

# UMS SUMMARY TEST REPORT

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



Report No: **U0070R01** Date of Issue: **1<sup>st</sup> December 2016**

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

Tested & Inspected for: **Bosch Security Systems Limited,  
PO Box 750,  
Uxbridge,  
UB9 5ZJ.**

Test Dates: **7<sup>th</sup> November 2016 – 9<sup>th</sup> November 2016.  
17<sup>th</sup> November 2016.**

Initial Receipt Date of Test Item: **7<sup>th</sup> November 2016.**

## **Sample 1**

Test Item Description: **Video Surveillance PTZ IP Camera with 55V High PoE MIDSPAN  
60W Injector.**  
Tested on behalf of: **Bosch Security Systems Limited.**  
Camera Model Number: **Mic-7230-B5.**  
PoE Part Number: **NPD-6001A.**  
Serial Number: **044482965724124004 (Camera) &  
N13146615100151A00 (PoE Injector).**

## **Sample 2**

Test Item Description: **Video Surveillance PTZ IP Camera with 55V High PoE MIDSPAN  
60W Injector.**  
Tested on behalf of: **Bosch Security Systems Limited.**  
Camera Model Number: **Mic-7230-B5.**  
PoE Part Number: **NPD-6001A.**  
Serial Number: **044482965724123004 (Camera) &  
N15306547130596A02 (PoE Injector).**

## **Sample 3**

Test Item Description: **Video Surveillance PTZ IP Camera with 55V High PoE MIDSPAN  
60W Injector.**  
Tested on behalf of: **Bosch Security Systems Limited.**  
Camera Model Number: **Mic-7230-B5.**  
PoE Part Number: **NPD-6001A.**  
Serial Number: **044482965721124005 (Camera) &  
N15306547130663A02 (PoE Injector).**

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## Sample 4

|                        |   |
|------------------------|---|
| Test Item Description: | <b>Video Surveillance PTZ IP Camera with 55V High PoE MIDSPAN 60W Injector.</b> |
| Tested on behalf of:   | <b>Bosch Security Systems Limited.</b>  |
| Camera Model Number:   | <b>Mic-7230-B5.</b>   |
| PoE Part Number:       | <b>NPD-6001A.</b>   |
| Serial Number:         | <b>044482965721124007 (Camera) &amp; N15456547135137A02 (PoE Injector).</b>     |

## Sample 5

|                        |   |
|------------------------|---|
| Test Item Description: | <b>Video Surveillance PTZ IP Camera with 55V High PoE MIDSPAN 60W Injector.</b> |
| Tested on behalf of:   | <b>Bosch Security Systems Limited.</b>  |
| Camera Model Number:   | <b>Mic-7230-B5.</b>   |
| PoE Part Number:       | <b>NPD-6001A.</b>   |
| Serial Number:         | <b>044482965722124001 (Camera) &amp; N14066547115491A00 (PoE Injector).</b>     |

Approved Signatories: M. Richens – Test Engineer

A handwritten signature in black ink, appearing to read 'M. Richens'.

APPROVED SIGNATORY

Verification Signatories: K. Richens – Managing Director

A handwritten signature in black ink, appearing to read 'K. Richens'.

VERIFICATION SIGNATORY

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## Mode 1

210 – 250V AC 50 Hz was supplied to a High PoE Midspan PoE injector, providing 55V DC and data connection to the surveillance video camera. The PoE injector was connected to a peripheral laptop in order to configure the video settings. In accordance with the customer's instructions the video settings were set to H.264 MP 1080P 25/30 FPS (1080P) only.

## Mode 2

230 AC 50 Hz was supplied to a High PoE Midspan PoE injector, providing 55V DC and data connection to the surveillance video camera. The PoE injector was connected to a peripheral laptop in order to configure the video settings. In accordance with the customer's instructions the video settings were set to H.264 MP 1080P 25/30 FPS (1080P) only. The camera's wiper was continuously operating and the peak value recorded only.

## Mode 3

230V AC 50 Hz was supplied to a High PoE Midspan PoE injector, providing 55V DC and data connection to the surveillance video camera. The PoE injector was connected to a peripheral laptop in order to configure the video settings. In accordance with the customer's instructions the video settings were set to H.264 MP 1080P 25/30 FPS (1080P) only. The camera was manually set to pan during the measurement and the peak value recorded only.

## Mode 4

230V AC 50 Hz was supplied to a High PoE Midspan PoE injector, providing 55V DC and data connection to the surveillance video camera. The PoE injector was connected to a peripheral laptop in order to configure the video settings. In accordance with the customer's instructions the video settings were set to H.264 MP 1080P 25/30 FPS (1080P) only. The camera was manually set to tilt during the measurement and the peak value recorded only.

