



## WPO SHOT CLOCKS

### USER'S MANUAL

3403.514.02 | Version 1.1 | September 2023



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## Caution and safety precautions

- Never use any other charger than the supplied or a type approved by Swiss Timing. This could destroy the battery, cause damage to unit, and possibly cause personal injury due to fire or/and electrical shock.
- Never bypass a power cord ground lead by breaking off the ground pin, or by using inappropriate extension cords or adapters.
- Never plug a power cord into the AC power source until you have made sure that all installation, cabling and power levels, are proper, and that the applicable procedures in this manual have been followed.
- Protect the equipment against splashing, rain and excessive sun rays.
- Never use the device if it is damaged or insecure.
- Verify the selection of the power distribution.
- Verify that the voltage quoted on the rating plate is the same as your voltage. Connect the appliance only to power sockets with protective earth. The use of incorrect connection voids warranty.
- This program may be modified at any time without prior notification.
- Do not open the case; there is nothing that needs servicing inside it. Nevertheless, if the case must be opened, you must call for some qualified personnel. The power supply cable must be disconnected before opening the case.
- During the transport of all Swiss Timing equipment delivered with a reusable carry case, the said case should be used at all times. This is imperative to limit the damage, such as shocks or vibration that can be caused to the units during transport.
- The same cases should also be used when returning equipment to Swiss Timing for repair. Swiss Timing reserves the right to refuse all guarantees if this condition is not fulfilled.
- If the installation includes a horn, be sure to maintain a sufficient security distance from the public.

## Documentation Updates

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## Environment



This symbol indicates that this product should not be disposed with household waste. It has to be returned to a local authorized collection system. By following this procedure you will contribute to the protection of the environment and human health. The recycling of the materials will help to conserve natural resources.

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## 1 INTRODUCTION

The Water polo shot clocks kit contains:

- Two or four shot clocks indicating the game time (white LEDs) and the remaining shot time (red LEDs)
- One power supply box with horn
- One or two cables of 30m and also 70m to connect the shot clocks to power supply box.
- One cable to connect the power supply box to the WPO Saturn console.
- Shot clock floor standing kits

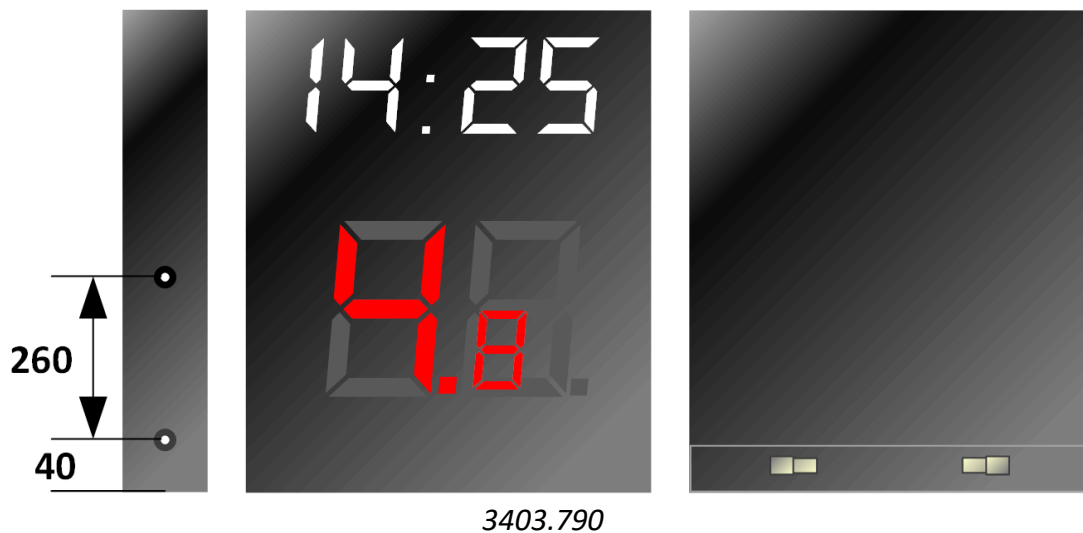
The power supply with horn is powered in 115/230VAC.

