

Save It Easy[®]

ENERGY SAVING RETROFIT HIGH FREQUENCY ADAPTERS



General Installation Guide

Version 3.2

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This document is intended as a general guide to be used by suitably qualified persons who conduct the installation work in compliance with all appropriate industry requirements and guidelines. Product warranties are only valid where the installation has been carried out in compliance with this installation guide.

Where individual sites have specific requirements with regard to installation or health and safety procedures, these should be taken into consideration.

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INTRODUCTION TO THIS GUIDE

This guide should be read in conjunction with the instructions shipped with the product. If you do not have the instructions they can be obtained from our website saveiteasy.co.uk

This Installation Guide provides an overview of the installation requirements for the Save It Easy® range of retrofit high frequency lighting adapters.

It is applicable to the installation of the products ***in standard switch start fittings*** and applies to all Inline T5 and Inline T8 Save It Easy® products.

Where the products are to be installed in non-switchstart luminaires, i.e. rapid start, quick start and T8 high frequency systems, the installer should refer for the specific wiring instructions to the appropriate Application Guidance Note which should be read in conjunction with this Guide.

Where the products are to be installed in multi-lamp switchstart 2 foot fittings you should also refer to the appropriate Application Guidance Note since, in this type of fitting, a wiring modification is required in order for the fitting to operate correctly.

The 'Save-It-Easy®' range of high frequency lighting adaptors is designed specifically as a solution for achieving significant energy savings. It is important that installers are aware that these adaptors cannot and do not seek to improve the lighting performance of existing installations, and in particular cannot guarantee that the installation of Save It Easy® will ensure that a lighting installation meets the latest guidelines.

It is therefore important that, prior to the installation of a retrofit product, the customer and/or installer have satisfied themselves that the light levels and light quality from the existing installation are appropriate for the use to which the building is put and that the lighting scheme complies with the appropriate health and safety legislation.

If there is any doubt concerning the existing or proposed installation then ECSL is happy to work with you and your clients to check lighting levels, to conduct trial installations in order to establish the efficacy of the retrofit solution or, in more complex situations, to work with a lighting engineer to define an appropriate solution.

Please note – the Save It Easy range has a number of different light output options for each size of light fitting. As part of the feasibility study you should ensure that you chose the version that is most appropriate for the light output and energy reduction objectives that you have.

SAVE IT EASY® COMPONENTS

The main components of Save It Easy® are illustrated below:



Main ballast units – above from left:
PRO-5-036, PRO-4-028
PRO-2-016 and PRO-2-011

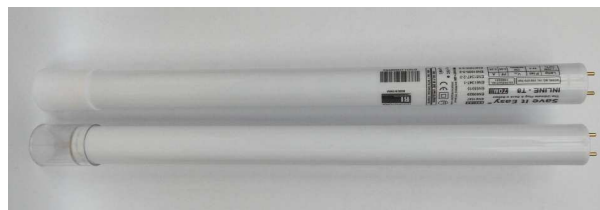


Left – PRO-6-052 and End Cap
Extension for 6ft fittings

Below from left – Filter for 4ft and 5ft
products, end cap for 2ft products
and fuse (which replaces the starter in all
cases)



8 ft ballast plus extension



ELECTRICAL SAFETY



Prior to installation each luminaire must be isolated from the mains supply before commencing work.

In the event that any wiring work is required, isolate via mains distribution board. This can be achieved by switching the circuit breakers off or removing the fuses as appropriate.

In the event that no wiring work is required, switch the lights off at the light switch. Please note, if no wiring changes or any other modifications are to be made to the light fitting, then appropriately experienced personnel can safely change the lamp with the power connected.

In the event of doubt, please consult your technician before proceeding.

All work should be carried out by a competent trained person.

ELECTRICAL COMPLIANCE

It is the responsibility of the installer to comply with current legislation regarding electrical works.

Where modifications are made to the luminaire it should be clearly labelled as having been modified and should indicate which organisation should be contacted in the event of malfunction or operational queries. Whilst ECSL warrants that a correctly modified fitting will comply with the relevant standards and that the modified fitting will be suitable for the CE mark, it is the installer's responsibility to ensure that all works are performed correctly and that the modified fitting is safe.

If modifications are made to the fitting, the installer should also perform a visual check of all the other components in order to identify any visible faults.

INSTALLATION GUIDELINES

Installation instructions for the specific model of Save It Easy you have purchased are included in the product packaging and are also available on our web site www.saveiteasy.co.uk

FITTING THE LAMP TO THE SIE BALLAST UNIT

- a. When attaching the SIE Ballast and end cap or extension piece to the lamp, always ensure that the end of the lamp with the manufacturers name and lamp part number is inserted into the ballast unit as shown below.
- b. Please note that there is normally an audible 'click' when the lamp pins fully engage in the female connector within the SIE ballast, end cap and extension piece. Make sure the lamp is properly engaged before continuing.
- c. When push connecting the lamp to the end cap, it is advisable to hold the end cap so that one finger is between the pins on the end cap. This will ensure that the force is exerted in the right way to effect a good connection and help avoid damage to the end cap.



