BUDGET TIMER RANGE

Coin or Token Operated

INSTALLATION AND OPERATING INSTRUCTIONS

7kVA types maximum load 30 Amp resistive
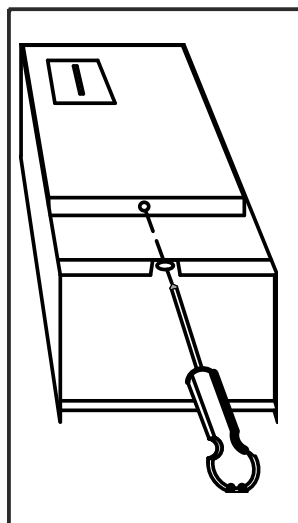12kVA types maximum load 50 Amp resistive

Issue 2 February 2018

1. INTRODUCTION

All meters are designed using modern electronic technology to give a very reliable unit when installed correctly. The modular construction allows for easy servicing or updating. Simple to install the meters require no maintenance other than regular emptying of the cash box. The operating characteristics, as defined by BS-EN60730, are type 1B. The meters comply to the latest EMC and Low Voltage directives, meeting EN60730-1:92, EN50082-1:92, EN55014:93, and EN60555-2:87.

2. INSTALLATION

The meters are designed as independently surface mounted controls. They can be corner mounted either way. Care should be taken not to mount the unit directly against a heat source and ambient temperature of 40°C not exceeded. Before connecting, ensure the electricity supply of the mains corresponds to the voltage on the rating plate. Failure to do so could result in irreparable damage. Current IET wiring regulations (BS 7671:2018) must be adhered to. It is recommended that each installation should be protected by a suitable residual current breaker (RCB). A 30mA trip device will provide protection to within Zone 2.

i.   Lay the meter on its back and unlock and remove the cash box.

ii. See Figure 1. Using a No. 1, 9 inch pozidrive screwdriver remove the recessed screw and remove the front panel by pulling towards base as far as possible, lifting bottom edge slightly outwards and then lifting panel upwards. **IMPORTANT.** It is essential that panel recess is clear of case lip before attempting to lift panel out. Rotate front panel and withdraw 5-way connector from printed circuit board, thus separating front panel from the meter case. Set programming switches (Section 3) and place panel in a safe place.

iii. Position the case on the wall and mark the top centre fixing position. Drill and plug the wall and fit with No. 8 or 10 screw of not less than 22mm. Hang case on screw and tighten. Use a spirit level to ensure the case is perfectly level.
If the case is not level the coin mechanism may malfunction.
Mark the bottom two screw positions, remove case and drill and plug the holes.

iv. Remove the cable knockouts as required and fix to the wall.

v.   Using a fused double pole switch for the mains input, wire the unit as shown in Figures 2 or 3. **IMPORTANT.** With 7kVA models use cable of cross sectional area not less than 6.0 mm^2 and fuse as appropriate up to a maximum of 30A. With 12kVA rated models use cable of not less than 10.0 mm^2 and fuse as appropriate up to a maximum of 50A. The use of 20mm conduit is recommended (use male thread adaptor with lock-ring e.g. Egatube type EMA/2). Alternatively fit a 20 mm nylon compression cable gland to provide strain relief.


Front panel removal
Figure 1.

<div align="center">

WARNING!

**THE EARTH TERMINAL MUST BE CORRECTLY CONNECTED TO A KNOWN EARTH**

ENSURE EARTH WIRE IS ADEQUATELY TRAPPED BY THE TAGS OF THE CLAMPING WASHERS

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vi. Refit front panel, making sure the 5-way connector is the correct way round. There is a polarising back wall to ensure correct polarity. **Forcing the connector the incorrect way round will cause irreparable damage.** Replace the recessed screw, making sure the screw head is flush with the front panel but not over tightened.

vii. Insert cash box and lock. *MAKE A NOTE OF THE KEY NUMBER AND PUT IN A SAFE PLACE.*

