

PAIL

Radio remote control



Joystick radio remote control with belly-box transmitter, available in standard configurations for cranes and bridge-cranes or in customized versions. Sturdy, handy and user-friendly: each part is specifically designed to withstand accidental shocks and falls.

FEATURES

- Quick and easy installation: from the transmitter it is possible to change the frequency, visualizing it through the flashing led channel indicator, program automatic switch-off functions, enable low power start-up, program the auxiliary button functions to meet the operator's needs.
- Transmitter with professional joysticks, up to 5 steps, safe to handle even with work gloves.
- IP protection degree: Pail is classified IP65.
- Extreme temperature resistance: from -20°C to +70°C.
- Tough NYLON casing for protection against shocks and scraping, resistant to acids, oils and chemical agents.
- Wide range of analogue and serial connections.

OPTIONS

- Available in standard configurations for tower cranes and bridge cranes, or for all kind of cranes (up to 5 speeds hoisting, 4 speeds rotation, 4 speeds trolley, 2 speeds transverse, 3 auxiliary controls, data feedback display showing crane parameters) or in customized versions.
- Available with graphic display (on request), showing up to 15 screens with data and programmable alarms.

- Patented universal electromagnetic induction charging device: simply placing the transmitter on its base and the batteries inside are recharged by inductive energy transfer. A 20 minute charge is enough for a typical working day, while a full recharge covers a whole working week.
- Receivers are available for mounting inside the electric panel (RX DIN) or in an IP65 watertight case for outdoor installation (RX RubyBox).
- Operational data storage by the receivers (working hours, total amount of start-ups and shut-downs, number of lift or movements); the tester Monitor (on request) is available to display the data.
- Supplied with a sturdy and reliable waterproof antenna (UHF model) for the receiver mounted inside the electric panel (RX DIN) or with an internal antenna for the version with outdoor casing (RX RubyBox).
- Directional and high-gain antennas also available (Flat870 model).
- Special versions with DataFeedback functions also available.

CERTIFICATIONS

- CE Marking.
- Performance Level Category 3 PL d
- Performance Level Category 2 PL c

RECEIVER UNITS

RX DIN



RX RubyBox



CERTIFICATIONS

Conformity to Community Directives	R&TTE 99/05/CE (Annex III) Radio and Telecommunications Terminal Equipment Directive
	LVD (2006/95/CE) Low Voltage Directive
Conformity to CE Standards	EN 301 489-3 Electromagnetic compatibility and Radio spectrum Matters (ERM) - Electromagnetic Compatibility (EMC) standard for radio equipment and services - Part 3.
	EN 300 220-2 Electromagnetic compatibility and Radio spectrum Matters (ERM) - Short Range Devices (SRD) - Radio equipment to be used in the 25 MHz to 1 000 MHz frequency range with power levels ranging up to 500 mW - Part 2.
	EN 60950-1 Information technology equipment - Safety - Part 1: General requirements.
	EN 60204-32 Safety of machinery - Electrical equipment of machines - Part 32: Requirements for hoisting machines.
	EN 13557 Cranes - Controls and control stations
Markings and homologations	EN 61000-6-2 Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments.
	EN ISO 13849-1:2006 Performance Level of Safety Function Category 3 PL d Stop Protection Category 2 PL c Protection against unintended movements from the standstill position
Markings and homologations	CE

TECHNICAL SPECIFICATIONS

Ambient temperature	Storage -20°C/+70°C
	Operational -20°C/+70°C
Frequency available	433 MHz
	870 MHz
	418 MHz for China
Hamming code	> 4
Maximum no. of simultaneous on/off controls	10
Response time	45 ms
Active Emergency/Stop response time	45 ms
Passive Emergency response time	1 s
Operating range	Approx. 100 mt
Stop control classification	Cat 3 PL-D

SPECIFICATIONS OF TRANSMITTER UNIT

Modulation	FM Manchester code
Output power	From 1 to 10 mW
Oscillator	Digital PLL
Antenna	Integrated
Power supply	3.6 Vdc
Power consumption	45 mA
Batteries	Integrated 3x1 x 1.2 V - 1800mA
Battery life	≈ 35 hours (20°C)
Low battery warning time	60 minutes
IP protection degree	IP 65
Overall dimensions	200 x 130 x 135 mm (LxWxD)
Weight	800 g

SPECIFICATIONS OF RECEIVER UNITS

Radio frequency receiver	Single Chip
Antenna	RX RubyBox: integrated (external antennas available) RX DIN: external
Control relay contact rating	4A /115 Vac
Stop relay contact rating	4A /115 Vac
Power supply	12-24 Vdc 24-115Vac 230Vac
IP protection degree	RX RubyBox watertight Nylon casing for outdoor mounting: IP 65 RX DIN for internal mounting on DIN bar: IP 20
Overall dimensions	RX RubyBox: 266 x 169 x 89mm (LxWxD) RX DIN: 158 x 90 x 75 mm (LxWxD)

SPECIFICATIONS OF EXTERNAL ANTENNAS

Model	UHF	Flat870	Whip
Specifications	Universal antenna suitable for standard applications. Prepared for fastening through a 16 mm diameter hole.	Directional antenna suitable for special applications where increased radio coverage in a particular direction is necessary. Prepared for pole or similar support.	Omnidirectional antenna suitable for applications where an all-direction radio coverage is required. Prepared for fastening through a 13 mm diameter hole.
Working frequency	418 MHz, 433-434 MHz, 870 MHz, 915 MHz	870 MHz	418 MHz, 433-434 MHz, 870 MHz, 915 MHz
Gain	5 dB	14 dB	8 dB
IP protection degree	IP 65, material: PA6 FV	-	-
Overall dimensions	128 x 72 x 50 mm (LxWxD)	240 x 25 x 240 mm (LxWxD)	35 x 450 x 35 mm (LxWxD)
Weight	140 g	800 g	190 g
Connection	Supplied with 1.5 m cable and SMA or SMB connector (depending on the model)	Supplied with 3 m cable and SMA connector	Supplied with 3 m cable and SMA connector

