

CERTIFICATE

KEMA No.: 2028725.01

Issued to:
Applicant:
**N.V. Nederlandsche Apparatenfabriek
"NEDAP"
Parallelweg 2
GROENLO, The Netherlands**

Manufacturer/Licensee:
**N.V. Nederlandsche Apparatenfabriek
"NEDAP"
Parallelweg 2
GROENLO, The Netherlands**

Product : voting machines

Trade name : NEDAP
Type/model : ES12

The product and any acceptable variation thereto is specified in the Annex to this certificate and the documents therein referred to.

KEMA hereby declares that the above-mentioned product has been certified on the basis of:

- a type test according to the standard EN 60950
- an inspection of the production location according to CENELEC Operational Document CIG 021
- a certification agreement with the number 900300

KEMA hereby grants the right to use the KEMA-KEUR certification mark



The KEMA-KEUR certification mark may be applied to the product as specified in this certificate for the duration of the KEMA-KEUR certification agreement and under the conditions of the KEMA-KEUR certification agreement.

This certificate is issued on: June 20, 2003

G.H. Wensink
Certification Manager

© Integral publication of this certificate is allowed

KEMA Quality B.V.
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ACCREDITED BY
THE DUTCH COUNCIL
FOR ACCREDITATION



SPECIFICATION OF THE CERTIFIED PRODUCT**Product data**

Product : voting machines
Trade name : NEDAP
Type : ESI2
Rated voltage : 220-240 Vac or 12 Vdc
Nature of supply : ac and dc
Rated frequency : 50-60 Hz
Rated current : 0,7 A(ac) 1,5 A(dc)
Class : I
Degree of protection : IP 20

TESTS**Test requirements**

EN 60950:2000

Test results

The test results are laid down in NTR NL-5375 and TRF No. 2028725.50-QUA/PEP.

Remarks

The List of Components is laid down in NTR NL-5375 with test report ref. no 2028725.50-QUA/PEP

Conclusion

The examination proved that all test requirements were met.

Tested by : B.B. van Leeuwen Checked by : G.H. Wensink **Factory-Locations**N.V. Nederlandsche Apparatenfabriek, "NEDAP"
Parallelweg 2, GROENLO, The Netherlands**KEMA Quality B.V.**Utrechtseweg 310, 6812 AR Arnhem, The Netherlands
P.O. Box 5185, 6802 ED Arnhem, The Netherlands
Telephone +31 26 3 56 20 00, Telefax +31 26 3 52 58 00

NOTIFICATION OF TEST RESULTS

Product

Voting Machines

Tested by request of

N.V. Nederlandse Apparatenfabriek NEDAP
Parallelweg 2, 7141 DC Groenlo, The Netherlands

Manufactured at (name and place)

N.V. Nederlandse Apparatenfabriek NEDAP
Parallelweg 2, 7141 DC Groenlo, The Netherlands

Rating and principal characteristics

220-240 V, 50-60 Hz, 0,7 A or 12 Vdc, 1,5 A

Pre-licence factory inspection carried out by

KEMA Quality B.V.

Trademark (if any)

Nedap

Model/Type Ref

ESI2

Additional information (if any)

-

A sample of the product has been tested and found to be in conformity with the current HD/EN and equivalent national standard, (number and edition)

EN 60950:2000 (3rd edition)

As shown in the Test Report (ref. No.)

2028725.50-OUA/PEP

This Notification of Test Results is the result of testing a sample of the product submitted, in accordance with the provisions of the relevant specific standard.

This Notification of Test Results has been established by a body, which participates in the CENELEC Certification Agreement (CCA) of 11th September 1973 as amended on 29th March 1983. Any other body participating in the CCA will take this Notification as a basis for granting a national mark of conformity or a national approval as specified in the CCA, as long as the standard referred to above is still in force in the country of that body.

KEMA Quality B.V.

Arnhem,

Signature:



Date: 23 June 2003

G.H. Wensink

Internal ref: BBL/PTB

TEST REPORT**EN 60 950****Safety of information technology equipment**

Report reference No: 2028725.50-QUA/PEP

Tested by (printed name and
signature): B.B. van LeeuwenApproved by (printed name and
signature): G.H. Wensink

Date of issue: 2003-04-03

This report is based on a blank test report that was prepared by FIMKO using information obtained from the TRF originator (see below).

