INTERMATIC®

EN Operating manual

eco BG1S, BG7S and BG1Q

This manual ensures safe and efficient use of the timers “eco BG1S”, “eco BG7S” and“eco BG1Q” (referred to as “device” in the fol-lowing). 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 prevention 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.

Copyright

Handover of this manual to third parties, reproductions of any type and form – including excerpts – and use and/or disclosure of the content without the written permission of Intermatic (referred to as “manufacturer” in the following), except for internal purposes, is not permitted. Violations will result in liability for compensation. The manufacturer reserves the right to assert additional claims.

1950 Innovation Way, Suite 300

Libertyville, IL 60048

USA

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*.

EN

Overview

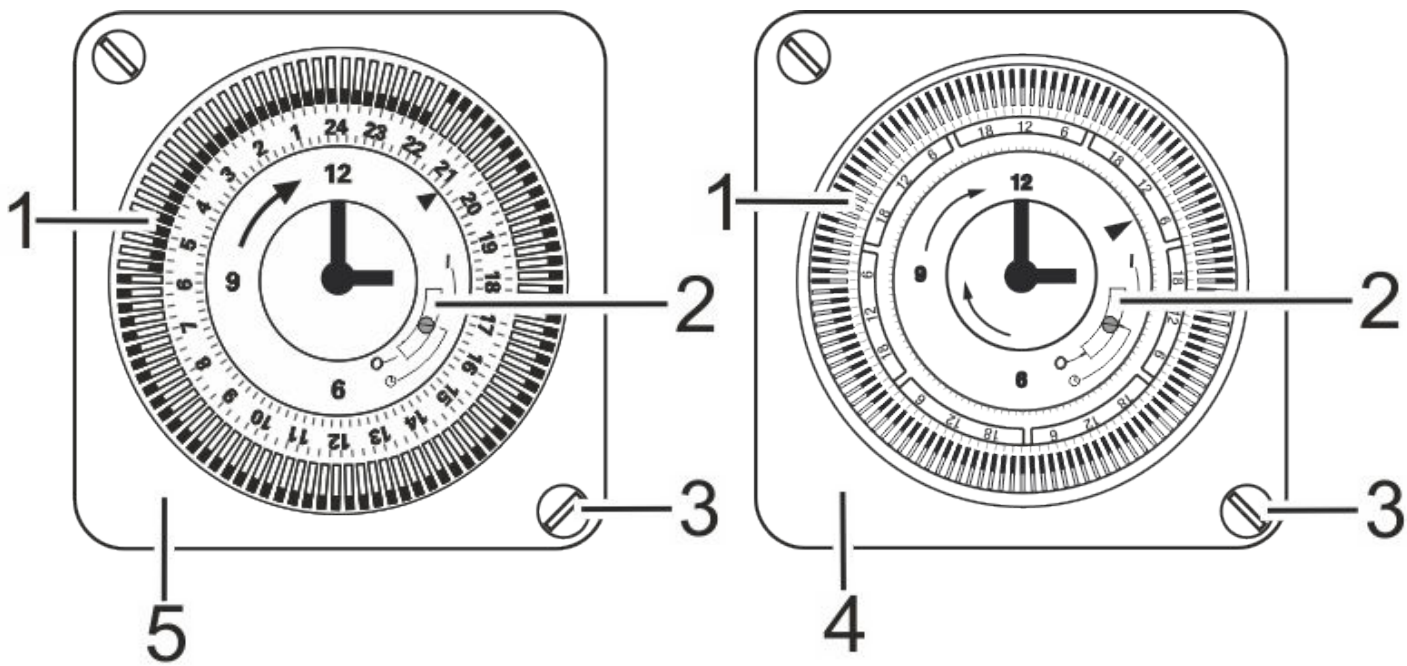


Fig. 1: Front view

EN

1 **Dial with tappets**
2 **Manual switch (ON, OFF, automatic mode)**
3 **Screw connection**
4 **“BG7S” timer**
5 **“BG1S und BG1Q” timer**

Description of function

The “eco BG1S” and “eco BG7S” timers are analogue single-channel synchronous timers and the “eco BG1Q” is an analogue single-channel quartz timer.