The shot clocks are powered in 24 VDC by the power supply box.

When the shot clocks reach zero, an acoustic signal is emitted from the power supply with horn.

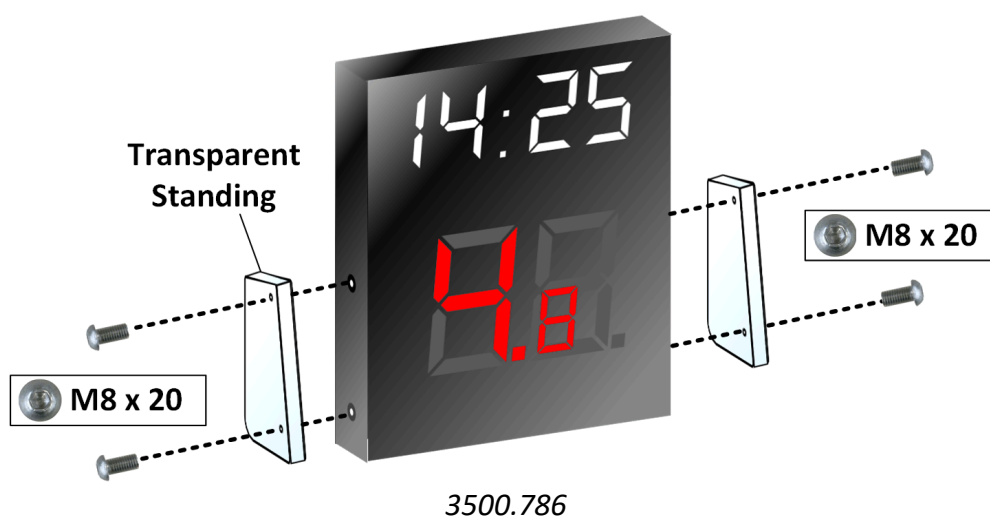
## 2 INSTALLATION

### 2.1 Shot clock with game time



|                    |                 |
|--------------------|-----------------|
| Dimensions (mm):   | 600 x 600 x 92  |
| Weight (kg):       | 6.8             |
| Game time digits:  | White LEDs 15cm |
| Shot clock digits: | Red LEDs 24cm   |
| Housing:           | Black RAL 9005  |

