Israel Electric Corporation
Marketing Division
Central Metering Unit

17 Ha-Lehi Street, Bnei Brak 51200, Israel
Tel. 972 3 6174859 Fax 972 3 6174908

Test Certificate

Certificate No: *14744* **Date:** *1/06/11*

According to procedure No – **And/or according to requirement:** *45–2010*

Procedure version is valid for the day of the test

Date received : *9.2010* **Description of tested item:** *Digital energy metering units*

Manufacturer: *Control Applications Ltd.* **Type:** *ELNet:MC,GR,LT,Pico* **Serial No:**

Status as received: *new*
(new; used; repaired; other)

Customer: *Control Applications Ltd.* **Address:** *24 Barzel str., Tel Aviv*

ISRAEL ELECTRIC CO.LTD. MARKETING DIVISION - CENTRAL MARKETING UNIT. METER TESTING LABORATORY DEPARTMENT. STANDARDS LABORATORY

Environmental conditions: *As stated in the work sheet*
Method: *compare to reference meter*
References: -
Suggested date for next calibration: *n a*
☒ **Calibration was done without adjustment**
☐ **Calibration was done after adjustment.** **No. of attached Test Report before adjustment:**

List of equipment used for the calibration

Description/Type	Manufacturer	Serial number	Calibration date
MTS320	*ZERA*	7/5382	*9.2010*
VCL4034MH	*VOTSCH*	7/5267	*2.2010*
UH28M	*RB*	7/4009	*11.2009*

The results of calibration characterize the calibrated item at the time of calibration only, and not include any changes after this time.
The reported expanded measurement uncertainties correspond to the coverage probability of approximately 95% and based on coverage factor k=2, or as stated in enclosed documents.
This certificate need to be related in full and no part thereof shall be quoted in other document.
Usage of this Certificate is under customer's responsibility only, and the Laboratory is not responsible for the usage as such.
This Calibration meets the requirements of ISO IEC 17025 and reference quantities of the laboratory are traceable to national and international reference quantities.
The Laboratory is accredited by ISRAC to carry out calibrations and tests in accordance with the laboratory scope of accreditation. The results which are not included in the laboratory scope of accreditation are marked on the results pages.
ISRAC is not responsible for the results of the tests performed by the organization research facility and accreditation recognition does not constitute a certificate of approval of any item, system or process tested.
The use of ISRAC symbol relates to tests calibrations which are included in the laboratory scope of accreditation, and performed according to the accreditation rules as detailed in the accreditation certificate.
ISRAC is one of the signatories of the International Accreditation Cooperation (ILAC) arrangement for the mutual recognition of test and calibration reports certificates

Tested by: G. Mittelman **Date: 9. 2010** **Signature:**

Verified by: I. Gueta **Date: 1.06.2011** **Signature:**

ISRAC
הרשות הלאומית להסמכת מעבדות
ISO/IEC 17025
No. 094

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Tests List

Nr.	Type Test			
	Test description	Section of IEC standard		
		62052-11	62053-22	62053-23
1.	Power consumption	-	7.1	7.1
2.	Voltage dips and short interruptions	7.1.2	-	-
3.	Heating	7.2	-	-
4.	Influence of self-heating	-	7.3	7.3
5.	Test of immunity to electrostatic discharges	7.5.2	-	-
6.	Limits of error due to variation of the current	-	8.1	8.1
7.	The additional percentage error due to ambient temperature variation	-	8.2	8.2
8.	The additional percentage error due to voltage variation ±10 %	-	8.2	8.2
9.	The additional percentage error due to frequency variation ±2 %	-	8.2	8.2
10.	The additional percentage error due to reversed phase sequence	-	8.2	-
11.	The additional percentage error due to voltage unbalance	-	8.2	-
12.	The additional percentage error due to harmonic components in the current and voltage circuits	-	8.2	-
13.	The additional percentage error due to sub-harmonics in the a.c. current circuit	-	8.2	-
14.	The additional percentage error due to magnetic induction of external origin 0,5 mT	-	8.2	-
15.	Initial start-up of the meter	-	8.3.1	8.3.1
16.	Test of no-load condition	-	8.3.2	8.3.2
17.	Starting	-	8.3.3	8.3.3
18.	Meter constant	-	8.4	8.4

