

UMS SUMMARY TEST REPORT

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ISSUED BY:
CRANAGE EMC TESTING LIMITED
STABLE COURT
OAKLEY
MARKET DRAYTON
SHROPSHIRE, TF9 4AG



Report No: **U0069R01** Date of Issue: **20th December 2016**

This document summarises the results of testing to ascertain the appropriate Elexon Charge Codes for inclusion in BSCP520

Tested & Inspected for: **JCDecaux,
991 Great West Road,
London,
TW8 9DN.**

Test Dates: **3rd October 2016 – 19th December 2016.**
Initial Receipt Date of Test Item: **28th September 2016.**

Sample 1

Test Item Description: **TfL Digital Bus Shelter Advertising Display
(Single LCD Screen with additional single LED panel for hard
advertising media)**
Tested on behalf of: **JCDecaux**

A Consumer panel was wired into the Display and consisted of the following components:

- **40A CPN RC240/03D (Labelled RCD).**
- **CPN MC125C (Labelled Screen & Rebooter).**
- **CHINT NB1-63 B1 (Line Filter).**
- **CH1NT NB1-63B4 (12V Transformer).**
- **CH1NT NB1-63B1 (24V Transformer).**
- **Line Filter Schaffner FN 2060-3-06.**
- **12V Contactor Finder 22.32.0.012.4320.**
- **230V Contactor Finder 22.32.0.230.4320.**
- **Meanwell 12V Transformer 100-240V 0.88A.**
- **Meanwell 24V Transformer 100-240V 0.88A.**
- **Description: Router.**
Model: TransPort WR21.
Part Number: WR21-L12B-DE1-5B.
Serial Number: 860461024891429.
Manufacturer: Digi International Inc. for JCDecaux.
Hardware Options: TE EMEA, 2E th/232 Ent.
- **Micro-Cell Rebooter (SMS).**
Manufacturer: JCDecaux.
Serial Number: 1199002-0019.
SMS Number: 07393 251255.

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Sample 2

Test Item Description: **TfL Digital Bus Shelter Advertising Display
(Single LCD Screen with additional single LED panel for hard
advertising media)**

Tested on behalf of: **JCDecaux**

A Consumer panel was wired into the Display and consisted of the following components:

- **40A CPN RC240/03D (Labelled RCD).**
- **CPN MC125C (Labelled Screen & Rebooter).**
- **CHINT NB1-63 B1 (Line Filter).**
- **CH1NT NB1-63B4 (12V Transformer).**
- **CH1NT NB1-63B1 (24V Transformer).**
- **Line Filter Schaffner FN 2060-3-06.**
- **12V Contactor Finder 22.32.0.012.4320.**
- **230V Contactor Finder 22.32.0.230.4320.**
- **Meanwell 12V Transformer 100-240V 0.88A.**
- **Meanwell 24V Transformer 100-240V 0.88A.**
- **Description: Router.**
Model: TransPort WR21.
Part Number: WR21-L12B-DE1-5B.
Serial Number: 860461025208078.
Manufacturer: Digi International Inc. for JCDecaux.
Hardware Options: TE EMEA, 2E th/232 Ent.
- **Micro-Cell Rebooter (SMS).**
Manufacturer: JCDecaux.
Serial Number: 1199001-0020.
SMS Number: 07393 251353.

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Sample 3

Test Item Description: **TfL Digital Bus Shelter Advertising Display
(Single LCD Screen with additional single LED panel for hard
advertising media)**

Tested on behalf of: **JCDecaux**

A Consumer panel was wired into the Display and consisted of the following components:

- **40A CPN RC240/03D (Labelled RCD).**
- **CPN MC125C (Labelled Screen & Rebooter).**
- **CHINT NB1-63 B1 (Line Filter).**
- **CH1NT NB1-63B4 (12V Transformer).**
- **CH1NT NB1-63B1 (24V Transformer).**
- **Line Filter Schaffner FN 2060-3-06.**
- **12V Contactor Finder 22.32.0.012.4320.**
- **230V Contactor Finder 22.32.0.230.4320.**
- **Meanwell 12V Transformer 100-240V 0.88A.**
- **Meanwell 24V Transformer 100-240V 0.88A.**
- **Description: Router.**
Model: TransPort WR21.
Part Number: WR21-L12B-DE1-5B.
Serial Number: 860461025044754.
Manufacturer: Digi International Inc. for JCDecaux.
Hardware Options: TE EMEA, 2E th/232 Ent.
- **Micro-Cell Rebooter (SMS).**
Manufacturer: JCDecaux.
Serial Number: 1199002-0020.
SMS Number: 07393 251254.

