LIGHTING CONTROL ENERGY SAVER FOR FLUORESCENT LAMPS

USER MANUAL
DISPLAY PARAMETER

Manual

Version 1.0, August 2012

TAS POWERTEK PVT. LTD.

Plot No. W-61, Pawar Industries Compound,

MIDC, Ambad, NASHIK – 422010 M.S. INDIA.

Phone +91 – 0253-6694952-60.

Email: sales@taspowertek.com

www.taspowertek.com

NOTE

These instructions do not purport to cover all details or variations in equipment, nor to provide for every possible contingency to be met in connection with installation, operation or maintenance.

Should further information be desired or should particular problems arise which are not covered sufficiently for the purchasers purposes, the matter should be referred to our factory.

The contents of this User Manual shall not become part of or modify any prior or existing agreement or relationship. Any statements contained herein do not create new warranties or modify the existing warranty.

1.Display Parameter

1.1 LCD Display

Power on Display

```
TAS POWERTEK
SLC-07
```

Default LCD Display:

```
17:05              21/08/12
A   OFF   SCH            OK
```

```
17:05              21/08/12
A   OFF   AMB           OK
```

```
17:05              21/08/12
M   OFF                 OK
```

▪ Last two characters on second line of default screen represent one of the following:

OV	Over Voltage
UV	Under Voltage
NV	NV Ram Fault
OL	Over Load
BF	Battery Fault

Communication

CF	Communication Failure

1.2.LED Indication

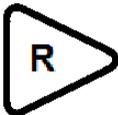|	
🔴	Power ON
🔴	BYPASS
🔴	ESM
🔴	FAULT

1.3.Keyboard

UP key: Used to scroll up the menu screen / Increment the numbers while entering values.

DOWN key: Used to scroll down the menu screen / Decrement numbers while entering values.

LEFT key: Used to shift the cursor to left / Decrease LCD Contrast, when on default screen.

