

# Permanent wiring in swimming pools with SWT-DP

ALGE-TIMING



## Important Information

### General

Before using your **ALGE-TIMING** device read the complete manual carefully. It is part of the device and contains important information about installation, safety and its intended use. This manual cannot cover all conceivable applications. For further information or in case of problems that are mentioned not at all or not sufficiently detailed, please contact your **ALGE-TIMING** representative. You can find contact details on our homepage [www.alge-timing.com](http://www.alge-timing.com)

### Safety

Apart from the information of this manual, all general safety and accident prevention regulations of the legislator must be considered.

Trained persons must only use the device. The setting-up and installation must only be executed according to the manufacturer's data. The international standard, in particular IEC 60364-7, must always be observed during installation.

### Intended Use

The device must only be used for its intended applications. Technical modifications and any misuse are prohibited because of the risks involved! **ALGE-TIMING** is not liable for damages that are caused by improper use or incorrect operation.

### Power supply

The stated voltage on the type plate must correspond to voltage of the power source. Check all connections and plugs before usage. An authorized electrician must replace damaged connection wires immediately. The device must only be connected to an electric supply that has been installed by an electrician according to IEC 60364-1. Never touch the mains plug with wet hands! Never touch live parts!

### Cleaning

Please clean the outside of the device only with a smooth cloth. Detergents can cause damage. The cleaning must not be carried out by hose or high-pressure (risk of short circuits or other damage).

### Liability Limitations

All technical information, data and information for installation and operation correspond to the latest status at time of printing and are made in all conscience considering our past experience and knowledge. Information, pictures and description do not entitle to base any claims. The manufacturer is not liable for damage due to failure to observe the manual, improper use, incorrect repairs, technical modifications, use of unauthorized spare parts. Translations are made in all conscience. We assume no liability for translation mistakes, even if the translation is carried out by us or on our behalf.

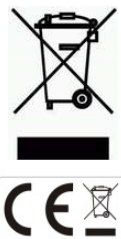
### Disposal

If a label is placed on the device showing a crossed-out dustbin on wheels (see drawing), the European directive 2002/96/EG applies for this device.

Please get informed about the applicable regulations for separate collection of electrical and electronical waste in your country and do not dispose of the old devices as household waste. Correct disposal of old equipment protects the environment and humans against negative consequences!

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## Declaration of Conformity

We declare that the following products comply with the requirements of the listed standards. Parts that we use in the product are CE certificated by the manufacturers and ALGE-TIMING GmbH does not change them.

We, **ALGE-TIMING GmbH**  
**Rotkreuzstrasse 39**  
**A-6890 Lustenau**

Declare under our sole responsibility, that the timing system for swimming:

**TM-SWIM** with accessories **SWT-DP**

is in conformity with the following standard(s) or other normative documents(s):

Safety:	IEC	60950:1999	/	EN	60950:2000
	EN 60335-1:2002 + A11:2004 + A1:2004 + A12:2006 + A2:2006				
EMC:	EN55022:2006+A1:2007				
	EN55024:1998+A1:2001+A2:2003				
	EN61000				
	EN61000 3-3:1995+A1:2001+A2:2005				
					3-2:2006

**Additional Information:**

The product herewith complies with the requirements of the Low Voltage Directive 73/23/EEC, also the EMC Directive 2004/108EG and accordingly carries the CE-marking.

Lustenau, 12.5.2025 **ALGE-TIMING GmbH**

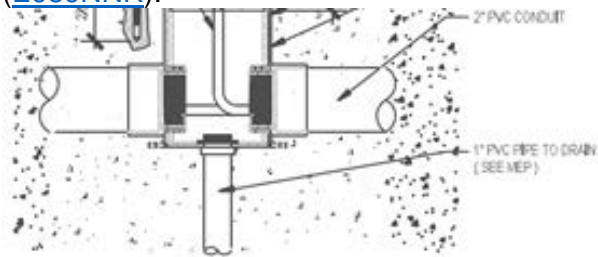
**Albert Vetter**  
(General Manager)

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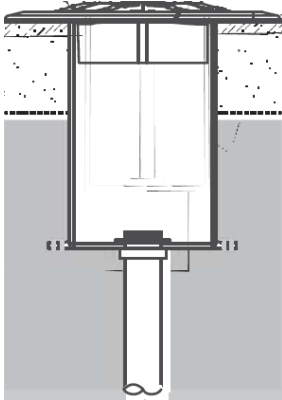
## 1 Introduction

The SWT-DP is a connection terminal for timekeeping in swimming. It has 4mm banana connections for timekeeping (touchpad, start block and 3 hand buttons) and speaker output. One SWT-DP must be installed per lane and side. Single-sided and double-sided installations are possible.

