

# **UNMETERED SUPPLIES OPERATIONAL INFORMATION**

**Version 7.0**

**Date: 3 February 2009**

**AMENDMENT RECORD**

<b>Version</b>	<b>Date</b>	<b>Description of Changes</b>	<b>CPs Included</b>	<b>Mods Panel Ref</b>
1.0	30/06/05	SVA June 2005 Release	CP1083	SVG/51/004
2.0	1/11/05	Test Procedure and updated Standard File Format included. Details of other format changes available from ELEXON.	N/A	SVG/57/010
3.0	2/02/07	New operational information added to existing documentation.	N/A	SVG/71/04 SVG/68/02
4.0	14/05/2008	SVA February 2008 Release (introducing CMS) and also new operational information added to existing documentation.	CP1196	SVG77/02
5.0	26/06/2008	SVA June 2008 Release – changing the charge code structure from 7 digits to 13 digits.	CP1204	SVG79/02
6.0	02/09/2008	New operational information added to existing documentation, detailed inventory file format updated and Switch Regime codes and Annual Hours removed from the document.	N/A	SVG91/03
7.0	03/02/2009	New operational information added to existing documentation	N/A	SVG96/06

**Intellectual Property Rights, Copyright and Disclaimer**

The copyright and other intellectual property rights in this document are vested in ELEXON or appear with the consent of the copyright owner. These materials are made available for you for the purposes of your participation in the electricity industry. If you have an interest in the electricity industry, you may view, download, copy, distribute, modify, transmit, publish, sell or creative derivative works (in whatever format) from this document or in other cases use for personal academic or other non-commercial purposes. All copyright and other proprietary notices contained in the document must be retained on any copy you make.

All other rights of the copyright owner not expressly dealt with above are reserved.

No representation, warranty or guarantee is made that the information in this document is accurate or complete. While care is taken in the collection and provision of this information, ELEXON Limited shall not be liable for any errors, omissions, misstatements or mistakes in any information or damages resulting from the use of this information or action taken in reliance on it.

---

**CONTENTS**

	<b><u>Page Number</u></b>
<b>1 INTRODUCTION</b>	<b>4</b>
1.1 Scope and Purpose	4
1.2 Main Users of the Document	4
1.3 Changes to the Document	4
<b>2 CATEGORIES OF UNMETERED APPARATUS</b>	<b>5</b>
2.1 Classification and Load Rating of Standard Lighting Apparatus	5
2.2 Classification and Load Rating of Traffic Signals	8
2.3 Classification of Motorway Signals	10
2.4 Classification of Optional Miscellaneous Standard Codes	11
2.5 Photocells	14
<b>3 SWITCH REGIME CODES</b>	<b>15</b>
3.1 Allocation of Switch Regime Codes	15
3.2 Switch Regime Codes	17
3.3 Motorway Operating Hours	18
<b>4 STANDARD FILE FORMAT FOR DETAILED INVENTORIES</b>	<b>19</b>
4.1 General Comments	19
4.2 Standard File Format	19
<b>5 TESTING PROCEDURE FOR THE ISSUE OF A CHARGE CODE FOR NEW APPARATUS</b>	<b>22</b>
5.1 Apparatus Tests	22

---

## 1 Introduction

### 1.1 Scope and Purpose

This Unmetered Supplies Operational Information document was formed in June 2005 under Change Proposal CP1083 (Removal of Unmetered Supplies operational details from BSCP520 'Unmetered Supplies') from the former appendices to Balancing and Settlement Code Procedure (BSCP) 520. BSCP520 details the processes and responsibilities for using Unmetered Supplies (UMS) in Settlement.

This document contains technical information concerning UMS apparatus and includes the procedure for allocating ratings to new apparatus.

