# PROFESSIONAL RADIO REMOTE CONTROL

# WAVE2 M880















# APPLICATIONS

EOT / Gantry / Jib Cranes

Hoists / Winches

Electromagnets

Construction Cranes

Concrete Mixers

**Dust Supression Sprayers** 

Container Loaders

Recovery Vehicles

Conveyor Belts

# WAVE2 L

Weight Dimensions 445 q 75 x 43 x 245 mm

# WAVE2 S

Weight Dimensions 375 g 75 x 43 x 180 mm

# **OPTIONS**



### DATA FEEDBACK

Data feedback on 64X102 pixels graphic display and 4 Leds.



#### TORCH

Keypad illumination for operations in the darkness or torch. Can be combined with a light sensor.



#### I-READY

An Infrared directional START operation guarantee the right machine has been picked up.



#### MTRS (MULTI TRANSMITTER RECEIVER SYSTEM)

It allows the classic Tandem, Catch-Release, Master-Slave working modes and many other configurations demanding the logging In and logging Out capability.



#### **ENABLING SWITCH**

The "enabling switch" is a special component that improves safety of machinery operating in hazardous areas thanks to its design that determines if the user is conscious. This 3 positions device activates a machine or a function only when it is at position 2 meaning the operator is present and vigilant. Applicable Standards are: EN60947-5-1, EC60947-5-1, UL508, CSA C22.2 No.14.



#### PITOOL

This device allows to interface the transmitting and receiving units to a PC for parameter setting and diagnosis purpose.









# **DETAILS**



#### STATUS LEDS

Colored LEDs report about the status of the radio link, the battery charge level and make the diagnosis of anomalies.



# PIN CODE

Start PIN code can be programmed to restrict the use to authorized personel.



#### LEGENDS

Clear and wide pushbutton legends, with the possibility of having fully customized symbols.



#### STOP

Mushroom head STOP button featuring Functional Safety level PLe/SIL3/Cat4.



#### CARRYING BELTS

Comfortable carrying belts.



#### .....

**BATTERY CHARGER BATTERIES**Fast charger and extractable rechargeable
Li-ion batteries for extra long duration.



### SLEEVE

Represents an additional protection that facilitates the use of your WAVE2 even in extreme working conditions, but without altering its ergonomic shape.



Rotative switch, Toggle switch, Push button, Key switch, Potentiometer.

# PROFESSIONAL RADIO REMOTE CONTROL





# TECHNICAL DATA

Power supply	
Frequency band	
Range	
Autonomy with fully charged battery (20°C ie 68°F)	
Safety performance STOP function (EN ISO 13849-1)	а
Protection degree	
Operating and storage temperature	
Dimensions	
Veight	

3,7VDC with Li-ion battery
433.05 - 434.79 MHz (69 channels) 2,4GHz (16 channels)
100 meters
≃ 25 hours with Li-ion battery
PL e
IP65 (NEMA 4)
Operating -25°C ÷ +55°C Storage: -40°C ÷ +85°C
S 72 x 42 x 190 mm, L 72 x 42 x 255 mm
≃ 0,235 Kg, ≃ 0,315 Kg

RECEIVERS	HAC/HDC	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 <sup>a</sup> relays or MOS, 32 <sup>a</sup> Analog (PWM, current, voltage)	16 relays or 20 MOS, 8 Analog (PWM, curarent, 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.) 4 Analog (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 <sup>a</sup>	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. PLc Cat 1, ISO 13849-1: 2006 6.2.3 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 - +70°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	

 $\it a$  : depends on the configuration  $\it b$  : only for L DC