



RADIO REMOTE CONTROLS FOR
SEWAGE CLEANERS, VACUUM PUMPS



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Since 1988 we design and manufacture industrial safety radio remote controls for every kind of Sewage cleaner and vacuum pump. Solidity, ergonomics, safety and quality of the materials used, make of it a cutting edge product, with an innovative design.



ADVANTAGES:

WORKING COMFORT AND COST REDUCTION

The operator, free from the bond of the cable or of the fixed station, can take place in the most safe and suitable position to control the machine and the load, without the aid of other operators. For example, it is the safest and most efficient way to control cleaning operations using high-pressure-water jets, vacuum suction pumping; even when the operator finds himself at a considerable distance from the vehicle.

SIZE AND WEIGHT

They are very compact and thus, allow the operator to have a higher freedom of movement.

CALIBRATION VIA RADIOFREQUENCY

The "proportional outputs calibration mode" allows you to program and save each joystick and potentiometer response, while you are operating the machine, thus adapting the speed of all movements and reaching the best possible result. (PIN code required).

CONTACTLESS OPTICAL JOYSTICKS

Designed and manufactured by IMET; thanks to their wide inclination angle (+/- 40°), guarantee a precise handling, like no other, that will continue throughout the remote control's life.

COMFORTABLE PUSH BUTTONS

Extra large print pushbuttons equip WAVE2 S and WAVE2 L for comfortable use also wearing gloves and for long work shifts.

ERGONOMIC CARRYING BELTS

The practical waist belts or shoulder straps allow the operator to completely free his hands to better follow manual operations.

EXTREME ENVIRONMENTS

The boxes are designed and manufactured with materials highly resistant to impacts. Operating temperatures from -25°C to +70°C.

CERTIFIED SAFETY

The STOP circuit ensures the maximum level of safety in accordance with the European and international standards.

LOGGING OF EVENTS

IMET Radio remote controls log every event causing a failure or an abnormal stop, as well as the number of hours done by the remote control.

THE DIAGNOSIS TOOL

It Interfaces the PC to the radio control, allowing to check all the operating parameters and to see the list of the most significant events that have taken place.

AUTOMATIC FREQUENCY CHANGE

The radio control is autonomously able to position itself on the best radio transmission channel. Manual changes of channel change are no longer required.

M880 WAVE2 S

**ROBUST HANDHELD TRANSMITTER,
SMALL AND POWERFUL**

Wave2 S can be equipped, in addition to the stop and start commands, also with 8 double-click buttons and an auxiliary push-button or selector control. Suitable for canaljet.



DIMENSIONS
72 x 42 x 190 mm

WEIGHT
235 g (batteria inclusa)

M880 ARES2 E

**ULTRA COMPACT AND ROBUST,
SAFETY AT TOP.**

Very small size but with high safety standards. The ARES E version is in fact characterized by the presence of the stop mushroom button classified in category 4 / SIL3 / PL e. Suitable for canaljet which, in addition to the control of the basic functions, require a high degree of safety.



DIMENSIONS
143 x 80 x 140 mm

WEIGHT
667 g (batteria inclusa)



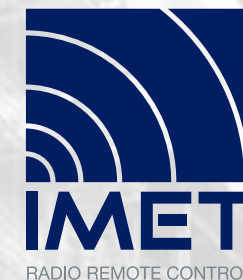
M880 KRON NJ

ROBUST AND INNOVATIVE

The new model from IMET, built to obtain maximum performance in minimum overall dimensions, is ideal to control small sewage vehicles. Featuring a practical clip for quick attachment to the waist belt or to the pocket, KRON impresses with its ease of use thanks to the design of its handle, which will render comfortable every work situation.



M880 ZEUS2 NJ



SOLID AND VERSATILE

A perfect mix of reliability and versatility reunited in a single control station; ZEUS2 NJ is the synthesis of the best ergonomic and functional features. The compact size of the panel, having rationalized space, makes it an easily customizable transmitter, according to the specific needs. It is available with robust toggle switches, push-buttons, potentiometers and connector for a high-pressure lance. They allow you to control the vacuum pump activation, hose reel winding, water pressure and flow, high-pressure/suction mode-selection, etc...