- Section 2 provides an explanation of how the charge code is constructed for different types of Unmetered Supplies apparatus and how these charge codes are approved.
- Section 3 of this document covers the construction of Switch Regime codes and the full listing is available on the [ELEXON website](#). These annual hours are used in the calculation of the Non Half Hourly (NHH) Estimated Annual Consumption (EAC).
- Section 4 covers the detailed inventory file format that Customers submit to their Unmetered Supplies Operator (UMSO) and
- Section 5 covers the testing procedure for allocating new charge codes for Unmetered Supplies apparatus.

Please note that all ELEXON issued temporary and approved charge codes may now be found in a single spreadsheet on the UMS section of the [ELEXON website](#). For information on the new 13 digit charge code format, please refer to the ELEXON guidance document '[Guidance on New Charging Code Structure for Unmetered Supplies](#)' available on the [ELEXON website](#).

### 1.2 Main Users of the Document

This Operational Information document will be of use primarily to UMS Suppliers, Unmetered Supplies Operators (UMSO), apparatus manufacturers and Customers.

Any questions or comments on the document should be submitted to ELEXON either via the Unmetered Supplies User Group (UMSUG) secretary [umsugsecretary@elexon.co.uk](mailto:umsugsecretary@elexon.co.uk) or by contacting the ELEXON helpdesk on 020 7380 4222 ([helpdesk@elexon.co.uk](mailto:helpdesk@elexon.co.uk)).

### 1.3 Changes to the Document

All proposed changes will be presented to the UMSUG for consideration, and approved by the Supplier Volume Allocation Group (SVG).

## 2 Categories of Unmetered Apparatus

Section 2 of this document contains the following categories of Unmetered apparatus:

Standard Lighting	Section 2.1
Traffic Signals	Section 2.2
Motorway Signals	Section 2.3
Miscellaneous Apparatus	Section 2.4

### 2.1 Classification and Load Rating of Standard Lighting Apparatus

The following charging codes provide a standardised listing of lamp types, nominal apparatus (lamp) ratings (wattages), control gear types and dimming levels. The list of approved charge codes with associated actual circuit wattages is available on the [ELEXON website](#) and is subject to amendment following detailed on-site measurement by load research.

Standard lighting apparatus shall be classified in accordance with a 13 digit charging code as follows:

<b>Digits 1 and 2</b>	Apparatus Type 2 numeric digits
<b>Digits 3, 4, 5 and 6</b>	Apparatus Wattage (N.B. Nominal lamp wattage to be used not the circuit wattage.) 4 numeric digits
<b>Digits 7, 8, 9 and 10</b>	Control Gear Type 4 numeric digits
<b>Digits 11, 12 and 13</b>	Dimming level, i.e. percentage of full load (N.B. '100' = full load circuit watts)

**Note:**

Customers will normally be expected to use the standard apparatus and Switch Regime codes when presenting the inventory to the UMSO in accordance with their Unmetered Connection Agreement.

**Digits 1 & 2**

<b>Apparatus Code</b>	<b>Apparatus Description</b>	<b>Definition Letters</b>
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
29	Cold Cathode	
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
39	Low Pressure Mercury – Compact Integral Standard Gear	
40	Light Emitting Diodes (LEDs)	
41	LED Street Lights	
45	Luminescent	
50	Electronic Ballasts	
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	Infra Red Photo Detectors	
97	Electric Photo Cell Timeswitch	
98	Electronic Controls (e.g. CMS devices)	
	Note: Apparatus Codes 32 and 34 refer to twin fluorescent lamps operated in series on a single ballast.	

**Digits 3, 4, 5 & 6**

Represent the nominal apparatus rating in watts.

### Digits 7, 8, 9 and 10

Control Gear Code	Control Gear Description
0000	No Control Gear
1000	Standard Control Gear
2000	Low Loss Control Gear
3000	High Frequency (H/F) Electronic Ballast (Frequencies greater than 1 kHz)
4000	SOX/E Optimum Gear
5000	Low Frequency (L/F) Electronic Ballast (Frequencies lower than 1 kHz)

#### Notes :

- a) Code 0000 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 1000 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
  - (iii) SOX & SOX/E lamps
  - (iv) SLI lamps
  - (v) MCF, PL-S, PL-L, PL-C, PL-T & 2D lamps
- c) Code 2000 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 3000 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 4000 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 5000 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.