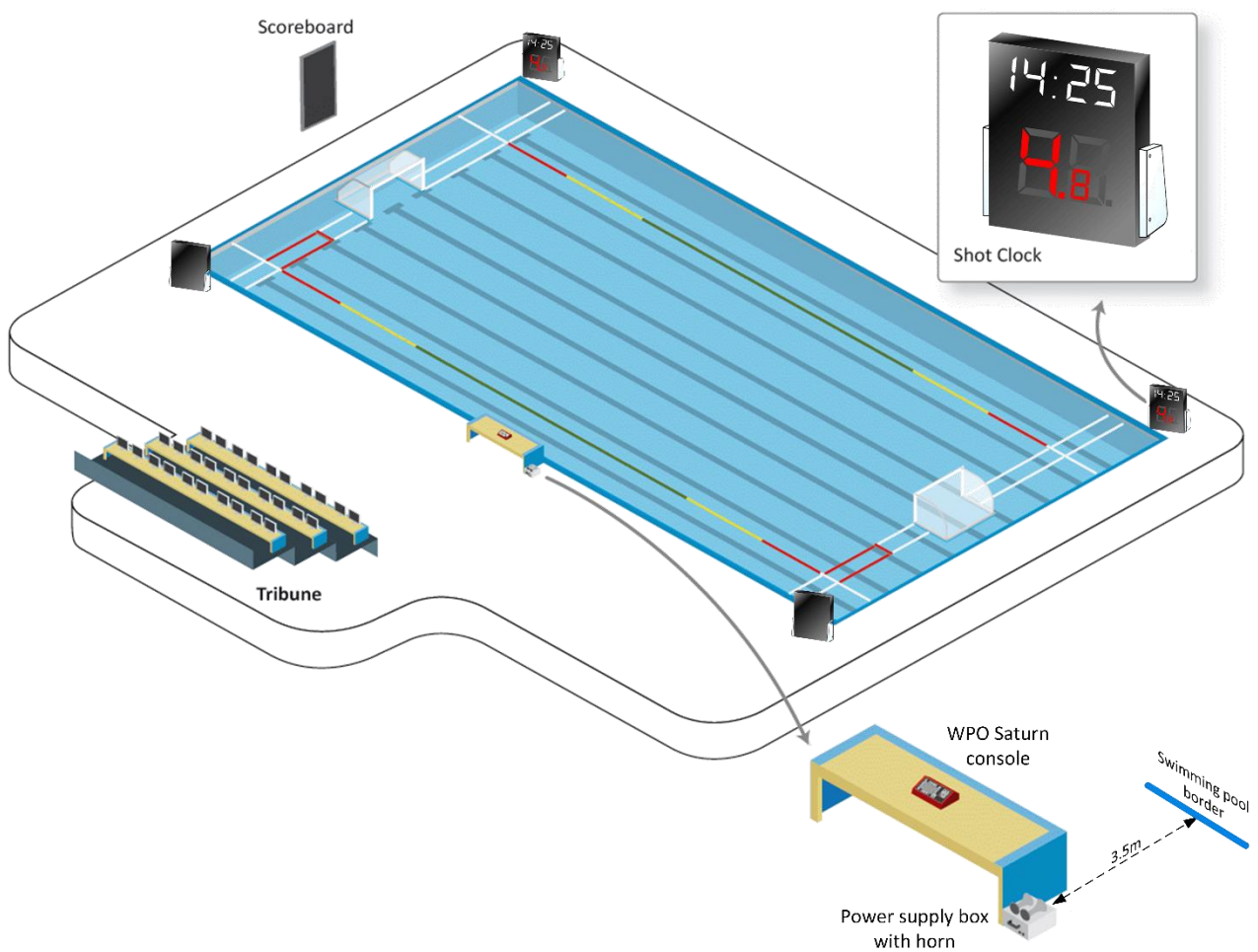
### 2.2 Floor standing mounting



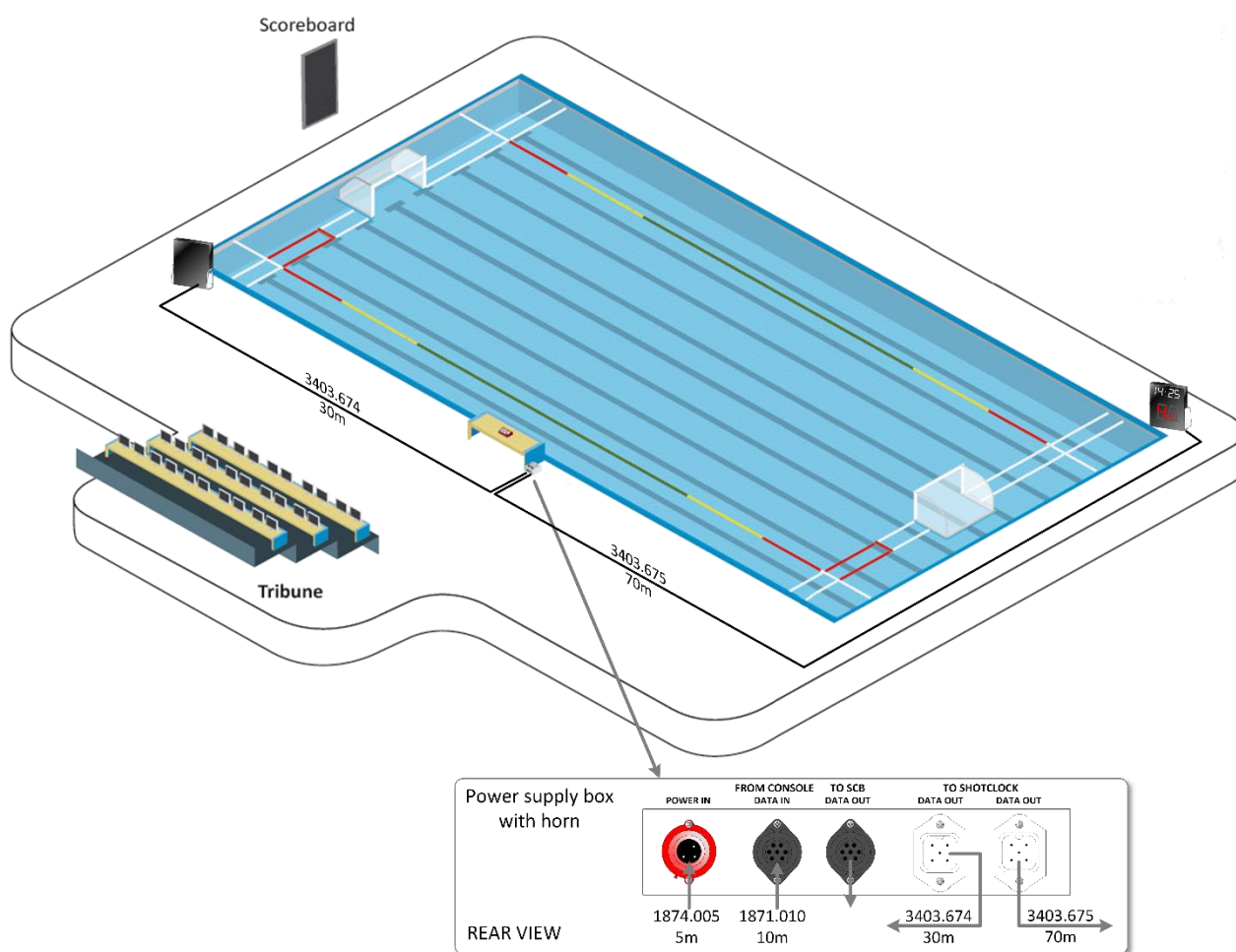
### 2.3 Min. distance between the swimming pool and the power supply box

According to standards international IEC 60634-7-702, apparatus which functions with a power of 115/230 VAC must be at minimal distance of 3.5m from the border of the swimming pool. The distance may change according to countries standards.