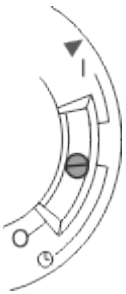
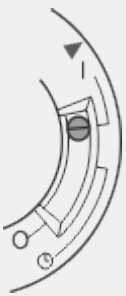
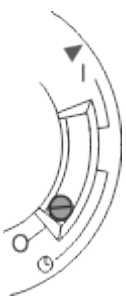
The “BG1S” and “eco BG1Q” times can switch connected loads with a smallest possible switching time of 15 minutes.

The “BG7S” timer can switch a connected load on each day with a smallest possible switching time of 2 hours.

EN

Manual switch

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

Position	Function
	Automatic mode
	Permanently on
	Permanently off

Power reserve

The “eco BG1Q” timer has a built-in, rechargeable battery. In the event of a power failure, the device saves the programmed settings for a maximum of 72 hours.

The battery is charged during normal operation and does not have to be replaced.

Contents

The following components are included in the contents:

EN

Number	Designation
1	“eco BG1S”, “eco BG7S” or “ eco BG1Q”
4	Wire end sleeves

Safety

Intended use

The timers are used exclusively for switching 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.

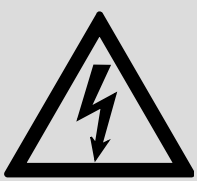
The “eco BG1S” and “eco BG7S” timers may only be used in private and commercial areas at ambient temperatures from -20 °C to +85 °C.

The “eco BG1Q” timer may only be used in private and commercial areas at ambient temperatures from -20 °C to +55 °C.

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

EN

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 mm².

Installation

The device is installed on a mounting socket (BS 4662 or BS 5733). This mounting socket can be installed either as a flush-mounted socket in the wall or it is installed on the wall.

In general, the following instructions apply to all three models. Where there are differences, the corresponding model number is specified before the instructions.

Personnel:

- Qualified electrician

Special tool:

- Flat-head screwdriver
- Phillips screwdriver
- Crimping pliers for wire end sleeves

Materials:

- Wire end sleeves (4 pieces)

Installing the housing base

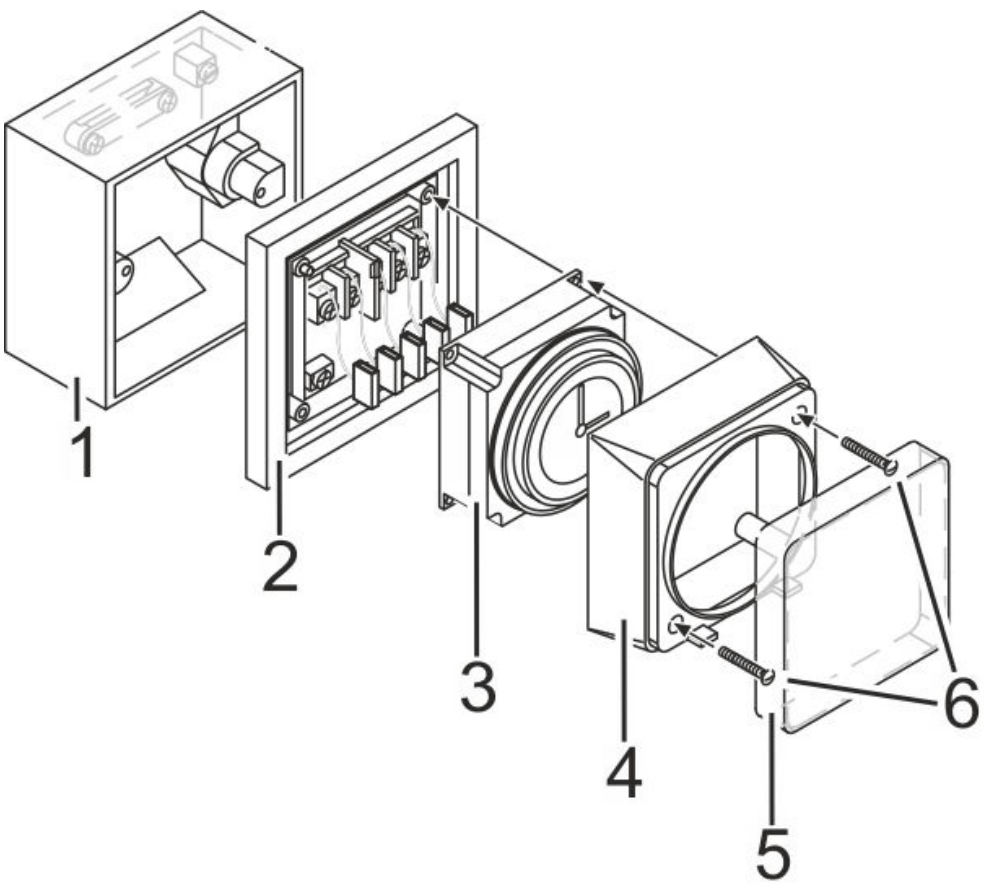


Fig. 2: Installation on a mounting socket (Fig. 2/1)