## 2.2 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 includes the following:

- a) Continuous steady loads, e.g. controllers, monitoring apparatus;
- 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 apparatus, 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:

<b>Digits 1 and 2</b>	Always 79
<b>Digits 3 and 4</b>	Numeric Code that represents type of apparatus
<b>Digits 5, 6 and 7</b>	Apparatus Wattage (Nominal Rating)
<b>Digits 8 9 and 10</b>	Numeric Code that allows equipment with the same full circuit watts but different dimmed circuit watts to be uniquely identified
<b>Digits 11, 12 and 13</b>	Always 100, the arrangements allow traffic lights and other non-lighting traffic equipment to have ‘day’ and ‘night’ watts so a % dimming is not applicable

**Digits 3 and 4**

<b>Apparatus Code</b>	<b>Apparatus Description</b>	<b>Apparatus Code</b>	<b>Apparatus Description</b>
01	3 lamp aspect (undimmed)	29	<i>[Not currently used]</i>
02	3 lamp aspect (dimmed)	30	Weather detection/measurement equip
03	2 lamp aspect (undimmed)	31	Supply cabinet
04	2 lamp aspect (dimmed)	32	CCTV equipment
05	Wait Signal/Push Button (undimmed)	33	Audio equipment
06	Controller	34	Radio equipment
07	Vehicle Detector	35	Telephone equipment
08	Cableless Link Unit (CLU)	36	Communications equipment
09	Lamp Monitoring Unit (LMU)	37	<i>[Not currently used]</i>
10	Outstation Monitoring Unit (OMU)	38	LED Wait Signal/Push Button (undimmed)
11	Outstation Transmission Unit (OTU)	39	LED Wait Signal/Push Button (dimmed)
12	Detector Power Pack Unit (DPU)	40	LED 3 lamp aspect (undimmed)
13	Speed Discrimination Unit (SDU)	41	LED 3 lamp aspect (dimmed)
14	Variable Maximum Unit (VMU)	42	LED 2 lamp aspect (undimmed)
15	Microprocessor Optimised Vehicle Actuation (MOVA)	43	LED 2 lamp aspect (dimmed)
16	Belisha Beacons	44	LED filter (undimmed)
17	Box Sign	45	LED filter (dimmed)
18	School Crossings	46	LED Belisha Beacons (undimmed)
19	Pole Mounted Responder	47	LED School Crossings

Apparatus Code	Apparatus Description	Apparatus Code	Apparatus Description
20	Traffic Counter	48	[Not currently used]
21	Speeding / Red Light Camera	49	[Not currently used]
22	Motorway Overhead Gantry	50	LED Belisha Beacons (dimmed)
23	Ticket Machine	51	[Not currently used]
24	Wait Signal/Push Button (dimmed)	52	Pedestrian Detector
25	Speed Warning Signs	53	Pedestrian Detector with night light
26	Variable Message Signs	54	LED Pedestrian Nearside Wait Signal/Push Button (undimmed)
27	[Not currently used]	55	LED Pedestrian Nearside Wait Signal/Push Button (dimmed)
28	[Not currently used]	56	[Not currently used]

It should be noted that the arrangements allowing traffic lights and other non-lighting traffic equipment to have ‘day’ and ‘night’ watts is retained under the new 13 digit format. This means that all existing 7 digit traffic signal codes will be converted into 13 digits by the addition of ‘000100’ so that the code is ‘xxxxxxx000100’.

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
LED Belisha 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.

It should be noted that traffic signal codes are given ‘per lamp head’. This means that for a traffic light containing three lamp heads, a quantity of 3 should be associated with the correct charge code in the inventory. For a traffic light containing two lamp heads, then a quantity of 2 should be associated with the correct charge code in the inventory.

