SECURE

SIR 020 / SIR 021 / SIR 022
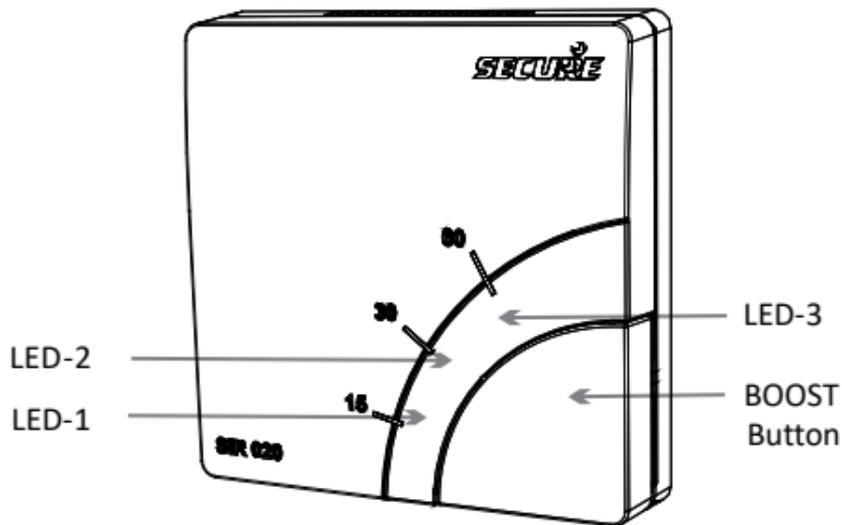## Countdown Timer

Installation and User Instructions

SIR 020 / SIR 021 / SIR 022

The SIR range of countdown timers can be used to control immersion elements and other electrical appliances up to 3kW or as an override/extension timer for central heating systems.

INSTALLATION AND CONNECTION SHOULD ONLY BE CARRIED OUT BY A SUITABLY QUALIFIED PERSON AND IN ACCORDANCE WITH THE CURRENT EDITION OF THE IET WIRING REGULATIONS.

WARNING: ISOLATE MAINS SUPPLY BEFORE COMMENCING INSTALLATION AND ENSURE THE UNIT IS PROPERLY EARTHED.

LED-3

BOOST Button

LED-2

LED-1

The LEDs become operational when the unit is powered up.

User instructions

To operate the unit press the BOOST button repeatedly until the indicator light for the required BOOST period is illuminated (see table below).

Model	1st time button press	2nd time button press	3rd time button press	4th time button press
SIR 020	15 min	30 min	60 min	off
SIR 021	½ hour	1 hour	2 hour	off
SIR 022	2 hour	4 hour	6 hour	off

When BOOST is active the indicator lights count down, showing the duration of the BOOST period remaining.

Model	LED - 1 on	LED – 1 & 2 on	LED – 1, 2 & 3 on
SIR 020	5min to 15min left	16min to 30min left	31min to 60min left
SIR 021	5min to 30min left	31min to 60min left	61min to 120min left
SIR 022	5min to 2hour left	2hour 1min to 4hour left	4hour 1min to 6hour left

For all three models, LED-1 will flash slowly when 5 minutes of the boost period remains and will flash faster when 1 minute remains. At the end of the boost period SIR will automatically switch off the connected appliance.

The appliance can be switched off by cancelling the boost period, using any of the following methods:

1. If the BOOST button has just been pressed, wait for three seconds and then press it again. The indicator lights should all turn OFF.
2. Press the BOOST button repeatedly, until ALL the indicator lights have turned OFF.
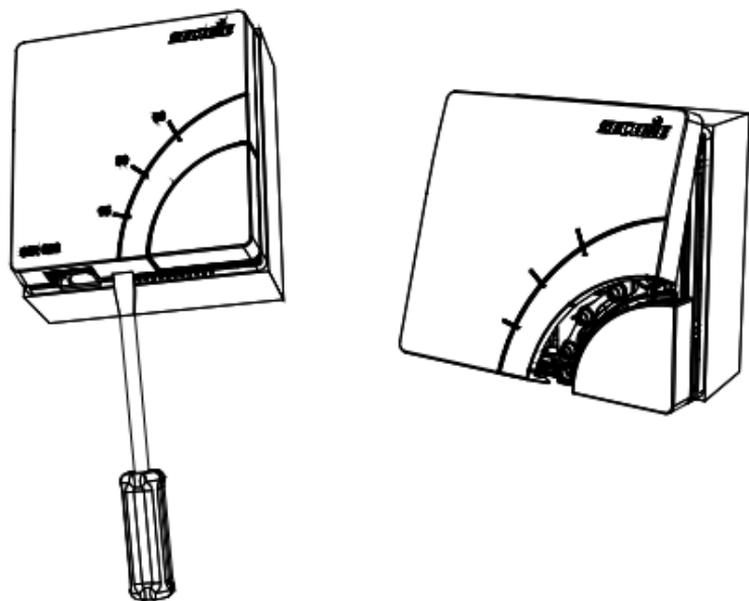3. Press and hold in the BOOST button until ALL the indicator lights have turned OFF.

