



Electronic Test & Calibration Ltd.

D15166

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

20th August 2015

Equipment under test

Level Crossing Camera System

Sample	Serial Number
Sample 1	SEA/WM10050
Sample 2	SEA/WM10051
Sample 3	SEA/WM10052
Sample 4	SEA/WM10053
Sample 5	SEA/WM10054

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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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	20 th August 2015	D15166 Test Report_01.pdf

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Equipment configuration

The Unit was already configured in a rack as it would be mounted at a level crossing.

Test: A power supply was connected the input of the unit, this then powered an internal PC, cameras, lights and a monitor. The camera and lights where enabled during the test to ensure maximum power use.

Elxon - Unmetered supply overview (undated document)

Date of Test	Temperature °C	Humidity %	Pressure mB
20 th August 2015	21.1	59.3	1004

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

Deviations

None

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%. A minimum of 5 samples should be tested.

Measurement	Voltage	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
Watts	210	151.60	146.77	150.75	159.72	141.98
	220	151.24	146.84	149.96	162.12	142.72
	230	151.32	146.36	149.73	161.56	142.77
	240	150.84	146.74	148.98	160.61	142.51
	250	149.96	146.81	148.69	160.58	142.98
VA	210	156.41	151.95	154.94	166.34	147.69
	220	157.34	151.99	155.21	167.51	148.92
	230	157.85	153.06	155.87	167.41	149.57
	240	158.96	154.09	156.36	168.01	150.59
	250	158.54	155.34	157.22	168.42	152.44
Var	210	37.57	37.49	37.56	38.93	39.16
	220	41.06	40.80	40.83	41.41	40.94

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	230	45.04	44.68	44.82	45.22	44.30
	240	48.15	48.06	48.14	48.54	47.66
	250	51.49	51.74	51.67	52.29	51.61
PF	210	0.97	0.97	0.97	0.97	0.97
	220	0.97	0.96	0.96	0.97	0.96
	230	0.96	0.96	0.96	0.96	0.96
	240	0.95	0.95	0.95	0.96	0.95
	250	0.94	0.94	0.94	0.95	0.94

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