



Electronic Test & Calibration Ltd.

D21955

Electrical Power Measurement

Customer

Systems Engineering & Assessment Ltd., Building 660, The Gardens, Bristol Business Park, Coldharbour Lane, Bristol, BS16 1EJ

Location

Electronic Test & Calibration Ltd., Unit 14 Caddsdwn Industrial Park, Clovelly Road, Bideford, EX39 3DX

Dates of test

7th July 2016

Equipment under test

Camera System

Disclaimer

The measurements made are valid at the time of measurement and do not represent the EUT characteristics under different operating conditions. Any conclusions drawn from these measurements are based purely on the represented information and are made in good faith. Any recommendations are made without prejudice and any changes in performance must be verified by testing to the appropriate standards. The following results and report are for the EUT tested as stated only and should not be transferred between product families.

Test Engineer

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Becky Scott

Signatory & Head of Laboratory

Becky Scott

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Standards and Results Summary

Standard	Description	
Elexon	Unmetered supply measurement procedure	Non-UKAS
	Energy usage and efficiency	

Status	Date	Report Name and Version
Original	14 th July 2016	D21955 Test Report_01.pdf

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Equipment configuration

The EUT was configured as shown in the photo below. Each setup consisted of a power supply, main processor unit, GSM switch box, HD camera, a smaller camera and cables. 5 complete setups were supplied.



Equipment set one:

MPU:	NEXCOM TSBG03011908	055011-002
HD Camera:	SN: K1003009	RD73TV/SW03/1.3MP/HD
Small camera	SN: K1003024	XC04FH/SW02/DN
GSM Switch	16-JSB-102	SEA0204SPN33000
P supply	Meanwell HLG-185H-15A	SN: HB55E69639

Equipment set two:

MPU:	NEXCOM TSBG03011916	055011-006
HD Camera:	SN: K10030xx	RD73TV/SW03/1.3MP/HD
Small camera	SN: K1003017	XC04FH/SW02/DN
GSM Switch	16-JSB-100	SEA0204SPN33000
P supply	Meanwell HLG-185H-15A	SN: HB53508766

Equipment set three:

MPU:	NEXCOM TSBG03011917	055011-010
HD Camera:	SN: K1003016	RD73TV/SW03/1.3MP/HD
Small camera	SN: K1003021	XC04FH/SW02/DN
GSM Switch	16-JSB-095	SEA0204SPN33000
P supply	Meanwell HLG-185H-15A	SN: HB61453739

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Equipment set
four:

MPU:	NEXCOM TSBG03011933	055011-009
HD Camera:	SN: K1003015	RD73TV/SW03/1.3MP/HD
Small camera	SN: K1003020	XC04FH/SW02/DN
GSM Switch	16-JSB-091	SEA0204SPN33000
P supply	Meanwell HLG-185H-15A	SN: HB61453768

Equipment set five:

MPU:	NEXCOM TSBG03011913	055011-003
HD Camera:	SN: K1003011	RD73TV/SW03/1.3MP/HD
Small camera	SN: K1003022	XC04FH/SW02/DN
GSM Switch	16-JSB-096	SEA0204SPN33000
P supply	Meanwell HLG-185H-15A	SN: HB61453761

Elxon - Unmetered supply overview (undated document)

Date of Test	Temperature °C	Humidity %	Pressure mB
7 th July 2016	21	60	1007

Equipment used	ID No.
Voltech 3000A power analyser	ETC1356
Kikusui PCR3000LE Power supply	ETC1506
Cables used	
IEC Mains Lead	

Calibration

All equipment used during testing was in current calibration.

Limits

N/A

Testing

The standard calls for the P, VA, VAr and PF consumption to be measured at 210 V, 220 V, 230 V, 240 V, 250 V, 50 Hz to a minimum accuracy of +/- 2%.

Set 1

V	210	220	230	240	250
W	60.58	61	60.9	61.2	61.4
P	320	310	302	293.8	289.4
VA	67.8	68.5	69.7	71	72.6
Var	29.8	31.7	34.1	36.36	38.88
PF	0.898	0.886	0.873	0.859	0.846

Set 2

V	210	220	230	240	250
W	59.5	59.7	60.3	60.4	60.7
P	315	305	298	292	286
VA	66.5	67.4	69.3	70.3	71.6
Var	29.6	31.77	33.9	36.2	38.76

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PF	0.895	0.878	0.871	0.857	0.84
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Set 3

V	210	220	230	240	250
W	58	57.9	58.1	58.2	58.4
P	309	299	291	284	280
VA	65.5	66.2	67.6	69.3	70.4
Var	30.09	32.2	34.4	36.7	39.2
PF	0.887	0.874	0.862	0.846	0.83

Set 4

V	210	220	230	240	250
W	57.5	57.3	57.6	57.8	58.2
P	305	297	293	286	277.8
VA	64.6	65.9	67.3	68.5	70
Var	59.9	32.1	34.5	36.7	39.37
PF	0.886	0.872	0.858	0.842	0.828

Set 5

V	210	220	230	240	250
W	59.6	59.1	58.7	60.7	62.4
P	315.7	304.7	294.2	291.3	290
VA	66.9	67.2	67.6	70.5	73.5
Var	29.9	32.2	34.4	37.2	39.6
PF	0.891	0.877	0.861	0.851	0.831

Uncertainty of measured voltage 0.2 %

Uncertainty of measured power 1.1 %

Uncertainty of measured VA 1.1 %

The reported uncertainty is based on a standard uncertainty multiplied by the coverage factor $k=2$, providing a level of confidence of approximately 95%.

End of Report