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Sample 4

Test Item Description: **TfL Digital Bus Shelter Advertising Display
(Single LCD Screen with additional single LED panel for hard
advertising media)**

Tested on behalf of: **JCDecaux**

A Consumer panel was wired into the Display and consisted of the following components:

- **40A CPN RC240/03D (Labelled RCD).**
- **CPN MC125C (Labelled Screen & Rebooter).**
- **CHINT NB1-63 B1 (Line Filter).**
- **CH1NT NB1-63B4 (12V Transformer).**
- **CH1NT NB1-63B1 (24V Transformer).**
- **Line Filter Schaffner FN 2060-3-06.**
- **12V Contactor Finder 22.32.0.012.4320.**
- **230V Contactor Finder 22.32.0.230.4320.**
- **Meanwell 12V Transformer 100-240V 0.88A.**
- **Meanwell 24V Transformer 100-240V 0.88A.**

- **Description: Router.**
Model: TransPort WR21.
Part Number: WR21-L12B-DE1-5B.
Serial Number: 860461024872627.
Manufacturer: Digi International Inc. for JCDecaux.
Hardware Options: TE EMEA, 2E th/232 Ent.

- **Micro-Cell Rebooter (SMS).**
Manufacturer: JCDecaux.
Serial Number: 1199002-0001.
SMS Number: 07393 251310.

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Sample 5

Test Item Description: **TfL Digital Bus Shelter Advertising Display
(Single LCD Screen with additional single LED panel for hard
advertising media)**

Tested on behalf of: **JCDecaux**

A Consumer panel was wired into the Display and consisted of the following components:

- **40A CPN RC240/03D (Labelled RCD).**
- **CPN MC125C (Labelled Screen & Rebooter).**
- **CHINT NB1-63 B1 (Line Filter).**
- **CH1NT NB1-63B4 (12V Transformer).**
- **CH1NT NB1-63B1 (24V Transformer).**
- **Line Filter Schaffner FN 2060-3-06.**
- **12V Contactor Finder 22.32.0.012.4320.**
- **230V Contactor Finder 22.32.0.230.4320.**
- **Meanwell 12V Transformer 100-240V 0.88A.**
- **Meanwell 24V Transformer 100-240V 0.88A.**

- **Description: Router.**
Model: TransPort WR21.
Part Number: WR21-L12B-DE1-5B.
Serial Number: 459174770.
Manufacturer: Digi International Inc. for JCDecaux.
Hardware Options: TE EMEA, 2E th/232 Ent.

- **Micro-Cell Rebooter (SMS).**
Manufacturer: JCDecaux.
Serial Number: 1199002-0010.
SMS Number: 07392276146.

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Sample 6

Test Item Description: **TfL Digital Bus Shelter Advertising Display
(Single LCD Screen with additional single LED panel for hard
advertising media)**
Tested on behalf of: **JCDecaux**

A Consumer panel was wired into the Display and consisted of the following components:

- 40A CPN RC240/03D (Labelled RCD).
- CPN MC125C (Labelled Screen & Rebooter).
- CHINT NB1-63 B1 (Line Filter).
- CH1NT NB1-63B4 (12V Transformer).
- CH1NT NB1-63B1 (24V Transformer).
- Line Filter Schaffner FN 2060-3-06.
- 12V Contactor Finder 22.32.0.012.4320.
- 230V Contactor Finder 22.32.0.230.4320.
- Meanwell 12V Transformer 100-240V 0.88A.
- Meanwell 24V Transformer 100-240V 0.88A.
- Description: Router.
Model: TransPort WR21.
Part Number: WR21-L12B-DE1-5B.
Serial Number: 860461025209779.
Manufacturer: Digi International Inc. for JCDecaux.
Hardware Options: TE EMEA, 2E th/232 Ent.
- Micro-Cell Rebooter (SMS).
Manufacturer: JCDecaux.
Serial Number: 1199000-0021.
SMS Number: 07393 251295.