M880 ZEUS2 B2

M880 THOR2 B2



SIMPLE BUT PRACTICAL

A perfect mix of reliability and versatility reunited in a single control station; ZEUS2 B2 has ideal ergonomic and functional features. The compact size of its panel, its rationalized space, makes it an easily customizable transmitter, according to the specific needs.

It is available with robust toggle switches, push-buttons, potentiometers and connector for a high-pressure lance. They allow you to control the vacuum pump activation, hose reel boom movement, water pressure and flow, high-pressure/suction mode-selection, etc...

STRONG AND COMPLETE

Numerous push-buttons, potentiometers, toggle switches find place on the main panel and on the sides, making THOR2 B2 suitable for any type of sewage vehicle, regardless of its complexity. It is available with robust toggle switches, push-buttons, potentiometers and connector for a high-pressure lance. They allow you to control the vacuum pump activation, hose reel boom movement, water pressure and flow, high-pressure/suction mode-selection, etc...



M880 THOR2 M5

UNIVERSALE

THOR2 M5 is a radio control equipped, in addition to the various selectors, buttons and any potentiometers, including 5 mono-axial joysticks in line on the control panel. Ideal for suction machines that, in addition to the traditional functions of the bleeding machine such as pump activation, reel winding, water pressure and compression, provide control of the tank, stabilization and proportional boom.



M880 OPTIONS



BLACKLIT PANEL

ADVANTAGES OF USING ON THE RADIO REMOTE CONTROL

This option is available on all waist-belt type of transmitters and grants a perfect readability of the transmitter panel in gloom or low-light situations.



ADD BOX DISPLAY

AVAILABLE ON MODELS ZEUS2 AND THOR2

The ADD BOX expands the number of commands present in the transmitting unit, allowing to insert additional push-buttons, potentiometers, switches, etc ..., according to specific requests. It is also used as housing for a large display (also available with a 64x102 or TFT QVGA 3,5" graphic display) or by LEDs, to visualize data and/or alarms coming from the crane.



LEDs

Feedback information can be reported on the transmitter by colored LEDs.



BUZZER

Feedback information can also be reported as an acoustic alarm. Note that DF can be given by the combination of Display/Led and Buzzer.



WAVE DISPLAY / LEDs

WAVE2 S and L can be equipped with a 64X102 pixels Display and 4 LEDs.



BEACON

Useful for operations in the darkness; this option is a keypad illuminator and at the same time, a torch. Can be combined with a light sensor.



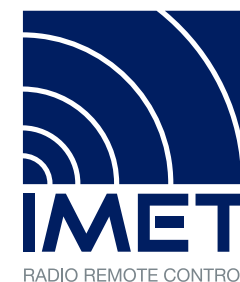
FURTHER M880 OPTIONS

TILT SENSOR

This device is able to recognize emergency situations caused by:

- Fall and tip over of the radio remote control
- Loss of balance by the operator

The functioning of the TILT SENSOR can be customized according to customer requirements and to the level of safety required: you can set the simple activation of predefined functions (eg. buzzer), up to the suspension of all functions of the radio control.



TILT SENSOR

CAVO SERIALE

The transmitting units of models ZEUS and THOR can be equipped with a socket for the serial connection to the receiver.

The direct cable connection excludes the radio transmission, thus overcoming any issues related to signal noise or use of the product in areas where the radiofrequency is not permitted, or due to the exhaustion of the battery.



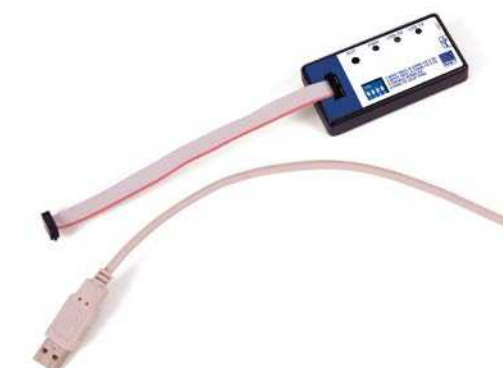
TWIN B

This feature is available on THOR2 and consists of a twin battery compartment. Once the first accumulator enters the "low battery" status, the transmitter automatically switches on the second accumulator. This process takes place without power supply interruption, hence, without transmitter shut down. It is the ideal option when the radio controlled machine has to operate continuously or for very long periods.