If the SWT-DP is installed on the floor, we recommend embedding a junction box with the size of 4"x4"x6" in the floor. Recommended junction boxes are from Cantex (Nr. [5133707](#)) or Carlon ([E989NNR](#)).



Both sides should be equipped with 2" PVC pipes for the cabling to the SWT-DP.

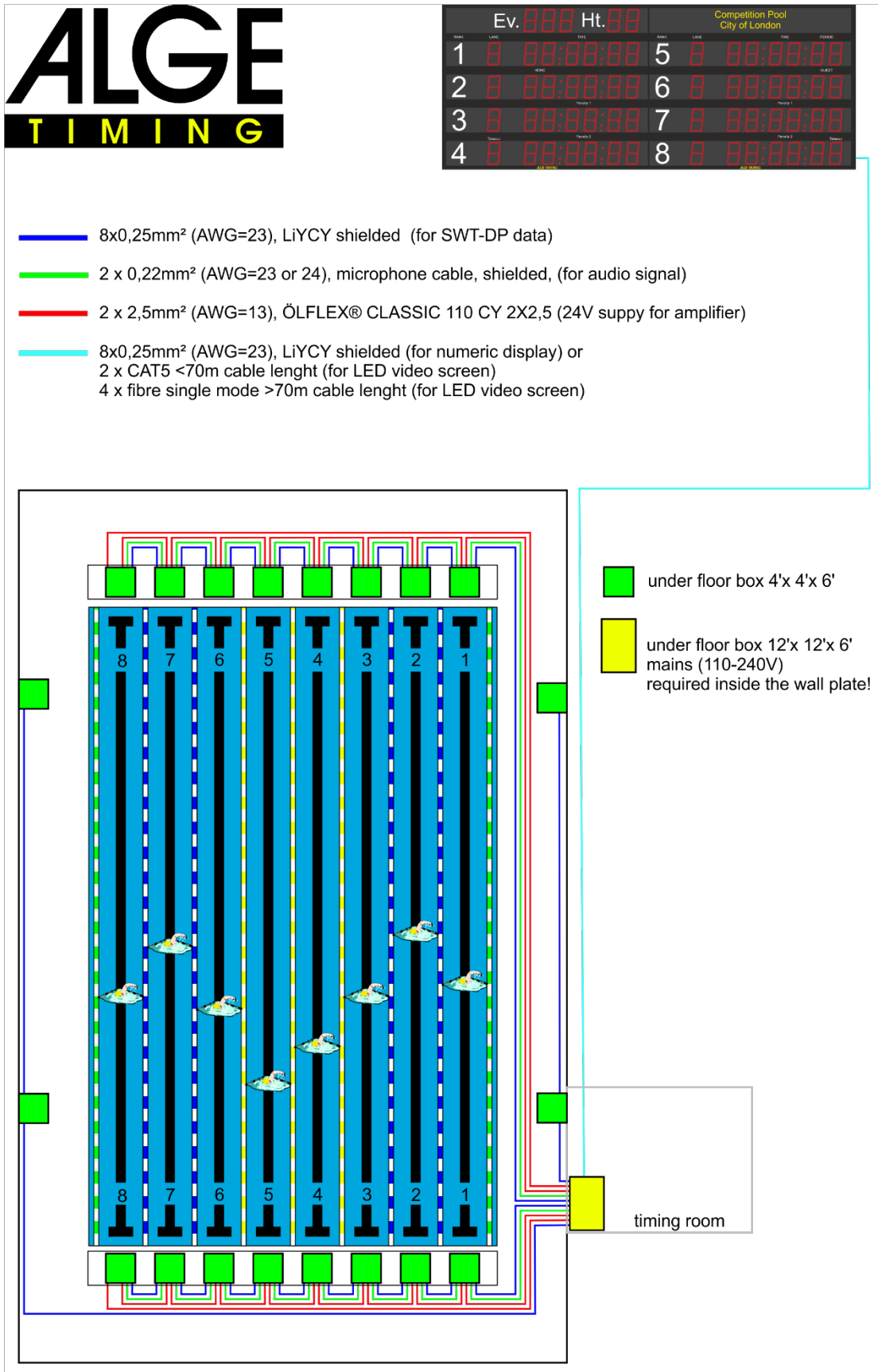


A drain on the bottom of the junction box is mandatory. A 1" PVC pipe is recommended for water drainage.

