

# Itowa ✪

*Radio Remote Control Systems*

## BETON

Remote control for concrete pumps



### CONTROLLED PUMPING

The BETON range of remote controls has been specifically designed to control concrete pumps. Thanks to its versatility, it is used for the remote control of all types of digital or analogical and proportional concrete pumps and electro-hydraulic applications.

As the operator now is able to move around freely, a significant cost saving in staff and maintenance is guaranteed. It also provides greater safety in the control of certain manoeuvres by eliminating blind spots, etc. As it is a radio remote control without the need for cables, speed is increased in operations, leading to greater profitability.



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Remote control for concrete pumps

The robust and top quality BETON remote control, is available with two or three dual-axis single-step digital joysticks. Its exclusive, light and easy-to-use design has been created to meet the multiple remote control needs of concrete pumps. It is supplied with a protective frame to prevent it from accidentally being turned on.

The receiver has an LCD display reporting system status, providing greater safety and agility if anomalies are detected. It also has an RS-485 serial port to connect to PLCs, robots, variators or any peripheral equipment that requires information through the serial port.

To configure each application, selectors, push-buttons and additional operating commands can be incorporated. The analogical version for proportional concrete pumps is also available.

The BETON model incorporates a multi-frequency, synthesized radio system that enables the operator to automatically change the working channel.

## TECHNICAL DESCRIPTION Beton

Number of commands	13 / 21 + Start - Stop - Horn
Responding time	< 50 ms
Active emergency responding time	< 50 ms.
Passive emergency responding time	1.900 ms
Operating range distance	200 m / 656 ft

### TRANSMITTER

Operating frequency range	Standard: UHF 433.050 MHz -434.775 MHz, others available
Channel spacing	25 kHz
Modulation	FM
RF power output	10 mW A.R.P.
Coding key	FFSK
Transmitting power consumption	80 mA
Standby power consumption	< 800 $\mu$ A
Operating working time (20 °C / 68 °F)	11 hours + 30 minutes after low-battery led flashes
Battery capacity and type	Ni-MH battery 7,2V , 1.500 mAh
Battery weight	200 g / 0,44 lb
Operating temperature	-10 °C to 55 °C / 14 °F to 131 °F
Casing material	Polyamide 6-6 reinforced with 15% fibreglass
Transmitter weight	1,8 kg / 3,97 lb
Protection rating	IP 65
Operating commands	Two dual-axis fully proportional and analogical step-less joysticks or up to three dual-axis digital single-step joysticks.
Indicator leds	Transmission indicator and low-battery on separate leds

### RECEIVER

RF Sensitivity	0'3 $\mu$ V at 12 dB S/N
Outputs	DIGITAL: by relays 5A 30Vdc / 5A, 250Vac with resistive load (cos $\phi$ =1) Comm. Port. RS-485 ANALOGICAL: by tension: bipolar (0-5 V, $\pm$ 5 V, 0-10 V, $\pm$ 10 V) and unipolar (2/4/6 V, 3/6/9 V, 6/12/18 V), other values adjustable from the transmitter by the operator.
Power requirements	24 Vdc
Display	LCD display matrix 2x16 reporting system status
Consumption	16 relays 1,5 A at 24 Vdc 32 relays 1,8 A at 24 Vdc
Casing material	Polyamide 6-6 reinforced with 30% fibreglass
Dimensions	16 relays 255x200x95 mm / 10,04x7,87x3,74 in 32 relays 315x235x120 mm / 12,40x9,25x4,72 in
Weight	2'8 kg (6,17 lb) (16 relays) / 4'2 kg (9,48 lb) (32 relays)
Protection class	IP 65

### BATTERY CHARGER

Power requirements	24 Vdc
Dimensions	73x69x72 mm / 2,87x7,21x2,83 in
Battery charging time	8 hours
Temperature charging range	0 °C to 40 °C / 32 °F to 104 °F
Weight	200 g / 0,44 lb



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