PITool

Produced by IMET, it allows to connect the transmitter or the receiver to be diagnosed to a PC. The data can be viewed through an easy and intuitive graphic interface and then saved directly on the PC in editable format.



TECHNICAL DATA

M880

TRANSMITTING UNITS

Dimensions (L.W.A.)		143x80x143 mm	S: 72x42x190 mm L: 72x42x255 mm	180x107x160 mm	205x150x150 mm	295x180x160 mm
Dimensions with display (L.W.A.)		/	Same	/	205x205x150 mm	295x250x165 mm
Weight (battery included)		≈ 667 g max	≈ 0,235 Kg max ≈ 0,315 Kg max	≈ 880 g max	≈ 1450 g max	≈ 2300 g max
Max number of ON/OFF commands		Up to 32	Up to 32	56 Max	56 Max	56 Max
Max number of analog commands (optional)		Up to 8	Up to 4	16 (19) Max	16 (19) Max	16 (19) Max
Joystick commands						
UMFS ^a = Unintended Movement From Standstill (ISO 13849-1:2006 6.2.6 architecture)		/	/	Up to 16	Up to 16	Up to 16
Range		100 m				
Number of service and safety commands		3 (Start, Clacson, Stop)				
Casing material		Charged Nylon UL94 HB				
Supply voltage		3,7 Vdc	3,6 Vdc	3,6 Vdc	3,6 Vdc	3,6 Vdc
Absorption		≈ 80 mA	95 mA	95 mA	95 mA	95 mA
Max supply power		0,3 W	0,35 W	0,35 W	0,35 W	0,35 W
Battery		NiMh 3,6V-2,2A/h accumulator, WAVE: 3,7V 2000 mA Li-Ion Batteries				
Autonomy at 20°C with charged battery in continuous service		≈ 25 hours	≈ 23 hours	≈ 22 hours	≈ 22 hours	≈ 22 hours
Notice time of low battery		≈ 15 min				
Character visualization speed on the display		100 char/s				
Command	STOP	PL e Cat.4 (ISO 13849-1:2006 6.2.7 architecture)				
	WITHOUT MUSHROOM BUTTON	PL e Cat.1 (ISO 13849-1:2006 6.2.4 architecture)				
	JOYSTICK	PL e Cat.3 (ISO 13849-1:2006 6.2.6 architecture)				
	LEVER - BUTTON	PL e Cat.2 (ISO 13849-1:2006 6.2.5 architecture)				
Operating frequency 1		I.S.M. Band 433.050-434.790 MHz Number of programmable channels: 69, AFA mode (Adaptive Frequency Agility) or on fixed channel. Max power: 1 mW e.r.p				
Operating frequency 2		I.S.M. 434.040-434.790 MHz Number of programmable channels: 30, AFA mode (Adaptive Frequency Agility) or on fixed channel. Max power: 10 mW e.r.p				
Operating frequency 3		2,405-2,480 GHz, 16 ch DSSS				
Alphanumeric LCD display (optional)		2 rows 16 char. / 4 rows 20 char.				
Graphic display (optional)		128x64 pixel monochromatic / TFT QVGA 3.5" ^b				
Buzzer		Avaible				
Operating temperature		-25°C - +70°C				
Storage temperature		-40°C - +85°C				
Power supply		Battery single su ARES, KRON, ZEUS2 (Double battery optional on model THOR2) ^b				
Radio transmission		Double (Single MTRS)				
Output calibration		Via calibrating procedure of proportionals				
LEDs		Link TX, Link RX, Error code				
Degree of protection		IP 65				