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## Mode 5

230V AC 50 Hz was supplied to a High PoE Midspan PoE injector, providing 55V DC and data connection to the surveillance video camera. The PoE injector was connected to a peripheral laptop in order to configure the video settings. In accordance with the customer's instructions the video settings were set to H.264 MP 1080P 25/30 FPS (1080P) only. The camera was manually set to zoom during the measurement and the peak value recorded only.

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 except in modes 2 - 5. This was found to be an adequate time window for the purpose of the test measurements.

All results are rounded to 2 decimal places.

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| Mode 1 – Watts    |            |          |          |          |          |
|-------------------|------------|----------|----------|----------|----------|
| Voltage<br>(Vrms) | Sample No. |          |          |          |          |
|                   | Sample 1   | Sample 2 | Sample 3 | Sample 4 | Sample 5 |
| 210               | 24.73      | 24.50    | 24.46    | 24.57    | 24.44    |
| 220               | 24.73      | 24.54    | 24.45    | 24.59    | 24.48    |
| 230               | 24.78      | 24.60    | 24.47    | 24.64    | 24.58    |
| 240               | 24.83      | 24.70    | 24.55    | 24.72    | 24.63    |
| 250               | 24.90      | 24.81    | 24.79    | 24.99    | 24.73    |

| Mode 1 – VA       |            |          |          |          |          |
|-------------------|------------|----------|----------|----------|----------|
| Voltage<br>(Vrms) | Sample No. |          |          |          |          |
|                   | Sample 1   | Sample 2 | Sample 3 | Sample 4 | Sample 5 |
| 210               | 60.63      | 59.39    | 58.18    | 59.91    | 59.50    |
| 220               | 61.82      | 61.31    | 59.81    | 61.56    | 60.90    |
| 230               | 63.47      | 63.10    | 61.41    | 63.22    | 62.63    |
| 240               | 65.07      | 64.88    | 63.03    | 64.88    | 64.26    |
| 250               | 66.67      | 66.60    | 63.09    | 65.89    | 65.85    |

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**These additional measurements were taken for Elexon purposes.**

| Mode 2 – Watts |              |              |              |              |              |
|----------------|--------------|--------------|--------------|--------------|--------------|
| Voltage (Vrms) | Sample No.   |              |              |              |              |
|                | Sample 1     | Sample 2     | Sample 3     | Sample 4     | Sample 5     |
| <b>230</b>     | <b>26.67</b> | <b>26.21</b> | <b>25.87</b> | <b>25.94</b> | <b>25.84</b> |
| Mode 2 – VA    |              |              |              |              |              |
| Voltage (Vrms) | Sample No.   |              |              |              |              |
|                | Sample 1     | Sample 2     | Sample 3     | Sample 4     | Sample 5     |
| <b>230</b>     | <b>65.38</b> | <b>66.52</b> | <b>64.17</b> | <b>64.93</b> | <b>65.20</b> |

| Mode 3 – Watts |              |              |              |              |              |
|----------------|--------------|--------------|--------------|--------------|--------------|
| Voltage (Vrms) | Sample No.   |              |              |              |              |
|                | Sample 1     | Sample 2     | Sample 3     | Sample 4     | Sample 5     |
| <b>230</b>     | <b>26.71</b> | <b>24.93</b> | <b>22.01</b> | <b>25.85</b> | <b>24.81</b> |
| Mode 3 – VA    |              |              |              |              |              |
| Voltage (Vrms) | Sample No.   |              |              |              |              |
|                | Sample 1     | Sample 2     | Sample 3     | Sample 4     | Sample 5     |
| <b>230</b>     | <b>65.34</b> | <b>64.28</b> | <b>57.40</b> | <b>64.98</b> | <b>63.11</b> |

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| Mode 4 – Watts    |            |          |          |          |          |
|-------------------|------------|----------|----------|----------|----------|
| Voltage<br>(Vrms) | Sample No. |          |          |          |          |
|                   | Sample 1   | Sample 2 | Sample 3 | Sample 4 | Sample 5 |
| 230               | 24.23      | 23.96    | 24.91    | 21.83    | 23.85    |
| Mode 4 – VA       |            |          |          |          |          |
| Voltage<br>(Vrms) | Sample No. |          |          |          |          |
|                   | Sample 1   | Sample 2 | Sample 3 | Sample 4 | Sample 5 |
| 230               | 61.34      | 62.44    | 62.33    | 57.9     | 61.60    |

| Mode 5 – Watts    |            |          |          |          |          |
|-------------------|------------|----------|----------|----------|----------|
| Voltage<br>(Vrms) | Sample No. |          |          |          |          |
|                   | Sample 1   | Sample 2 | Sample 3 | Sample 4 | Sample 5 |
| 230               | 25.84      | 25.53    | 25.45    | 25.43    | 25.54    |
| Mode 5 – VA       |            |          |          |          |          |
| Voltage<br>(Vrms) | Sample No. |          |          |          |          |
|                   | Sample 1   | Sample 2 | Sample 3 | Sample 4 | Sample 5 |
| 230               | 63.90      | 65.22    | 63.30    | 64.06    | 64.73    |