### 2.3 Classification of Motorway Signals

The structure of Motorway signal codes is as per the Traffic signal codes in section 2.2 above. However, digits 1 and 2 are either ‘60’ or ‘79’ only.

### 2.3.1 Motorway Signals - Devices with Variable Hours

The following charge codes are currently processed by the UMISO separately. As such they are not contained in the charge code spreadsheet available on the [ELEXON website](#) and will remain in the table below. Customers should contact their UMISO if they have any questions on how to submit this equipment in their detailed inventory.

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
Rotating Plank Portal Type C	6001301	80.00	0	0
Rotating Plank Verge Type D	6001302	80.00	0	0

### 2.4 Classification of Optional Miscellaneous Standard Codes

Miscellaneous apparatus which does not fit into the above categories will be coded using the “8” as the first digit. The structure of these miscellaneous codes is:

<b>Digits 1, 2 and 3</b>	Digit 1 is always 8, digits 2 and 3 represent the type of apparatus, see below
--------------------------	--

<b>Digits 4, 5, 6 and 7</b>	Apparatus Wattage (Nominal Rating)
<b>Digits 8, 9 and 10</b>	Numeric Code that represents type of control gear, see below
<b>Digits 11, 12 and 13</b>	Dimming level, i.e. percentage of full load (N.B. '100' = full load circuit watts)

<b>Description</b>	<b>Numeric Code</b>	<b>Comment</b>
AA/RAC Boxes	802	
Advertising Hoardings	804	
Alarm System	806	
Automated Number Plate Recognition System	807	
Automatic Railway Crossing	808	
Battery Charger	810	
Bus Information Systems	811	
Bus Shelter	812	
Cable Network Pillar	813	See 2.4.1
Cathodic Protection	814	
Clock	816	
CMS Equipment	817	
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	
Information Systems	835	
Navigation Signal	836	
Pay & Display Machine	838	
People Counter	839	
Phonecard Phones	840	
Police Boxes	842	
Pump	844	
Radio Transmitter	846	
Radio Relay Station	848	See 2.4.1
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	See 2.4.1
Ticket Machine	864	
TV Aerial	866	

Description	Numeric Code	Comment
TV Amplifier	868	
TV Camera	870	See 2.4.3
CCTV illuminator	871	
TV Relay	872	
Trafficmaster Units	873	
Ventilation Unit	874	
Warden Call Equipment	876	
Warning Bell	878	
Water Level Indicator	880	
Unknown	899	

**2.4.1 813 - Cable Network Pillars**

The distributed architecture and wide variety of apparatus, power amplifiers, distribution amplifiers, heaters, humidifiers, etc. used in cable TV distribution networks makes it extremely difficult to provide apparatus 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 apparatus, 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 ‘8130520000100’, ‘8130540000100’ and ‘8130560000100’ respectively).

**2.4.2 863 - Payphones**

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)			
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	

### 2.4.3 870 - 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 associated with a continuous Switch Regime (001).

Component	Thermostat	Factor
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%

### 2.4.4 2.4.3 871 - CCTV Illuminators

Illuminators, typically infra red units, should have an associated Switch Regime based on the Photo Electric Cell Unit (PECU) controlling the lighting (e.g. '821' Electronic PEC 70/35).

### 2.5 Photocells

Codes 92 0003 0000 100 and 93 0003 0000 100 are based on 3 watts when the lamp is switched "OFF" and 0 watts when lamp is switched "ON".

Code 94 0001 1000 100 can only to be used for specifically approved cells

Code 95 0000 0000 100 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".

Code 97 0000 0000 100 relates to a photo cell controller with an electronic fixed time switch off (Part night operation).

Code 98 0000 0000 100 relates to a controller for CMS equipment or a part night dimming system. Energy is consumed by the controller 24 hour/day.

