

# 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: **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: **044482965721124007 (Camera) & N15456547135137A02 (PoE Injector).**

## Sample 5

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: **044482965722124001 (Camera) & N14066547115491A00 (PoE Injector).**

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

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

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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 (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 (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 (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 (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/ Number	Serial Number
Fujitsu Laptop	AH530	YL9Q454752

## Photographs of the Test Item



Above: Camera & PoE Injector.

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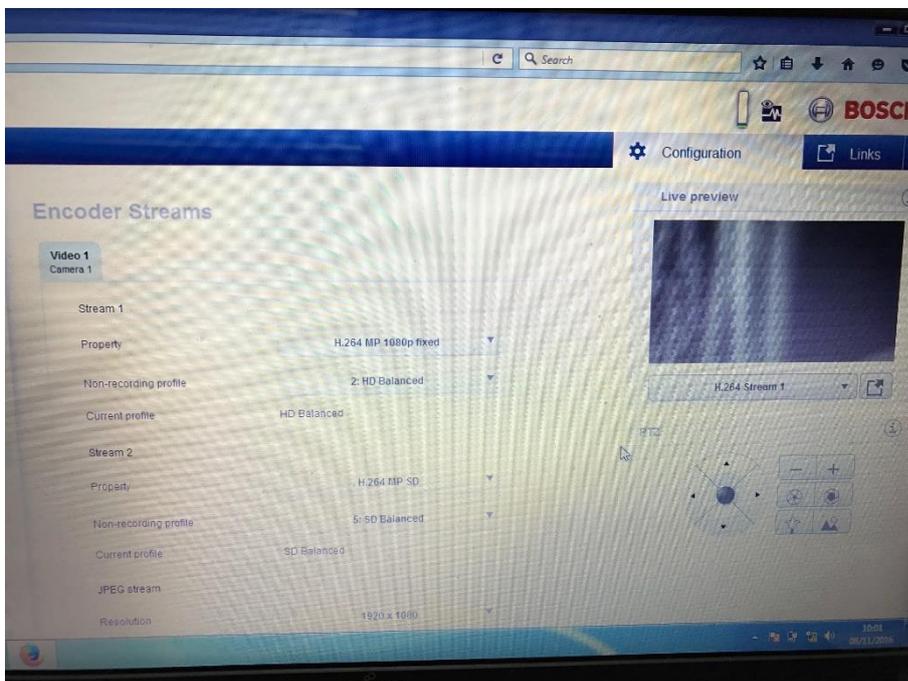
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Above: Measurements on system including peripheral.



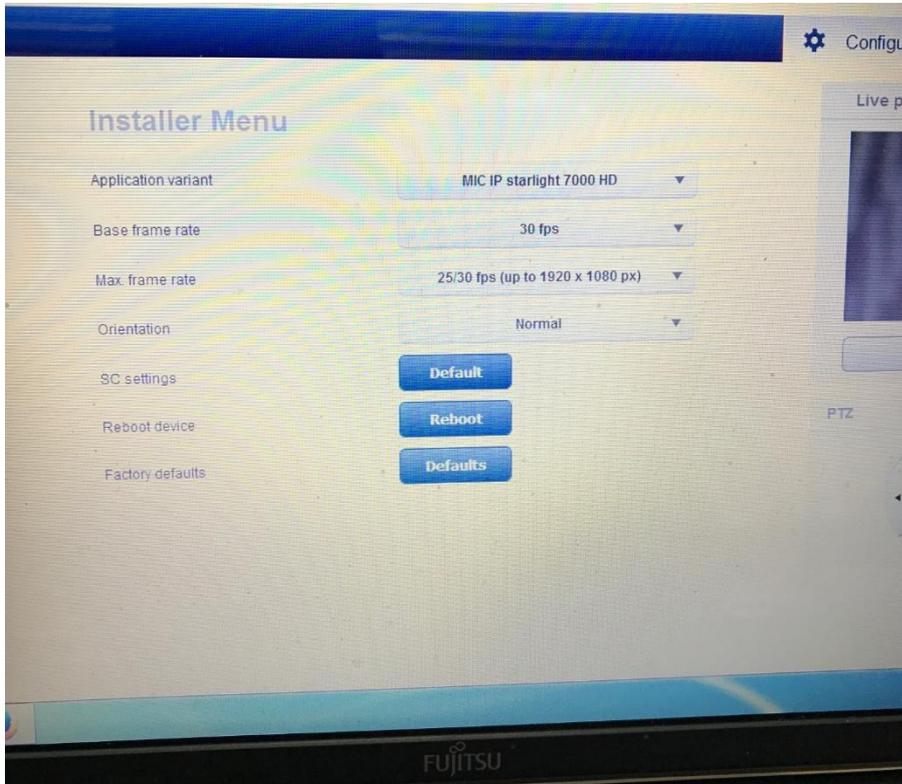
Above: Video stream settings set through the control panel.

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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 showing hardware settings for cameras. The interface has a search bar at the top right and a list of settings below. The settings are as follows:

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/43 °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%.