Testing Laboratory Name: KEMA Quality B.V.

Address: Utrechtseweg 310, 6812 AR Arnhem, The Netherlands

Testing location: N.V. Nederlandse Apparatenfabriek NEDAP
Parallelweg 2, 7141 DC, Groenlo

Applicant's Name: N.V. Nederlandse Apparatenfabriek NEDAP

Address: Parallelweg 2, 7141 DC, Groenlo
.....:

Test specification

Standard: EN 60 950: 2000 (3rd Edition)

Test procedure: CCA-scheme

Procedure deviation: N.A.

Non-standard test method: N.A.

Test Report Form

Test Report Form No: 60950__E/00-08

TRF originator: FIMKO

Master TRF: Dated 00-08

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Test item description: Voting Machines

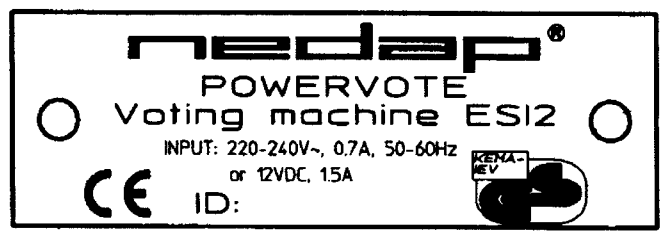
Trademark: NEDAP

Model and/or type reference: ESI2

Rating(s): 220-240 V, 50-60 Hz, 0,7 A or 12 Vdc 1,5 A

<p>Particulars: test item vs. test requirements</p> <p>Equipment mobility: Stationary</p> <p>Operating condition.....: Continuous</p> <p>Mains supply tolerance (%): 10</p> <p>Tested for IT power systems: No</p> <p>IT testing, phase-phase voltage (V) : -</p> <p>Class of equipment: Class I</p> <p>Mass of equipment (kg): 30</p> <p>Protection against ingress of water ..: IP 20</p>
<p>Test case verdicts</p> <p>Test case does not apply to the test object : N/A (-)</p> <p>Test item does meet the requirement : P(ass)</p> <p>Test item does not meet the requirement .. : F(ail)</p>
<p>Testing</p> <p>Date of receipt of test item : April 2003</p> <p>Date(s) of performance of test : April 2003</p>
<p>General remarks</p> <p>This report shall not be reproduced except in full without the written approval of the testing laboratory.</p> <p>The test results presented in this report relate only to the item(s) tested.</p> <p>"(see remark #)" refers to a remark appended to the report.</p> <p>"(see Annex #)" refers to an annex appended to the report.</p> <p>Throughout this report a comma is used as the decimal separator.</p> <p>This report is an addendum of report 2015895.51-QUA/PEP due to changes in the display function and an alternate ballast.</p> <p>The subject equipment is a voting system ESI2 and consist of the following different parts:</p> <ul style="list-style-type: none"> - a voting computer with a control unit type - a monitor unit for the voting computer type <p>The readout unit and voting system units are stand-alone units. The same power supply is used in the two different units. For the readout unit see CB report 98.3851.51-KRQ/EAP</p> <p>The voting computer is not intended to be connected to antennas nor to cable TV systems.</p> <p>The following tests were necessary:</p> <ul style="list-style-type: none"> - Input tests - Temperature tests <p>Contents:</p> <p style="padding-left: 40px;">Report: 9 pages</p>

Copy of marking plate and summary of test results (information/comments):