1	Mounting socket (BS4662 or BS5733)	3	Dial
		4	Housing cover
		5	Plastic cover
2	Housing base	6	Screws

1. Remove the plastic cover (Fig. 2/5).
2. Undo the screws (Fig. 2/6) on the housing cover (Fig. 2/4) using a flat-head screwdriver.
3.  The dial is connected to the housing base by blue connection wires.

NOTICE!

Danger of material damage!

When the dial is lifted up, the connection wires may be damaged.

– Lift up the dial carefully.
– Do not remove the dial from the housing base.

Remove the housing cover (Fig. 2/4) and the dial together with the connected housing base (Fig. 2/3).

4. Install the housing base (Fig. 2/2) on the mounting socket (Fig. 2/1).

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.

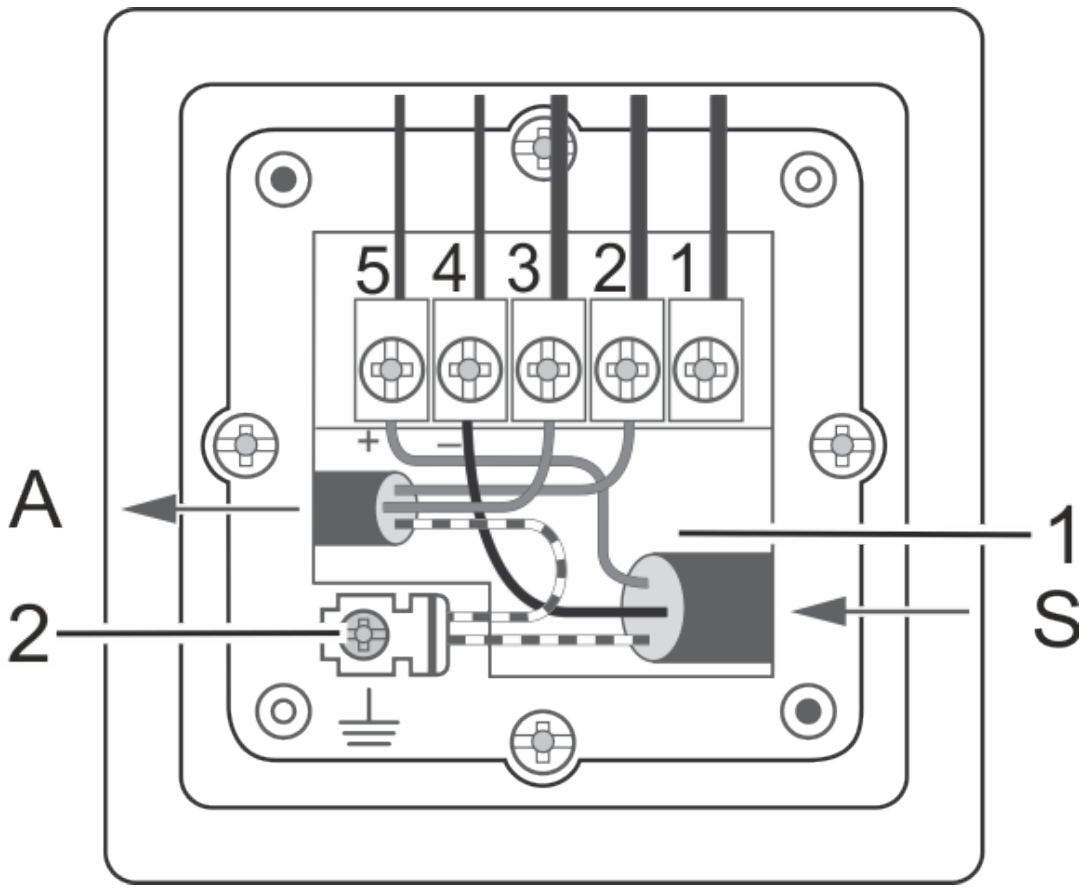


Fig. 3: BG1S/BG7S housing base

8. Thread the connection wires into the device through the cable feed-through (Fig. 3/1).

Electric connections

9.

