

Balancing and Settlement Code

APPENDICES FOR BSC PROCEDURE

**UNMETERED SUPPLIES REGISTERED IN
SMRS**

BSCP520

Version 1.1

Date : TBA

Appendices to BSC Procedure BSCP520**relating to****Unmetered Supplies Registered in SMRS**

1. Reference is made to the Balancing and Settlement Code (the Code) for the Electricity Industry in England and Wales and, in particular, to the definition of "BSC Procedure".
2. This is the Appendices to Balancing and Settlement Code BSCP520, Version 1.1 relating to Unmetered Supplies Registered in SMRS.
3. This Appendices to Balancing and Settlement Code BSCP520 is effective from TBA.
4. This Appendices to Balancing and Settlement Code BSCP520 has been approved by the Panel.

For and on behalf of the Panel

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AMENDMENT RECORD

Version	Date	Description of Changes	CPs Included	Mods Panel Ref
1.0	06/02/02	Changes incorporated for CP690.	CP690	SVG/008/101
<u>1.1</u>	<u>TBA</u>	<u>Proposed changes incorporated affecting all sections of Appendices document.</u>		

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1. Categories of Unmetered Apparatus

1.1 Classification and Load Rating of Standard Lighting Equipment

The following charging codes are proposed to provide a standardised listing of lamp types, nominal lamp wattages and charging wattages (existing nationally agreed charging wattages are shown). The actual charging wattages are subject to amendment following detailed on-site measurement by load research and the new values will be introduced progressively as they become available.

Standard lighting equipment shall be classified in accordance with a 7 digit charging code as follows:-

Digits 1 and 2	Apparatus Type 2 numeric digits
Digits 3, 4, 5 and 6	Apparatus Watts (N.B. Nominal lamp wattage to be used not the circuit wattage.) 4 numeric digits
Digit 7	Control Gear Type 1 numeric digit

Note: Customers will normally be expected to use the standard apparatus and switching regime codes when presenting the inventory to the Unmetered Supplies Operator (UMSO) in accordance with their Connection Agreement.

1.2 Use of Digits**Digits 1 & 2****Apparatus Code****Apparatus Description****Definition Letters**

01	General lighting service filament	GLS, GLD
03	Tungsten Halogen	TH
11	Low Pressure Sodium	SOX, SOXPLUS
12	Low Pressure Sodium (Economy)	SOX/E, SOX-PLUS, SOX-HF
14	High Pressure Sodium	SON, SON/T, SON/+
21	High Pressure Mercury	MBF/U, MBFR/U
23	High Pressure Mercury (Blended)	MBTL/U
24	High Pressure Mercury (Halide)	MBI
25	High Pressure Mercury (Induction)	QL
26	High Pressure Mercury (Ceramic Discharge Metal Halide)	CDM-T, CDM-TT
27	High Pressure Mercury (Metal Arc)	MP
31	Low Pressure Mercury (Fluorescent Tube) - Single Lamp	MCF/U
32	Low Pressure Mercury (Fluorescent Tube) - Twin Lamp	MCF/U
33	Low Pressure Mercury (Compact) - Single Lamp	SL, PL-S, PL-L
34	Low Pressure Mercury (Compact) - Twin Lamp	PL-S, PL-L
35	Low Pressure Mercury (Compact) - Single Lamp	PL-C, PL*E/C
36	Low Pressure Mercury (Compact) - Single Lamp	PL-T
37	Low Pressure Mercury (2D) - Single Lamp	2D
40	Light Emitting Diodes (LEDs)	

Apparatus Code**Apparatus Description**

Note: Lamp Codes 32 and 34 refer to twin fluorescent lamps operated in series on a single ballast.

60	Triple rated Motorway Signs
79	Traffic Signals
91	Time Switch Controllers
92	Thermal Photo Cells
93	Hybrid Photo Cells
94	Electronic Photo Cell
95	Electronic Photo Cells (Latching Relay)
96	Photo Electric Cells Time Switch (Part Night Controllers)

Digits 3, 4, 5 & 6

Are the nominal lamp rating in watts

Digit 7

Control Gear Code	Control Gear Description
0	No Control Gear
1	Standard Control Gear
2	Low Loss Control Gear
3	High Frequency (H/F) Electronic Ballast (Frequencies greater than 1 kHz)
4	SOX/E Optimum Gear
5	Low Frequency (L/F) Electronic Ballast (Frequencies lower than 1 kHz)

Notes :

- a) Code 0 relates to all lamps which do not require control gear to operate or in which the control gear is incorporated into the lamp envelope. For example :-
- (i) GLS/GLD lamps
 - (ii) TH lamps
 - (iii) MBT lamps
 - (iv) SL lamps
 - (v) PL*E/C lamps
- b) Code 1 relates to standard control gear (auto leak) which consists of a ballast/transformer and capacitor. In some circuits i.e. fluorescent lamps circuits a starter switch is also incorporated.
- (i) HPL & HPI lamps
 - (ii) MBF lamps

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- (iii) SOX & SOX/E lamps
 - (iv) SLI lamps
 - (v) MCF, PL-S, PL-L, PL-C, PL-T & 2D lamps
- c) Code 2 relates to low loss control gear which consists of a ballast/transformer and capacitor together with an electronic ignitor to provide the initial ignition pulse to the lamp.
- (i) SOX & SOX/E lamps
 - (ii) SON & SON/T lamps
 - (iii) CDM-T lamps
 - (iv) MP lamps
- d) Code 3 relates to electronic control gear operating at high frequency (in excess of 1kHz) which provides the initial ignition pulse and the subsequent voltage/current control of the lamp.
- (i) HPL & HPI lamps
 - (ii) MBF lamps
 - (iii) SOX & SOX/E lamps
 - (iv) SON & SON/T lamps
 - (v) SLI lamps
 - (vi) MCF, PL-S, PL-L & PL-C lamps
 - (vii) QL lamps
- NB. High frequency control gear is not currently available for all lamp types and wattages, however it is believed that all future developments will be towards high frequency control gear.

- e) Code 4 relates to optimum control gear which consists of a ballast/transformer and capacitor together with an electronic ignitor to provide the ignition pulse to the lamp.
 - (i) SOX/E lamps
- f) Code 5 relates to electronic control gear operating at low frequency (below 1kHz) which provides the initial ignition pulse and the subsequent voltage/current control of the lamp.

1.3 Charging Codes and Circuit Ratings for Standard Lighting Equipment

Lamp Watts	Load Description	Lamp Definition	Charging Code	Circuit Watts	Circuit VA	Circuit var	Power Factor
40w	General lighting service filament	GLS, GLD	0100400	40	40	0	1.00
60w	General lighting service filament	GLS, GLD	0100600	60	60	0	1.00
75w	General lighting service filament	GLS, GLD, PAR	0100750	75	75	0	1.00
80w	General lighting service filament	GLS, GLD, PAR	0100800	80	80	0	1.00
100w	General lighting service filament	GLS, GLD	0101000	100	100	0	1.00
120w	General lighting service filament	GLS, GLD, PAR	0101200	120	120	0	1.00
150w	General lighting service filament	GLS, GLD	0101500	150	150	0	1.00
200w	General lighting service filament	GLS, GLD	0102000	200	200	0	1.00
300w	General lighting service filament	GLS, GLD	0103000	300	300	0	1.00
500w	General lighting service filament	GLS, GLD	0105000	500	500	0	1.00
50w	Tungsten Halogen	TH	0300500	50	50	0	1.00
100w	Tungsten Halogen	TH	0301000	100	100	0	1.00
150w	Tungsten Halogen	TH	0301500	150	150	0	1.00
200w	Tungsten Halogen	TH	0302000	200	200	0	1.00
300w	Tungsten Halogen	TH	0303000	300	300	0	1.00
500w	Tungsten Halogen	TH	0305000	500	500	0	1.00
1000w	Tungsten Halogen	TH	0310000	1000	1000	0	1.00
1500w	Tungsten Halogen	TH	0315000	1500	1500	0	1.00
35w	Low Pressure Sodium - Standard Gear	SOX, SOXPLUS	1100351	65	75	37	0.87
55w	Low Pressure Sodium - Standard Gear	SOX, SOXPLUS	1100551	84	95	44	0.87
90w	Low Pressure Sodium - Standard Gear	SOX, SOXPLUS	1100901	123	140	67	0.88
135w	Low Pressure Sodium - Standard Gear	SOX, SOXPLUS	1101351	175	206	109	0.85
180w	Low Pressure Sodium - Standard Gear	SOX, SOXPLUS	1101801	223	245	101	0.91