Test of Digital Energy Metering Devices Report according to agreements 45-2010, 15-2011

Samples List

Nr.	Manufacturer	Type	Constant, imp/kWh	Current, A	Voltage, V
1	Control Applications Ltd.	ElNet^{MC}	10000	5(6)	230
2		ElNet^{GR}			
3		ElNet^{LT}			
4		ElNet^{Pico}			

Equipment used for test

Type	Manufacturer	Description	Serial Nr.
MTS320	ZERA	Meter test system	7/5382
VCL4034MH	VOTSCH	Climatic chamber	7/5267
UH28M	RB	Insulation tester	7/4009

Tests List

Nr.	Type Test			
	Test description	Section of IEC standard		
		62052-11	62053-22	62053-23
1.	Power consumption	-	7.1	7.1
2.	Voltage dips and short interruptions	7.1.2	-	-
3.	Heating	7.2	-	-
4.	Influence of self-heating	-	7.3	7.3
5.	Test of immunity to electrostatic discharges	7.5.2	-	-
6.	Limits of error due to variation of the current	-	8.1	8.1
7.	The additional percentage error due to ambient temperature variation	-	8.2	8.2
8.	The additional percentage error due to voltage variation ±10 %	-	8.2	8.2
9.	The additional percentage error due to frequency variation ±2 %	-	8.2	8.2
10.	The additional percentage error due to reversed phase sequence	-	8.2	-

11	The additional percentage error due to voltage unbalance	-	8.2	-
12	The additional percentage error due to harmonic components in the current and voltage circuits	-	8.2	-
13	The additional percentage error due to sub-harmonics in the a.c. current circuit	-	8.2	-
14	The additional percentage error due to magnetic induction of external origin 0,5 mT	-	8.2	-
15	Initial start-up of the meter	-	8.3.1	8.3.1
16	Test of no-load condition	-	8.3.2	8.3.2
17	Starting	-	8.3.3	8.3.3
18	Meter constant	-	8.4	8.4

1. Power consumption test

Type	Phase	Voltage circuit, VA	Voltage circuit, W	Current circuit, VA
ElNet^{MC}	R	0.2	0.2	0.9
	S	0.2	0.2	0.7
	T	0.2	0.2	0.6
ElNet^{GR}	R	0.055	0.05	-
	S	0.055	0.05	-
	T	0.055	0.05	-
ElNet^{LT}	R	0.05	0.05	0.04
	S	0.05	0.05	0.04
	T	0.05	0.05	0.04
ElNet^{Pico}	R	0.05	0.05	-
	S	0.05	0.05	-
	T	0.05	0.05	-

2. Voltage dips and short interruptions

Type	√ if pass	
	pass	fail
ElNet^{MC}	√	
ElNet^{GR}	√	
ElNet^{LT}	√	
ElNet^{Pico}	√	

3. Heating

Type	√ if pass	
	pass	fail
ElNet^{MC}	√	
ElNet^{GR}	√	
ElNet^{LT}	√	
ElNet^{Pico}	√	

4. Influence of self-heating

- Voltage 230V
- Current 6A

Power factor	Additional error, %			
	ElNet^{Pico}	ElNet^{LT}	ElNet^{GR}	ElNet^{MC}
1	0.04	0.02	0.00	0.1
0.5	0.02	0.01	0.00	0.04

5. Test of immunity to electrostatic discharges

Type	√ if pass	
	pass	fail
ElNet^{MC}	√	
ElNet^{GR}	√	
ElNet^{LT}	√	
ElNet^{Pico}	√	

6. Initial start-up of the meter

Type	√ if pass	
	pass	fail
ElNet^{MC}	√	
ElNet^{GR}	√	
ElNet^{LT}	√	
ElNet^{Pico}	√	