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

| Description    | Model Name/<br>Number | Serial Number |
|----------------|-----------------------|---------------|
| Fujitsu Laptop | AH530                 | YL9Q454752    |

## Photographs of the Test Item



Above: Camera & PoE Injector.

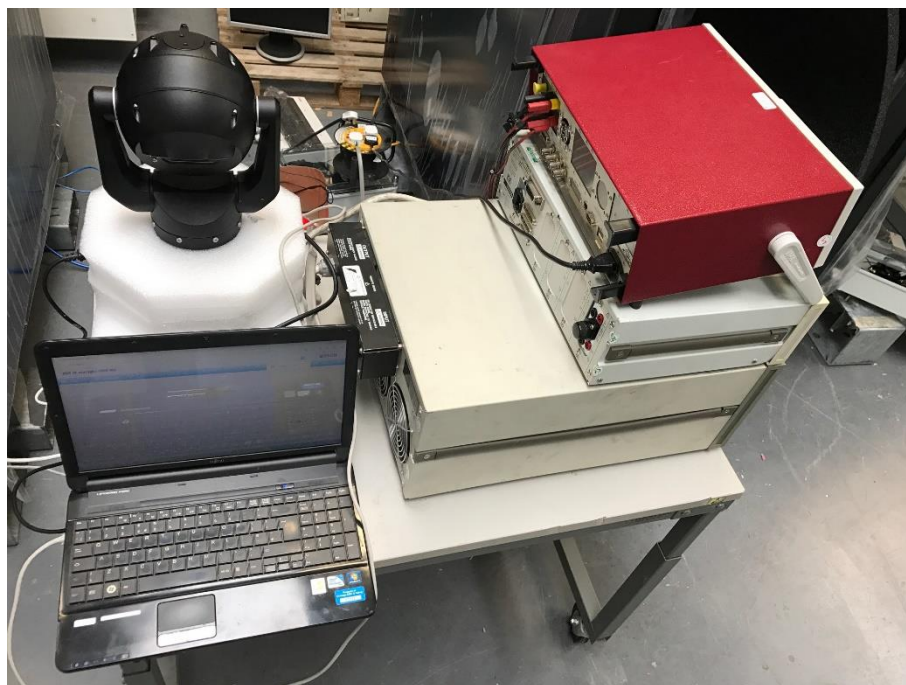
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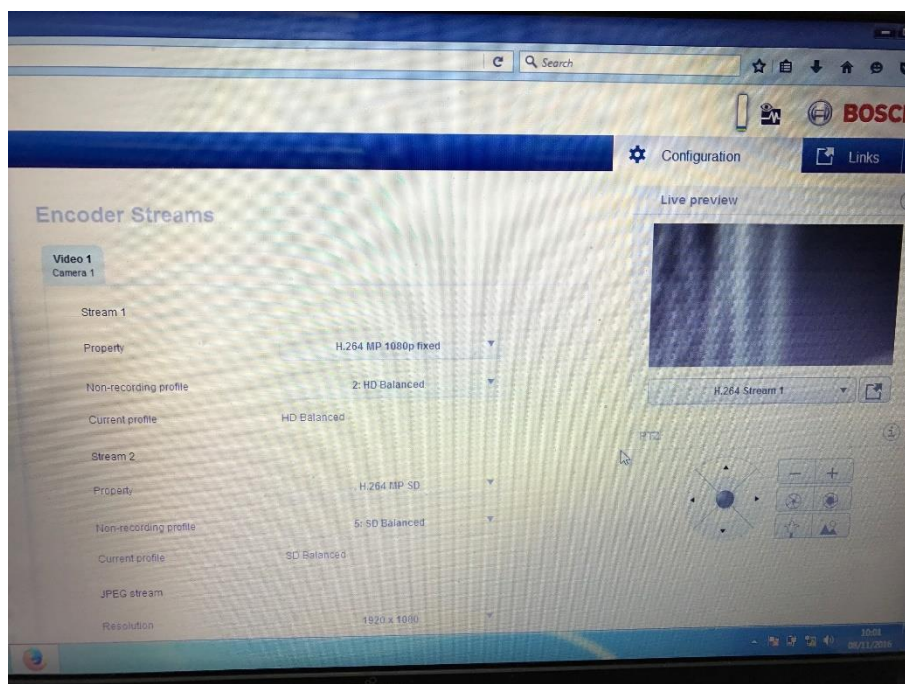
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Above: Measurements on system including peripheral.