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.

Insert the earth connection wire into the earth contact (Fig. 3/2).

BG1S/BG7S mains connection

The diagram (Fig. 4) shows the wiring for mains connection. The connection between terminals 3 and 5 must be mounted.

For low-voltage, connect connections L (230 V) or N to 5 or 4, respectively, and apply the electric circuit to connections 3 and 2.

EN

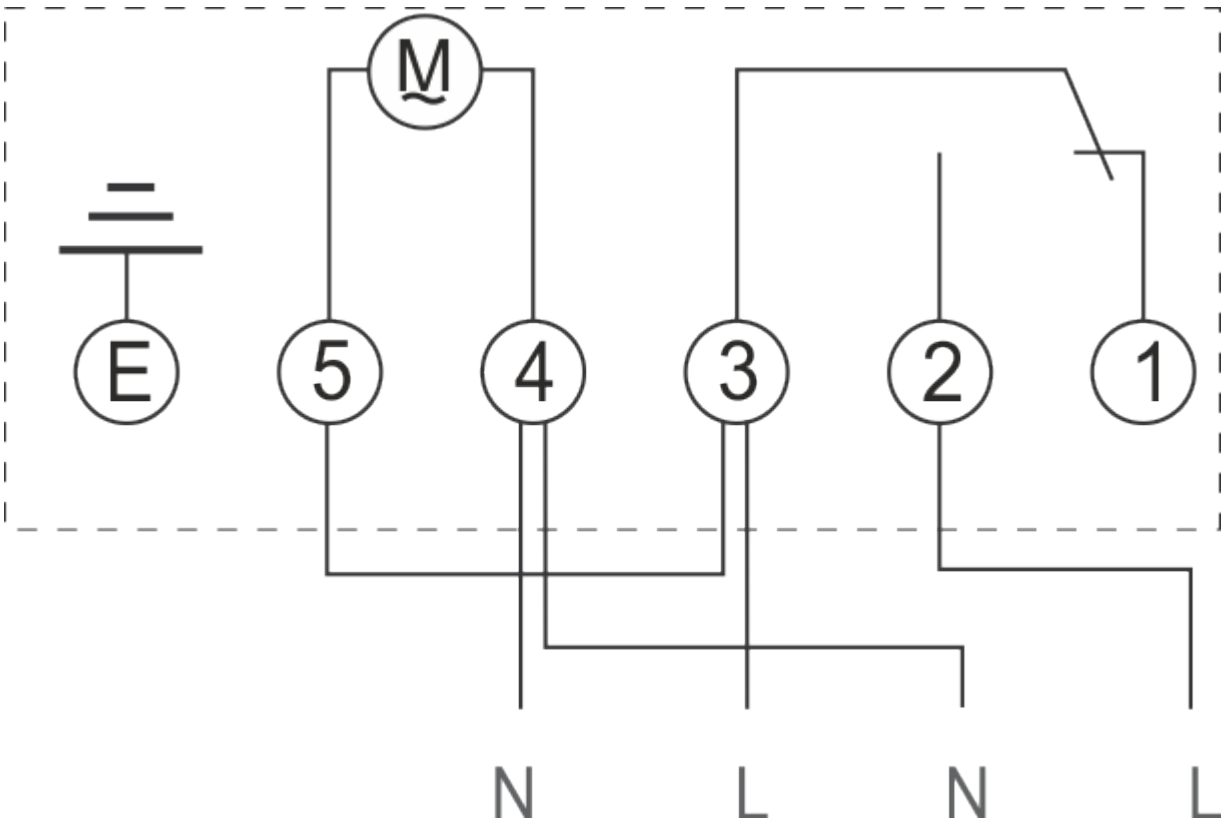


Fig. 4: BG1S/BG7S mains connection

10. Insert the connection wires into the corresponding terminals in accordance with the relevant wiring diagram (A = application/connected load; S = supply voltage; N = neutral conductor; L = live conductor) (Fig. 4).

BG1S/BG7S voltage-free connection

If there is no connection between terminals 3 and 5, it is possible to control the connected loads in a separate circuit with different voltages up to 250 V AC.

To do so, connect connections L or N to 5 or 4, respectively, and apply $L_{(in)}$ or $L_{(out)}$ to connection 2 or 3, respectively.