The ALGE-TIMING label should point towards the edge of the pool. This allows the connections of the manual buttons to be routed to the rear.

The timing part of the SWT-DP is supplied from the TM-SWIM. If you do not need the speaker output, there is no need of an external 24V power supply on the SWT-DP. Do not connect or mix this two power supplies.

## 2 Installation schema



The 24V power supply must be connected at the first and the last lane to minimize voltage drop from one lane to the next. Pay attention to the correct polarity. 2.5mm<sup>2</sup> (AWG=13) cable cross-section is recommended for most applications. For very long distances (>70m) to the first lane, we would recommend to use a cable with 4mm<sup>2</sup> (AWG=11) for the first and last connection. This is also recommended for more than 10 SWT-DP on one timing bus.

The 24V power supply and the audio signal (Sound A+B) is connected in parallel to all SWT-DP's. There is no need to connect the shield of the audio signal (Sound A+B). A twisted pair cable would be also fine. However, it is important that you do not use the same cable for audio and digital signals. The 7-pin digital signal cable is connected as input (previous) and output next SWT-DP. Pay attention to connect the correct side. Input comes from the timing, output goes to the next SWT-DP.

### 3 Cable distributor in the timing room

The distribution box must be installed on site by a qualified electrician. The location of the cable distributor must be selected in accordance with the applicable regulations. In particular, the international regulations IEC 60364-7 must be applied.

Note: Only 12VAC or 30VDC is allowed in zone 0 or 1 (IEC 60364-7)

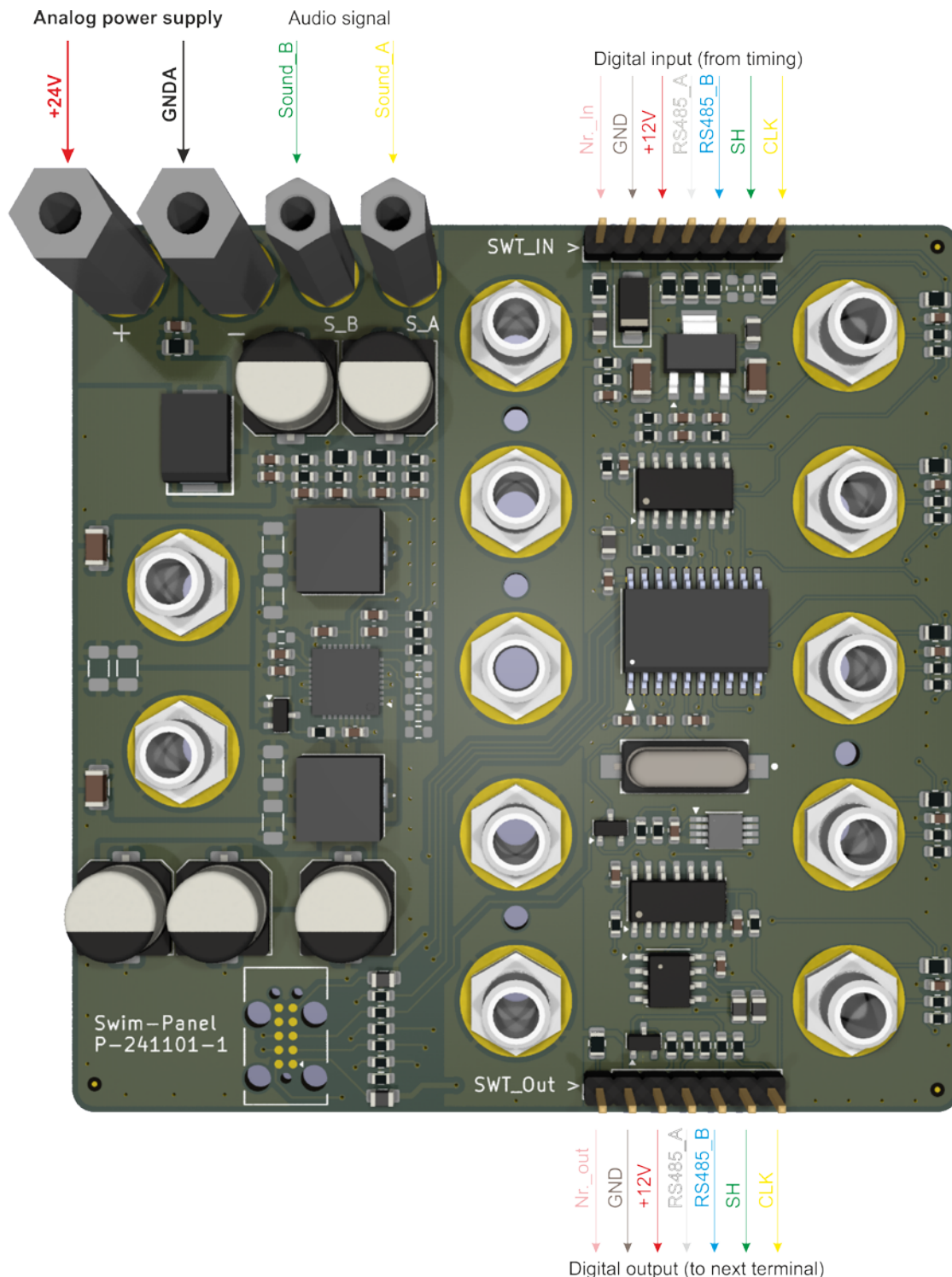
The fault protection (F11) switch is marked as optional, but is nevertheless recommended. It is very important that the special protective measures that apply to a swimming pool are observed.