7. Test of no-load condition

Type	√ if pass	
	pass	fail
ElNet^{MC}	√	
ElNet^{GR}	√	
ElNet^{LT}	√	
ElNet^{Pico}	√	

8. Starting

Type	√ if pass	
	pass	fail
ElNet^{MC}	√	
ElNet^{GR}	√	
ElNet^{LT}	√	
ElNet^{Pico}	√	

9. Meter Constant

Type	√ if pass	
	pass	fail
ElNet^{MC}	√	
ElNet^{GR}	√	
ElNet^{LT}	√	
ElNet^{Pico}	√	

10. Active mode tests (kWh)

10.1 Accuracy tests

10.1.1 Balanced load

Current, A	Power factor	Error, %			
		ElNet^{Pico}	ElNet^{LT}	ElNet^{GR}	ElNet^{MC}
0.05	1.0	0.04	0.00	-0.09	0.05
0.1	0.5 i	0.10	0.00	0.03	-0.05
	0.8 c	0.01	0.04	-0.03	0.09
0.25	1.0	0.06	0.04	0.03	0.04
0.5	0.5 i	-0.03	-0.03	-0.03	-0.03
	0.8 c	0.02	0.07	0.06	0.10
	0.25 i	0.19	-0.10	-0.10	-0.14
	0.5 c	-0.01	0.11	0.00	0.13
5	1	0.04	0.02	0.02	0.03
	0.5 i	0.05	0.01	0.00	-0.02
	0.8 c	0.04	-0.01	0.03	0.07
	0.25 i	0.06	0.00	-0.03	-0.09
	0.5 c	0.04	0.04	0.05	0.12
6	1.0	0.02	0.00	0.00	-0.01
	0.5 i	0.07	0.03	-0.03	-0.05
	0.8 c	0.02	0.01	0.00	0.01
	0.25 i	0.14	0.07	-0.07	-0.15
	0.5 c	0.00	0.03	0.00	0.08

10.1.2 Unbalanced Load

Current, %In	Voltage in phases	Power factor	Current in phases	Error, %			
				ElNet^{Pico}	ElNet^{LT}	ElNet^{GR}	ElNet^{MC}
5	ABC	1.0	A	0.04	0.04	0.03	0.04
			B	0.03	0.04	0.02	0.00
			C	0.03	0.02	0.01	0.00
10		0.5i	A	0.04	-0.02	-0.01	-0.03
			B	-0.02	-0.02	-0.03	-0.10
			C	-0.02	-0.03	-0.04	-0.03
100		1.0	A	0.04	0.03	0.04	0.04
			B	0.02	0.03	0.02	0.01
			C	0.03	0.02	0.01	0.03
		0.5i	A	0.07	0.01	0.02	-0.01
			B	0.03	0.02	0.01	-0.07
			C	0.02	0.02	-0.03	0.00
Imax	ABC	1.0	A	0.02	0.02	0.03	0.03
			B	0.01	0.02	0.01	0.00
			C	0.02	0.01	0.00	0.02
		0.5i	A	0.09	0.05	0.02	0.01
			B	0.06	0.04	-0.01	-0.04
			C	0.05	0.05	-0.06	0.04

10.2 The additional percentage error due to ambient temperature variation

10.2.1 Temperature rise 23°C to 63°C

Current, %In	Power factor	Temperature coefficient 23 °C to 43 °C, %/K				Temperature coefficient 43 °C to 63 °C, %/K			
		ElNet^{Pico}	ElNet^{LT}	ElNet^{GR}	ElNet^{MC}	ElNet^{Pico}	ElNet^{LT}	ElNet^{GR}	ElNet^{MC}
I max	1.0	0.000	0.002	0.000	0.001	0.002	0.001	אין מדידה	0.005
	0.5	0.001	-0.002	-0.002	-0.002	0.001	0.001	אין מדידה	0.002
100	1.0	-0.001	0.002	0.000	0.001	0.003	0.002	אין מדידה	0.005
	0.5	-0.001	0.001	-0.002	-0.002	0.001	0.001	אין מדידה	0.002
10	0.5	-0.001	0.001	0.000	0.001	0.005	0.005	אין מדידה	0.011
5	1.0	0.000	0.003	0.001	0.001	0.002	0.003	אין מדידה	0.007