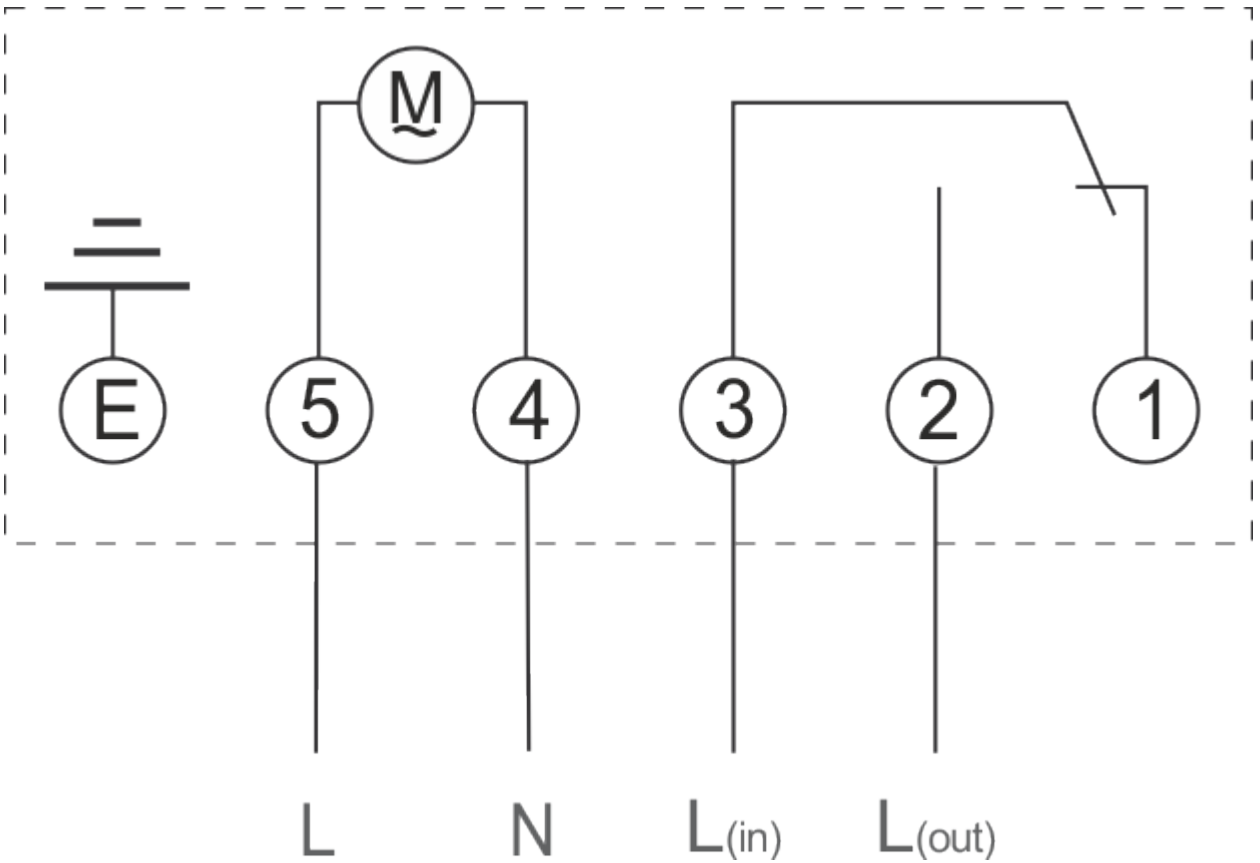


Fig. 5: BG1S/BG7S voltage-free connection

11. Insert the connection wires into the corresponding terminals in accordance with the relevant wiring diagram (A = application/connected load; S = supply voltage; N = neutral conductor; L = live conductor) (Fig. 5).