Lamp Watts	Load Description	Lamp Definition	Charging Code	Circuit Watts	Circuit VA	Circuit var	Power Factor
35w	Low Pressure Sodium - Low Loss Gear	SOX, SOXPLUS	1100352	48	56	29	0.86
55w	Low Pressure Sodium - Low Loss Gear	SOX, SOXPLUS	1100552	67	73	29	0.92
90w	Low Pressure Sodium - Low Loss Gear	SOX, SOXPLUS	1100902	104	120	60	0.87
135w	Low Pressure Sodium - Low Loss Gear	SOX, SOXPLUS	1101352	159	168	54	0.95
180w	Low Pressure Sodium - Low Loss Gear	SOX, SOXPLUS	1101802	223	245	101	0.91
35w	Low Pressure Sodium - H/F Electronic Ballast	SOX	1100353	39	40	9	0.98
55w	Low Pressure Sodium - H/F Electronic Ballast	SOX	1100553	59			
90w	Low Pressure Sodium - H/F Electronic Ballast	SOX	1100903	----			
135w	Low Pressure Sodium - H/F Electronic Ballast	SOX	1101353	----			
180w	Low Pressure Sodium - H/F Electronic Ballast	SOX	1101803	----			
26w	Low Pressure Sodium (Economy) - Standard Gear	SOX/E	1200261	59	73	43	0.81
36w	Low Pressure Sodium (Economy) - Standard Gear	SOX/E	1200361	67	84	51	0.80
66w	Low Pressure Sodium (Economy) - Standard Gear	SOX/E	1200661	104	108	29	0.96
91w	Low Pressure Sodium (Economy) - Standard Gear	SOX/E	1200911	136	169	100	0.80
131w	Low Pressure Sodium (Economy) - Standard Gear	SOX/E	1201311	178	194	77	0.92
26w	Low Pressure Sodium (Economy) - Low Loss Gear	SOX/E	1200262	41	42	9	0.98
36w	Low Pressure Sodium (Economy) - Low Loss Gear	SOX/E	1200362	51	55	21	0.93
66w	Low Pressure Sodium (Economy) - Low Loss Gear	SOX/E	1200662	83	92	40	0.90
91w	Low Pressure Sodium (Economy) - Low Loss Gear	SOX/E	1200912	129	143	62	0.90
131w	Low Pressure Sodium (Economy) - Low Loss Gear	SOX/E	1201312	176	196	86	0.90
18w	Low Pressure Sodium (Economy) - Optimum Gear	SOX/E	1200184	25	30	17	0.83
26w	Low Pressure Sodium (Economy) - Optimum Gear	SOX/E	1200264	33	38	19	0.87
36w	Low Pressure Sodium (Economy) - Optimum Gear	SOX/E	1200364	45	49	19	0.92
66w	Low Pressure Sodium (Economy) - Optimum Gear	SOX/E	1200664	81	85	26	0.95
91w	Low Pressure Sodium (Economy) - Optimum Gear	SOX/E	1200914	106	112	36	0.95
131w	Low Pressure Sodium (Economy) - Optimum Gear	SOX/E	1201314	151	164	64	0.92

Lamp Watts	Load Description	Lamp Definition	Charging Code	Circuit Watts	Circuit VA	Circuit var	Power Factor
26w	Low Pressure Sodium (Economy) - H/F Electronic Ballast	SOX/E	1200263	----			
36w	Low Pressure Sodium (Economy) - H/F Electronic Ballast	SOX/E	1200363	38			
66w	Low Pressure Sodium (Economy) - H/F Electronic Ballast	SOX/E	1200663	68			
91w	Low Pressure Sodium (Economy) - H/F Electronic Ballast	SOX/E	1200913	----			
131w	Low Pressure Sodium (Economy) - H/F Electronic Ballast	SOX/E	1201313	----			
50w	High Pressure Sodium - Standard Gear	SON, SON/T	1400501	62	71	35	0.87
70w	High Pressure Sodium - Standard Gear	SON, SON/T	1400701	84	94	42	0.89
100w	High Pressure Sodium - Standard Gear	SON, SON/T	1401001	114	132	67	0.86
150w	High Pressure Sodium - Standard Gear	SON, SON/T	1401501	172	162	92	0.88
250w	High Pressure Sodium - Standard Gear	SON, SON/T	1402501	279	317	150	0.88
400w	High Pressure Sodium - Standard Gear	SON, SON/T	1404001	434	511	270	0.85
600w	High Pressure Sodium - Standard Gear	SON, SON/T	1406001	640	736	363	0.87
1000w	High Pressure Sodium - Standard Gear	SON, SON/T	1410001	1083	1265	654	0.86
210w	High Pressure Sodium (Plug in Replacement)	SON/H	1402101	229			
350w	High Pressure Sodium (Plug in Replacement)	SON/H	1403501	372			
35w	High Pressure Sodium - White SON	SON/T	1400352	35			
50w	High Pressure Sodium - White SON	SON/T	1400502	50			
100w	High Pressure Sodium - White SON	SON/T	1401002	100			
70w	High Pressure Sodium – Edison 21 HID Controllers	SON, SON/T	1400702	70	80	39	0.87
100w	High Pressure Sodium – Edison 21 HID Controllers	SON, SON/T	1401002	95	112	59	0.85
150w	High Pressure Sodium – Edison 21 HID Controllers	SON, SON/T	1401502	143	166	84	0.86
250w	High Pressure Sodium – Edison 21 HID Controllers	SON, SON/T	1402502	232	269	136	0.86
400w	High Pressure Sodium – Edison 21 HID Controllers	SON, SON/T	1404002	360	434	242	0.83

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Lamp Watts	Load Description	Lamp Definition	Charging Code	Circuit Watts	Circuit VA	Circuit var	Power Factor
50w	High Pressure Sodium - H/F Electronic Ballast	SON, SON/T	1400503	----			
70w	High Pressure Sodium - H/F Electronic Ballast	SON, SON/T	1400703	<u>78</u>	<u>79</u>	<u>13</u>	<u>0.99</u>
100w	High Pressure Sodium - H/F Electronic Ballast	SON, SON/T	1401003	----			
150w	High Pressure Sodium - H/F Electronic Ballast	SON, SON/T	1401503	<u>164</u>	<u>166</u>	<u>26</u>	<u>0.99</u>
250w	High Pressure Sodium - H/F Electronic Ballast	SON, SON/T	1402503	----			
400w	High Pressure Sodium - H/F Electronic Ballast	SON, SON/T	1404003	----			
600w	High Pressure Sodium - H/F Electronic Ballast	SON, SON/T	1406003	----			
1000w	High Pressure Sodium - H/F Electronic Ballast	SON, SON/T	1410003	----			
50w	High Pressure Sodium - L/F Electronic Ballast	SON, SON/T	1400505	----			
70w	High Pressure Sodium - L/F Electronic Ballast	SON, SON/T	1400705	70	80	13	0.99
100w	High Pressure Sodium - L/F Electronic Ballast	SON, SON/T	1401005	----			
150w	High Pressure Sodium - L/F Electronic Ballast	SON, SON/T	1401505	----			
- 50w	High Pressure Mercury - Standard Gear	HPL-N (MBF/U)	2100501	61	71	36	0.86
- 80w	High Pressure Mercury - Standard Gear	HPL-N (MBF/U)	2100801	94	106	49	0.89
- 125w	High Pressure Mercury - Standard Gear	HPL-N (MBF/U)	2101251	142	162	78	0.88
- 250w	High Pressure Mercury - Standard Gear	HPL-N (MBF/U)	2102501	275	322	168	0.85
- 400w	High Pressure Mercury - Standard Gear	HPL-N (MBF/U)	2104001	428	519	294	0.82
- 700w	High Pressure Mercury - Standard Gear	HPL-N (MBF/U)	2107001	742	858	431	0.86
1000w	High Pressure Mercury - Standard Gear	HPL-N (MBF/U)	2110001	1040	1206	611	0.86
250w	High Pressure Mercury – Edison 21 HID Controllers	HPL-N (MBF/U)	2102502	228	274	152	0.83
400w	High Pressure Mercury – Edison 21 HID Controllers	HPL-N (MBF/U)	2104002	335	441	262	0.80
100w	High Pressure Mercury (Blended)	ML (MBTL/U)	2301000	100			
160w	High Pressure Mercury (Blended)	ML (MBTL/U)	2301600	160			
250w	High Pressure Mercury (Blended)	ML (MBTL/U)	2302500	250			
500w	High Pressure Mercury (Blended)	ML (MBTL/U)	2305000	500			