RIGHT key: Used to shift the cursor to right / Increase LCD Contrast, when on default screen.
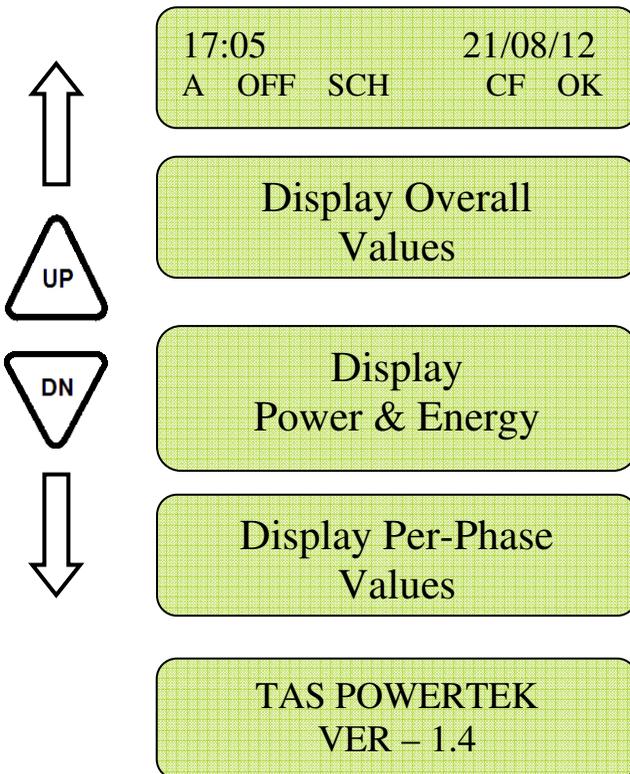
ENTER key: Used for entering a sub-menu or for setting up values.
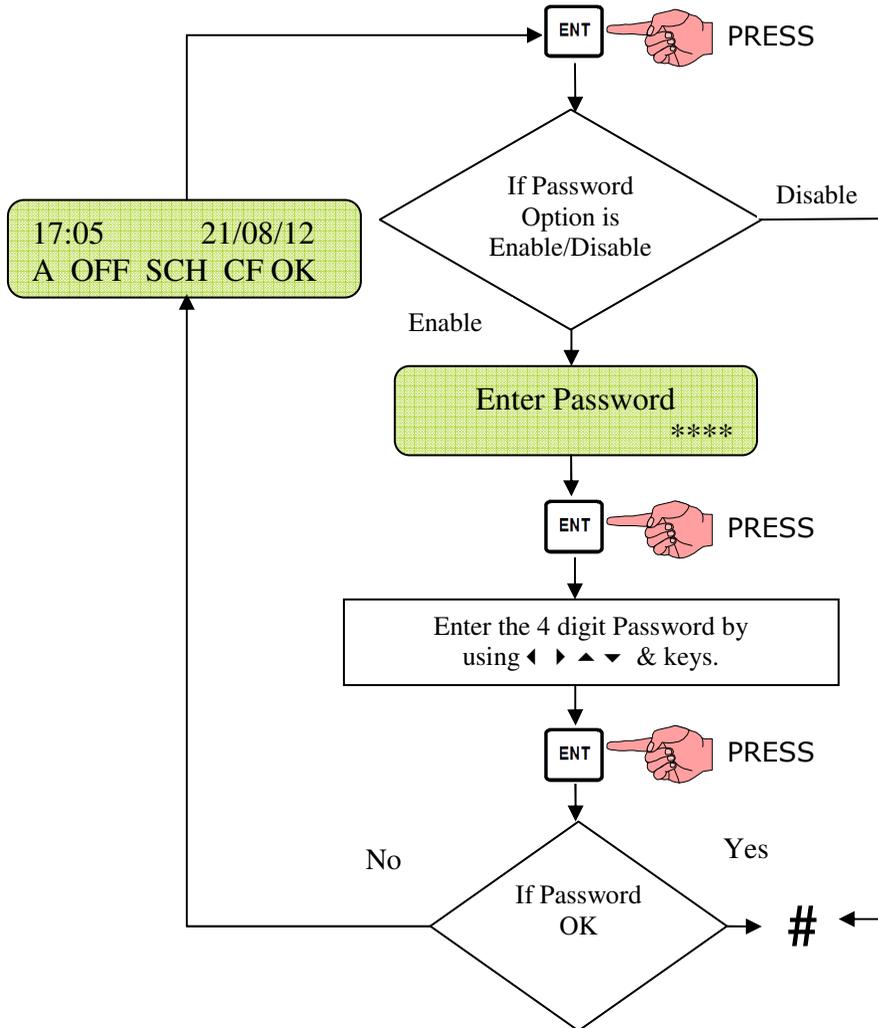
2.Screen Navigation

2.1 Display of various parameters
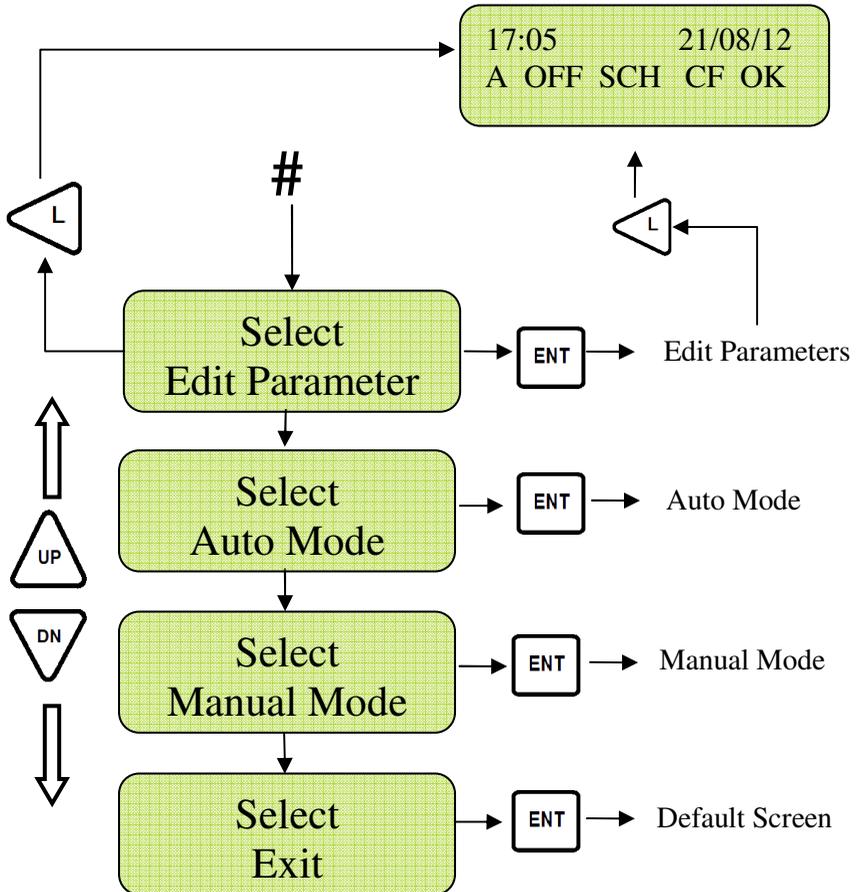
Values of various parameters can be viewed by using UP / DN keys & then pressing ENT key. To exit a sub-menu, press MODE key.