BG1Q circuit diagram

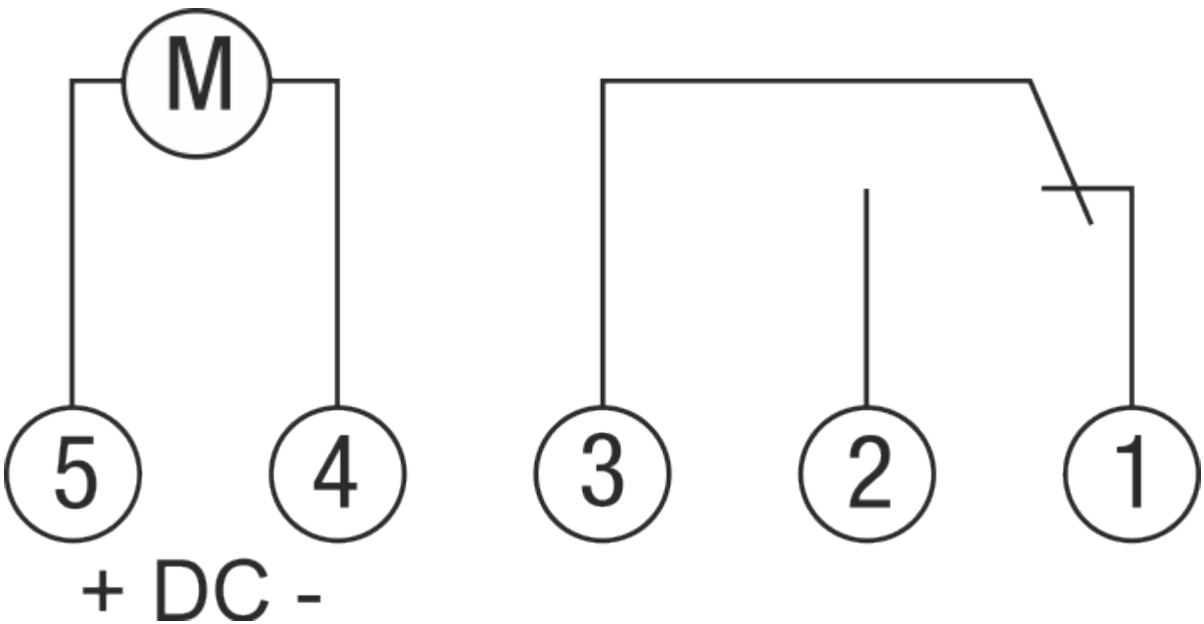


Fig. 6: BG1Q circuit diagram

12. Insert the connection wires into the corresponding terminals in accordance with the relevant wiring diagram (A = application/connected load; S = supply voltage; N = neutral conductor; L = live conductor) (Fig. 6).

13. NOTICE!

Tightening torques

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

Tighten all terminals using a Phillips screwdriver.

Closing the housing

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.

14. Screw the dial (Fig. 2/3) and housing cover (Fig. 2/4) onto the housing base (Fig. 2/2) using a flat-head screwdriver.
15. Replace the plastic cover (Fig. 2/5).

Operation

Setting the day of the week/time

EN

With the “BG7S”" timer (Fig. 7/6) the day of the week (Monday – Sunday) and the current time have to be set. With the “BG1S” and “eco BG1Q” (Fig. 7/5) timers only the current time has to be set.

Personnel:

- User

Setting the day of the week

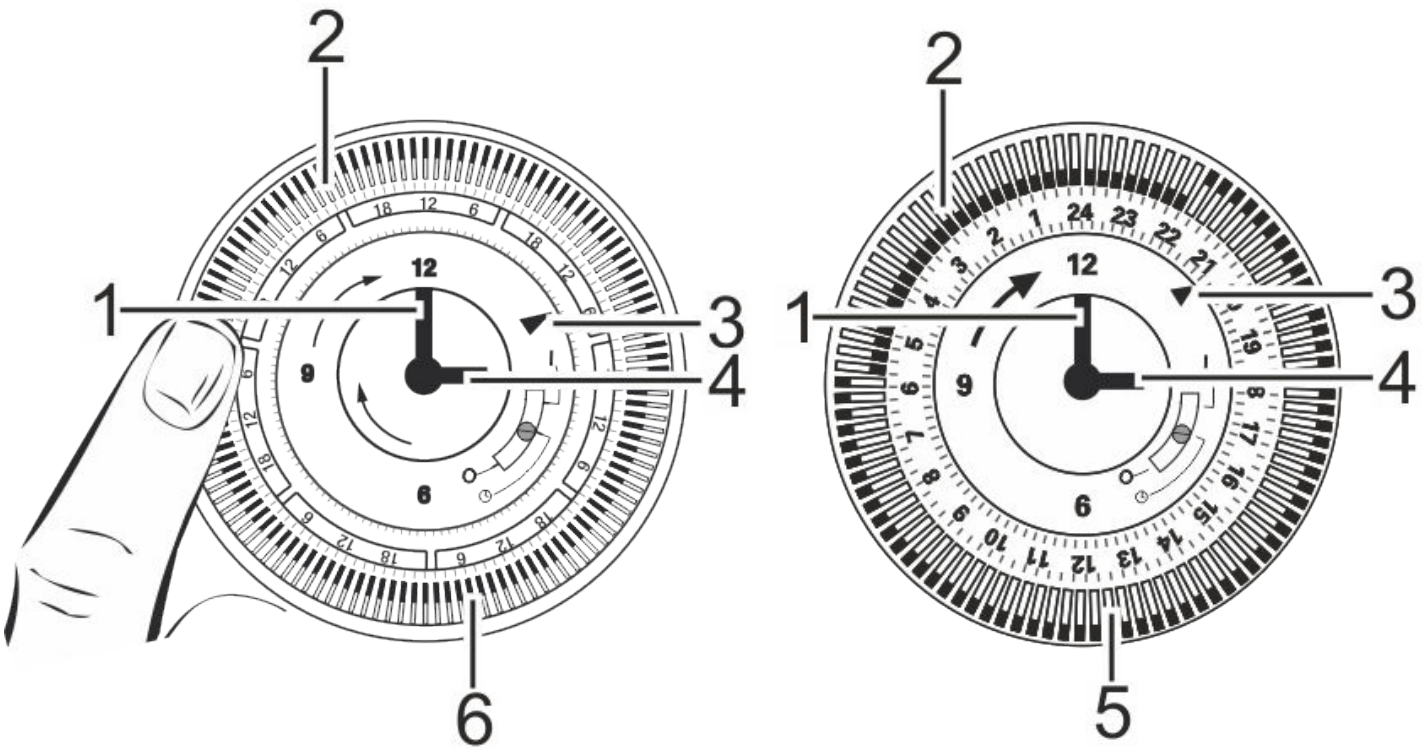


Fig. 7: Setting the day of the week and the time

1	Minute hand	3	Indicator marker
2	Dial with tappets	4	Hour hand

5 “BG1S und BG1Q” timer

6 “BG7S” 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.

“BG7S” 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

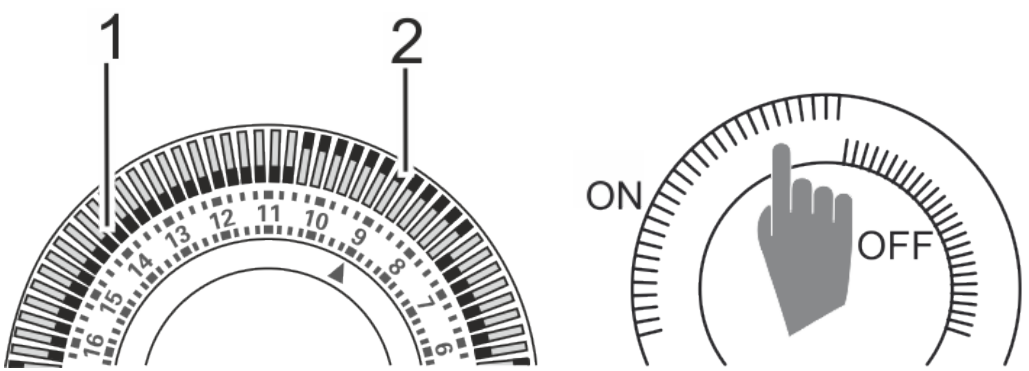


Fig. 8: Setting the tappets

1.

With the “BG1S” and“eco BG1Q” timers, each tappet corresponds to 15 minutes of switching time.

With the “BG7S” 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.

EN

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

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

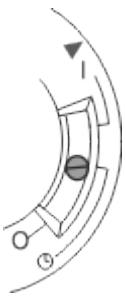
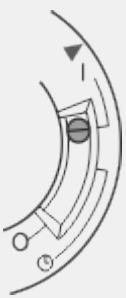
Selecting the operating mode

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

EN

Disposal

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.

EN

- Batteries/rechargeable batteries (Directive 2006/66/EC) and electrical or electronic scrap must under no circumstances be disposed of with general waste. If in doubt, please obtain information about environmentally responsible disposal from specialist disposal companies.
- Disposal must be environmentally responsible and must employ state-of-the-art environmental protection, recycling and disposal technology.

Intermatic Incorporated
1950 Innovation Way, Suite 300
Libertyville, IL 60048
USA
Telephone: +1 815 675 7000
www.intermatic.com

158--02319 0217/V01