Installation

A means of disconnection from the supply, having at least 3mm contact separation in both poles, must be incorporated in the fixed wiring. We recommend a separate fused circuit from the consumer unit (24-hour supply) protected by a 15A HRC fuse or, preferably a 16A MCB. In some cases immersion heater failure can damage the SIR. Installation of a 100mA RCD will provide additional protection for the unit. If the SIR is to be connected to a ring main then the spur feeding the controller should be protected in the same way. The SIR is NOT suitable for mounting on an unearthed metal surface.

THE SIR UNIT SHOULD BE KEPT IN ITS SEALED PACK UNTIL ALL DUST AND DEBRIS HAVE BEEN CLEARED AWAY PRIOR TO MAKING CONNECTIONS.
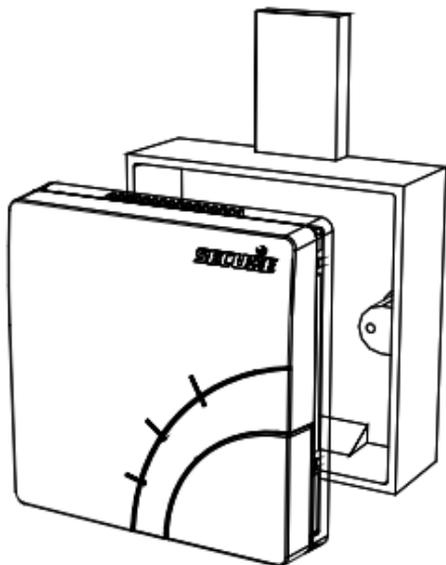
STEP-1 Unpack unit and remove front cover

Take the SIR out of its packaging and then remove the front cover gently, using a slotted screwdriver in the notch, as shown in the picture below

STEP-2 Preparing SIR for surface wall mounting

SIR is suitable for mounting directly on to any surface mounted single-gang moulded box having a minimum depth of 25mm for UK, or 35mm for Continental Europe. Cable entry can be made through the most convenient cut-out.
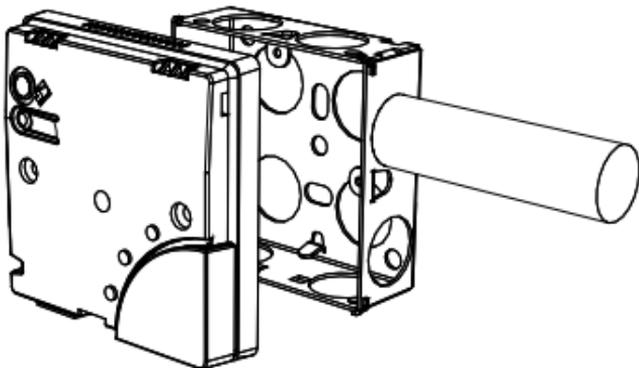
Remove cut-outs before fixing the box in place. Where appropriate, drill the box to provide close-fitting entry for cables and heat-resistant flexible cables. Take care to remove sharp edges.

Ensure that the clamp is positioned the right way up. The projections on the underside of the clamp should grip the cable in order to secure it firmly. The cable clamp screws must be adequately tightened, to a torque setting of 0.4Nm.

For flush wall mounting

The SIR can be mounted directly to any standard minimum 25mm deep flush mounting single gang wiring box of UK (BS 4662) or 35mm deep flush wall box Europe (DIN 49073).

Clamp all surface wiring to the wall adjacent to the SIR, using trunking where appropriate. The flexible cable to the appliance should be passed through the cable entry hole in the bottom edge of the SIR, and secure under the cable clamp provided.
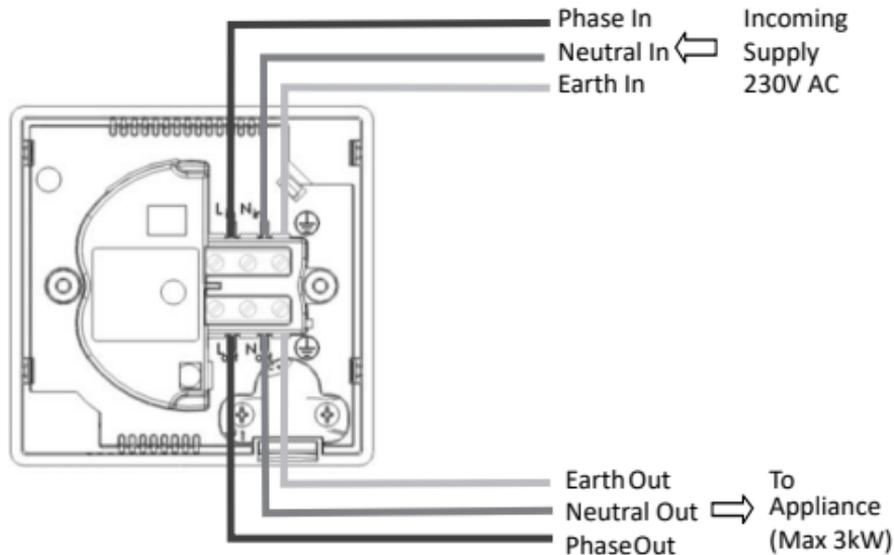
STEP-3 Making connections

Use twin-and-earth cable with a maximum conductor size of 2.5mm^2 single conductor for the incoming supply to the SIR.