A 24V power supply with at least 600W is necessary for a double sided 10-lane pool. This types are only available as open frame types. We recommend a closed frame power supply with 280-360W for each lane for security reasons. The temperature inside the cable distributor should not exceed 120 °F.

The outlined relay is not a must, but recommended. It is used to save energy if the system is not in use.



## 4 Connections of SWT-DP



The digital signal has to be soldered on site. The audio signal and the 24V power supply are connected to the SWT-DP using cable lugs. Take care that there is no short cut.

After installation, the system must be switched on and tested. To do this, plug a loudspeaker into each SWT-DP to the speaker plugs and switch on the TM-SWIM.

You can check the audio output by check the audio output. You can check the audio output by triggering a start and false start on the TM-SWIM. Connect the TM-Swim to your PC and check that all lanes are displayed. Make a start on a demo race and then check with a short cut on the touchpad connection if all SWT-DP's are working.

After the system is connected and tested, it is necessary to seal all connections completely within latest one day to avoid corrosion. The air on a swimming pool can be really aggressive and would destroy the cable connections within a very short time.

## 5 Cleaning and maintenance

The SWT-DP should only be cleaned with a damp cleaning cloth.

If the pool is cleaned with mildew cleaner or similar aggressive chemicals, it is very important that the residues are thoroughly washed off with clear water.

### Note:

- Do not use a high-pressure cleaner.
- The SWT-DP must not be driven over with a cleaning device or something similar.
- Do not step or jump on the SWT-DP

If a plug connection has no or only poor contact, you only need to turn the banana plug briefly in both directions. Then it should have contact again. Do not use a drill or similar. That would damage the surface of the connector.

## 6 Technical Data of SWT-DP

Audio power supply	9-24VDC for Audio
Audio power consumption	1,25A max.
Speaker	4-8Ohm Types are possible
Amplifier	Class D Amplifier
Audio output	20W@4Ohm ( <a href="#">SPP2</a> ), 10W@8Ohm max.
Digital power supply	12V for SWT, powered from TM-SWIM
Digital contacts	5V, NO for Touchpad and push buttons, NC for start block

### 6.1 Limitations

Minimum 4 SWT-DP must be connected on one timing bus.

Maximum of 16 SWT-DP per timing bus can be connected. Recommended and tested up to 12 SWT-DP.

Do not connect speakers with an impedance less than 4Ohm.

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