

HRN RANGE

MULTI CIRCUIT LOW PROFILE CONVERSION KITS



■ **4 POLE CHANGE OVER RELAY**

For total isolation of control gear in the event of a test or emergency condition.

■ **ADDITIONAL 5th POLE HF RELAY**

With built in time delay to ensure the interconnected HF ballast does not see an open circuit condition when the fluorescent lamp is used in the emergency condition. Prevents ballast "shut down" or failure.

■ **DDP**

Module incorporates battery deep discharge protection circuit.

■ **CONSTANT CURRENT CHARGER CIRCUIT**

■ **BATTERY**

Extra high temperature nickel cadmium, complies with IEC 598, voltage dependant on lamp wattage.

■ **WIRING CONNECTIONS**

Screw terminals for supply cables (2.5mm solid or stranded), 'push fit terminals' for connection of wiring from ballast to lamp holder.

■ **LOW PROFILE MODULE**

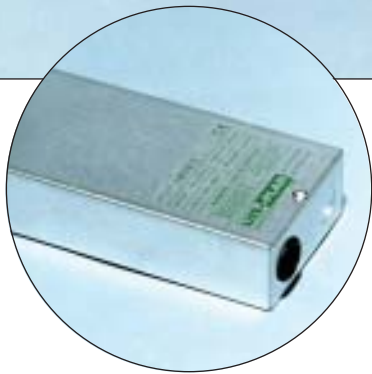
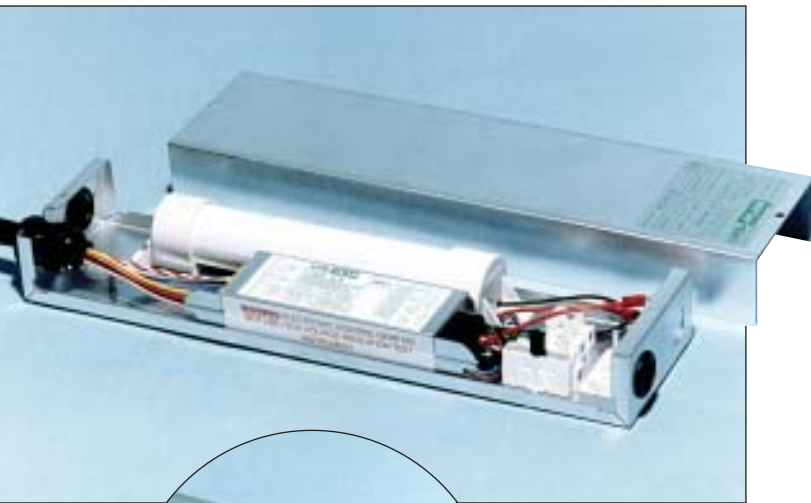
29mm high, enables fixing within most luminaires, including those with category 3 louvres.

■ **MODULES**

Designed and manufactured in accordance with BS.EN 61347-2-7: 2001 and E.M.C. directive for mains and emergency mode.

LITE-PLAN
Reliability by Design

CE
Patent Applied For.



REMOTE ENCLOSURES

Where it is impractical to enclose the HRN kit within the body or spine of a luminaire, a surface mounted metal enclosure can be supplied.

Various types are available which can accommodate the batteries only, complete HRN kit, or kits with the appropriate ballast.

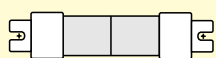
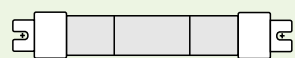
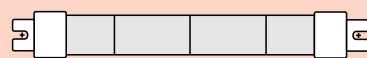

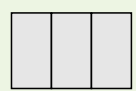
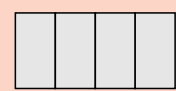
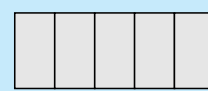
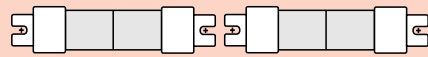
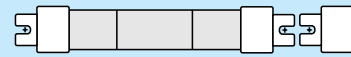
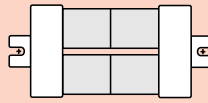
Two part and IP54 versions are also available.

Enclosures have adequate cable entries provided and when required, they can accommodate a starter holder/starter.