17:05	21/08/12
A OFF SCH	CF OK

Display Overall Values

Display Power & Energy

Display Per-Phase Values

TAS POWERTEK VER – 1.4

UP

DN

2.2 Programming Mode Navigation

Flowcharts for entering into Programming mode:

ENT 👉 PRESS

If Password Option is Enable/Disable — Disable

17:05   21/08/12
A OFF SCH CF OK

Enable

Enter Password
                ****

ENT 👉 PRESS

Enter the 4 digit Password by using ◀ ▶ ▲ ▼ & keys.

ENT 👉 PRESS

No ——— If Password OK ——— Yes

#

```
17:05          21/08/12
A  OFF  SCH   CF  OK
```

\#

◁ L

◁ L → (up arrow)

Select
Edit Parameter → ENT → Edit Parameters

Select
Auto Mode → ENT → Auto Mode

Select
Manual Mode → ENT → Manual Mode

Select
Exit → ENT → Default Screen

UP

DN

Edit Parameters

```
┌─────────────────┐        ┌─────────────────────────┐
│     Select      │   ◁L   │  17:05        21/08/12   │
│  Edit Parameter │───────▶│  A OFF SCH CF OK         │
└─────────────────┘        └─────────────────────────┘

              Edit Parameters

┌─────────────────┐    ENT ▶    General
│  Edit Parameter │───────      Parameters
│     General     │    ◁L ◀
└─────────────────┘

┌─────────────────┐    ENT ▶    System
│  Edit Parameter │───────      Parameters
│     System      │    ◁L ◀
└─────────────────┘

┌─────────────────┐    ENT ▶    Schedule
│  Edit Parameter │───────      Control
│ Schedule Control│    ◁L ◀
└─────────────────┘

┌─────────────────┐    ENT ▶    Schedule
│  Edit Parameter │───────      Parameter
│ Schedule Param  │    ◁L ◀
└─────────────────┘

┌─────────────────┐    ENT ▶    Communication
│  Edit Parameter │───────      Parameters
│  Communication  │    ◁L ◀
└─────────────────┘

┌─────────────────┐    ENT ▶    Fault
│  Edit Parameter │───────      Parameters
│     Fault       │    ◁L ◀
└─────────────────┘

UP ▲    DN ▽
```

3.Programming Mode

3.1 Edit Parameters

This mode is used to carry out system settings. In this mode, various system settings can be carried out. To do the same, use the ▲ ▼ keys and select the type of parameters to be edited. The types of parameters that can be edited are:

- **General & Input/Output** : For General and input/ output settings.

- **System**   : For System Parameters.

- **Fault**   : Different types of fault settings.

1. After selecting the type, press "**Enter**" to enter the sub-menu of that specific type. The details of these sub-menus are given further.

2. You can edit all these sub-menu settings by using the "**Enter**", "**Up**", "**Down**", "**Right**" or "**Left**" keys.

3. To come out of the sub-menu, press "**Left**" key once.

4. To store the edited parameters permanently, press "**Left**" key again it will ask you to save changes press YES & "**Enter**" to save the edited parameter.