Lamp Watts	Load Description	Lamp Definition	Charging Code	Circuit Watts	Circuit VA	Circuit var	Power Factor
250w	High Pressure Mercury (Halide) - Standard Gear	HPI (MBI)	2402501	266			
400w	High Pressure Mercury (Halide) - Standard Gear	HPI (MBI)	2404001	471			
1000w	High Pressure Mercury (Halide) - Standard Gear	HPI (MBI)	2410001	1015			
2000w	High Pressure Mercury (Halide) - Standard Gear	HPI (MBI)	2420001	2105			
55w	High Pressure Mercury (Induction) - H/F Electronic Ballast	QL	2500553	55			
85w	High Pressure Mercury (Induction) - H/F Electronic Ballast	QL	2500853	85			
165w	High Pressure Mercury (Induction) – H/F Electronic Ballast	QL	2501653	165			
35w	High Pressure Mercury (CDM) - Low Loss Gear	CDM-T, TT, ET	2600352	47			
70w	High Pressure Mercury (CDM) - Low Loss Gear	CDM-T, TT, ET	2600702	86			
150w	High Pressure Mercury (CDM) - Low Loss Gear	CDM-T, TT, ET	2601502	167			
75w	High Pressure Mercury (Metal Arc) – Low Loss Gear	MP	2700752	86			
100w	High Pressure Mercury (Metal Arc) – Low Loss Gear	MP	2701002	115			
150w	High Pressure Mercury (Metal Arc) – Low Loss Gear	MP	2701502	172			
4w	Low Pressure Mercury - Standard Gear (Single Lamp Circuit)	MCF/U	3100041	10	12	7	0.83
6w	Low Pressure Mercury - Standard Gear (Single Lamp Circuit)	MCF/U	3100061	12	14	7	0.86
8w	Low Pressure Mercury - Standard Gear (Single Lamp Circuit)	MCF/U	3100081	14	16	8	0.88
13w	Low Pressure Mercury - Standard Gear (Single Lamp Circuit)	MCF/U	3100131	18	21	11	0.86
15w	Low Pressure Mercury - Standard Gear (Single Lamp Circuit)	MCF/U, TLD	3100151	25	29	15	0.86
18w	Low Pressure Mercury - Standard Gear (Single Lamp Circuit)	MCF/U, TLD	3100181	29	34	18	0.85
20w	Low pressure Mercury - Standard Gear (Single Lamp Circuit)	MCF/U, TLD	3100201	31	36	18	0.86
30w	Low Pressure Mercury - Standard Gear (Single Lamp Circuit)	MCF/U, TLD	3100301	40	47	25	0.85
36w	Low Pressure Mercury - Standard Gear (Single Lamp Circuit)	MCF/U, TLD	3100361	47	51	20	0.92
40w	Low Pressure Mercury - Standard Gear (Single Lamp Circuit)	MCF/U, TLD	3100401	50	53	18	0.94
58w	Low Pressure Mercury - Standard Gear (Single Lamp Circuit)	MCF/U, TLD	3100581	71	80	37	0.89
65w	Low Pressure Mercury - Standard Gear (Single Lamp Circuit)	MCF/U, TLD	3100651	79	83	25	0.95
70w	Low Pressure Mercury - Standard Gear (Single Lamp Circuit)	MCF/U, TLD	3100701	83	92	40	0.90

Lamp Watts	Load Description	Lamp Definition	Charging Code	Circuit Watts	Circuit VA	Circuit var	Power Factor
75w	Low Pressure Mercury - Standard Gear (Single Lamp Circuit)	MCF/U, TLD	3100751	92			
85w	Low Pressure Mercury - Standard Gear (Single Lamp Circuit)	MCF/U, TLD	3100851	102	113	49	0.90
100w	Low Pressure Mercury - Standard Gear (Single Lamp Circuit)	MCF/U, TLD	3101001	114	125	52	0.91
125w	Low Pressure Mercury - Standard Gear (Single Lamp Circuit)	MCF/U, TLD	3101251	139	227	179	0.61
16w	Low Pressure Mercury - H/F Gear (Single Lamp Circuit)	TLDHF	3100163	19			
18w	Low Pressure Mercury - H/F Gear (Single Lamp Circuit)	TLDHF	3100183	19			
32w	Low Pressure Mercury - H/F Gear (Single Lamp Circuit)	TLDHF	3100323	36			
36w	Low Pressure Mercury - H/F Gear (Single Lamp Circuit)	TLDHF	3100363	36			
50w	Low Pressure Mercury - H/F Gear (Single Lamp Circuit)	TLDHF	3100503	56			
58w	Low Pressure Mercury - H/F Gear (Single Lamp Circuit)	TLDHF	3100583	58			
70w	Low Pressure Mercury - H/F Gear (Single Lamp Circuit)	TLDHF	3100703	70			
4w	Low Pressure Mercury - Standard Gear (Twin Lamp Circuit)	MCF/U	3200041	14	17	10	0.82
6w	Low Pressure Mercury - Standard Gear (Twin Lamp Circuit)	MCF/U	3200061	18	21	11	0.86
8w	Low Pressure Mercury - Standard Gear (Twin Lamp Circuit)	MCF/U	3200081	20	23	11	0.87
13w	Low Pressure Mercury - Standard Gear (Twin Lamp Circuit)	MCF/U	3200131	34	40	21	0.86
15w	Low Pressure Mercury - Standard Gear (Twin Lamp Circuit)	MCF/U	3200151	40	47	25	0.85
18w	Low Pressure Mercury - Standard Gear (Twin Lamp Circuit)	MCF/U	3200181	47	49	14	0.96
20w	Low Pressure Mercury - Standard Gear (Twin Lamp Circuit)	MCF/U	3200201	50	50	0	1.00
9w	Low Pressure Mercury - Compact Integral Standard Gear	SL	3300090	9	11	6	0.82
13w	Low Pressure Mercury - Compact Integral Standard Gear	SL	3300130	13	15	7	0.87
18w	Low Pressure Mercury - Compact Integral Standard Gear	SL	3300180	18	21	11	0.86
25w	Low Pressure Mercury - Compact Integral Standard Gear	SL	3300250	25	27	10	0.93
5w	Low Pressure Mercury - Compact Stan. Gr. (Single Lamp Circuit) - 2 Pin	PL-S	3300051	11	12	5	0.92
7w	Low Pressure Mercury - Compact Stan. Gr. (Single Lamp Circuit) - 2 Pin	PL-S	3300071	12	13	5	0.92
9w	Low Pressure Mercury - Compact Stan. Gr. (Single Lamp Circuit) - 2 Pin	PL-S	3300091	13	15	7	0.87
11w	Low Pressure Mercury - Compact Stan. Gr. (Single Lamp Circuit) - 2 Pin	PL-S	3300111	16	18	8	0.89

Lamp Watts	Load Description	Lamp Definition	Charging Code	Circuit Watts	Circuit VA	Circuit var	Power Factor
11w	Low Pressure Mercury - Compact Stan. Gr. (Single Lamp Circuit) - 4 Pin	PL-L	3300111	16	36	33	0.42
18w	Low Pressure Mercury - Compact Stan. Gr. (Single Lamp Circuit) - 4 Pin	PL-L	3300181	26	89	85	0.29
24w	Low Pressure Mercury - Compact Stan. Gr. (Single Lamp Circuit) - 4 Pin	PL-L	3300241	32	82	75	0.39
36w	Low Pressure Mercury - Compact Stan. Gr. (Single Lamp Circuit) - 4 Pin	PL-L	3300361	44	103	93	0.43
5w	Low Pressure Mercury - Compact H/F Gear (Single Lamp Circuit) - 4 Pin	PL-S	3300053	7			
7w	Low Pressure Mercury - Compact H/F Gear (Single Lamp Circuit) - 4 Pin	PL-S	3300073	8			
9w	Low Pressure Mercury - Compact H/F Gear (Single Lamp Circuit) - 4 Pin	PL-S	3300093	10			
24w	Low Pressure Mercury - Compact H/F Gear (Single Lamp Circuit) - 4 Pin	PL-L	3300243	25			
36w	Low Pressure Mercury - Compact H/F Gear (Single Lamp Circuit) - 4 Pin	PL-L	3300363	36			
40w	Low Pressure Mercury - Compact H/F Gear (Single Lamp Circuit) - 4 Pin	PL-L	3300403	45			
55w	Low Pressure Mercury - Compact H/F Gear (Single Lamp Circuit) - 4 Pin	PL-L	3300553	62			
18w	Low Pressure Mercury - Compact Stan. Gr. (Twin Lamp Circuit) - 4 Pin	PL-L	3400181	44	52	28	0.85
24w	Low Pressure Mercury - Compact H/F Gear (Twin Lamp Circuit) - 4 Pin	PL-L	3400243	49			
36w	Low Pressure Mercury - Compact H/F Gear (Twin Lamp Circuit) - 4 Pin	PL-L	3400363	72			
40w	Low Pressure Mercury - Compact H/F Gear (Twin Lamp Circuit) - 4 Pin	PL-L	3400403	90			
55w	Low Pressure Mercury - Compact H/F Gear (Twin Lamp Circuit) - 4 Pin	PL-L	3400553	124			
9w	Low Pressure Mercury - Compact Integral Electronic Gear	PL*E/C	3500090	9	17	14	0.54
11w	Low Pressure Mercury - Compact Integral Electronic Gear	PL*E/C	3500110	11	22	19	0.50
15w	Low Pressure Mercury - Compact Integral Electronic Gear	PL*E/C	3500150	15	32	29	0.46
20w	Low Pressure Mercury - Compact Integral Electronic Gear	PL*E/C	3500200	20	37	31	0.54
23w	Low Pressure Mercury - Compact Integral Electronic Gear	PL*E/C	3500230	23	43	37	0.53
10w	Low Pressure Mercury - Compact Stan. Gr. (Single Lamp Circuit) - 2 Pin	PL-C	3500101	16			
13w	Low Pressure Mercury - Compact Stan. Gr. (Single Lamp Circuit) - 2 Pin	PL-C	3500131	18			

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Unmetered Supplies Registered in SMRS