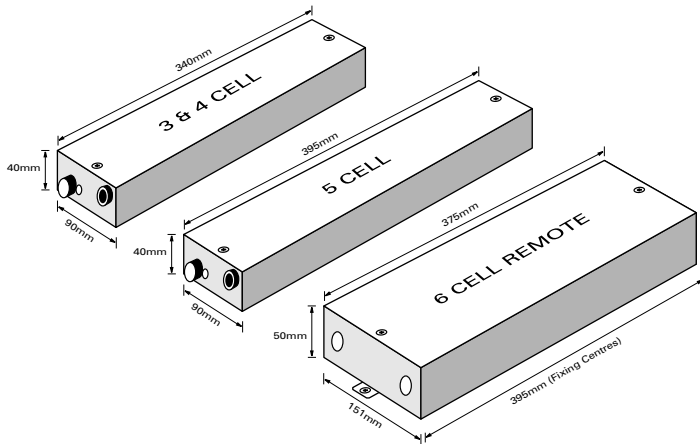
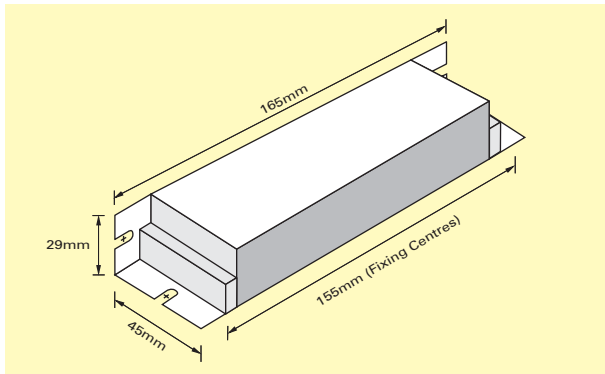
Remote enclosures are supplied as standard with a 4-way FTB for termination of all supplies in the remote box.


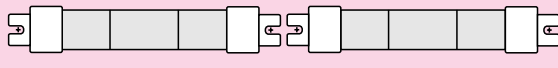
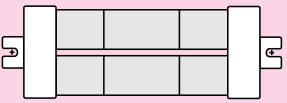
Standard loom supplied is 1m cables with 600mm sleeving (2 x 20mm glands).

BATTERY CONFIGURATIONS

2 Cell	3 Cell	4 Cell (4.8v)	5 Cell (6v)
<p style="text-align: center;">TYPE 1</p>  <p style="text-align: center;">2 CELL STICK</p> <p>160mm(l) x 37mm(h) x 37mm(d) Fixing Centres 145mm</p>	<p style="text-align: center;">TYPE 1</p>  <p style="text-align: center;">3 CELL STICK</p> <p>220mm(l) x 37mm(h) x 37mm(d) Fixing Centres 205mm</p>	<p style="text-align: center;">TYPE 1</p>  <p style="text-align: center;">4 CELL STICK</p> <p>280mm(l) x 37mm(h) x 37mm(d) Fixing Centres 265mm</p>	<p style="text-align: center;">TYPE 1</p>  <p style="text-align: center;">5 CELL STICK</p> <p>340mm(l) x 37mm(h) x 37mm(d) Fixing Centres 325mm</p>
	<p style="text-align: center;">TYPE 2</p>  <p style="text-align: center;">3 CELL PLATE</p> <p>99mm(l) x 60mm(w) x 35mm(h) Fixing Centres 32 x 40mm</p>	<p style="text-align: center;">TYPE 2</p>  <p style="text-align: center;">4 CELL PLATE</p> <p>132mm(l) x 60mm(w) x 35mm(h) Fixing Centres 64 x 40mm</p>	<p style="text-align: center;">TYPE 2</p>  <p style="text-align: center;">5 CELL PLATE</p> <p>165mm(l) x 60mm(w) x 35mm(h) Fixing Centres 96 x 40mm</p>
		<p style="text-align: center;">TYPE 3</p>  <p style="text-align: center;">2 x 2 CELL STICKS</p> <p>2 off 160mm(l) x 37mm(h) x 37mm(d) Fixing Centres 145mm</p>	<p style="text-align: center;">TYPE 3</p>  <p style="text-align: center;">1 x 3 CELL + 1 x 2 CELL</p> <p>220mm(l) x 37mm(h) x 37mm(d) Fixing Centres 205mm + 160mm(l) x 37mm(h) x 37mm(d) Fixing Centres 145mm</p>
		<p style="text-align: center;">TYPE 4</p>  <p style="text-align: center;">2 x 2 CELL STICKS (TWIN END CAPS)</p> <p>168mm(l) x 70mm(h) x 37mm(d) Fixing Centres 150mm</p>	