Above: Video stream settings set through the control panel.

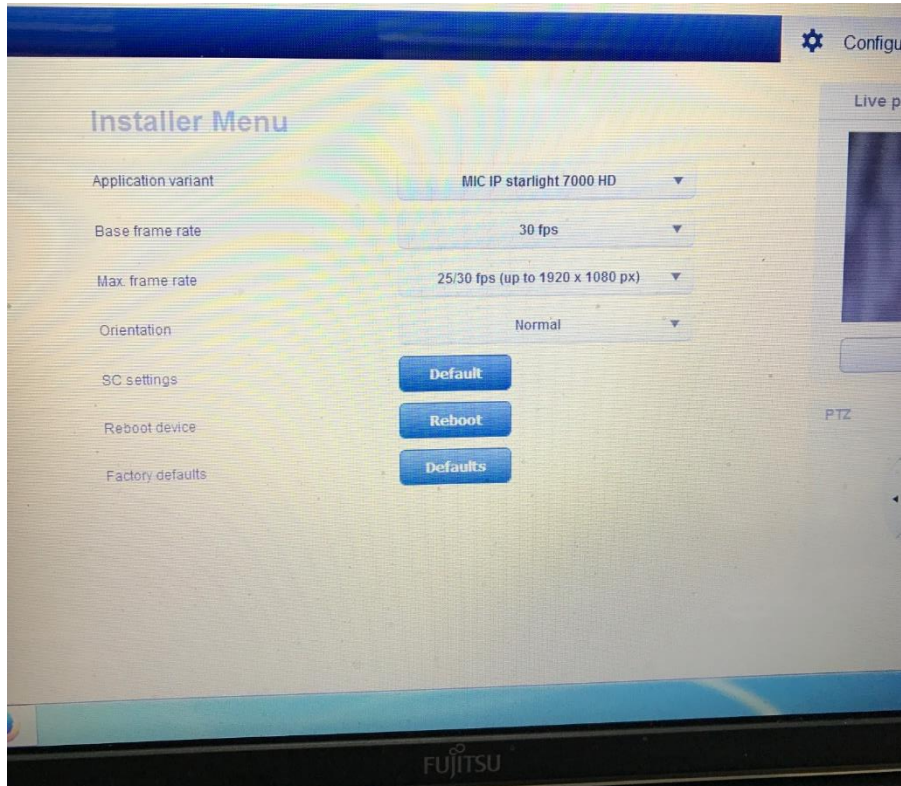
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Above: Video stream settings set through the control panel.

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A screenshot of a web-based control panel for a camera. The interface has a blue header bar with a search icon and the word 'Search'. Below the header, there is a table of hardware settings. The table has two columns: the setting name and its value. The settings include Product ID, Product variant ID, Hardware ID, IP address, MAC address, Firmware version, Min. firmware version, Hardware version, Audio option, Initiator name, System controller version, CMC version, IR controller version, I/O controller version, Stream 1, Stream 2, Temperature, and Cloud state.

|                           |  |
|---------------------------|--|
| Product ID                | 0x2b   |
| Product variant ID        | 0x01   |
| Hardware ID               | 0x72   |
| IP address                | 192.168.1.241                                    |
| MAC address               | 00-07-5F-86-8F-9A                                |
| Firmware version          | 6.30.0136 (36510630)                             |
| Min. firmware version     | 5.92   |
| Hardware version          | F0007242   |
| Audio option              | No   |
| Initiator name            | Iqn.2005-12.com.bosch:unit00075f868f9a           |
| System controller version | 04.15.00.16 / 06.00.01.05                        |
| CMC version               | 01.00.00.06 / 01.08.00.01                        |
| IR controller version     | 00.00.00.00 / 00.00.00.00                        |
| I/O controller version    | 00.00.00.00 / 00.00.00.00                        |
| Stream 1                  | HD Balanced                                      |
| Stream 2                  | SD Balanced                                      |
| Temperature               | 109 °F/42.5 °C (max. 115 °F/45 °C)               |
| Cloud state               | Not running (Automatic IP assignment not active) |

**Above: Typical hardware settings of the cameras viewed through the control panel.**

## Measurement Uncertainty

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