10.2.2 Temperature fall 23°C to -10°C

Current, %In	Power factor	Temperature coefficient 23 °C to 3 °C, %/K				Temperature coefficient 13 °C to -7 °C, %/K			
		ElNet^{Pico}	ElNet^{LT}	ElNet^{GR}	ElNet^{MC}	ElNet^{Pico}	ElNet^{LT}	ElNet^{GR}	ElNet^{MC}
I max	1.0	0.004	-0.001	0.000	0.003	0.000	-0.004	0.000	אין מדידה
	0.5	0.001	-0.003	0.001	0.003	0.001	-0.004	-0.001	אין מדידה
100	1.0	0.003	-0.001	0.000	0.002	-0.001	-0.003	0.000	אין מדידה
	0.5	0.002	-0.003	0.000	0.002	-0.001	-0.004	-0.001	אין מדידה
10	0.5	0.002	-0.002	0.001	0.001	0.001	-0.002	0.001	אין מדידה
5	1.0	0.001	-0.001	0.001	0.001	-0.002	-0.003	0.001	אין מדידה

10.3 The additional percentage error due to voltage variation ±10 %

Current, %In	Power factor	Voltage, % Vn	Additional error, %			
			ElNet^{Pico}	ElNet^{LT}	ElNet^{GR}	ElNet^{MC}
I max	1.0	110	0.03	0.03	0.01	-0.05
		90	-0.04	-0.02	0.00	0.04
	0.5	110	0.04	0.04	0.00	-0.05
		90	-0.03	-0.03	-0.01	0.03
100	1.0	110	0.03	0.03	0.01	0.10
		90	-0.03	-0.03	-0.01	0.03
	0.5	110	0.04	0.03	0.01	-0.01
		90	-0.03	-0.03	0.00	0.04
10	0.5	110	0.03	0.02	0.01	-0.03
		90	-0.03	-0.03	-0.01	0.05
5	1.0	110	0.02	0.03	0.00	-0.05
		90	-0.05	-0.03	-0.01	0.04

10.4 The additional percentage error due to frequency variation ±2 %

Current, %In	Power factor	Frequency, % f_n	Additional error, %			
			ElNet^{Pico}	ElNet^{LT}	ElNet^{GR}	ElNet^{MC}
I max	1.0	98	-0.01	0.01	0.00	0.01
		102	0.00	0.01	0.01	0.00
	0.5	98	0.02	0.01	0.01	0.02
		102	-0.01	-0.01	0.00	-0.01
100	1.0	98	0.00	0.00	0.00	0.00
		102	0.00	0.00	0.00	0.00
	0.5	98	0.01	0.01	0.02	0.02
		102	-0.02	-0.02	-0.01	-0.01
10	0.5	98	0.01	0.02	0.03	0.02
		102	-0.02	-0.01	-0.01	-0.02
5	1.0	98	-0.01	0.00	-0.01	0.00
		102	0.00	0.00	-0.01	0.00

10.5 The additional percentage error due to reversed phase sequence

Current	Power factor	Phase sequence	Additional error, %			
			ElNet^{Pico}	ElNet^{LT}	ElNet^{GR}	ElNet^{MC}
0.1In	1	BAC	-0.01	-0.01	0.00	0.00

10.6 The additional percentage error due to voltage unbalance

Current	Power factor	Voltage in phases	Additional error, %			
			ElNet^{Pico}	ElNet^{LT}	ElNet^{GR}	ElNet^{MC}
In	1	A	0.00	-0.01	0.00	-0.02
		B	-0.01	0.00	-0.01	0.00
		C	0.00	0.00	-0.02	0.00
		AB	0.01	0.00	0.00	-0.01
		AC	0.00	0.00	-0.01	-0.01
		BC	0.00	0.01	-0.01	0.01