5. To come out of EDIT Parameters without saving the changes, press "**Left**" key it will ask for save changes press "NO" & "**Enter**".

3.1.1 **General & Input / Output**

Password Enable : 1	Enables or Disable password for programming mode 0: Disable 1: Enable
Change Password :0001	Sets new password for programming mode Factory Default Value: 0001
Load Default No : 0	Loads factory set values of Parameters 0: No 1: Yes
Reset Energy Cnt No : 0	Sets status of o/p on Auxiliary input 1 state 0: O/P Disable 1: O/p Enable
Default Mode Auto : 0	Here we set the Default mode set after power up 0 : Auto 1 : Manual
Amb Light / Sch Disable : 0	Decides the operation to be work on Ambient Light sensor. 0: Disable 1: Enable

3.1.2 System

Meas. Voltage : 240	Measured Voltage: It is a Factory set parameter dependent on hardware. This parameter is **not editable.**
EXT – PT Ratio 0001.0:1	Ext-PT ratio: By default set to 0001.0:1, but in case external PT is used, this ratio can be set.
Load CT Primary Current : 1000	Sets the Load Current CT's Maximum allowed Primary Current.
Saver TAP Ratio : 0.8333	Saver Tap Ratio : Defines step down ratio of auto transformer.

Note: The Maximum allowable secondary current of Load CT can be either 1A or 5A. Confirm proper CT connections as per the maximum secondary current.

3.1.3 Schedule Control

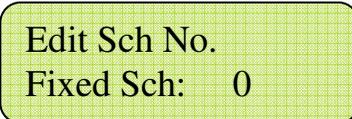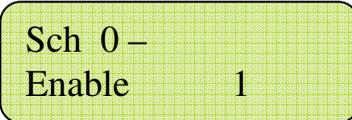|	
ESM Vol Cntrl Disable 0	Enable or Disable Voltage Control within set limit. 0: Disable 1: Enable
Voltage Point Lower : 220V	(Under this, the unit goes out of ESM to Bypass.) Lower : it can set 000V to 230V. Lamps in BYP below Lower Limit .
Voltage Point Upper : 230V	(Above this, if the unit is in BYP mode will go to ESM if desired as in schedule.) Upper: it can set 220V to 299V. Lamps in ESM above Upper Limit
ESM – Power ON Delay : 0300 Secs	After lamp turn ON , this time defines it for attaining full intensity of the lamps. Delay : 0000 to 6000 seconds.
Load Vary Chk Disable 0	Disable =0, Enable =1 This feature enables automatic jump to BYP from ESM , If increase in KW load is seen.
Load Vary Chk : 01.0 %	This parameter is valid if previous load variation 'Enabled'. It defines to load variation % in terms of KW for ESM To BYPASS. It senses % change in KW. Percent : 00.1 to 99.9 %

3.1.4 Schedule Parameter

```
S  M  Tu  W  Th  F  S
↓  ↑   ↑   ↑  ↑   ↑  ↓
```
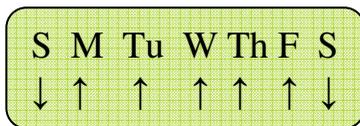
On entering into Schedule parameter above screen will appear, This represents whole week definition starting from Sunday, Monday ends at Saturday one can set Weekly OFF days & Working days by just editing UP & DOWN arrows.

In above display Sunday & Saturday are shown by Down arrow (↓), this indicates these two days are set as weekly OFF days. Here schedule follows timing set in weekend schedule parameter.

The remaining days (Monday to Friday) are considered as Working days, Here schedule follows normal schedule timing.
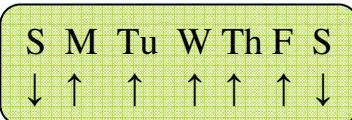
S M Tu W Th F S ↓ ↑ ↑ ↑ ↑ ↑ ↓	Set the weekly schedule as weekly OFF & Weekly ON days.
Edit Sch No. Fixed Sch: 0	Edit Sch No.: Select the number of the schedule to be edited
Sch 0 – Enable 1	Disable = 0; Enable = 1. Enable /Disable 'n' schedule no.

