	50 ÷ 100 mS	
Power supply	12/24 Vdc	24/264 Vac/dc
	-	12 Vdc (optional)
Power consumption	-	AC: 8.3 W / DC: 12.8 W
Antenna	Esterna	
Standby current consumption	16 mA at 24 Vdc	0,97 W
Relays	-	2 stop + max. 13 function (1 NO 5 A 250 Vca)
Outputs	12 or 16 configurable 5 A mosfets	-
Housing material	Nylon and glass fiber	PA6 (30%GF)

RECEIVER UNITS OVERALL DIMENSIONS

H C4/C2
142 x 141,2 x 58,5 mm
800 g

HV MOSFET
142 x 141,2 x 58,5 mm
800 g

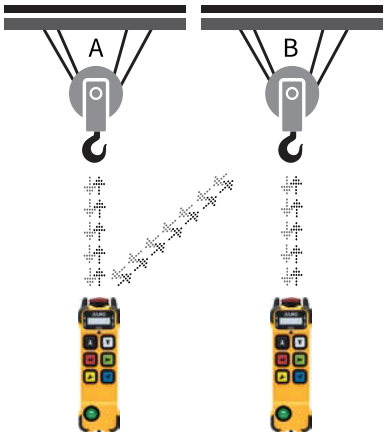
HS C2 / HS-R
184 x 190 x 64 mm
1795 g

HM C2
260 x 272 x 96 mm
2950 g

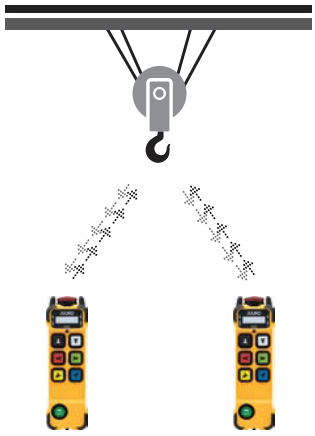
SPECIAL FUNCTIONS

Option	Operation
Multi-control option	Possibility to operate in combination with double transmitter or double receiver in modality: Master & Slave, Take & Release, Tandem.
Start area limit	Possibility to carry out the "Start" in safety by restricting it to a limited area near the radio control receiver.
Two-way radio transmission	Possibility to activate some LEDs positioned on the transmitter by the return signal of the receiver to visually check the activation of priority functions defined by the installer.
Pairing transmitter - receiver	Possibility to transfer the data saved on the transmitters and receivers by a push-buttons combination, creating copies transmitter → transmitter / transmitter → receiver / receiver → transmitter.

Master & Slave



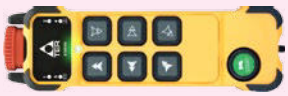
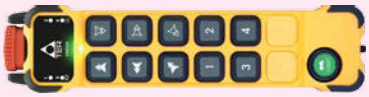
Take & Release



Tandem

STANDARD KIT

Standard kits are equipped with: 1 trasmitter unit + protective cover, 1 receiver unit + mt 1.5 wiring cable + 1 receiver antenna, 2 sets AA battery, 1 pushbuttons stickers paper, 1 wrist & shoulder belt.

Code		Description
TERK200-HSA		Trasmitter: 2 pushbuttons 1 step + Start/all + Stop Receiver: HS-A - AC/DC 24/264 V - 2 Stop relays + 2 Start relays + 2 functions relays
TERK202-HSA		Trasmitter: 2 pushbuttons 2 steps + Start/all + Stop Receiver: HS-A - AC/DC 24/264 V - 2 Stop relays + 2 Start relays + 4 functions relays
TERK400-HSA		Trasmitter: 4 pushbuttons 1 step + Start/all + Stop Receiver: HS-A - AC/DC 24/264 V - 2 Stop relays + 2 Start relays + 4 functions relays
TERK404-HSA		Trasmitter: 4 pushbuttons 2 steps + Start/all + Stop Receiver: HS-A - AC/DC 24/264 V - 2 Stop relays + 2 Start relays + 7 functions relays
TERK600-HSB		Trasmitter: 6 pushbuttons 1 step + Start/all + Stop Receiver: HS-B - AC/DC 24/264 V - 2 Stop relays + 2 Start relays + 6 functions relays
TERK606-HSB		Trasmitter: 6 pushbuttons 2 steps + Start/all + Stop Receiver: HS-B - AC/DC 24/264 V - 2 Stop relays + 2 Start relays + 10 functions relays
TERK800-HSB		Trasmitter: 8 pushbuttons 1 step + Start/all + Stop Receiver: HS-B - AC/DC 24/264 V - 2 Stop relays + 2 Start relays + 8 functions relays
TERK808-HSB		Trasmitter: 8 pushbuttons 2 steps + Start/all + Stop Receiver: HS-B - AC/DC 24/264 V - 2 Stop relays + 2 Start relays + 13 functions relays
TERK1000-HSC		Trasmitter: 10 pushbuttons 1 step + Start/all + Stop Receiver: HS-C - AC/DC 24/264 V - 2 Stop relays + 2 Start relays + 10 functions relays
TERK1010-HM		Trasmitter: 10 pushbuttons 2 steps + Start/all + Stop Receiver: HM - AC/DC 24/48 V - 2 Stop relays + 2 Start relays + 16 functions relays
TERK1200-HSC		Trasmitter: 12 pushbuttons 1 step + Start/all + Stop Receiver: HS-C - AC/DC 24/264 V - 2 Stop relays + 2 Start relays + 12 functions relays
TERK1212-HM		Trasmitter: 12 pushbuttons 2 steps + Start/all + Stop Receiver: HM - AC/DC 24/48 V - 2 Stop relays + 2 Start relays + 19 functions relays

REMARKS