DIMENSIONS



	6 Cell (7.2v)
	<p>TYPE 2</p> <p>6 CELL PLATE 198mm(l) x 60mm(w) x 35mm(h) Fixing Centres 128 x 40mm</p>
	<p>TYPE 3</p> <p>2 x 3 CELL STICKS 2 off 220mm(l) x 37mm(h) x 37mm(d) Fixing Centres 205mm</p>
	<p>TYPE 4</p> <p>2 x 3 CELL STICKS (TWIN END CAPS) 228mm(l) x 70mm(h) x 37mm(d) Fixing Centres 210mm</p>

BALLAST LUMEN FACTORS %

LAMP		HRN.3	HRN.4	HRN.5	HRN.6
WATT.	TYPE	(3.6v)	(4.8v)	(6.0v)	(7.2v)
4	T5	28	33	39	46
5	TC-EL	25	29	35	42
6	T5	22	25	30	36
7	TC-EL	20	24	28	34
8	T5	18	21	25	30
9	TC-EL	19	22	26	31
10	TC-DEL	15	18	21	25
10	TC-DD	17	19	23	28
11	TC-EL	18	21	26	31
13	T5	16	18	22	26
13	TC-DEL	16	18	22	26
15	T8	14	16	19	23
16	T8	13	15	18	21
16	TC-DD	13	15	18	21
18	TC-L	12	14	16	20
18	TC-F	12	14	16	20
18	TC-DEL	12	14	17	20
18	TC-TEL	13	15	18	21
18	T8	12	14	17	20
20	T12	12	14	17	20
21	TC-DD	12	14	16	20
22	T-R	11	13	16	19
24	TC-L	11	12	15	18
24	TC-F	11	12	15	18
26	TC-DEL	10	12	14	17
26	TC-TEL	9	11	13	16
28	TC-DD	10	11	13	16
30	T8	9	11	13	15
32	T-R	9	10	12	14
32	TC-TEL	9	10	12	14
34	TC-L	8	9	11	13
36	TC-L	8	9	11	13
36	T8	8	9	11	13
36	TC-F		9	11	13
38	T8		9	11	13
38	TC-DD		8	10	12
40	T12		8	10	12
40	T-R		8	10	12
40	TC-L		9	11	13
42	TC-TEL				11
55	TC-L		7	8	10
58	T8		7	8	9
65	T12			7	9
70	T8			7	8
75	T12				8
80	T12				7
85	T12				7

N.B. For Amalgam and T5 Lamps – specially designed conversion kits should be used, see separate literature.

N.B. Modules can be calibrated to provide a higher B.L.F. than shown above, when the type and wattage of lamp is known and specified.

SPECIFICATION

Please Note:

For amalgam and T5 lamps – Specifically designed conversion kits should be used, see separate literature.

Modules can be calibrated to provide a higher BLF than shown overleaf, when the type and wattage of lamp is known and specified.

	HRN.3	HRN.4	HRN.5	HRN.6
MAINS VOLTAGE	220 – 240 volts A.C.			
MAINS CURRENT	50 mA			
MAINS FREQUENCY	50 Hz			
CHARGE CURRENT	200 mA (NOM)			
RECHARGE PERIOD	24 hours			

ORDERING CODES

HRN.3	4 – 36W
HRN.4	4 – 58W
HRN.5	4 – 70W
HRN.6	4 – 85W
<i>For remote enclosure suffix /R</i>	

ACCESSORIES



LED indicator supplied with each kit (500mm long) to be connected to module via screw terminals



Batteries fixed via fire retardant end cap.

All the details and specifications shown in this folder are deemed correct at time of print. The right to modify equipment, change specifications and instructions at any time, without notice, is reserved as part of Lite-Plan policy of continuous development and improvement.

We will endeavour to keep all our customers informed of any alterations as and when occur.

LITE-PLAN
Reliability by Design

CONVERSION SERVICE

We offer a very comprehensive and competitive conversion service for all customers.

Although there is no specific British Standard covering Emergency Lighting conversions, all conversion work carried out at Lite-Plan is to meet the relevant requirements of BS.EN 60598-1 (Luminaires Part 1: General requirements and tests) and BS.EN 60598.2.22 (Luminaires for Emergency Lighting) as well as the relevant Industry Committee for Emergency Lighting (ICEL) standards especially ICEL 1004: (The use or Modification of Mains Luminaires for Emergency Lighting Applications).

All modification work is designed and carried out to have negligible effect on EMC emissions and susceptibility.

Lite-Plan carries out in excess of 5,000 emergency conversions each month, the skill and experience of the conversion team ensure that all luminaires are suitably converted for emergency use.