TAS POWERTEK PVT.LTD.

Sch 0 – ON Time 18:30	Set 'On' time of lamps Hours can set from 00 to 23. Minutes can set from 00 to 59.
Sch 0 – OFF Time 06:59	Set 'OFF' time of Lamps Hours can be set from 00 to 23 Minutes can set from 00 to 59.
Sch 0 – ESM Enable 1	Disable = 0 ; Enable=1. Lamps will go in ESM only if ESM control is enabled for this schedule.
Sch 0 – ESM ON 23:00	Set ESM ON time of lamps Hours can set from 00 to 23. Minutes can set from 00 to 59.
Sch 0 – ESM OFF 06:59	Set ESM OFF time of lamps Hours can set from 00 to 23. Minutes can set from 00 to 59.
Edit WEEKEND Sch Fixed Sch: 0	Edit Weekend Sch: Set weekly OFF days schedule (Set as ↓ arrow).
WEEKEND Sch : Fixed Sch: 0	Disable = 0; Enable = 1. Enable /Disable 'n' schedule no

Sch 0 – ON Time 18:30	Set 'On' time of lamps Hours can set from 00 to 23. Minutes can set from 00 to 59.
Sch 0 – OFF Time 06:59	Set 'OFF' time of Lamps Hours can be set from 00 to 23 Minutes can set from 00 to 59.
WEEKEND Sch ESM Enable 1	Disable = 0 ; Enable=1. Lamps will go in ESM only if ESM control is enabled for this schedule.
Sch 0 – ESM ON 23:00	Set ESM ON time of lamps Hours can set from 00 to 23. Minutes can set from 00 to 59
Sch 0 – ESM OFF 06:59	Set ESM OFF time of lamps Hours can set from 00 to 23. Minutes can set from 00 to 59.

3.1.5 Communication Parameter

Unit ID :0000	0000 to 9999. Default value 0001. Defines the 4 digit unit ID used for serial communication on RS-232 Dedicated protocol.
COM Function Modbus RTU : 1	Used for MODBUS comm.. Modbus ASCII : 1 Modbus RTU : 0
Baud Rate - COM 9600 : 1	Baud Rate: selectable. 0–4800bps, 1–9600bps, 2–19200bps, 3 – 38400bps, 4 – 57600bps.
Time 00:00:00	Time: Defines the time setting.
Date 01:01:12	Date: Defines the date setting
Initialize RTC No : 0	0 – No, 1 – Yes. Defining Yes initializes RTC (real time clock) to the above specified values.
Clear NVRAM No :0	0 – No, 1 – Yes. Defining Yes clears NVRAM (in real time clock)This will also clear Energy counters .

3.1.6 Fault

For all types of faults except "Load current over Limit" defined here, the options available are as under:

0 - Disable

1 - Indicate (Display a Fault Message)

2 – Lamps Off (Switch-Off Output)

For all the faults, normally two limits are defined. One is Detection Limit (Over Limit) and another Resume Limit. Detection Limit, if exceeded by the parameter, would mean the action as defined by parameter in type of fault (as given here-above). Resume Limit defines the parameter value below / above which the fault is de-activated.

Over Volt Fault Lamps OFF : 2	Over Voltage Fault Detection
Over Voltage Limit (%) : 115	Over Voltage Limit (%) Range MAX : 150
Over Voltage Resume (%) :110	Over Voltage Resume (%) Range MIN: 100

Under Volt Fault Lamps OFF : 2	Under Voltage Fault Detection
Under Voltage Limit (%) : 085	Under Voltage Limit (%) Range MIN: 00
Under Voltage Resume (%) 090	Under Voltage Resume (%) Range MAX: 100
Over Load Fault Lamps OFF : 2	If the output current goes more than over load limit then, unit take action as set in 'Over Load Fault' parameter.
Over Load Limit (%) : 130	Over Load Limit (%) Range Min: 55 Max : 150
Over Load Reset Yes : 1	If 'Over Load' fault occurs then it will reset only through this fault by saying 'yes' in this parameter. Otherwise action taken on 'over load ' fault will be continue in action