REMOTE END FILTERS

Adaptors in the 'Energys Professional' range for 4ft and 5ft (1200 mm and 1500mm) fittings are supplied with a 'Remote End Filter' (see photos on page 4). These filters give a far superior performance with regard to suppression of electrical 'noise'. When installing the Remote End Filter it is IMPERATIVE that you follow the installation instructions carefully. In particular, if the warning red LED is ON,(or, if the filter has a green LED then if the green Led is OFF) then this will damage the ballast unit within a few minutes, and any damage to units caused by incorrect installation will not be covered by our warranty. You must ensure that the remote end filter is correctly installed to avoid damage to the Save it Easy ballast.

Also please note that the ballast must be at the live end of the fitting in order for the filter to operate at full capacity.

Please ensure you read and follow the installation instructions for the product carefully.



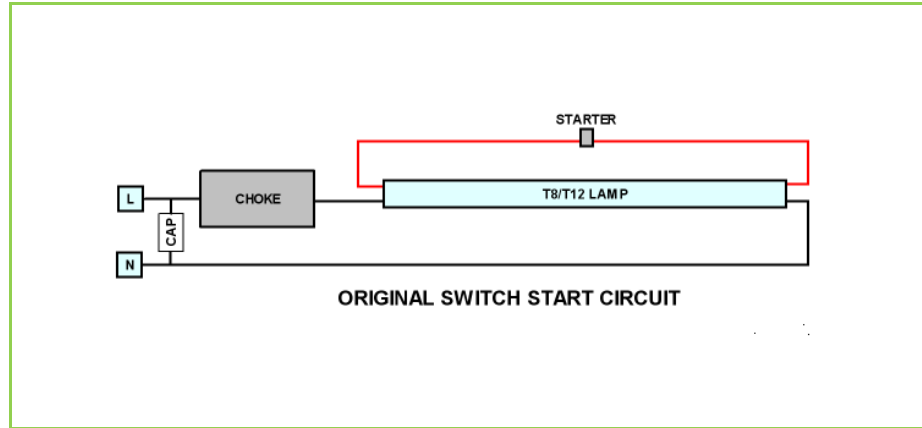
8 FOOT LUMINAIRES

The INL-240-070-SET is supplied with two heat resistant O rings which must be used to secure the T8 lamp into the SIE ballast and extension units. Fit the ring onto the metal end cap of the lamp before inserting into the SIE unit so that the O ring is trapped within the neck of the unit, creating a firm fit.

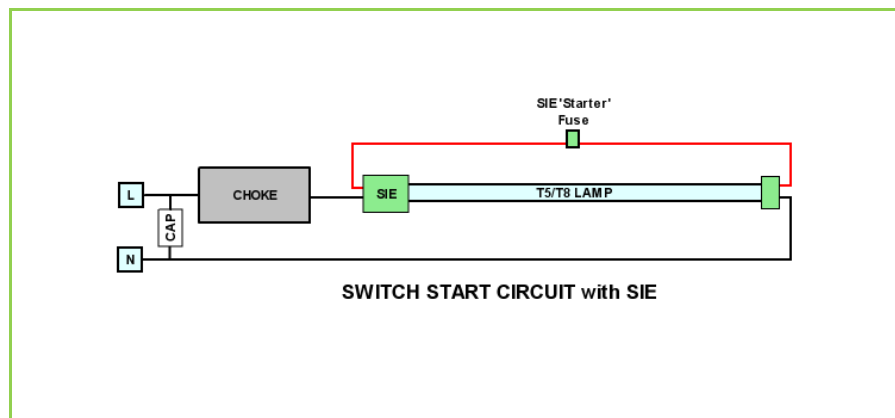
Please note – the Save It Easy adaptors cannot compensate for old or worn lamp holders. In 8ft fittings it is possible that the weight of the tube is sufficient to cause stress on very old, worn, damaged, or poorly fitting lamp holders. If you are in any doubt as to whether the lamp is securely held, we recommend the use of simple clips for T8 lamps which can give additional support and security. Please contact us for additional information if you require it.

INSTALLING IN SWITCH START CIRCUITS (EXCLUDING 600MM X 600MM, 3 AND 4 LAMP MODULAR FITTINGS)

The existing switch start circuit prior to the installation of Save It Easy® is illustrated below.



To install Save It Easy®, the starter is replaced by the SIE fuse (shaped the same as the old starter) and the existing T8 or T12 lamp is replaced by the new lamp with the Save It Easy® HF ballast attached to one end and the T5 end cap / filter, or (in the case of the INL-240-070-SET and the PRO-6-052) the extension piece attached to the other. The resulting circuit is shown below.



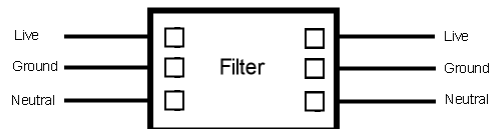
COMMON MODE CHOKE

Some products/kits will include a Common Mode Choke (product code CMC-2A3) which acts as an electrical filter for the luminaire. Where a filter is supplied, this should be fitted in line with the incoming live and neutral to the luminaire adjacent to the connector block as shown below.