EN 60 950			
Clause	Requirement – Test	Result	Verdict
1	GENERAL		P
1.5	Components		P
1.5.1	Comply with IEC 950 or relevant component standard	(see appended table 1.5.1)	P
1.5.2	Evaluation and testing of components		N
	Dimensions (mm) of mains plug for direct plug-in		-
	Torque and pull test of mains plug for direct plug-in; torque (Nm); pull (N)		-
1.5.3	Thermal controls		N
1.5.4	Transformers		P
1.5.5	Interconnecting cables		N
1.5.6	Capacitors in primary circuits		P
1.5.7	Double or reinforced insulation bridged by components		N
1.5.7.1	Bridging capacitors		N
1.5.7.2	Bridging resistors		N
1.5.7.3	Accessible parts		N
1.5.8	Components in equipment for IT power systems		N
1.6	Power interface		P
1.6.1	AC power distribution systems	Tested for TN	P
1.6.2	Input current	(see appended table 1.6.2)	P
1.6.3	Voltage limit of hand-held equipment		N
1.6.4	Neutral conductor		P
1.7	Marking and instructions		P
1.7.1	Power rating		P
	Rated voltage(s) or voltage range(s) (V)	220-240 Vac or 12 Vdc	P
	Symbol for nature of supply for d.c.	DC	P
	Rated frequency or frequency range (Hz)	50-60	P
	Rated current (A)	0,7 Aac or 1,5 Adc	P
	Manufacturer's name/Trademark	NEDAP	P
	Type/model	ESI2	P
	Symbol of Class II		N

EN 60 950			
Clause	Requirement – Test	Result	Verdict
	Other symbols		N
	Certification marks	KEMA-KEUR	P
1.7.2	Safety instructions		P
1.7.3	Short duty cycles		N
1.7.4	Supply voltage adjustment		P
1.7.5	Power outlets on the equipment		N
1.7.6	Fuse identification	F1, 7A, DC/DC unit F1, 2,5 A, AC/DC unit	P
1.7.7	Wiring terminals		P
1.7.7.1	Protective earthing and bonding terminals		N
1.7.7.2	Terminal for a.c. mains supply conductors		N
1.7.8	Controls and indicators		N
1.7.8.1	Identification, location and marking		N
1.7.8.2	Colours		N
1.7.8.3	Symbols according to IEC 60417		N
1.7.8.4	Markings using figures		N
1.7.9	Isolation of multiple power sources		N
1.7.10	IT power system		N
1.7.11	Thermostats and other regulating devices		N
1.7.12	Language	English	—
1.7.13	Durability		P
1.7.14	Removable parts		N
1.7.15	Replaceable batteries		N
	Language		—
1.7.16	Operator access with a tool		P
1.7.17	Equipment for restricted access locations		N

4.5	Thermal requirements		P
4.5.1	Temperature rises	See appended table	P
	Normal load condition per Annex L		P
4.5.2	Resistance to abnormal heat		P

EN 60 950					
1.5.1	TABLE: list of critical components				
Object/part No.	Manufacturer/ trademark	Type/model	technical data	standard	mark(s) of conformity ¹⁾
Enclosure	-	-	metal parts	-	*
Enclosure sides	-	ABS B401M	min. HB	-	*
Power supply cord	-	3 x 0,75 mm ²	-	IEC 227	HAR, KEMA-KEUR
Plug	-	Rewireable	10/16 A, 250 V	IEC 320	KEMA-KEUR
Fuse in power supply unit	-	-	2,5 A, 250 V	IEC 127	*
Mainsfilter	Schaffner	FN 322-1/05	1 A, 250 V, 50/60 Hz	IEC 384-14	VDE
Transformer	Nedap	7651279	-	EN 60950	*
Optocoupler	Telefunken	944HTFK4 CNY 64B	Reinforced insulation min. 0,4 mm	-	VDE, SEV
Printed Circuit board	several	9550151	epoxy, V0	EN 60950	VDE, SEV
X-Capacitor	Roederstein	F1772 410	0,1 µF, 250 Vac	IEC 384-14	VDE
Electrolytic capacitor	several	-	47 µF, 250 Vdc min 85 °C	EN 60950	*
Appliance connector	Otto Heil	4020 rewireable	-	IEC 320	KEMA-KEUR
Appliance inlet	Schaffner	323.4	-	IEC 320	KEMA-KEUR
Ballast	several	-	Max 36 W	EN 61347-1, EN 61347-2-3	KEMA-KEUR, VDE
Starter holder	Vossloh	101631	-	IEC 400	KEMA-KEUR
Lamp socket	Vossloh	101485	-	IEC 400	KEMA-KEUR
TL-lamp	-	-	36 W	EN 60950	*
Fuse in DC/DC converter	-	-	7 A, 250 V	IEC 127	*
Capacitor C1	several	-	10000 µF, 25 V	EN 60950	*
Inductor L1	several	-	130 µH	EN 60950	*