Approved Signatories: M. Richens – Test Engineer


APPROVED SIGNATORY

Verification Signatories: K. Richens – Managing Director


VERIFICATION SIGNATORY

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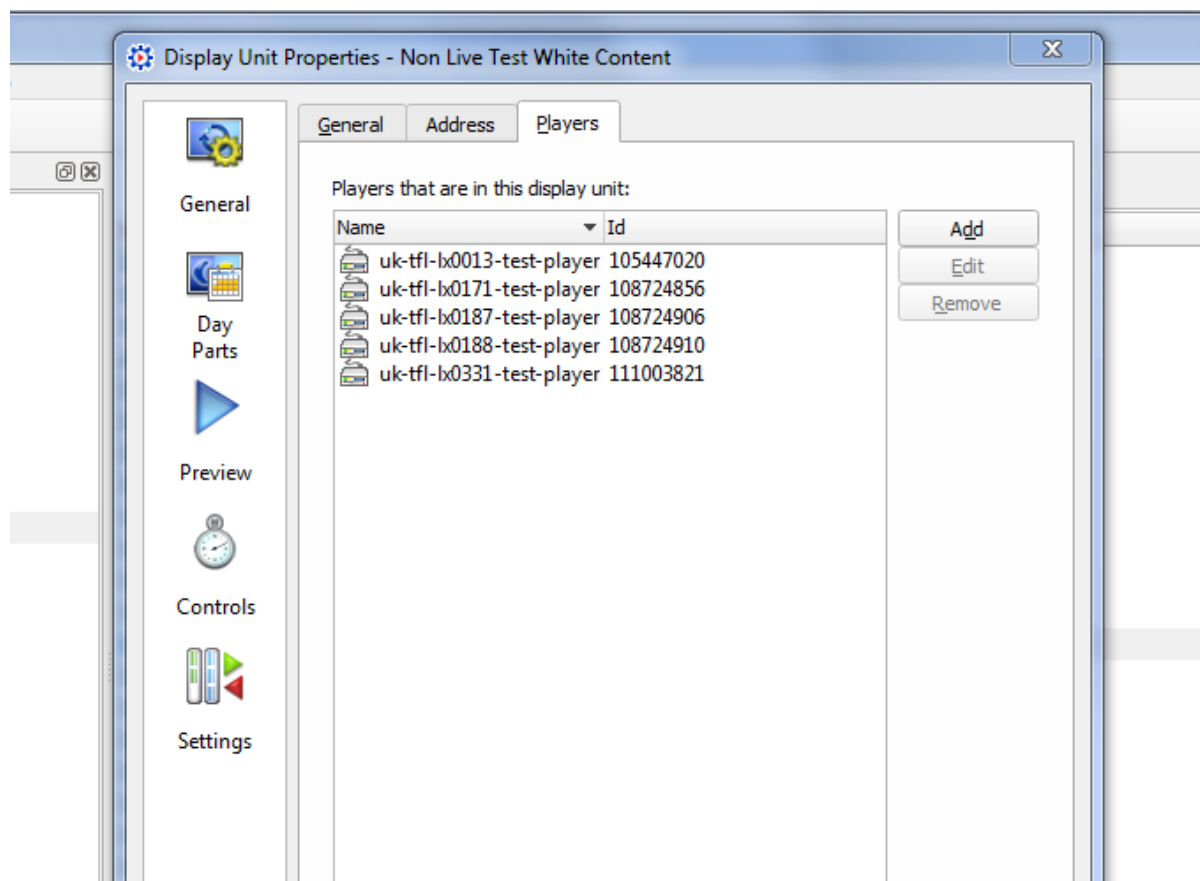
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Mode 1

210 – 250V AC 50 Hz was supplied to the unit under test. 100% white content was sent through a booking schedule via a 3G connection to the LCD screen. This was configured by JCDecaux through a content management system (see image below). As soon as the display units were online the content was assigned and played accordingly. The back light for the purposes of physical advertising media (non-digital) was illuminated, no dimming mode.