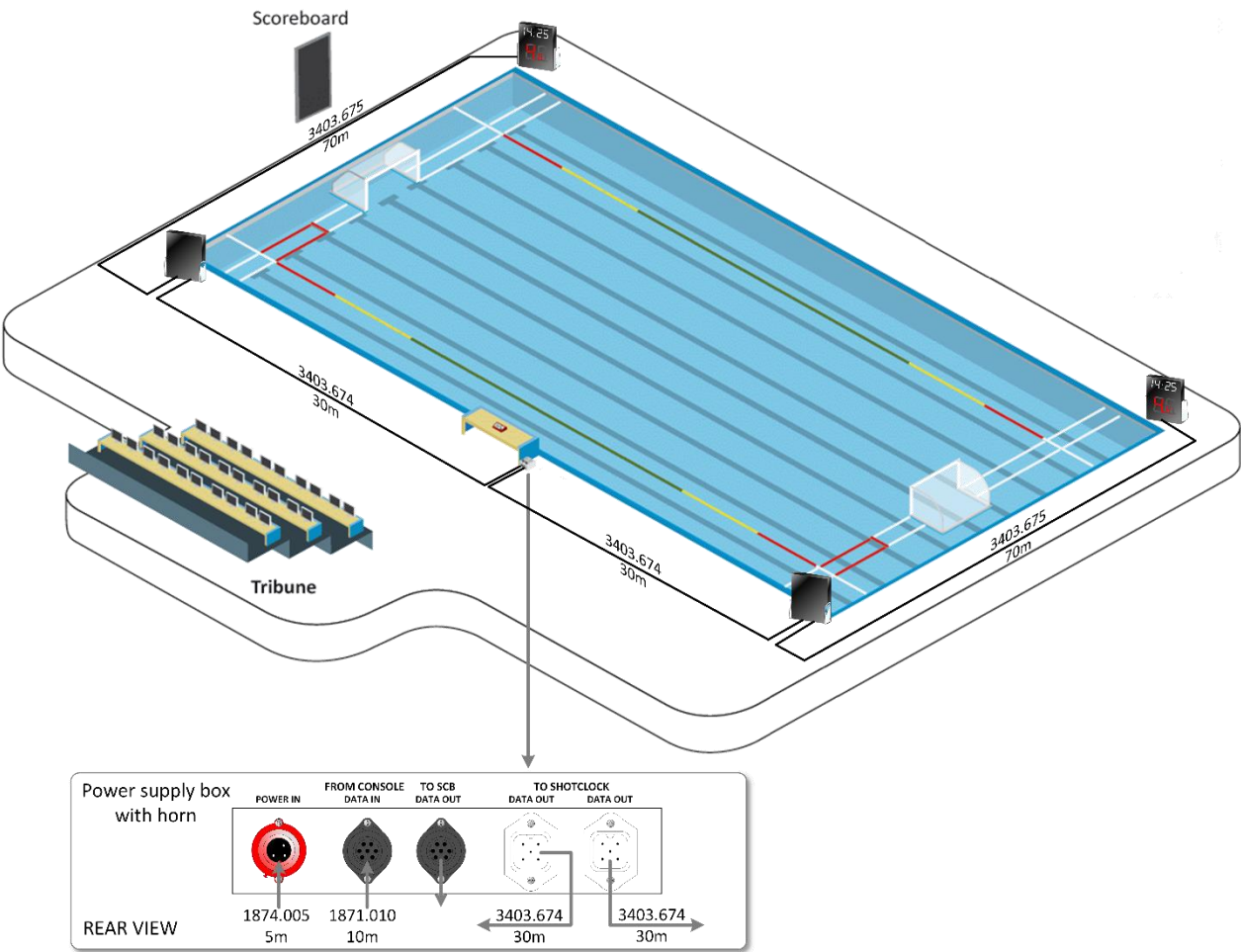
This distance can decreased to 2m if power supply box with horn is connected to a residual current protective device with rated residual operating current not exceeding 30mA.



## 2.4 Configuration with 2 shot clocks

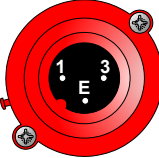
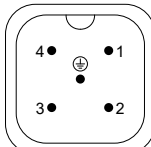