Lamp Watts	Load Description	Lamp Definition	Charging Code	Circuit Watts	Circuit VA	Circuit var	Power Factor
18w	Low Pressure Mercury - Compact Stan. Gr. (Single Lamp Circuit) - 2 Pin	PL-C	3500181	24			
26w	Low Pressure Mercury - Compact Stan. Gr. (Single Lamp Circuit) - 2 Pin	PL-C	3500261	32			
9w	Low Pressure Mercury - Compact H/F Gear (Single Lamp Circuit) - 4 Pin	PL-C	3500093	11			
13w	Low Pressure Mercury - Compact H/F Gear (Single Lamp Circuit) - 4 Pin	PL-C	3500133	15			
18w	Low Pressure Mercury - Compact H/F Gear (Single Lamp Circuit) - 4 Pin	PL-C	3500183	20			
26w	Low Pressure Mercury - Compact H/F Gear (Single Lamp Circuit) - 4 Pin	PL-C	3500263	---			
18w	Low Pressure Mercury - Compact Stan. Gr. (Single Lamp Circuit) - 2 Pin	PL-T	3600181	24			
26w	Low Pressure Mercury - Compact Stan. Gr. (Single Lamp Circuit) - 2 Pin	PL-T	3600261	32			
10w	Low Pressure Mercury – 2D Standard Gear (Single Lamp Circuit)	2D	3700101	13	16	9	0.82
16w	Low Pressure Mercury – 2D Standard Gear (Single Lamp Circuit)	2D	3700161	21	25	14	0.84
21w	Low Pressure Mercury – 2D Standard Gear (Single Lamp Circuit)	2D	3700211	27	32	18	0.84
28w	Low Pressure Mercury – 2D Standard Gear (Single Lamp Circuit)	2D	3700281	36	42	22	0.86
38w	Low Pressure Mercury – 2D Standard Gear (Single Lamp Circuit)	2D	3700381	48	56	29	0.86
38w	LED		4000380	38	38	0	1.00

Load Description	Charging Code	Circuit Watts	Circuit VA	Circuit var	Power Factor
Time switch	9100020	2			
Thermal Photo Cell	9200030	3			
Hybrid Photo Cell	9300030	3			
Electronic Photo Cell	9400010	1			
Electronic Photo Cell (Latching Relay)	9500000	0.25			
Electronic Photo Cell Time Switch	9700000	3			

Notes :

- a) Code Nos. 9200030 & 9300030 are based on 3 watts when the lamp is switched "OFF" and 0 watts when lamp is switched "ON".
- b) Code No. 9500000 relates to a photo cell which is fitted with a latching relay which only consumes power for the instance of switch "ON" or switch "OFF".
- c) Code No. 9700000 relates to a photo cell controller with an electronic fixed time switch off (Part night operation).

1.4 Classification and Load Rating of Traffic Signals

Traffic signals are complex installations which may have a substantial load, up to 3 kW or more, and are difficult to record accurately. Also, because of the long operating hours, they may have annual consumptions running into many thousands of kWhs. Because of these factors it is recommended that new installations should be metered, within the constraints outlined in Section 1.1.

Traffic signals can present some alternative operating modes in addition to steady continuous loads and photocell or time switch controlled loads. The range of modes include the following :-

- a) Continuous steady loads e.g. controllers, monitoring equipment;
- b) Night dimming loads e.g. vehicle and pedestrian aspect lamps;
- c) Cyclic operating loads e.g. vehicle and pedestrian aspect lamps;
- d) Part time loads e.g. school/cattle crossings, peak time traffic lights;
- e) Multi time loads e.g. school crossings (up to four times a day);
- f) Manually controlled loads e.g. fog override, overhead gantries; and
- g) Flashing equipment e.g. school and zebra crossings.

Traffic signal codes now use “79” as the first two digits to avoid confusion with the original Second Tier Unmetered Supplies Panel (STUSP) codes. The structure of the codes is :-

Charging Code	=	79XXRRR
where XX	=	Numeric Code overleaf
and RRR	=	Nominal Rating

01	3 lamp aspect (undimmed)	26	
02	3 lamp aspect (dimmed)	27	
03	2 lamp aspect (undimmed)	28	
04	2 lamp aspect (dimmed)	29	
05	Wait Signal/Push Button/Filter	30	Weather detection/measurement equip
06	Controller	31	Supply cabinet
07	Vehicle Detector	32	CCTV equipment
08	Cableless Link Unit (CLU)	33	Audio equipment
09	Lamp Monitoring Unit (LMU)	34	Radio equipment
10	Outstation Monitoring Unit (OMU)	35	Telephone equipment
11	Outstation Transmission Unit (OTU)	36	Communications equipment
12	Detector Power Pack Unit (DPU)	37	
13	Speed Discrimination Unit (SDU)	38	
14	Variable Maximum Unit (VMU	39	
15	(MOVA)	40	LED 3 lamp aspect (undimmed)
16	Zebra Crossings	41	LED 3 lamp aspect (dimmed)
17	Box Sign	42	LED 2 lamp aspect (undimmed)
18	School Crossings	43	LED 2 lamp aspect (dimmed)
19	Pole Mounted Responder	44	LED filter (undimmed)
20	Traffic Counter	45	LED filter (dimmed)
21	Speeding/Red Light Camera	46	LED Belisha Beacons
22	Motorway Overhead Gantry	47	LED School Crossings
23	Ticket Machine	48	
24	Wait Signal/Push Button/Filter (dimmed)	49	
25	Speed Warning Signs		

The tables below have been prepared on the following basis:-

Cyclically operating lamps are treated as continuous with the following assumed percentage operating times to give a reduced “continuous” load value :-

3 lamp heads	55% of red lamp + 5% of amber lamp + 45% of green lamp
2 lamp heads	50% of each lamp
Pedestrian “Wait” signals	20% of each lamp
Zebra Beacons	62% of each lamp
School Crossings	50% of each lamp

Tungsten dimmed lamps shall be rated at the full nominal wattages for the daytime period and at 66% of the nominal wattage for the night-time period.

The codes listed below are not exhaustive. Where different ratings are found, appropriate codes may be created using the above structure.

Watts	Load Description	Charging Code	Day Watts	Day var	Night Watts	Night var
Red/Amber/Green Vehicle Aspect per lamp						
50w	Vehicle Aspect - 3 lamp (undimmed)	7901050	18	0	18	0
65w	Vehicle Aspect - 3 lamp (undimmed)	7901065	23	0	23	0
50w	Vehicle Aspect - 3 lamp (dimmed)	7902050	18	0	12	0
65w	Vehicle Aspect - 3 lamp (dimmed)	7902065	23	0	16	0
Red/Amber; Cross/Do not cross, Filter per lamp						
50w	Pedestrian Aspect - 2 lamp (undimmed)	7903050	25	0	25	0
65w	Pedestrian Aspect - 2 lamp (undimmed)	7903065	32	0	32	0
50w	Pedestrian Aspect - 2 lamp (dimmed)	7904050	25	0	16	0
65w	Pedestrian Aspect - 2 lamp (dimmed)	7904065	32	0	21	0
“WAIT” Signals						
25w	Tungsten “WAIT” signal (undimmed)	7905025	5	0	5	0
40w	Tungsten “WAIT” signal (undimmed)	7905040	8	0	8	0
65w	Tungsten “WAIT” signal (undimmed)	7905065	13	0	13	0
25w	Tungsten “WAIT” signal (dimmed)	7924025	5	0	4	0
40w	Tungsten “WAIT” signal (dimmed)	7924040	8	0	5	0
65w	Tungsten “WAIT” signal (dimmed)	7924065	13	0	9	0
Controllers						
10w	Controller	7906010	10	0	10	0
20w	Controller	7906020	20	0	20	0
25w	Controller	7906025	25	0	25	0
30w	Controller	7906030	30	0	30	0
35w	Controller	7906035	35	0	35	0
40w	Controller	7906040	40	0	40	0
50w	Controller	7906050	50	0	50	0
60w	Controller	7906060	60	0	60	0
65w	Controller	7906065	65	0	65	0
70w	Controller	7906070	70	0	70	0
74w	Controller	7906074	74	0	74	0
75w	Controller	7906075	75	0	75	0
89w	Controller	7906089	89	0	89	0
100w	Controller	7906100	100	0	100	0
105w	Controller	7906105	105	0	105	0
120w	Controller	7906120	120	0	120	0
125w	Controller	7906125	125	0	125	0
135w	Controller	7906135	135	0	135	0
140w	Controller	7906140	140	0	140	0
141w	Controller	7906141	141	0	141	0
150w	Controller	7906150	150	0	150	0
160w	Controller	7906160	160	0	160	0
165w	Controller	7906165	165	0	165	0
170w	Controller	7906170	170	0	170	0
244w	Controller	7906244	244	0	244	0
271w	Controller	7906271	271	0	271	0