10.7 The additional percentage error due to harmonic components in the current and voltage circuits

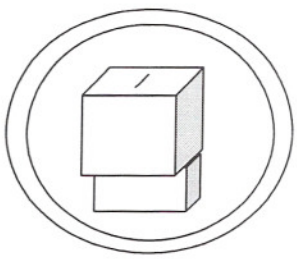
Current	Power factor	Additional error, %			
		ElNet^{Pico}	ElNet^{LT}	ElNet^{GR}	ElNet^{MC}
0.5 I max	1	-0.01	-0.03	-0.04	-0.10

10.8 The additional percentage error due to sub-harmonics in the a.c. current circuit

current	Power factor	Additional error, %			
		ElNet^{Pico}	ElNet^{LT}	ElNet^{GR}	ElNet^{MC}
0.5 I max	1	-0.02	-0.01	-0.02	-0.01

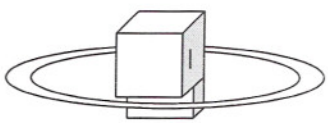
10.9 Continuous magnetic induction of external origin

10.9.1 Magnetic induction applied to front surface



Current	Power factor	Magnetic field angle, °	Additional error, %			
			ElNet^{Pico}	ElNet^{LT}	ElNet^{GR}	ElNet^{MC}
In	1	0	0.00	0.00	0.00	0.00
		30	0.01	0.00	0.00	0.00
		60	-0.01	0.00	0.00	0.00
		90	-0.01	0.00	0.00	0.00
		120	-0.01	0.00	0.00	0.00
		150	-0.01	0.01	0.00	0.00
		180	-0.01	0.01	0.00	0.00
		210	0.00	0.01	0.00	0.00
		240	0.00	0.01	0.00	0.00
		270	0.00	0.01	0.00	0.00
		300	-0.01	0.01	0.00	0.00
		330	-0.01	0.01	0.00	0.00

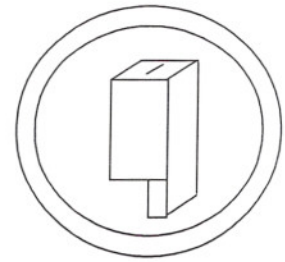
10.9.2 Magnetic induction applied perpendicular



Current	Power factor	Magnetic field angle, °	Additional error, %			
			ElNet^{Pico}	ElNet^{LT}	ElNet^{GR}	ElNet^{MC}
In	1	0	-0.02	0.01	0.00	0.00
		30	-0.01	0.01	0.01	0.00
		60	-0.01	0.01	0.01	0.00
		90	-0.01	0.02	0.01	0.00

Current	Power factor	Magnetic field angle, °	Additional error, %			
			ElNet^{Pico}	ElNet^{LT}	ElNet^{GR}	ElNet^{MC}
In	1	120	-0.01	0.02	0.01	0.00
		150	-0.01	0.02	0.01	0.00
		180	-0.01	0.02	0.01	0.00
		210	-0.01	0.02	0.01	0.00
		240	-0.01	0.02	0.01	0.00
		270	-0.01	0.01	0.01	0.00
		300	-0.01	0.02	0.01	0.00
		330	-0.01	0.02	0.01	0.00

10.9.3 Magnetic induction applied from a side



Current	Power factor	Magnetic field angle, °	Additional error, %			
			ElNet^{Pico}	ElNet^{LT}	ElNet^{GR}	ElNet^{MC}
In	1	0	0.00	0.00	0.00	0.00
		30	0.00	0.00	0.00	0.00
		60	0.00	0.00	0.00	0.00
		90	0.00	0.00	0.00	0.00
		120	0.00	0.01	0.00	0.00
		150	0.00	0.01	0.00	0.00
		180	0.00	0.01	0.00	0.00
		210	0.00	0.01	0.00	0.00
		240	0.00	0.01	0.00	0.00
		270	-0.01	0.01	0.1	0.00
		300	0.00	0.01	0.00	0.00
		330	0.00	0.01	0.00	0.00