a = depends on the command configuration / b = to be implemented



RECEIVING UNITS

	H AC / H DC	L AC / L DC	S AC / S DC	M AC
Supply voltage	H-AC: 45-240 Vac (50-60 Hz); H-DC: 11÷30 Vdc and 24 Vac (50-60 Hz)	L-AC: 24-240 Vac (50-60 Hz); L-DC: 11÷30 Vdc	S-AC: 24 Vac (50-60 Hz) / 12÷30 Vdc (Optional 24-440 VAC [50-60 Hz]) S-DC: 12÷30 Vdc	12÷30 Vdc / 24 Vac (50-60 Hz)
Safety commands	STOP, Safety-Enable (up to 8)	STOP, Safety-Enable	STOP, Safety-Enable	STOP, Safety-Enable
Commands	73 ^a relays or MOS, 32 ^a Analog (PWM, current, voltage)	16 relays or 20 MOS, 8 Analog (PWM, current, voltage)	S-AC: 14 relays (N.O.); S-DC: Max 14 MOSFET (N.O), Max 4 Proportional, 2 Digital IN	24 relays (20 N.O. and 4 N.C./N.O.) (Current, voltage)
Service commands	Start, Horn, Timed-Relay	Start, Horn, Timed-Relay ^b	Start, Horn, (configurable)	Start, Blinker (Among the 24 relays)
Input port	CAN, Serial RS232/RS485	CAN, Serial RS232/RS485	S-DC: CAN, Serial RS232 RS485	CAN, Serial RS232/RS485
STOP relay category ^a	PLe Cat 4, ISO 13849-1: 2006 6.2.7 architecture	PLe Cat 4, ISO 13849-1: 2006 6.2.7 architecture	PLe Cat 4, ISO 13849-1: 2006 6.2.7 architecture, (With ARES2 C and WAVE2 C)	PLe Cat 4, ISO 13849-1: 2006 6.2.7 architecture
Field BUS	CAN (ID 11-29 bit) CANOpen (ID 11-29 bit) RS232 / RS485	CAN (ID 11-29 bit) CANOpen (ID 11-29 bit) RS232 / RS485	S-DC: RS232 / RS485 (115200 Baud max) CAN_Bus (ID 11-29 bit) (1Mbit/s max) CANOpen (ID 11-29 bit) (1Mbit/s max)	CAN (ID 11-29 bit) CANOpen (ID 11-29 bit) RS232 / RS485
Integrated flashing light	/	/	Only AC version	/
Operating temperature	-25°C - +70°C	-25°C - +70°C	-25°C - +60°C	-25°C - +70°C
Degree of protection	IP 66	IP 66	IP 66	IP20
Dimensions	205 x 130 x 280 mm	140 x 65 x 230 mm	127 x 147 x 70 mm	180 x 120 x 73 mm
Weight	3500 g	1700 g	630 g	910 g

a : depends on the configuration
b : only L DC

BATTERY CHARGER

Supply voltage	11÷30 Vdc
Absorption	400 mA max
Batteries type	3,6V NiMH
Charging current	900 mA
Max charging time	about 2 hours and 20 minutes
Recommended operating temperature with battery in charge	0°C to +35°C (+32°F to +95 °F)
Storage temperature when off and without battery	-40°C - +85°C (-40°F - +185 °F)
Dimensions (L.W.H.)	80 x 30 x 120 mm
Weight	250 g
Degree of protection	IP 20

CB36NIMH

Supply voltage	11÷30 Vdc
Absorption	400 mA max
Batteries type	3,6V NiMH
Charging current	900 mA
Max charging time	about 2 hours and 20 minutes
Recommended operating temperature with battery in charge	0°C to +35°C (+32°F to +95 °F)
Storage temperature when off and without battery	-40°C - +85°C (-40°F - +185 °F)
Dimensions (L.W.H.)	80 x 30 x 120 mm
Weight	250 g
Degree of protection	IP 20

CB37LION

COMPLIANCE TO THE REGULATIONS

• IEC/EN 60950-1	• ISO 13849-1	• EN 301 489-3	• 2006/42/CE (Directive Machines)
• EN 50371	• EN 13557/A2	• EN 300 220-1	• RED Directive (2014/53/EU)
• EN 60204-32	• EN 61000-6-2	• EN 300 220-2	
• EN 60529:1991+A1	• EN 301 489-1	• 1999/5/CE (Directive R&TTE)	



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