Watts	Load Description	Charging Code	Day Watts	Day var	Night Watts	Night var
1w	Vehicle Detector - Generic	7907001	1	0	1	0
2w	Vehicle Detector - Plessey	7907002	2	0	2	0
3w	Vehicle Detector - Sarasota	7907003	3	0	3	0
5w	Vehicle Detector - GEC	7907005	5	0	5	0
6w	Vehicle Detector - Microsense MXE	7907006	6	0	6	0
7w	Vehicle Detector - Infra red (IVD)	7907007	7	0	7	0
8w	Vehicle Detector - Microwave/Radar (MVD)	7907008	8	0	8	0
14w	Vehicle Detector - Microwave/Radar (MVD)	7907014	14	0	14	0
25w	Vehicle Detector - Microwave/Radar (MVD)	7907025	25	0	25	0
15w	Cableless Link Unit (CLU)	7908015	15	0	15	0
40w	Cableless Link Unit (CLU)	7908040	40	0	40	0
50w	Cableless Link Unit (CLU)	7908050	50	0	50	0
6w	Lamp Monitoring Unit (LMU)	7909006	6	0	6	0
2w	Outstation Monitoring Unit (OMU)	7910002	2	0	2	0
8w	Outstation Monitoring Unit (OMU)	7910008	8	0	8	0
25w	Outstation Monitoring Unit (OMU)	7910025	25	0	25	0
40w	Outstation Monitoring Unit (OMU)	7910040	40	0	40	0
15w	Outstation Transmission Unit (OTU)	7911015	15	0	15	0
30w	Outstation Transmission Unit (OTU)	7911030	30	0	30	0
40w	Outstation Transmission Unit (OTU)	7911040	40	0	40	0
10w	Detector Power Pack Unit (DPU)	7912010	10	0	10	0
25w	Detector Power Pack Unit (DPU)	7912025	25	0	25	0
40w	Detector Power Pack Unit (DPU)	7912040	40	0	40	0
42w	Detector Power Pack Unit (DPU)	7912042	42	0	42	0
48w	Detector Power Pack Unit (DPU)	7912048	48	0	48	0
??w	Speed Discrimination Unit (SDU)	79130				
10w	Variable Maximum Unit (VMU)	7914010	10	0	10	0
7w	(MOVA)	7915007	7	0	7	0
18w	Box Sign - 3 x 6w Fluorescent	7917018	36	22	36	22
21w	Box Sign - 3 x 7w Fluorescent	7917021	33	21	33	21
150w	Pole Mounted Responder	7919150	150	0	150	0
180w	Traffic Counter	7920180	180	0	180	0
500w	Camera - Speeding / Red Light	7921500	500	0	500	0
200w	Motorway Overhead Gantry per signal face	7922200	200	0	200	0
400w	Motorway Overhead Gantry per signal face	7922400	400	0	400	0

Watts	Load Description	Charging Code	Day Watts	Day var	Night Watts	Night var
42w	Ticket Machine	7923042	42	0	42	0
Pedestrian Crossing (Zebra)						
50w	Flashing Beacons	7916050	31	0	31	0
60w	Flashing Beacons	7916060	37	0	37	0
100w	Flashing Beacons	7916100	62	0	62	0
150w	Flashing Beacons	7916150	93	0	93	0
<u>10w</u>	<u>Pace Type BB001 LED</u>	<u>7946006</u>	<u>6</u>	<u>0</u>	<u>6</u>	<u>0</u>
School Crossings						
<u>50w</u>	<u>School Crossing Patrol Signals</u>	<u>7918050</u>	<u>25</u>	<u>0</u>	<u>25</u>	<u>0</u>
60w	School Crossing Patrol Signals	7918060	30	0	30	0
100w	School Crossing Patrol Signals	7918100	50	0	50	0
150w	School Crossing Patrol Signals	7918150	75	0	75	0
<u>6w</u>	<u>Forest City LED conversion</u>	<u>7947006</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>

Note

Charging Code Nos. 7908*** to 7915*** are powered directly from the traffic signal/pelican crossing controller and therefore the energy consumed may be included within the overall wattage figure provided by the controller manufacturer. Each installation will need to be investigated and consumption figures agreed with the UMSO and the Customer.

1.5 Motorway Signals

1.5.1 Devices with Variable Hours

NOMAD VARIANT	Charge Code	Quiescent Load (Watts)	Dim Load(Watts)	Bright Load(Watts)
Controlled Indicator 450	6001450	50	200	400
Controlled Indicator 451	6001451	50	200	400
Controlled Indicator 452	6001452	50	200	400
Matrix Indicator 407	6001407	20	19	116
Matrix Indicator 409	6001409	20	19	116
Matrix Indicator 421	6001421	20	19	113
Matrix Indicator 429	6001429	20	19	116
Matrix Indicator 491	6001491	20	19	116
Matrix Indicator 492	6001492	20	19	116
Matrix Indicator 493	6001493	20	19	116
Matrix Indicator 494	6001494	20	19	116
Matrix Indicator 495	6001495	20	19	116
Enhanced Matrix Indicator 442	6001444	20	19	152
Enhanced Matrix Indicator 443	6001445	20	19	152
Enhanced Matrix Indicator 444	6001446	20	19	152
Enhanced Matrix Indicator 445	6001442	20	19	152
Enhanced Matrix Indicator 446	6001443	20	19	152
2x12 CantileverType A	6001101	115	320	625
2x12 CantileverType B	6001102	92	320	625
2x12 Portal Type C	6001201	92	320	625
2x16 CantileverType B	6001103	119	394	770
2x16 Portal Type C	6001202	119	394	770
3x18 CantileverType B	6001104	129	410	880
3x18 Portal Type C	6001203	129	410	880
3x23 Verge Type D*	6001069	130	480	890
2X12 Verge Type D*	6001024	92	320	625
3X24 Verge Type D*	6001072	140	500	900
3X16 Verge Type D*	6001048	120	400	800

1.5.2 Devices with Continuous Demand

NOMAD VARIANT	Charge Code	Quiescent Load (Watts)	Dim Load(Watts)	Bright Load(Watts)
600 Cabinet	7931180	180.00	0	0
617 Cabinet	7931180	180.00	0	0
Ambient Light Monitor	7930005	5.00	0	0
Audio	7933050	50.00	0	0
CCTV Camera	7932030	30.00	0	0
CCTV Outstation	7932330	330.00	0	0
Common Interface (2456)	7936250	250.00	0	0
Common Interface (9334)	7936250	250.00	0	0
Private Wire Interface	7936250	250.00	0	0
EMI Driver	7936025	25.00	0	0
EMS Driver	7936025	25.00	0	0
Loop Detector	7907120	120.00	0	0
Main Line Carrier Repeater	7936100	100.00	0	0
Main Line Carrier Terminal	7936080	80.00	0	0
Meteorology Fog Detector	7930018	18.00	0	0
Meteorology Ice Detector	7930100	100.00	0	0
Meteorology Anemometer	7930080	80.00	0	0
Mini Carrier Terminal	7936060	60.00	0	0
Modem Equipment	7936120	120.00	0	0
NMCS1 Responder	7936250	250.00	0	0
NMCS1 Signal Controller (3 Way)	7936030	30.00	0	0
NMCS1 Signal Switch	7936050	50.00	0	0
NMCS2 MIDAS Outstation	7936075	75.00	0	0
NMCS2 MIDAS Transponder	7936040	40.00	0	0
NMCS2 Signal Driver	7936036	36.00	0	0
NMCS2 Signal Transponder	7936145	145.00	0	0
NMCS2 Telephone Transponder	7935240	240.00	0	0
Pulse Code Modulator	7936180	180.00	0	0
Radio	7934150	150.00	0	0
Regional Communications Controller	7936050	50.00	0	0
Rotating Plank Portal Type C	6001301	80.00	0	0
Rotating Plank Verge Type D	6001302	80.00	0	0
Signal Power Unit 2 Way	7936030	30.00	0	0
Signal Power Unit 3 way	7936030	30.00	0	0
Telephone Bridging Unit	7935250	250.00	0	0
Transmission Station Battery Backup	7936500	500.00	0	0
VMS Driver	7936030	30.00	0	0

1.6 Optional Miscellaneous Standard Codes

Miscellaneous equipment may be coded using the “8” as the first digit. The structure of these miscellaneous codes is :-

Charging Code = **8XXRRRR**
 where **XX** = **Numeric Code below**
 and **RRRR** = **Nominal Rating**

Description	Numeric Code
AA/RAC Boxes	802
Advertising Hoardings	804
Alarm System	806
Automatic Railway Crossing	808
Battery Charger	810
Bus Shelter	812
Cable Network Pillar	813
Cathodic Protection	814
Clock	816
Damp Proof Course	818
Door Answering Service	820
Fire Warning System	822
Flood Warning System	824
Gas Governors	826
Gauging Flume	828
Ice Detector	830
Illuminated Map Cabinets	832
Lifting Barrier	834
Navigation Signal	836
Pay & Display Machine	838
Phonecard Phones	840
Police Boxes	842
Pump	844
Radio Transmitter	846
Radio Relay Station	848
Railway Signal	850
Rain Gauge	852
Security Camera	854
Septic Tanks	856
Sewage Flow Recorder	858
Storm Overflow	860
Tannoy Alarm System	862
Telephone kiosks	863
Ticket Machine	864
TV Aerial	866
TV Amplifier	868
TV Camera	870
CCTV illuminator	871

Description	Numeric Code
TV Relay	872
Trafficmaster Units	873
Unknown	899
Ventilation Unit	874
Warden Call Equipment	876
Warning Bell	878
Water Level Indicator	880

1.6.1 Miscellaneous Equipment Codes

	<u>Charge</u>	<u>Circuit</u>
	<u>Code</u>	<u>Watts</u>

1.6.1.1 804 – Advertising Hoardings

<u>Adpost advertising display unit</u>	<u>8040100</u>	<u>100</u>
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1.6.1.1.1.2 813 - Cable Network Pillars

The distributed architecture and wide variety of equipment, power amplifiers, distribution amplifiers, heaters, humidifiers, etc. used in cable TV distribution networks makes it extremely difficult to provide equipment detail in a form which is suitable to perform an accurate calculation of load and which can be applied to each installation.