When connecting the filter, please note that the filter is bi-directional which means that it does not matter which side the incoming feed is connected. Note also that the middle pin on each side is reserved for the earth connection if present.

Due to the relatively high power of the PRO-6-052 (for 6ft fittings) and the INL-230-070-SET (for 8ft fittings) a common mode choke must be installed in each fitting in order to ensure compliance with the electrical emission standards. These can be ordered from us direct, or from any electrical wholesaler.

A common mode choke is also supplied as standard in the kit for conversion of 4 x 600mm fittings since the internal wiring of these fittings is usually done in such a way that the high and low frequency carriers are close together – and it is simpler to install the filter than to try to separate out the low frequency carriers.



GENERAL INSTALLATION CONSIDERATIONS

We provide below some general guidance concerning the planning and execution of a Save It Easy® installation and the operation of the equipment.

POWER FACTOR

Save It Easy® adapters are designed to operate with a Power Factor (PF) close to unity (the most desirable situation) when used in series with electromagnetic (EM) ballasts. The actual power factor varies slightly with the different versions and with the characteristics of the existing EM ballast.

Because EM ballasts have a very poor, lagging Power Factor, most luminaires are fitted with a capacitor to improve the PF, which means that, when Save It Easy® is installed, an Over Compensation Effect (OCE) can occur. This would result in a low, leading, PF and consequently an increased current through the system (although the power consumption is not affected by this increased current since the increased current is offset by the lower power factor).

In sites where there is an extremely heavy lighting load compared to other electricity consumption, this may not be desirable because it could mean that the whole site would end up with a leading PF. In such an event, the capacitors should be removed from the luminaire's circuit (a very simple process) during the Save It Easy® installation. However, in any other situation, the OCE is likely to be beneficial in that it will improve the overall PF for the site, in some case bringing with it additional savings with respect to reduced capacity charges.

It should be noted, however, that this relates only to fittings with Switch Start ballasts. The installation process for non-Switch Start ballasts will include removal of the PF correction capacitor as a matter of course.

For further information, and a more detailed discussion of this topic, please refer to SIE Application Guidance Note 18.

ELECTROMAGNETIC COMPATIBILITY

Save It Easy® has been tested and certified as performing in conformance with the International Standard EN55015, Limits and Methods of Measurement of radio disturbance characteristics of electrical lighting and similar equipment.

When Save It Easy is installed correctly the converted luminaire will also comply with this standard. All testing is performed in a luminaire and it is the performance of the complete luminaire (not just the Save It Easy adaptor) which is certified as being compliant.

Under some circumstances we recommend the use of a common mode choke in the light fitting to suppress unwanted interference (see the section on Common Mode Choke).

LAMP COMPATIBILITY

Save It Easy® is compatible with linear fluorescent lamps that meet the industry standards. However, we strongly recommend that only lamps from the leading manufacturers, i.e. Sylvania, GE, Philips and Osram are used to help ensure that the expected lumen output and lamp life are achieved. In particular, we have conducted extensive testing with both Sylvania and GE, and we are happy to offer an extended warranty on lamps from these two manufacturers where the lamps are purchased through ourselves.

PIR CONTROLS

If you are intending to install the T5 lamps in areas controlled by PIRs, it is essential you contact your supplier to obtain SIE Application Guidance Note 019 before carrying out the installation.

APPLICATION GUIDANCE NOTES

Information on both general and specific topics, including wiring instructions for non-switchstart luminaires, is provided through SIE Application Guidance Notes.

These are continually being updated and added to. To ensure you are using the up-to-date guide, please contact your supplier.

The list of current and planned Application Guidance Notes (AGN) at the date of the release of this guide is as follows:

AGN Number	Topic	Release Date
14	Specific Instructions for Installing in 2 foot Switch Start multi-lamp fittings	1/10/10
15	General Guide to Installing in Fittings with Quick Start or Rapid Start Ballasts	1/10/10
16	Installation in standard Switch Start Fittings	1/10/10
17	Specific Instructions for Installing in 600 mm x 600 mm HF Fittings	1/10/10
18	Power Factor Considerations	22/8/08
19	Using Save It Easy with Lighting Controls	4/12/08
20	Guidance with regard to Emergency Fittings	4/12/08
21	General Instructions for Installing in HF Fittings	1/10/10

PRO SERIES -APPLICATION GUIDANCE NOTES

Information on all PRO series product range can be downloaded from our SaveItEasy website under downloads section. There are specific instructions for 4' and 5' products especially supplied with new remote end filters. In case of standard wiring questions follow general wiring instructions (AGN) for SwitchStart, non-SwitchStart luminaire and HF fitting provided through SIE Application Guidance Notes.

List of recent releases:

[PRO Series 2' QUAD Installation Instructions _PRO-2-Q44 \(UK version\)](#)

[PRO Series 2' DEPOP Installation Instructions \(UK Version\)](#)

[PRO 4' and 5' Installation Instructions \(UK Version\)](#)

[PRO 36 and 39 Installation Instructions \(UK Version\)](#)

[PRO Series 6ft Installation Instructions _PRO-6-52 \(UK Version\)](#)