

## Safe Supply Units

### 2022 Update

We have recently become aware that there are no commercially available RCD test sets on the market that are compatible with the output of a Safe Supply Unit (SSU). Therefore, unless the installer already has a suitable test set, it will not be possible to complete the normal range of RCD related tests at the time of installation or when carrying out periodic testing.

A range of composite protection assemblies designed for installation in school science laboratories and similar locations, where the close proximity of children, water and mains voltage electricity creates an extremely hazardous environment, requiring the highest level of protection against electric shock. SSUs provide a threefold level of protection:

- (i) RCD sensitivity of 1.25 mA or 5 mA
- (ii) Shock current restricted to 10 mA
- (iii) Reduced line to earth shock voltage of 115V

The high level of protection provided by Safe Supply Units is achieved by combining a 1:1 ratio, double wound transformer fitted with an extra high sensitivity RCD to the output. The secondary winding of the transformer is centre tapped and bonded to earth via a 12 k.ohm current limiting safety resistor. The complete assemblies are presented in a range of enclosures to suit different power and distribution arrangements.

SSUs are designed for use in an education environment and incorporate a number of features to suit this application.

- Enclosures are of robust construction to ensure longevity and to minimise vibration and noise.
- Enclosures are ventilated to assist with cooling and fine mesh is fitted behind the louvres to prevent the insertion of litter and other debris.
- Floor standing enclosures incorporate fixing holes to enable them to be secured to walls.
- The transformer winding incorporates primary tapplings enabling the output voltage to be adjusted in low load applications (the open circuit voltage can exceed full load voltage by up to 5%).

### Options

Safe Supply Units can incorporate a range of options including:

- Remote trip facility for use with “normally closed” emergency stop buttons in accordance with BS7671, Regulation 37.4.2.3.
- Key switch controlled outputs, to enable the load to be isolated when the laboratory is unsupervised.
- Hinged protective covers over MCBs, test buttons, etc.

Please see over the page for full details of the Safe Supply Unit range, type references, weights and dimensions, etc. A FAQ sheet for Safe Supply Units is also available, which can be downloaded from the Tech Data section of our website: [www.blakley.co.uk](http://www.blakley.co.uk)