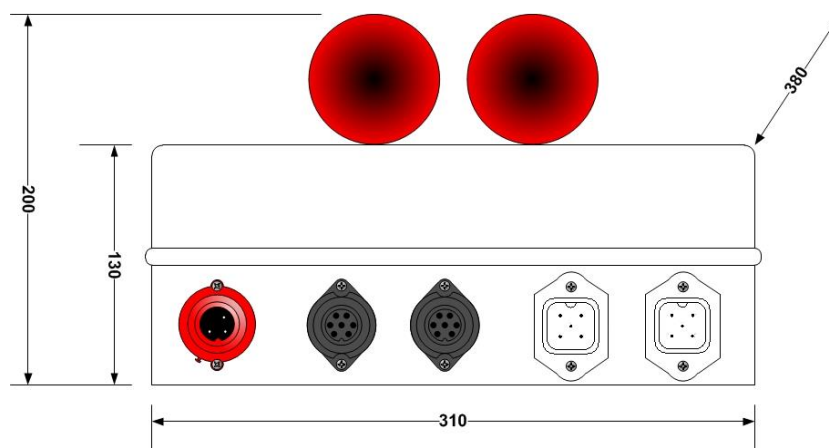
2.5 Configuration with 4 shot clocks



### 3 CONNECTIONS

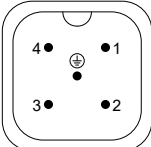
#### 3.1 Power supply box with horn

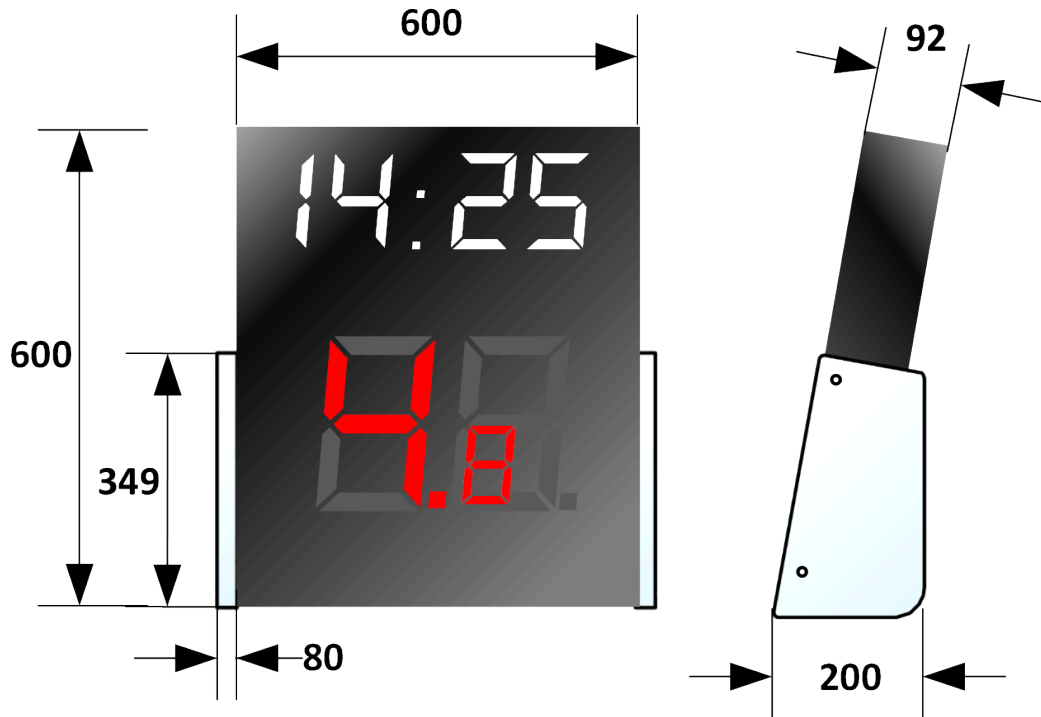
| Connector                                                                                                                        | Pinning                                                                                                                                                                 |
|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| POWER (Tuchel3pMT)<br>                          | 1: L (115/230VAC)<br>3: N (115/230VAC)<br>E: GND                                                                                                                        |
| DATA IN (Tuchel 7pFT)<br>                       | 1: Connected to DATA OUT 1<br>2: +12V output (maximum 40mA)<br>3: Connected to DATA OUT 5<br>4: Connected to DATA OUT 6<br>5: Data input -<br>6: Data input +<br>E: GND |
| DATA OUT (Tuchel 7pFT)<br>                     | 1: Connected to DATA IN 1<br>2: +12V output (maximum 40mA)<br>3: Data output -<br>4: Data output +<br>5: Connected to DATA IN 3<br>6: Connected to DATA IN 4<br>E: GND  |
| DATA OUT for Shot Clock<br>(HARTING 5pMT)<br> | 1 : TRx- (RS485)<br>2 : TRx+ (RS485)<br>3 : GND<br>4 : +24VDC<br>E :                                                                                                    |



Weight (kg): 6.2  
 Power consumption (VA): max. 350  
 Horn (dB): 114

### 3.2 Shot clock

| Connector                                                                                                              | Pinning                                                              |
|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| DATA IN AND OUT<br>(HARTING 5pMT)<br> | 1 : TRx- (RS485)<br>2 : TRx+ (RS485)<br>3 : GND<br>4 : +24VDC<br>E : |



Weight (kg): 6.8  
Power consumption (VA): max. 350

## 4 APPENDICE

### 4.1 Version history

| Version | Modifications since last version               |
|---------|------------------------------------------------|
| 1.0     | Initial version                                |
| 1.1     | Replacement screws for mounting floor standing |

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**NOTES**



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