It is therefore necessary to measure the actual load (spot check) at each point, on the installation of the relevant equipment, and to quote the load applicable to each exit point in bands of 20 watts. The customer shall quote the higher level in the band on the inventory, e.g. if a particular load is measured at 548 watts and the relevant band is 541 to 560 watts, then the figure quoted on the inventory will be 560 watts, and the customer will be charged on that basis.

(Note - bands shall be specified as 501 to 520 watts, 521 to 540 watts, 541 to 560 watts, etc. The charge codes being 8130520, 8130540 and 8130560 respectively).

		Charge	Circuit
		Code	Watts

1.6.1.2 1.6.1.3 848 - One 2 One Cabinets

Type E2102	300 watts	8480300	300
Type S2000	450 watts	8480450	450

1.6.1.3 1.6.1.4 848 - Orange Microcells

Original units were	150 watts	8480150	150
Second generation	300 watts	8480300	300
Third generation	500 watts	8480500	500

1.6.1.41.6.1.5 863 - BT telephone kiosks

	Charge Code	Watts VA	var	pf
<u>Payphones</u>				
Type P0	phone powered from phone lines		0	
Type P1	textphone	8630001	1	
Type P2	payphone	8630029	29	
<u>Type P3</u>	<u>internet payphone</u>	<u>8630175</u>	<u>175</u>	
<u>Lighting</u>				
Type L1	8w flourescent stan. gr twin lamp cct	8630020	20 23	11 0.87
Type L2	32w low pressure mercury H/F gear	8630036	36	
<u>Combinations</u>				
Type L1 lighting + type P0 phone		8630020	20 23	11 0.87
Type L1 lighting + type P1 phone		8630021	21 23	11 0.88
Type L1 lighting + type P2 phone		8630049	49 2350	11
			0.990	
<u>Type L1 lighting + type P3 phone</u>		<u>8630195</u>	<u>195 195</u>	<u>11 1.00</u>
Type L2 lighting + type P0 phone		8630036	36	
Type L2 lighting + type P1 phone		8630037	37	
Type L2 lighting + type P2 phone		863002165	-65	
<u>Type L2 lighting + type P3 phone</u>		<u>8630211</u>	<u>211</u>	
<u>Equipment Classifications</u>				
Payphones type P0	CT24	CT34	P690	P790
	Sovereign Cardpay 1 (Schlumb)			
	Sovereign Cardpay 2 (GPT)			
	Sovereign Paychoice (GPT)			
Payphones type P1	Textphone			
Payphones type P2	CP1C	Payphone 2000 (all payments)		
	Payphone 2000 (no cash)			
<u>Payphones type P3</u>	<u>Eagle products phone with full internet access, e-mail and text messaging</u>			
Kiosks with type 1 lighting	K6	K6C	K8	
Kiosks with type 2 lighting	K100A	K100B	K100C	K100D
	K100H	K300PI	K300PN	
	KX100	KX100A	KX100B	
	KX100C	KX100D		
	KX200	KX200S	KX300	

1.6.1.5 1.6.1.6 870 - CCTV

The total load should be determined by applying the following factors to the nominal rating of the components. A composite code 870**** may then be used.

Camera		100%
Fibre Optic Transmitter		100%
Micro wave link		100%
Tel. Receiver		100%
Cabinet heater	5°C thermostat	13%
Demister	5°C thermostat	13%
Heater	5°C thermostat	13%
Pan & tilt motor		5%
Washer		5%
Wiper		5%
Zoom		10%

1.6.1.6 1.6.1.7 871 - CCTV Illuminators

Illuminators, typically infra red units, should have an associated switch regime.

1.6.1.7 1.6.1.8 873 - Trafficmaster Units

	Charge Code	Watts	VA	var	pf
Single camera sites (obsolete code)	8730101	70	74	23	0.95
Dual camera sites (obsolete code)	8730201	80	84	26	0.95
Standalone IR site	8730110	11	11	0	1.00
Sensor IR site	8730230	23	23	0	1.00
Single camera sites (new code)	8730700	70	74	23	0.95
Dual camera sites (new code)	8730800	80	84	26	0.95

2. Switching Regime Codes

2.1 Allocation of Switching Regime Codes

The following switching regime codes provide a standardised listing of switching types and burning hours. The actual burning hours will be derived from the burning hours recorded from the on line photo electric cell monitoring units.

Switch Type Code	Switch Type Description
001	No switching - 24 Hour Burning
010	Manual Switching for police daylight fog override facility – 50 hours per annum
020-199	Manual Switching Equipment
200-399	Time Switch Control
400-599	Thermal Photo Cells (Positive Differential Switch "ON/OFF")
600-699	Hybrid Photo Cells (Negative Differential Switch "ON/OFF")
700-799	Electronic Photo Cell Time Switch (Part Night Controller)
800-999	Electronic Photo Cells (Negative Differential Switch "ON/OFF")

Notes : Code 001 relates to all equipment which has no switching mechanism and continuously burns for 24 hours per day for 365 days per year.

NB. Charging Hours - 8766 hours per annum to account for Leap Years.

For example :-

- (i) Traffic signals
 - (ii) Traffic Signs continuously burning
 - (iii) Pedestrian underpass/subway lighting (some installations may be under time control)
 - (iv) CCTV Systems and Over-height/Over-weight detection equipment
 - (v) Traffic Counters
- b) Code 010 to be used for equipment which is provided with a manual override facility to be used by police for day-light fog. Additional burning hours assumed to be 50 hours per annum.
- c) Codes 020 - 199 to be used for equipment which is manually switched on and off for pre-determined periods per day, month or year.
- (i) School Patrol Crossing Flashing Lights
- d) Codes 200 - 399 to be used for equipment which is controlled by a time switch which has pre-determined on/off periods per day, month or year;
- (i) Normal time switch control
 - (ii) Part night lighting controlled by time switch

The hours of burning will be agreed between the UMSO and the customer and pre-set into the EM.

- e) Codes 400 - 599 to be used for equipment which is automatically switched on and off by thermal photo electric cell controllers. The actual switch "ON/OFF" times and the number of hours burnt per day will be obtained from metering equipment installed at pre-determined locations within each inventory area. Thermal photo cell controllers are units in which the output of the photo cell is directly fed to the bi-metallic strip which provides both the switching and the time delay. These units generally have a positive differential for switching. For example 100 Lux "ON" 200 Lux "OFF" although other switch "ON/OFF" levels are available.
- f) Codes 600 - 699 to be used for equipment which is automatically switched on and off by hybrid photo electric cell controllers. The actual switch "ON/OFF" times and the number of hours burnt per day will be obtained from metering equipment installed at pre-determined locations within each inventory area. Hybrid photo cell controllers are units in which the output of the photo cell is fed to the bi-metallic strip via an electronic circuit which provides the time delay. The bi-metallic thermal strip only acts as switching mechanism. These units generally have a negative differential for switching. For example 70 Lux "ON" 35 Lux "OFF" although other switch "ON/OFF" levels are available.
- g) Codes 700 - 799 to be used for equipment which is automatically switched on and off by electronic photo electric cell time switch controllers (Part Night Controllers). The actual switch "ON" times are controlled by a photo electric cell with the midnight switch "OFF" times being factory preset (alternative factory switching "OFF" times are available). An early morning switch "ON" factory preset for 05.00 (alternative factory switching "ON" times are available) with the switch "OFF" being controlled by the photo electric cell. The actual number of hours burnt per day will be obtained from metering equipment installed at pre-determined locations within each inventory area.
- h) Codes 800 - 999 to be used for equipment which is automatically switched on and off by electronic photo electric cell controllers. The actual switch "ON/OFF" times and the number of hours burnt per day will be obtained from metering equipment installed at pre-determined locations within each inventory area. Electronic photo cell controllers are units in which the output of an photo cell is fed to a switching mechanism (generally solid state but can be an electro mechanical relay) via an electronic circuit which provides the time delay. These units generally have a negative differential for switching. For example 70 Lux "ON" 35 Lux "OFF" although other switch "ON/OFF" levels are available.
- i) Whilst photo electric cells can be calibrated to any "Switch On" level required the most popular settings are :
 - (i) 40 Lux
 - (ii) 55 Lux
 - (iii) 70 Lux