3.1.7 Parameters Default Value

Parameters	Default Value	Minimum set value	Maximum set value
Password	0000	0000	9999
CUR CT Primary	150	1	500
Over Volt Fault	2	0	2
Over Voltage Limit (%)	115	110	125
Over Voltage Resume (%)	110	-	-
Under Volt Fault	2	0	2
Under Voltage Limit (%)	85	75	95
Under Voltage Resume (%)	90	-	-
INT Temp. FLT	2	0	2
INT Temp U. Limit (Deg. C)	70	65	75
Current U. Limit (Amp.)	80	10	Value in CUR CT Primary Parameter
O.C. Trip After (Seconds)	30	01	60
Soft Start Time (Seconds)	60	01	60

4.Standard Warranty

Warranty Conditions for TAS products range:

1) The product/system is warranted against any manufacturing and design defects. Any other defects in the product/system due to wrong handling, transportation damages, usages of product beyond the specified electrical supply conditions, wrong application, wrong working conditions etc are not covered under the warranty clause.

2) TAS Powertek Private Limited will not accept any liabilities, liquidated damages claims due to usage of these equipments. The proper usage of these products/systems would be sole responsibility of the purchaser of these products and TAS would only give the guidelines for the proper usage.

3) Product is warranted against failure of any component as specified in clause no.1 and TAS Powertek Private Limited would be replacing any faulty components free of cost which would be including the cost of the component and the direct engineering services that are involved with the repair of the said product/system.

4) The warranty services offered would be only applicable in the specified territory of our service centers. Any services required outside the specified territory would be on chargeable basis.

5) Some of the products can only be serviced at our Manufacturing works at Nasik. With such products, the transportation cost of faulty product to and fro Nasik would be to purchaser's account.

6) Normally, the products offered are warranted for a period of 15 months from the product invoice date or 12 months from the first usage date, whichever is earlier. This is valid unless extended term of warranty is explicitly agreed between TAS and the purchaser.

7) The warranty is applicable is for rectification of the defective product/system and would not be applicable for the entire product/system replacement.

5.Important Notes

The following applies to all products named in this publication:

1. Some parts of this publication contain **statements about the suitability of our products for certain areas of application**. These statements are based on our knowledge of typical requirements that are often placed on our products in the areas of application concerned. We nevertheless expressly point out **that such statements cannot be regarded as binding statements about the suitability of our products for a particular customer application**. As a rule, TAS is either unfamiliar with individual customer applications or less familiar with them than the customers themselves. For these reasons, it is always ultimately incumbent on the customer to check and decide whether a TAS product with the properties described in the product specification is suitable for use in a particular customer application.

2. We also point out that **in individual cases, a malfunction of electronic components or failure before the end of their usual service life cannot be completely ruled out in the current state of the art, even if they are operated as specified**. In customer applications requiring a very high level of operational safety and especially in customer applications in which the malfunction or failure of an electronic component could endanger human life or health (e.g. in accident prevention or life-saving systems), it must therefore be ensured by means of suitable design of the customer application or other action taken by the customer (e.g. installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the event of malfunction or failure of an electronic component.

3. **The warnings, cautions and product-specific notes must be observed**.

4. In order to satisfy certain technical requirements, **some of the products described in this publication may contain substances subject to restrictions in certain jurisdictions (e.g. because they are classed as hazardous)**. Useful information on this will be found in our Material

Data Sheets on the Internet (www.taspowertek.com). Should you have any more detailed questions, please contact our factory.

5. We constantly strive to improve our products. Consequently, **the products described in this publication may change from time to time**. The same is true of the corresponding product specifications. Please check therefore to what extent product descriptions and specifications contained in this publication are still applicable before or when you place an order.

   We also **reserve the right to discontinue production and delivery of products**. Consequently, we cannot guarantee that all products named in this publication will always be available. The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products.

6. Unless otherwise agreed in individual contracts, **all orders are subject to the current version of the "General Terms of Delivery for Products and Services in the Electrical Industry" published by the German Electrical and Electronics Industry Association (ZVEI)**.

7. The trade name TAS PowerTek further information will be found on the Internet at www.taspowertek.com.