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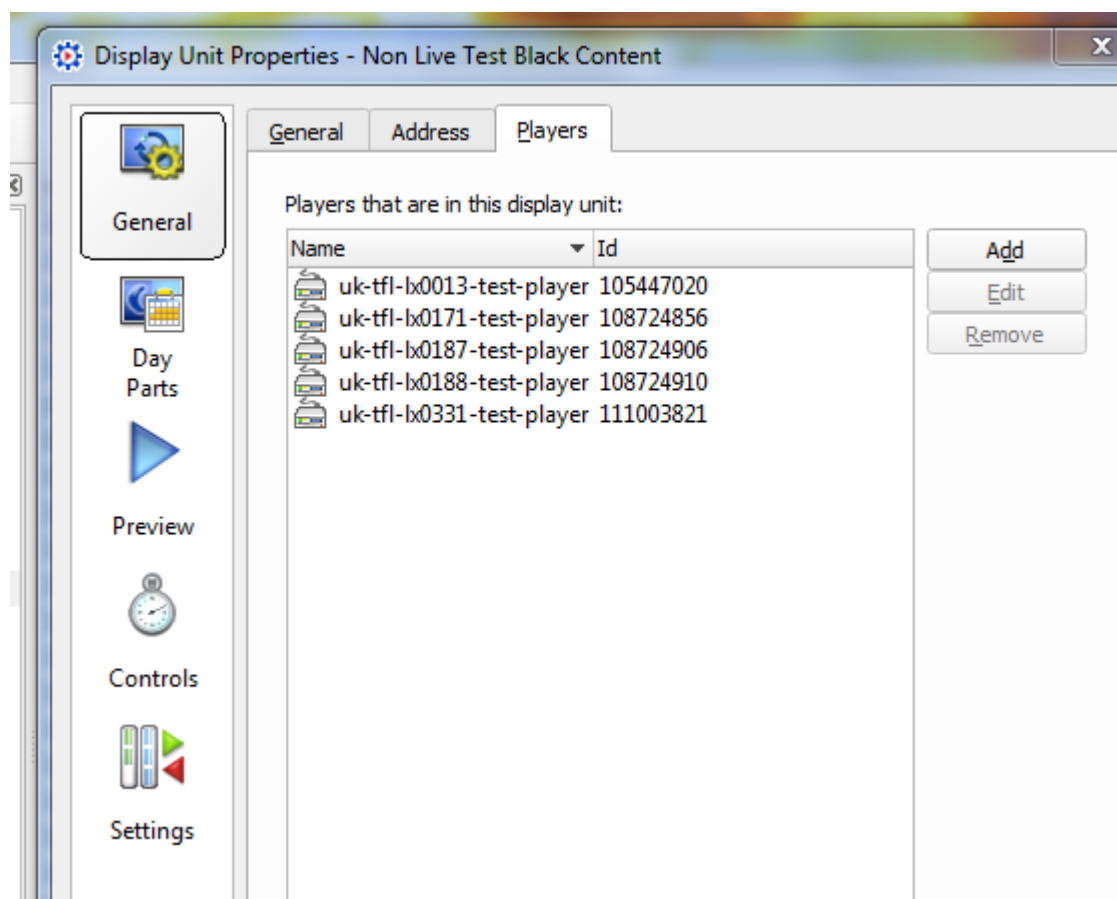
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Mode 2

210 – 250V AC 50 Hz was supplied to the unit under test. 100% black content was sent through a booking schedule via a 3G connection to the LCD screen. This was configured by JCDecaux through a content management system (see image below). As soon as the display units were online the content was assigned and played accordingly. The back light for the purposes of physical advertising media (non-digital) was illuminated, no dimming mode.