Use a suitably rated three-core flexible cable to connect the SIR to the appliance to be switched. For appliances rated up to 2kW use minimum $1.0mm^2$ flexible conductors. For appliances rated up to 3kW use minimum $1.5mm^2$ flexible conductors. Heat resistant flexible cable must be used if connecting the SIR to an immersion heater.

L in	Live in
N in	Neutral in
⊕	Supply earth terminal
L out	Live out to appliance
N out	Neutral out to appliance
⊕	Appliance earth terminal

All un-insulated earth conductors must be sleeved and connected to the earth terminals on the back of the SIR. The supply earth conductor and appliance earth conductor must use the separate terminal connections provided.

Switch off the mains supply and then connect the conductors for the incoming supply and the appliance on the back of the unit, as shown on the next page.
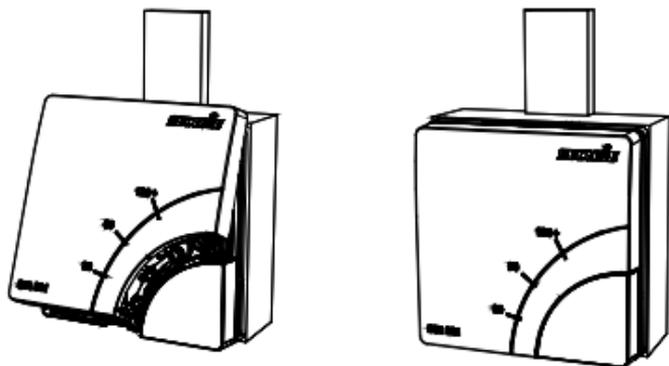

Phase In
Neutral In
Earth In

Incoming Supply 230V AC

Earth Out
Neutral Out
Phase Out

To Appliance (Max 3kW)

STEP-4 Installing SIR on wall gang / flush wall box
Carefully offer the SIR to the moulded/metal box and secure using two screws.

Take care not to damage the insulation or trap the conductors when fitting to flush wall box.

STEP-5 Fitting front cover and final check
After fitting the mounting screws, fix the front cover back on. Offer the front cover on to the unit and make sure that it clicks securely in place.

Finally switch on the mains supply and check that the SIR switches the appliance on and off correctly.

Service and Repair

The SIR is NOT user serviceable. Please do not dismantle the unit. In the unlikely event of a fault occurring please contact a heating engineer or a qualified electrician.

Technical specifications

Electrical

Purpose of control	Electronic timer (independently mounted)
Contact rating for loads up to 3kW	13A resistive*, 230V AC, suitable
Control type	Micro-disconnection
Supply	230V AC, 50Hz only
Control action	Type 2B
Operation time limitation	Intermittent
Software class	Class A
Timing accuracy	(±5%)
Timer boost period	Model SIR 020: 15/30/60 minutes
	Model SIR 021: 30 mins/1 hour/2 hours
	Model SIR 022: 2/4/6 hours

optionally 3A inductive

Mechanical

Dimensions	85 x 85 x 19mm (flush mount), 85 x 85 x 44mm (surface mount)
Case material	Thermoplastic, flame retardant
Ball pressure test temperature	75°C
Mounting	Single-gang surface mount / flush box, minimum depth 25mm (UK) / 35mm (Continental Europe)

Environmental

Impulse voltage rating	Cat II 2500V
Enclosure protection	IP 30
Pollution degree	Degree 2
Operating temperature range	0°C to 35°C

Compliance

Design standards	EN 60730-2-7, RoHS, 🗑 BS EN 60730-1, BS EN 60720-2-7

Ordering information

SIR 020 15 to 60 minute countdown timer with single push-button operation and LED indicator lights. Suitable for loads up to 3kW at 230V AC.

SIR 021 30 to 120 minute countdown timer with single push-button operation and LED indicator lights. Suitable for loads up to 3kW at 230V AC.
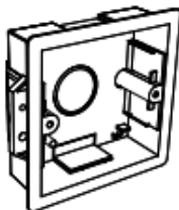
SIR 022 2 to 6 hour countdown timer with single push-button operation and LED indicator lights. Suitable for loads up to 3kW at 230V AC.

All above models are suitable for installation on illustrated types (see page 19) or any other similar type of wall gang / back boxes.
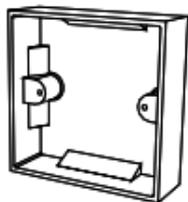
Metal back box

Single gang

Surface mount

Flush wall

Flush wall

Flush wall

Flush wall

Flush wall

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Part Number BGX501-866 Issue 4