### 3 Switch Regime Codes

#### 3.1 Allocation of Switch Regime Codes

The following Switch Regime Codes provide a standardised listing of switch 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 Regime Code	Switch Regime Description
001	No switching – 24 Hour Burning
010	Manual Switching for police daylight fog override facility – 50 hours per annum (Please note that this is a historical code and has been superseded by newer technology that is now available).
020-099	Manual Switching Equipment
100-199	Motorway Control Centre Switching
200-399	Time Switch Control
400-499	Thermal Photo Cells (Positive Differential Switch "ON/OFF")
500-599	Electronic Photo Cell Time Switch (Part Night Dimming Controller)
600-699	Hybrid Photo Cells (Negative Differential Switch "ON/OFF")
700-799	Electronic Photo Cell Time Switch (Part Night Controller)
800-997	Electronic Photo Cells (Negative Differential Switch "ON/OFF")
998-999	CMS Controlled Equipment

#### Notes:

a) Code 001: relates to all apparatus 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 apparatus 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 – 099: to be used for apparatus 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 apparatus 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 – 499: to be used for apparatus 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 apparatus 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 500 – 599: to be used for apparatus which is automatically switched on and then to a single preset dimming level for part of the night. The actual switch "ON" times are controlled by a photo electric cell with the switch to the dimmed power level being factory preset (a range of alternative factory switching times are available). Early morning switching back to full power is preset with a range of times available, the switch "OFF" being controlled by the photo electric cell.
  - g) Codes 600 – 699: to be used for apparatus 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 apparatus 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.
  - h) Codes 700 – 799: to be used for apparatus 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 apparatus installed at pre-determined locations within each inventory area.
  - i) Codes 800 – 997: to be used for apparatus 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 apparatus installed at pre-determined locations within each inventory area. Electronic photo cell controllers are units in which the output of a 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.

- j) Codes 998 and 999: to be used for CMS controlled equipment only. The Switch Regime code shall be set to 999 to denote the use of switched equipment (i.e. dusk to dawn), or 998 to denote continuous burning for that MSID.
- k) 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

### 3.2 Switch Regime Codes

#### 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.

### **3.3 Motorway Operating Hours**

**Please see the BSCCo website for the latest annual motorway operating hours**

## 4 Standard File Format for Detailed Inventories

### 4.1 General Comments

The inventory shall be submitted **either** as a fixed format text file **or** as a comma separated file with a line for each item of inventory.

The file format below is that which should be supplied by the Customer or as otherwise agreed with the UMSO. The file format should contain, as a minimum, the following information:

- (a) a list of items of Unmetered Apparatus providing a unique identification and geographical location of each item;
- (b) the number of items of each category of Unmetered Apparatus, classified by category and switch regime. Items not able to be so classified shall be identified and quantified separately;
- (c) the nominal rating for each category should be indicated; and
- (d) the switch regime code for each category. Items not able to be so classified shall be identified separately.

For the purposes of this Unmetered Supplies Operational Information document, reference to the summary inventory means only the summarised information identified in (b), (c) and (d) above.

### 4.2 Standard File Format

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	Name of town or parish or the district	Text	30	9	38
3.	Road Name	Name of the Road	Text	30	39	68
4.	Location	e.g. Ordinance Survey Number	Text	20	69	88

Field No.	Name	Details required	Type	Length	Position	
					Start	Finish
5.	Unit Type	Identifies the record as a lamp or a sign, etc. B = bollard; F = school crossing flashers; L = street light; M = miscellaneous; P = pillar; R = Refuge Beacon; S = sign; T = traffic signal equip; Z = Belisha Beacon (Zebra)	Text	1	89	89
6.	Unit Identity	Identity shown on unit (if any)	Text	12	90	101
7.	CMS Unit Reference	Unique alphanumeric identifier of the CMS Unit (if applicable)	Text	12	102	113
8.	Charge Code	Appropriate BSCP520 code	Numeric	13	114	126
9.	No. of Items	Number of items of this charge code at this location	Numeric	3	127	129
10.	Switch Regime	Appropriate BSCP520 code	Numeric	3	130	132
11.	No. of Controls	Number of PECs or time switches on the item	Numeric	1	133	133
12.	Control Charge Code	Appropriate BSCP520 code for the control device	Numeric	13	134	146
13.	Ordinance Survey Grid ref 'East' or Latitude		Text	11	147	157
14.	Ordinance Survey Grid ref 'North' or Longitude		Text	11	158	168
15.	Exit Point	Y if Yes, N if No, U if Unknown	Text	1	169	169

The data, with the originator clearly identified, should be either on a CD or attached to an e-mail. It may be a compressed .ZIP file but NOT a 'self extracting .EXE' archive.