WELU series



FELU series

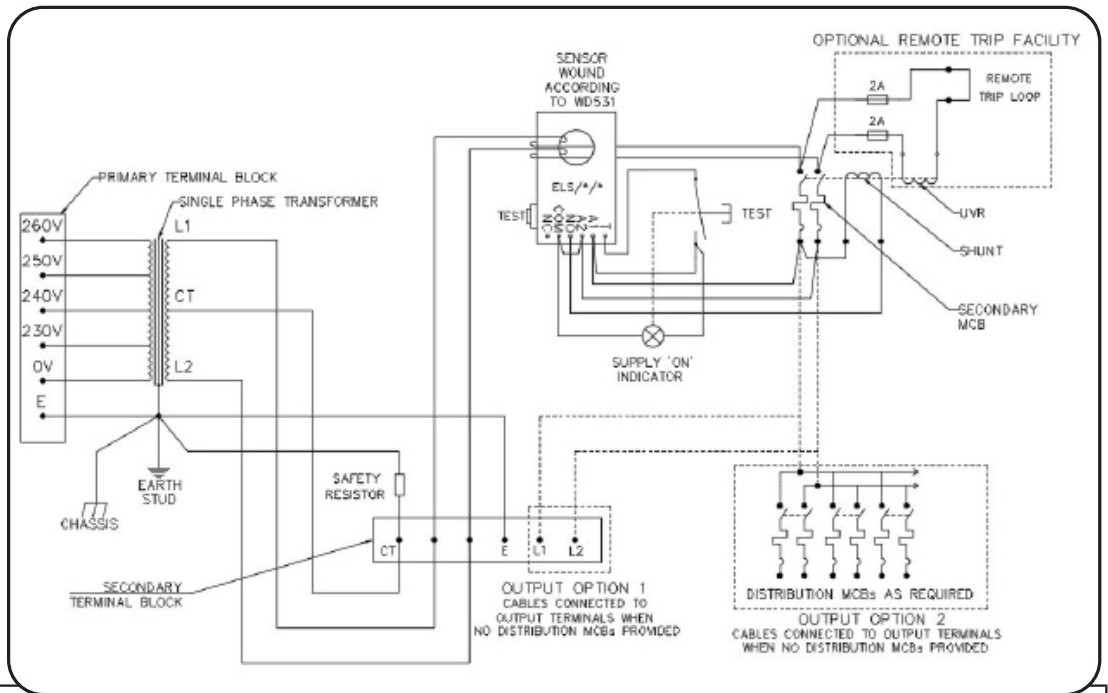


CELU series

# Safe Supply Units

The diagram below shows the general schematic for a standard Safe Supply Unit. The diagram also shows extras such as: Distribution MCBs; a Keyswitch controlled output; a Remote Trip Facility for use with Normally Closed Emergency Stop Buttons. Shown below are Type Numbers, Descriptions, Dimensions and Weights of Safe Supply Units, as well as details of standard extras, which should be specified at the time of initial enquiry.

Schematic diagram of a typical Safe Supply Unit showing various options



Type	Description	Dimensions, W x D x H	Weight
<b>WELU series - Wall Mounting</b>			
WELU/2/#	2 kVA rating	372 x 395 x 333 mm	29 kg
WELU/2#/C2-10	2 kVA rating, fitted 2 no. 10A DP distribution MCBs	372 x 395 x 333 mm	29 kg
WELU/2#/C3-10	2 kVA rating, fitted 3 no. 10A DP distribution MCBs	372 x 395 x 333 mm	29 kg
WELU/3/#	3 kVA rating	372 x 395 x 333 mm	42 kg
WELU/3#/C2-16	3 kVA rating, fitted 2 no. 16A DP distribution MCBs	372 x 395 x 333 mm	42 kg
WELU/3#/C3-16	3 kVA rating, fitted 3 no. 16A DP distribution MCBs	372 x 395 x 333 mm	42 kg
<b>CELU series - Floor Standing Console Style Enclosure</b>			
CELU/3#/C3-16	3 kVA rating, fitted 3 no. 16A DP MCBs	314 x 219 x 775 mm	47 kg
CELU/5#/C3-20	5 kVA rating, fitted 3 no. 20A DP MCBs	314 x 219 x 775 mm	67 kg
<b>FELU series - Floor Standing Enclosure</b>			
FELU/5/#	5 kVA rating	367 x 354 x 686 mm	67 kg
FELU/5#/C2-##	5 kVA rating, fitted 2 no. DP distribution MCBs - ## insert rating (usually 16A or 20A)	367 x 354 x 686 mm	67 kg
FELU/5#/C3-##	5 kVA rating, fitted 3 no. DP distribution MCBs - ## insert rating (usually 16A or 20A)	367 x 354 x 686 mm	67 kg
FELU/5#/C4-##	5 kVA rating, fitted 4 no. DP distribution MCBs - ## insert rating (usually 16A or 20A)	367 x 354 x 686 mm	67 kg
FELU/8/#	8 kVA rating	367 x 354 x 686 mm	91 kg
FELU/8#/C2-##	8 kVA rating, fitted 2 no. DP distribution MCBs - ## insert rating (usually 16A, 20A or 32A)	367 x 354 x 686 mm	91 kg
FELU/8#/C3-##	8 kVA rating, fitted 3 no. DP distribution MCBs - ## insert rating (usually 16A, 20A or 32A)	367 x 354 x 686 mm	91 kg
FELU/8#/C4-##	8 kVA rating, fitted 4 no. DP distribution MCBs - ## insert rating (usually 16A, 20A or 32A)	367 x 354 x 686 mm	91 kg
FELU/10/#	10 kVA rating	367 x 354 x 686 mm	97 kg
FELU/10#/C2-##	10 kVA rating, fitted 2 no. DP distribution MCBs - ## insert rating (usually 16A, 20A or 32A)	367 x 354 x 686 mm	97 kg
FELU/10#/C3-##	10 kVA rating, fitted 3 no. DP distribution MCBs - ## insert rating (usually 16A, 20A or 32A)	367 x 354 x 686 mm	97 kg
FELU/10#/C4-##	10 kVA rating, fitted 4 no. DP distribution MCBs - ## insert rating (usually 16A, 20A or 32A)	367 x 354 x 686 mm	97 kg
# = Insert required sensitivity of RCD: 125 = 1.25mA; 5 = 5mA i.e. FELU/5/5			
Extra for Remote Trip Facility - all models. Add suffix /RTF to above Type Numbers i.e. FELU/5/5/RTF			