



**EN** Operating manual



eco BI1S and BI7S



This manual ensures safe and efficient use of the timers “eco BI1S” and “eco BI7S” (referred to as “device” in the following). This manual is a component of the devices and must remain accessible at all times for everyone who uses the devices.

Everyone who uses the devices must have read and understood this manual before commencing any work. The basic prerequisite for working safely is compliance with all safety instructions and usage instructions specified in this manual. Furthermore, the local accident pre-vention regulations and the general safety regulations in the area in which the devices are operated apply.



Illustrations in this manual are intended to provide a general understanding and may differ from the actual design.

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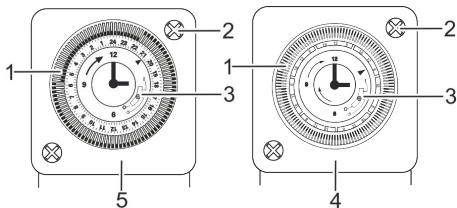
### **Declaration of conformity and download instructions**

The declaration of conformity for the devices described in this manual, a download of the manual, and the technical data can be found at [www.intermatic.com](http://www.intermatic.com).

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## Overview

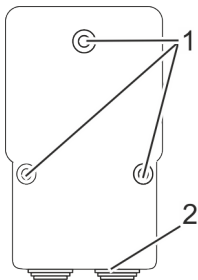


**Fig. 1: Front view**



- 1 Dial with tappets
- 2 Screw connection
- 3 Manual switch (ON, OFF, automatic mode)
- 4 “BI1S” timer
- 5 “BI7S” timer

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**Fig. 2: Rear view**

- 1**     **Mounting holes**
- 2**     **Flexible union fittings for cable feed-through**



### *Description of function*

The “eco BI1S” and “eco BI7S” timers are mechanical single-channel synchronous timers. The “BI1S” timer can switch the connected load with a smallest possible switching time of 15 minutes.

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The “BI7S” timer can control a connected load on each day with a smallest possible switching time of 2 hours.



### *Manual switch*

The timers have a manual switch; this can switch between the modes ⌚ (automatic), 0 (OFF) and I (ON).



**Position**

**Function**



Automatic mode

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Permanently on



Permanently off



## *Contents*

The following components are included in the contents:

| <b>Number</b> | <b>Designation</b>            |
|---------------|-------------------------------|
| 1             | “eco BI1S” or “eco BI7S”      |
| 1             | Wiring diagram adhesive label |
| 4             | Screws                        |
| 2             | Strain relief clamps          |
| 4             | Wire end sleeves              |



## Safety

### *Intended use*

The timers are used exclusively for switching e.g. heating systems, pumps, motors and machines with a resistance load of 16 A and for switching individual immersion heaters up to 3 kW. The connected devices must comply with the limits specified in the technical data.

The intended use also includes compliance with all information specified in this manual. Any use other than the intended use is considered incorrect use.



## *Residual risks*



**WARNING!**

**Danger to life due to electric shock!**

Improper assembly and installation of the device may result in life-threatening electrical voltages.

- Have assembly and connection performed by a qualified electrician only.



**WARNING!**

**Danger due to insufficient wire cross-section!**

If wires with an insufficiently large cross-section are used, short circuits or fires may occur.

- For the flexible wires, only use terminals with a maximum cross-section of 2.5 mm<sup>2</sup>.

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## Installation



### NOTICE!

**Danger of material damage to wires in the wall!**

Selecting the wrong installation position can result in material damage to any wires in the wall.

- Make sure that there are no wires in the wall at the installation position.

### Personnel:

-  Qualified electrician

### Special tool:

- Power drill
- Drill
- Phillips screwdriver
- Crimping pliers for wire end sleeves
- Cutting tool

### **Materials:**

- Wire end sleeves (4 pieces)
- Strain relief clamps (2 pieces)
- Screws (2 pieces)

### **Installing the housing base**

1. Remove the plastic cover.

2. Undo the screws on the housing cover using a Philips screwdriver.
3. Remove the housing cover.
4. Install the housing base on top of the wall.

### **Preparing the electrical connection**

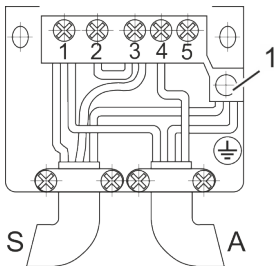
5. Strip the insulation from the connection wire.
  - Stripping length: 8 mm
6. Insert the wire end sleeves onto the connection wires.
7. Crimp the wire end sleeves using the crimping pliers.

## Electric connections



To ensure that the wiring is correct, consult the operating manual for the heating system in use.

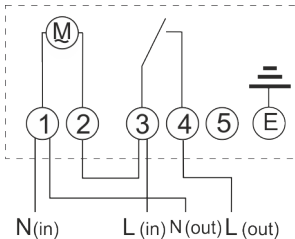
The devices have protection class 1, so earthing is essential. Connect the earth correctly.



**Fig. 3: Housing base wiring diagram CI7**

8. Insert the earth connection wire into the earth contact (Fig. 3/1).

## Mains connection



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**Fig. 4: Mains connection**

9. Insert the connection wires into the corresponding terminals in accordance with the relevant wiring diagram (Fig. 4) (N = neutral conductor; L = live conductor) (Fig. 4).