### Notes on Standard Inventory Format

This format has been developed to provide the information required for the operation of BSCP520 and the auditing requirements of Distribution Businesses in a standard way. It is expected to be of particular benefit to customers with unmetered apparatus 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 Business agree to continue with a different format. With respect to the longer, 13 digit charge code, the Distribution Business will continue to support the 'old' seven digit charging code format for a period of time to be agreed with the UMS customer.

- 
- 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                      F = school crossing flasher      L = street light  
M= miscellaneous              P = pillar                              R = refuge beacon  
S = sign                          T = traffic signal equip              Z = zebra crossing
- Field 7** CMS Unit Reference  
Where this field is populated, the Switch Regime code in Field 10 must be reported as either 998 or 999.
- Field 11** 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.
- Fields 13, 14** Grid References or Latitude and Longitude  
Data is to be inserted in these fields when available. The increasing use of GPS apparatus provides very accurate location data which may supplement or be in addition to the location in Field 4.

## 5 Testing Procedure for the Issue of a Charge Code for New Apparatus

The object of this testing procedure is to provide an accurate indication of the load at the Distribution Network terminals of the particular apparatus under normal service conditions; i.e. to establish what consumption would be recorded by a standard meter fitted at the supply terminals. The load tests for apparatus designed for operation at other voltages MUST include an appropriate transformer.

Brief details of the apparatus, including the Product Name and Product Code (and version number if applicable) used by the manufacturer, must be supplied with the test data to enable the list of agreed ratings to be maintained.

### 5.1 Apparatus Tests

- Testing shall be carried out by an ISO 9001 accredited test house or other test house agreed by ELEXON
- ELEXON reserves the right to witness the tests if so required.
- Both power/voltage and volt-ampere/voltage curves will be required with measurements taken at 210, 220, 230 240 and 250 volts, 50 hertz. .
- The accuracy of the measurements shall be stated and the minimum accuracy shall be  $\pm 2\%$  of the recorded value.
- The power measurements must include any voltage transformers necessary to operate the apparatus from the mains.
- The sample size shall be 1% of the expected first year's production subject to a minimum sample size of five and a maximum of fifty.
- Samples must be tested after operating for sufficient time to reach their steady load state. If it is likely that the load will vary over the life of the apparatus then the tests should be carried out after at least one hundred hours of operation.
- If the apparatus contains both lamps and control gear then the control gear shall be divided into at least three batches. Each batch is to be tested with lamps supplied by a different major manufacturer.
- If the apparatus includes facilities to dim to a fixed load level, then full load as well as dimmed load data is required.

The User Group will consider the test results in recommending an appropriate charge code for inclusion in BSCP520. However, the Chairman may, at their discretion, issue a Temporary Code prior to the recommendation by the Group.

Note – Power Factor

It is a standard requirement of Unmetered Connection Agreements that the power factor of connected apparatus should be as near to unity as practicable but in any case at not less than 0.85 lagging or 0.95 leading. If apparatus does not meet this standard then Distribution Companies may refuse to connect the apparatus.

The issue of a charge code does not mean that the apparatus meets the requirements of the Distribution Business for an Unmetered Connection.

Test results and any comments on or questions about this procedure should be addressed to [umsugsecretary@elexon.co.uk](mailto:umsugsecretary@elexon.co.uk) or by contacting the BSCCo helpdesk: [helpdesk@elexon.co.uk](mailto:helpdesk@elexon.co.uk) (020 7380 4222).