11. Reactive mode tests

11.1 Accuracy test

11.1.1 Balanced load

Current, A	Power factor	Error, %			
		ElNet^{Pico}	ElNet^{LT}	ElNet^{GR}	ElNet^{MC}
0.1	1	0.10	0.06	0.05	0.12
0.25	1.0	0.08	0.06	0.07	0.11
	0.5 i	0.13	0.14	0.15	0.18
	0.5 c	0.13	0.13	0.15	0.18

Current, A	Power factor	Error, %			
		ElNet^{Pico}	ElNet^{LT}	ElNet^{GR}	ElNet^{MC}
0.5	1	0.20	0.24	0.27	0.29
	0.25 c	0.19	0.24	0.26	0.29
5	1.0	0.06	0.04	0.05	0.10
	0.5 i	0.05	0.05	0.08	0.14
	0.5 c	0.07	0.03	0.01	0.06
	0.25 i	0.06	0.04	0.05	0.11
	0.25 c	0.09	0.01	-0.02	0.00
6	1.0	0.04	0.02	0.03	0.09
	0.5 i	-0.01	0.00	0.03	0.12
	0.5 c	0.04	0.00	0.04	0.04
	0.25 i	-0.08	-0.01	0.01	0.20
	0.25 c	0.05	-0.01	0.05	-0.01

11.1.2 Unbalanced load

Current, %In	Voltage in phases	Power factor	Current in phases	Error, %			
				ElNet^{Pico}	ElNet^{LT}	ElNet^{GR}	ElNet^{MC}
5	ABC	1.0	A	0.11	0.08	0.10	0.11
			B	0.09	0.04	0.09	0.11
			C	0.11	0.06	0.09	0.11
10		0.5 i	A	0.13	0.16	0.19	0.18
			B	0.16	0.10	0.17	0.22
			C	0.17	0.13	0.18	0.16
		0.5 c	A	0.12	0.00	0.04	0.02
			B	0.04	-0.02	0.04	0.00
			C	0.06	0.00	0.02	0.06
100		1.0	A	0.06	0.04	0.06	0.07
			B	0.05	0.04	0.06	0.11
			C	0.05	0.04	0.03	0.12
		0.5 i	A	0.03	0.06	0.09	0.12
			B	0.04	0.05	0.07	0.18
			C	0.06	0.04	0.09	0.13
		0.5 c	A	0.10	0.02	0.05	0.02
			B	0.06	0.03	0.05	0.04
			C	0.05	0.04	-0.01	0.12
Imax	ABC	1.0	A	0.05	0.03	0.05	0.06
			B	0.04	0.03	0.04	0.10
			C	0.04	0.02	0.02	0.11
		0.5 i	A	-0.01	0.00	0.03	0.06
			B	-0.01	0.00	0.2	0.19
			C	0.00	-0.01	0.04	0.13
		0.5 c	A	0.10	0.01	0.08	0.00
			B	0.04	0.01	0.07	0.01
			C	0.03	0.01	0.00	0.09

11.2 The additional percentage error due to ambient temperature variation

11.2.1 Temperature rise 23°C to 63°C

Current, %In	Power factor	Temperature coefficient 23 °C to 43 °C, %/K				Temperature coefficient 43 °C to 63 °C, %/K			
		ElNet^{Pico}	ElNet^{LT}	ElNet^{GR}	ElNet^{MC}	ElNet^{Pico}	ElNet^{LT}	ElNet^{GR}	ElNet^{MC}
I max	1.0	-0.001	0.002	0.001	0.000	0.001	0.002	No measurements	0.007
	0.5	0.000	0.001	0.002	0.001	0.001	0.003	No measurements	0.011
100	1.0	0.001	0.002	0.001	0.000	0.000	0.002	No measurements	0.007
	0.5	0.010	0.002	0.002	0.000	0.002	0.003	No measurements	0.011
10	0.5	0.002	0.001	0.002	0.002	0.000	-0.001	No measurements	0.010
5	1.0	0.003	0.002	0.002	0.002	0.002	0.003	No measurements	0.011