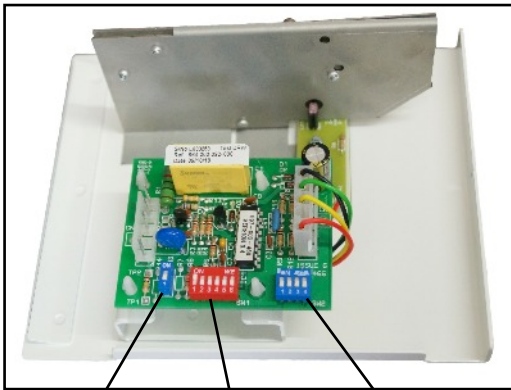viii. Switch on and test for correct operation. See Section 4.
NEVER OPERATE THE UNIT WITH THE FRONT PANEL UNSECURED OR WITH THE CASE UNEARTHED.
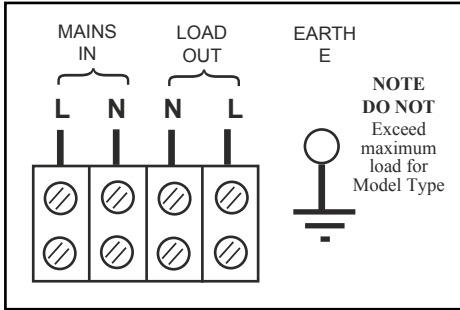
Wiring connections for mains output versions
Figure 2

NOTE. Maximum current for any load 30A
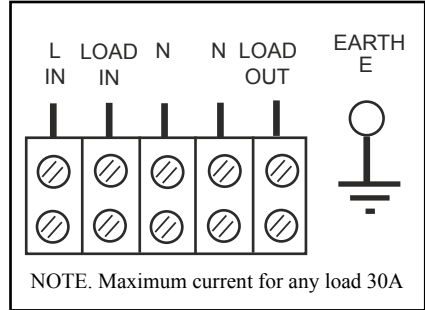
Wiring connections for volt-free output versions
Figure 3

Accumulative   Set Time   Set Price Change
Setting (SW3)   (SW1)   (SW2)

Position of programming switches
Figure 4.

TO SET TIME PERIOD	
Switch No.	Time Period
1	1
2	2
3	4
4	8
5	16
6	32

Example set for 15 minutes

Switch numbers 1,2,3,4 ON
=1+2+4+8 = 15 minutes

To set time period
Figure 5.

3. SETTING PROGRAMMING SWITCHES

IMPORTANT - ALWAYS DISCONNECT FROM THE MAINS BEFORE ADJUSTING.

i   Setting the TIME PER COIN.

This is achieved with a 6-way switch bank (SW1) located on a PCB (printed circuit board) on the back of the front panel. Time periods are selectable in 1 to 32 minute steps. The maximum time per coin is 63 minutes. The time units double for each switch; For example, Switch 1 gives one minute, Switch 2 gives two and Switch 3 gives four; so if Switches 1, 2, 3 and 4 are ON, 15 minutes will have been programmed. See Figures 4 and 5.

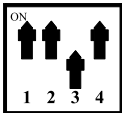**ii.   Setting the PRICE CHANGE OPTION.**

This gives the facility to alter the number of coins required to activate the timer from one to sixteen. This is set with a 4-way switch bank (SW2) located to the right of the 6-way switch. See Figure 4 and 6.

iii.   Setting ACCUMULATIVE MODE

Use the 1-way switch bank (SW3) to the left of the 6-way switch bank. Set to OFF for non-accumulative or set to ON for accumulative mode. See Figure 4 and section 4 for further details.

COINS	SW1	SW2	SW3	SW4
1	OFF	OFF	OFF	OFF
2	ON	OFF	OFF	OFF
3	OFF	ON	OFF	OFF
4	ON	ON	OFF	OFF
5	OFF	OFF	ON	OFF
6	ON	OFF	ON	OFF
7	OFF	ON	ON	OFF
8	ON	ON	ON	OFF
9	OFF	OFF	OFF	ON
10	ON	OFF	OFF	ON
11	OFF	ON	OFF	ON
12	ON	ON	OFF	ON
13	OFF	OFF	ON	ON
14	ON	OFF	ON	ON
15	OFF	ON	ON	ON
16	ON	ON	ON	ON

Example. Set for 12 coins

To set price change

Figure 6.

4. OPERATION

The Budget Timer can be configured to be either accumulative or non-accumulative using setting switch (see Figure 4). In non-accumulative mode (SW3 OFF) when a correct coin is inserted the load will be switched on for the time period selected. If a second coin is inserted the timer will reset to the programmed time and remaining time on the previous coin will be lost. In accumulative mode (SW3 ON) additional coins inserted add programmed time to time remaining. For example, if the time period is set to ten minutes, one coin gives ten minutes, two gives twenty and three gives thirty and so on. The maximum time which may be accumulated is 255 minutes.

The optional price change allows a set charge to be programmed. For example, with a twenty pence coin acceptor forty pence may be charged by setting the price change to two. Two twenty pence coins are required before the load switches on. Similarly one pound may be charged by programming the price change to five.