- (iv) 100 Lux
- (v) 120 Lux

2.2 Time Switch Regime Codes

Code	Description	After Sunset	Before Sunrise
200	Dusk to Dawn	30	30
205	Offset Dusk to Offset Dawn	15	15
210	Offset Dusk to Offset Dawn (Sunset to Sunrise)	---	---
212	Annual Burn Hours defined by the UMISO		
214	Annual Burn Hours defined by the UMISO		
216	Annual Burn Hours defined by the UMISO		
220	Dusk to 22.00	30	---
221	Dusk to 23.00	30	---
222	Dusk to 23.30	30	---
223	Dusk to 24.00	30	---
224	Dusk to 01.00	30	---
235	Dusk to 22.00 / 04.30 to Dawn	30	30
236	Dusk to 22.00 / 05.30 to Dawn	30	30
237	Dusk to 22.00 / 06.30 to Dawn	30	30
240	Dusk to 23.00/04.30 to Dawn	30	30
241	Dusk to 23.00/05.30 to Dawn	30	30
242	Dusk to 23.00/06.30 to Dawn	30	30
245	Dusk to 23.30/04.30 to Dawn	30	30
246	Dusk to 23.30/05.30 to Dawn	30	30
247	Dusk to 23.30/06.30 to Dawn	30	30
250	Dusk to 24.00 / 04.30 to Dawn	30	30
258	Dusk to 24.00 / 05.00 to Dawn	30	30
251	Dusk to 24.00 / 05.30 to Dawn	30	30
252	Dusk to 24.00 / 06.30 to Dawn	30	30
253	Dusk to 24.00 / 06.45 to Dawn	30	30
255	Dusk to 01.00 / 04.30 to Dawn	30	30
256	Dusk to 01.00 / 05.30 to Dawn	30	30
257	Dusk to 01.00 / 06.30 to Dawn	30	30
270	Offset Dusk to 22.00	15	----
271	Offset Dusk to 23.00	15	----
272	Offset Dusk to 23.30	15	----
273	Offset Dusk to 24.00	15	----
274	Offset Dusk to 01.00	15	----
280	Offset Dusk to 22.00 / 04.30 to Offset Dawn	15	15
281	Offset Dusk to 22.00 / 05.30 to Offset Dawn	15	15

Code	Description	After Sunset	Before Sunrise
282	Offset Dusk to 22.00 / 06.30 to Offset Dawn	15	15
285	Offset Dusk to 23.00 / 04.30 to Offset Dawn	15	15
286	Offset Dusk to 23.00 / 05.30 to Offset Dawn	15	15
287	Offset Dusk to 23.00 / 06.30 to Offset Dawn	15	15
290	Offset Dusk to 23.30 / 04.30 to Offset Dawn	15	15
291	Offset Dusk to 23.30 / 05.30 to Offset Dawn	15	15
292	Offset Dusk to 23.30 / 06.30 to Offset Dawn	15	15
295	Offset Dusk to 24.00 / 04.30 to Offset Dawn	15	15
296	Offset Dusk to 24.00 / 05.30 to Offset Dawn	15	15
297	Offset Dusk to 24.00 / 06.30 to Offset Dawn	15	15
300	Offset Dusk to 01.00 / 04.30 to Offset Dawn	15	15
301	Offset Dusk to 01.00 / 05.30 to Offset Dawn	15	15
302	Offset Dusk to 01.00 / 06.30 to Offset Dawn	15	15
310	Sunset to 01.00 / 05.00 to Sunrise	---	---
<u>311</u>	<u>Offset Dusk to 24.00 / 05.30 to Dawn</u>	<u>15</u>	<u>30</u>
<u>312</u>	<u>Offset Dusk to 24.00 / 06.30 to Dawn</u>	<u>15</u>	<u>30</u>
320	Sunset to 22.00	---	---
321	Sunset to 23.00	---	---
322	Sunset to 23.30	---	---
323	Sunset to 24.00	---	---
324	Sunset to 01.00	---	---
330	Sunset to 22.00 / 04.30 to Sunrise	---	---
331	Sunset to 22.00 / 05.30 to Sunrise	---	---
332	Sunset to 22.00 / 06.30 to Sunrise	---	---
335	Sunset to 23.00 / 04.30 to Sunrise	---	---
336	Sunset to 23.00 / 05.30 to Sunrise	---	---
337	Sunset to 23.00 / 06.30 to Sunrise	---	---
340	Sunset to 23.30 / 04.30 to Sunrise	---	---
341	Sunset to 23.30 / 05.30 to Sunrise	---	---
342	Sunset to 23.30 / 06.30 to Sunrise	---	---
345	Sunset to 24.00 / 04.30 to Sunrise	---	---
346	Sunset to 24.00 / 05.30 to Sunrise	---	---

<u>Code</u>	<u>Description</u>	<u>After Sunset</u>	<u>Before Sunrise</u>
347	Sunset to 24.00 / 06.30 to Sunrise	---	---
348	Sunset to 24.00 / 06.45 to Sunrise	---	---
349	Sunset to 24.00 / 05.00 to Sunrise	---	---
<u>Code</u>	<u>Description</u>	<u>After Sunset</u>	<u>Before Sunrise</u>
350	Sunset to 01.00 / 04.30 to Sunrise	---	---
351	Sunset to 01.00 / 05.30 to Sunrise	---	---
352	Sunset to 01.00 / 06.30 to Sunrise	---	---
362	Sunset to 24.00 / 06.45 to Dawn	---	30
363	Dusk to 24.00 / 06.45 to Sunrise	30	---
364	Off Set Dusk to 24.00 / 06.45 to Off Set Dawn	30	30
365	Off Set Dusk to 24.00 / 05.00 to Dawn	30	30
366	Sunset to 24.00 / 05.00 to Dawn	---	30
367	Dusk to 24.00 / 05.00 to Sunrise	30	---
368	Dusk to 24.00 / 05.30 to Sunrise	30	---
<u>369</u>	<u>Dusk to 24.00 / 06.30 to Sunrise</u>	<u>30</u>	<u>---</u>
370	Sunset to Dawn	---	30
380	Dusk to Sunrise	30	---
390	Peak Period Lighting		
391	See Note Below		
392	See Note Below		
393	See Note Below		

Notes:391 - Regime (iv)

During the months October to February - from sunset to midnight and from 6.45 to 15 mins. before sunrise; and during the months May to August - from 30 minutes after sunset to midnight.

During March, April and September times vary regularly between winter and summer times.

392 - Regime (v)

During the months October to February - from sunset to midnight and from 5.00 to 15 mins. before sunrise; and during the months May to August - from 30 minutes after sunset until midnight.

During March, April and September times vary regularly between winter and summer times.

393 - Regime (vi)

During the months October to February, from sunset to 15 mins. before sunrise; and during the months May to August - from half hour after sunset until half hour before sunrise.

During March, April and September times vary regularly between winter and summer times.

2.3 Thermal & Hybrid Photo Cell Regime Codes

2.3.1 Thermal Cell Regime Codes

Code	Description	Lux ON	Lux OFF
411	Thermal	55	110
412	Thermal	55	138
413	Thermal	55	165
421	Thermal	70	140
422	Thermal	70	175
423	Thermal	70	210
431	Thermal	100	200
432	Thermal	100	250
433	Thermal	100	300
440	Thermal Photo Cell Annual Burn Hours defined by the UMSO		

2.3.2 Photo Cell Regime Codes

611	Hybrid	55	28
612	Hybrid	55	55
613	Hybrid	55	83
621	Hybrid	70	35
622	Hybrid	70	70
623	Hybrid	70	105
624	Hybrid	70	50
631	Hybrid	100	50
632	Hybrid	100	100
633	Hybrid	100	150
640	Hybrid Photo Cell Annual Burn Hours defined by the UMSO		

2.4 Electronic Photo Electric Cell Control Time Switch (Part Night Controllers)

Code	Description	Lux ON	Lux OFF
711	Dusk to 24.00 / 05.00 to Dawn	55	Timed
712	Dusk to 24.00 / 05.30 to Dawn	55	Timed
713	Dusk to 24.00 / 06.00 to Dawn	55	Timed
714	Dusk to 24.00 / 06.30 to Dawn	55	Timed
721	Dusk to 24.00 / 05.00 to Dawn	70	Timed
722	Dusk to 24.00 / 05.30 to Dawn	70	Timed
723	Dusk to 24.00 / 06.00 to Dawn	70	Timed
724	Dusk to 24.00 / 06.30 to Dawn	70	Timed
731	Dusk to 24.00 / 05.00 to Dawn	100	Timed
732	Dusk to 24.00 / 05.30 to Dawn	100	Timed
733	Dusk to 24.00 / 06.00 to Dawn	100	Timed
734	Dusk to 24.00 / 06.30 to Dawn	100	Timed
741	Dusk to 24.00 / 05.00 to Dawn	120	Timed
742	Dusk to 24.00 / 05.30 to Dawn	120	Timed
743	Dusk to 24.00 / 06.00 to Dawn	120	Timed
744	Dusk to 24.00 / 06.30 to Dawn	120	Timed
811	Electronic	55	28
812	Electronic	55	55
813	Electronic	55	83
821	Electronic	70	35
822	Electronic	70	70
823	Electronic	70	105
824	Electronic	70	140
825	Electronic	70	50
831	Electronic	100	50
832	Electronic	100	100
833	Electronic	100	150
834	Electronic	100	200
840	Electronic Photo Cell Annual Burn Hours defined by the UMSO		