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Mode 3

210 – 250V AC 50 Hz was supplied to the unit under test. A representative advertising image (Ford – see below) was sent through a booking schedule via a 3G connection to the LCD screen. This was configured by JCDecaux through a content management system. As soon as the display unit was online the content was assigned and played accordingly. As agreed with Elexon only one sample was tested in this mode.



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Mode 4

210 – 250V AC 50 Hz was supplied to the unit under test. A representative advertising image (Old Mount Cider – see below) was sent through a booking schedule via a 3G connection to the LCD screen. This was configured by JCDecaux through a content management system. As soon as the display unit was online the content was assigned and played accordingly. As agreed with Elexon only one sample was tested in this mode.



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Mode 5

210 – 250V AC 50 Hz was supplied to the unit under test. A representative advertising image (Iglu – see below) was sent through a booking schedule via a 3G connection to the LCD screen. This was configured by JCDecaux through a content management system. As soon as the display unit was online the content was assigned and played accordingly. As agreed with Elexon only one sample was tested in this mode.



Test Conditions: A stabilisation period of 15 minutes was given, prior to measurements, at 230V 50Hz. The EUT was powered on. Measurements were subsequently taken after 15 minutes at each voltage level. All results are rounded to 2 decimal places.

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Mode 1

Watts					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	498.96	508.76	518.58	523.79	505.14
220	508.57	515.97	508.15	514.59	503.52
230	496.05	522.68	507.21	512.51	510.68
240	503.20	522.52	505.31	493.13	509.41
250	494.06	511.30	504.26	499.06	516.84
VA					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	560.09	570.72	580.37	601.72	567.23
220	576.73	584.01	574.75	585.27	571.96
230	572.21	597.65	581.20	590.65	588.82
240	586.87	605.14	587.71	578.89	595.86
250	588.71	604.19	597.09	595.21	613.64

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Mode 2

Watts					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	284.55	285.39	284.13	285.65	275.88
220	282.55	285.09	283.04	286.21	275.47
230	282.17	284.76	282.27	284.27	274.78
240	281.62	285.18	281.86	283.77	274.75
250	281.43	283.58	281.62	283.59	276.26
VA					
Voltage (Vrms)	Sample No.				
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
210	340.88	342.36	340.00	344.57	334.31
220	346.83	349.22	346.94	353.23	341.71
230	354.91	357.72	354.58	258.60	349.35
240	363.15	368.08	363.00	366.51	359.02
250	374.36	377.16	373.83	377.75	371.70

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Mode 3

Watts	
Voltage (Vrms)	Sample No.
	Sample 1
210	483.61
220	482.72
230	481.34
240	497.84
250	478.93
VA	
Voltage (Vrms)	Sample No.
	Sample 1
210	543.61
220	548.53
230	555.24
240	562.43
250	572.01

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Mode 4

Watts	
Voltage (Vrms)	Sample No.
	Sample 1
210	477.83
220	482.55
230	481.25
240	482.57
250	479.03
VA	
Voltage (Vrms)	Sample No.
	Sample 1
210	537.56
220	548.26
230	555.06
240	565.16
250	572.06

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Mode 5

Watts	
Voltage (Vrms)	Sample No.
	Sample 1
210	493.70
220	484.40
230	483.68
240	481.92
250	480.41
VA	
Voltage (Vrms)	Sample No.
	Sample 1
210	554.05
220	550.02
230	557.58
240	564.30
250	572.97

Ambient temperature & humidity range recorded during test period:
18°C - 22°C

Test Equipment

Asset Number	Description	Calibration Date	Calibration Due
AN288	Power Source	-	-
AN1162	Power Analyser	06/09/2016	-
AN452	Timer	-	-

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Peripheral Equipment

There was no peripheral equipment used with the test item.

Photographs of the Test Item



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LED Back light

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Measurement Uncertainty

The 95 % confidence measurement uncertainty for the AC Power Analyser is 0.17%.