## Voltage-free wiring diagram

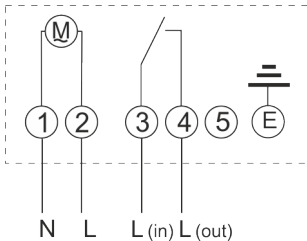


Fig. 5: Voltage-free wiring diagram

10. Insert the connection wires into the corresponding terminals in accordance with the relevant wiring diagram (Fig. 5) (N = neutral conductor; L = live conductor) (Fig. 5).

### **General purpose timer**

11. Insert the connection wires into the corresponding terminals in accordance with the enclosed wiring diagram (Fig. 5) (N = neutral conductor; L = live conductor) (Fig. 5).
12. Affix the enclosed wiring diagram to the device to enable future identification of the wiring.

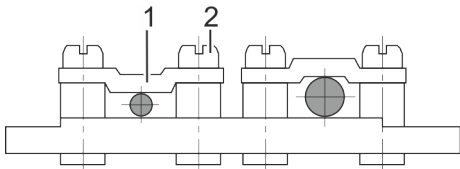
13.

**NOTICE!****Tightening torques**

To avoid damage and faulty contacts, tighten the terminals using a torque of **0.75 Nm**.

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Tighten all terminals using a Phillips screwdriver.



**Fig. 6: Installing the strain relief clamps**

14. Screw on the strain relief clamps (Fig. 6/1) using the screws provided (Fig. 6/2).

15.



The housing has two flexible union fittings for the cable feed-through, each with three different possible sizes for different diameters of connection wire.

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Use a cutting tool to cut the flexible union fittings to the correct size for the connection wires.

**NOTICE!****Danger of material damage to the wires!**

When closing the housing, there is a risk of pinching wires. This results in material damage to the wires and faulty contacts.

- Make sure that the wires are not pinched when the you close the housing.

16. Screw the housing cover onto the housing base using a Phillips screwdriver.
17. Replace the plastic cover.



## Operation

### Setting the day of the week/time

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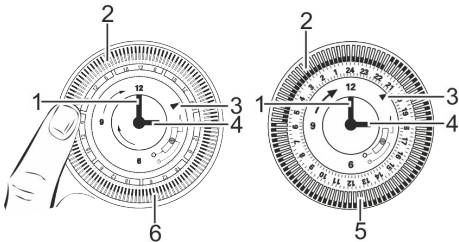
With the “BI7S” timer (Fig. 7/6) the day of the week (Monday – Sunday) and the current time have to be set. With the “BI1S” timer (Fig. 7/5) only the current time has to be set.

#### **Personnel:**

- User



## Setting the day of the week



**Fig. 7: Setting the day of the week and the time**



- 1 Minute hand**
- 2 Dial with tappets**
- 3 Indicator marker**
- 4 Hour hand**
- 5 “BI1S” timer**
- 6 “BI7S” timer**

**EN**



1.



**NOTICE!**

**Risk of material damage due to turning anti-clockwise!**

Turning the dial or the clock hand anti-clockwise can result in material damage to the timer.

- Make sure to turn the dial and clock hand clockwise only.

“BI7S” only: To set the current day of the week, rotate the dial (Fig. 7/2) clockwise until the indicator marker (Fig. 7/3) points to the current day of the week.



## Setting the time

2. To roughly set the time, turn the dial (Fig. 7/2) clockwise until the indicator marker points to the current time.



In 12 hour display: 6:00 = 6.00 (a.m.) and 16:00 = 4.00 (p.m.)

The timer does not distinguish between summer and winter time. As a result, you have to set the summer and winter time manually by adjusting the current time.

3. To finely adjust the time, turn the minute hand (Fig. 7/1) clockwise until the time indicated by the indicator marker (Fig. 7/3) matches the current time.



The dial and the clock hand rotate together with the current time.

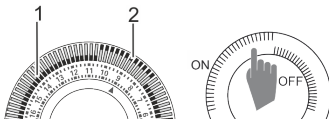


## Setting the on/off time

### Personnel:

- User

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**Fig. 8: Setting the tappets**

1.



With the “BI1S” timer, each tappet corresponds to 15 minutes of switching time.



With the “eco BI7S” timer, each tappet corresponds to 2 hours of switching time. If the tappets are pushed inwards, the heating system is switched off during that time; if the tappets are pushed outwards, the heating system is switched on during that time.

Push the tappets to the OFF (Fig. 8/1) or ON (Fig. 8/2) position, according to your desired switching times.

2. To activate the timer, switch the manual switch to the position .



## Selecting the operating mode

In addition to automatic mode, which switches according to the defined switching times, the device can also be switched permanently on or off.

### Personnel:

- User
- 1. Switch the manual switch to the desired position.
  - ⇒ The device reacts according to the position.



**Position**

**Function**



Automatic mode



Permanently on



Permanently off



## Disposal

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ENVIRONMENT!

### **Environmental hazard!**

Incorrect disposal could result in environmental dangers.

- Electric scrap and electronic components must be disposed of correctly, i.e. the parts for disposal must be sorted into material groups.
- Disposal must be environmentally responsible and must employ state-of-the-art environmental protection, recycling and disposal technology.



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