11.2.2 Temperature fall 23°C to -10°C

Current, %In	Power factor	Temperature coefficient 23 °C to 3 °C, %/K				Temperature coefficient 13 °C to -7 °C, %/K			
		ElNet^{Pico}	ElNet^{LT}	ElNet^{GR}	ElNet^{MC}	ElNet^{Pico}	ElNet^{LT}	ElNet^{GR}	ElNet^{MC}
I max	1.0	0.001	-0.002	0.001	0.002	-0.001	-0.003	0.001	No measurements
	0.5	0.002	-0.004	-0.001	0.002	-0.001	-0.002	0.001	No measurements
100	1.0	0.001	-0.002	0.001	0.002	0.000	-0.003	0.001	No measurements
	0.5	0.011	-0.001	0.001	0.002	0.000	-0.003	0.001	No measurements
10	0.5	0.003	-0.001	0.001	0.001	-0.002	-0.003	0.000	No measurements
5	1.0	0.003	-0.001	0.003	0.004	0.002	-0.003	0.001	No measurements

11.3 The additional percentage error due to voltage variation ±10 %

Current %In ,	Power factor	Voltage, % Vn	Additional error, %			
			ElNet^{Pico}	ElNet^{LT}	ElNet^{GR}	ElNet^{MC}
I max	1.0	110	0.03	0.03	0.01	-0.05
		90	-0.03	-0.03	-0.01	0.04
	0.5 i	110	0.03	0.02	0.00	0.21
		90	-0.02	-0.02	0.00	0.05
	0.5 c	110	0.04	0.04	0.01	-0.04
		90	-0.03	-0.02	-0.02	0.03
100	1.0	110	0.03	0.03	0.00	-0.05
		90	-0.04	-0.03	-0.01	0.04
	0.5 i	110	0.03	0.02	0.00	-0.06
		90	-0.04	-0.03	-0.02	0.04
	0.5 c	110	0.04	0.04	0.00	-0.05
		90	-0.03	-0.03	-0.02	0.04
5	0.5 i	110	0.02	0.02	-0.01	-0.07
		90	-0.04	-0.03	-0.01	0.03
	0.5 c	110	0.03	0.05	0.00	-0.05
		90	-0.03	-0.02	-0.01	0.03
2	1.0	110	0.03	0.03	0.00	-0.06
		90	-0.03	-0.03	-0.01	0.04

11.4 The additional percentage error due to frequency variation ±2 %

Current, %In	Power factor	Frequency, % fn	Additional error, %			
			ElNet^{Pico}	ElNet^{LT}	ElNet^{GR}	ElNet^{MC}
I max	1.0	102	0.00	0.00	0.00	0.00
		98	0.01	0.01	0.01	0.01
	0.5 i	102	0.02	0.02	0.02	0.02
		98	0.00	0.00	0.00	0.00
	0.5 c	102	-0.02	0.00	-0.03	-0.02
		98	0.01	0.03	0.02	0.02
100	1.0	102	0.00	-0.01	-0.01	0.00
		98	0.00	0.00	0.00	0.01
	0.5 i	102	0.02	0.01	0.01	0.01
		98	-0.01	-0.02	-0.01	-0.01
	0.5 c	102	-0.02	-0.02	-0.02	-0.02
		98	0.02	0.02	0.02	0.02
5	0.5 i	102	0.02	0.02	0.00	0.01
		98	-0.03	-0.02	-0.01	-0.03
	0.5 c	102	-0.03	-0.02	-0.02	-0.02
		98	0.01	0.03	0.02	0.04
2	1.0	102	-0.01	-0.01	-0.01	0.00
		98	0.00	0.00	-0.01	0.01

End of report

Tester	G. Mittelman	Signature		Date	5.6.11
Aproved by	I. Gueta	Signature		Date	5.6.11