2.5 Motorway Control Office Allocated Hours

Switch Regime Code	(CO Area No.) and County	Control Office	Average Annual Hours		
			Total Duration	Bright	Dim
-	-	-	-	-	-
102	(22) Cheshire (P)	Chester	335.5	138.86	196.65
104	(23) Cumbria	Penrith	584.39	263.47	320.92
108	(21) Greater Manchester (P)	Manchester	367.42	208.81	158.62
111	(24) Lancashire (P)	Hutton Hall	334.27	153.62	180.64
114	(25) Merseyside (P)	Liverpool	326.1	150.15	175.95
105	(12) Durham	Durham	8.76	7.8	0.96
119	(56) Notts/Derby	Ripley	233.15	120.47	112.68
121	(31) South Yorkshire	Sheffield	591.63	228.67	362.96
128	(33) West Yorkshire	Wakefield	591.63	228.67	362.96
130	(30) N Yorkshire	Northallerton	258.53	129.18	129.36
131	(32) Humberside	Hessle	233.15	120.47	112.68
118	(41) West Midlands	Perry Bar	1365.99	623.51	742.48
125	(44) Warwickshire	Leek Wooton	52.6	47.34	5.26
127	(43) West Mercia	Hindip Hall	78.89	70.21	8.68
122	(42) Staffordshire	Stafford	326.77	109.49	217.28
112	(55) Leicestershire	Enderby	96.43	93.54	2.89
132	(66) Cambridgeshire	Hinchingbrook	1171.51	405.58	765.92
106	(64) Essex	Chelmsford	35.06	21.74	13.32
109	(65) Bedfordshire	Kempston	547.33	179.02	368.31
117	(53) Northamptonshire (P)	Wooton Hall	183.8	46.06	137.74
133	(82) Met West London (CMI)	Heston	648.43	368.02	280.4
103	(62) Met East London	Chigwell	43.82	26.29	17.53
120	(81) Met North London	Scratchwood	648.43	368.02	280.4
110	(74) Thames Valley	Kidlington	701.98	354.74	347.25
126	(63) Welwyn	Welwyn	166.55	134.91	31.64
123	(76) Surrey (CMI)	Godstone	648.43	368.02	280.4
134	(72) Hampshire	Winchester	648.43	368.02	280.4
135	(73) Kent	Maidstone	648.43	368.02	280.4
113	(75) Sussex	Lewes	0	-	-
100	(91) Avon and Somerset	Portishead	212.97	106.12	106.85
101	(95) Gloucestershire	Cheltenham (P)	17.44	15.52	1.92
107	(96) Devon and Cornwall	Exeter	26.3	25.77	0.53
129	(94) Wiltshire	Swindon	1062.84	453.97	608.87
136	(71) River Crossing	Dartford	0	-	-

Average Annual Hours

Signals

Message Signs

Control Office	Code	Total	Bright	Dim	Code	Total	Bright	Dim
Avon Portishead	100	207.4	125.2	82.2	N/A			
BEDS Kempston	109	373.5	126.5	247.0	N/A			
CAMB Hinchingsbrk	132	111.4	50.6	60.8	182	152.7	71.0	81.7
CHES Chester	102	242.7	124.1	118.6	152	62.1	44.0	18.1
CUMB Penrith	104	92.9	43.4	49.5	154	1003.9	599.6	404.3
DEVN Exeter	107	193.6	144.7	48.9	157	45.8	28.4	17.4
DURH Durham	105	52.4	39.0	13.4	N/A			
GLOC Cheltenham	101	245.3	157.4	87.9	N/A			
GMP Manchester	108	280.3	158.8	121.5	158	16.6	11.5	5.1
HAMP Winchester	137	823.6	597.8	225.8	187	199.4	66.5	132.9
HERT Welwyn	126	434.1	198.7	235.4	176	555.7	295.2	260.5
HUMB Hessle	131	80.7	28.2	52.5	N/A			
KENT Maidstone	135	25.6	18.4	7.2	185	238.9	114.8	124.1
LANC Hutton Hall	111	157.5	75.9	81.6	161	72.3	41.8	30.5
LEIC Enderby	112	158.3	106.1	52.2	162	254.1	132.4	121.7
MERS Liverpool	114	230.5	113.7	116.8	N/A			
METC Chigwell	103	150.9	76.1	74.8	153	1546.1	1240.8	305.3
METH Heston	133	413.7	290.0	123.7	183	339.9	201.8	138.1
METS Scratchwood	120	129.3	89.1	40.2	N/A			
NORT Wooton Hall	117	326.0	83.8	242.2	167	350.4	127.7	222.6
NOTT Ripley	119	215.9	106.9	109.0	169	462.6	252.5	210.1
NYOR Northallerton	130	110.1	56.6	53.5	180	109.6	59.7	49.9
STFS Stafford	122	306.8	109.2	197.6	172	340.1	217.6	122.5
SURY Godstone	123	823.6	597.8	225.8	173	317.8	167.8	150.0
SYOR Sheffield	121	145.0	65.2	79.8	N/A			
THAM Kidlington	110	392.7	190.8	201.9	160.0	940.3	552.4	387.9
WILT Swindon	129	449.4	210.2	239.2	N/A			
WMID Perry Barr	118	1133.6	582.8	550.8	168	340.1	217.6	122.5
WYOR Wakefield	128	595.5	184.9	410.6	N/A			
Leek Wooton	125	No	Longer	Used				
Hindip Hall	127	No	Longer	Used				
Chelmsford	106	No	Longer	Used				
Lewes	113	No	Longer	Used				
Dartford	136	No	Longer	Used				

3. Standard File Format for Detailed Inventories

[Either a fixed format text file or a comma separated file for each item of inventory.](#)

Field No.	Name	Details required	Type	Length	Position	
					Start	Finish
1	Road Reference	National Street Gazetteer reference, Motorway number e.g. M42 or other agreed unique road reference	Text	8	1	8
2	Town, Parish, District		Text	30	9	38
3	Road Name		Text	30	39	68
4	Location	e.g. O/S No. 10	Text	20	69	88
5	Unit Type	Identifies the record as a lamp or a sign, etc. B = bollard; L = lamp; M= miscellaneous; P = Pillar S = sign; T = traffic signal equip.	Text	1	89	89
6	Unit Identity	Identity shown on unit (if any)	Text	12	90	101
7	Charge Code	Appropriate BSCP520 code	Numeric	7	102	108
8	No. of Items	Number of items of this charge code at this location	Numeric	3	109	111
9	Switch Regime	Appropriate BSCP520 code	Numeric	3	112	114
10	No. of Controls	Number of PECs or time switches on the item	Numeric	1	115	115
11	Control Charge Code	Appropriate BSCP520 code for the PEC or timeswitch	Numeric	7	116	122
12	Ordinance Survey Grid ref 'East'		Text	7	123	129
13	Ordinance Survey Grid ref 'North'		Text	7	130	136
14	Exit Point	Y if Yes, N if No, U if Unknown	Text	1	137	137
15	Multiple equipment	M if this item has multiple charge codes	Text	1	138	138

Notes on Standard Inventory Format

The data, with the originator clearly identified, should be supplied on a CD or as a single compressed .ZIP file (not a self extracting .EXE archive) either on a MSDOS formatted, 1.44Mb diskette or attached to an e-mail.

This format was developed to provide the information required for the operation of this BSCP and the auditing requirements of distribution companies in a standard way. It is expected to be of particular benefit to customers with unmetered equipment in more than one Distribution Licence area and to suppliers of inventory software who wish to provide a standard extract package for their customers.

It is **NOT** intended to supersede existing arrangements where both the customer and the distribution company are happy to continue with a different format.

Field 1 Road Reference

National Street Gazetteer Unique Street Reference Number is the preferred format because it provides a better location than the combination of road name and town. It is also a very useful sort field when checking for duplicate records.

NSGIR codes are not available for motorways so the motorway reference should be used e.g. M42, A1(M)

Field 3 Road Name

In the case of Motorways this will be the Motorway reference number e.g. M42, A1(M)

Field 5 Unit Type

B = bollard	L = street light	M= miscellaneous
P = pillar	S = sign	T = traffic signal equip

Field 10 No. of Controls

In the case of isolation pillars which only contain a time control device and no other load consuming device then the number of time control devices should be entered here and the appropriate charge code in field 11. Zeros should be entered in fields 7 & 8.

Field 12 Grid References

Field 13 Data to be inserted in these fields when available. The increasing use of GPS equipment provides very accurate locational data which may replace or be in addition to the location in Field 4

Field 15 Multiple Equipment

Equipment containing multiple charge codes is becoming more common, for example :-

- bollards with 3 lamps of which 2 are connected in series;
- motorway lanterns which contain both a 400w and a 250w lamp;

-
- c. Belisha beacons with either one or two fluorescent tubes plus a flashing tungsten bulb;
 - d. dimming lamps on variable ballasts.

The software used to determine EACs and half hour consumptions can only handle a single combination of charge code and switch regime per record. Multiple records are therefore required, one for each charge code and switch regime combination used by the same item at a single location. In these cases, the insertion of 'M' in this field notifies the operator that these are not duplicate records.

4. Procedure for Allocating Load Ratings to New Equipment

This appendix has been included and is reserved for future use.