¹⁾ an asterisk indicates tested as part of the appliances

EN 60 950						
1.6.2	TABLE: electrical data (in normal conditions)					
Fuse #	I _{rated} (A)	U(V)	P(W)	I(A)	I _{fuse} (A)	Condition/status
Main input:						
F1	0,7	198	65	0,45	2,5	According testprogram
F1	0,7	220	73	0,53	2,5	According testprogram
F1	0,7	240	81	0,61	2,5	According testprogram
F1	0,7	254	90	0,69	2,5	According testprogram
DC input:						
F1	1,5	10,8	18,4	1,7	7	According testprogram
F1	1,5	12	18	1,5	7	According testprogram
F1	1,5	13,2	17,2	1,3	7	According testprogram

4.5	TABLE: temperature rise measurements		
	test voltage (V)	254/198	—
	t ₁ (°C)	25	—
	t ₂ (°C)	25	—
Conditions:			
A: 198 Vac			
B: 254 Vac			
C: 10, 8 Vdc only on dc/dc power supply			
D: 13,2 Vdc only on dc/dc power supply			
(between brackets calculated to 40 °C)			
Temperature T of part/at:		T (°C)	
		A/B	
AC/DC power supply			
Primary filter L1		24(39) / 26(41)	
Transformer TR1		75(90) / 69(94)	
Inductor L3		61(78) / 62(79)	
DC/DC power supply		A/B/C/D	
Inductor L1		47(64) / 51(68) / 34(51) / 35(52)	
Maximum normal load was established by projecting numbers on the display, as by normal operation during a voting .			

temperature rise dT of winding:	R ₁ (Ω)	R ₂ (Ω)	dT (K)	allowed dT (K)	insulation class

Photo:

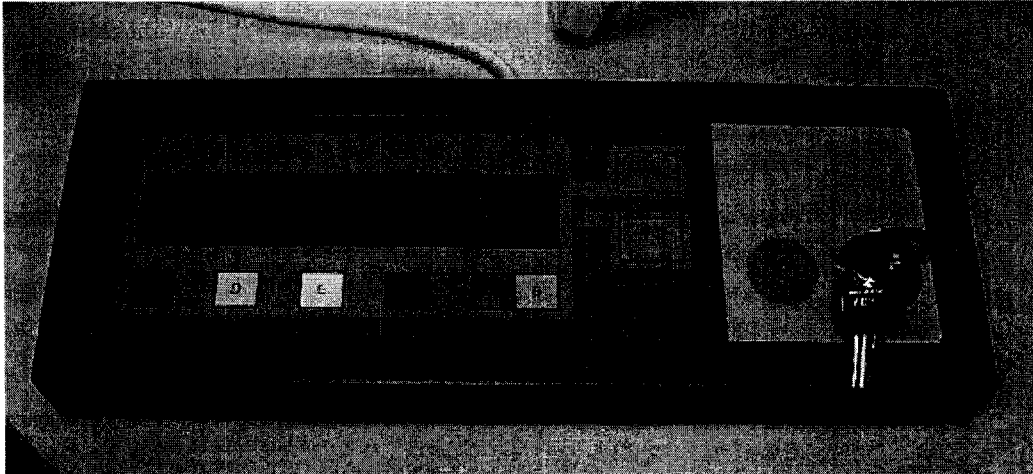
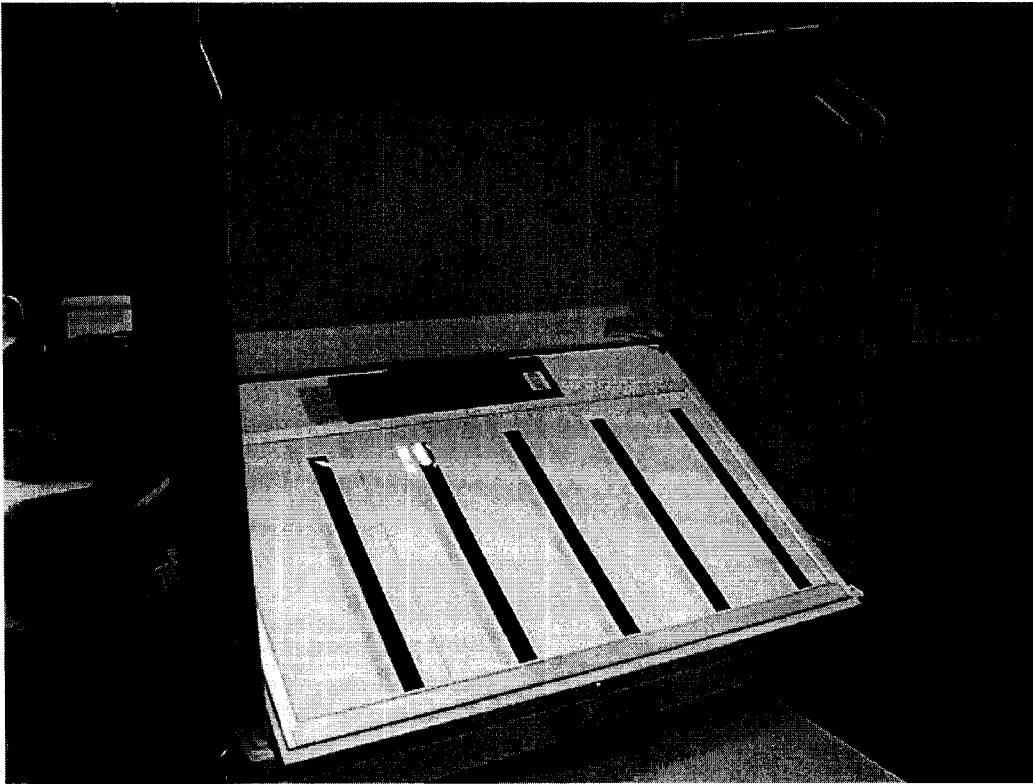
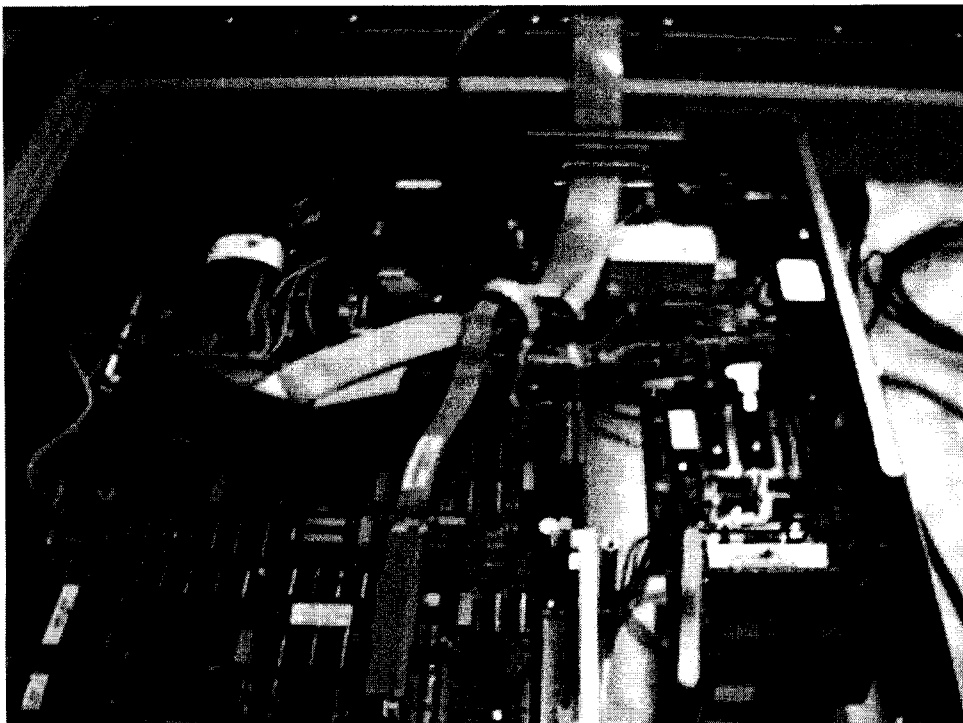
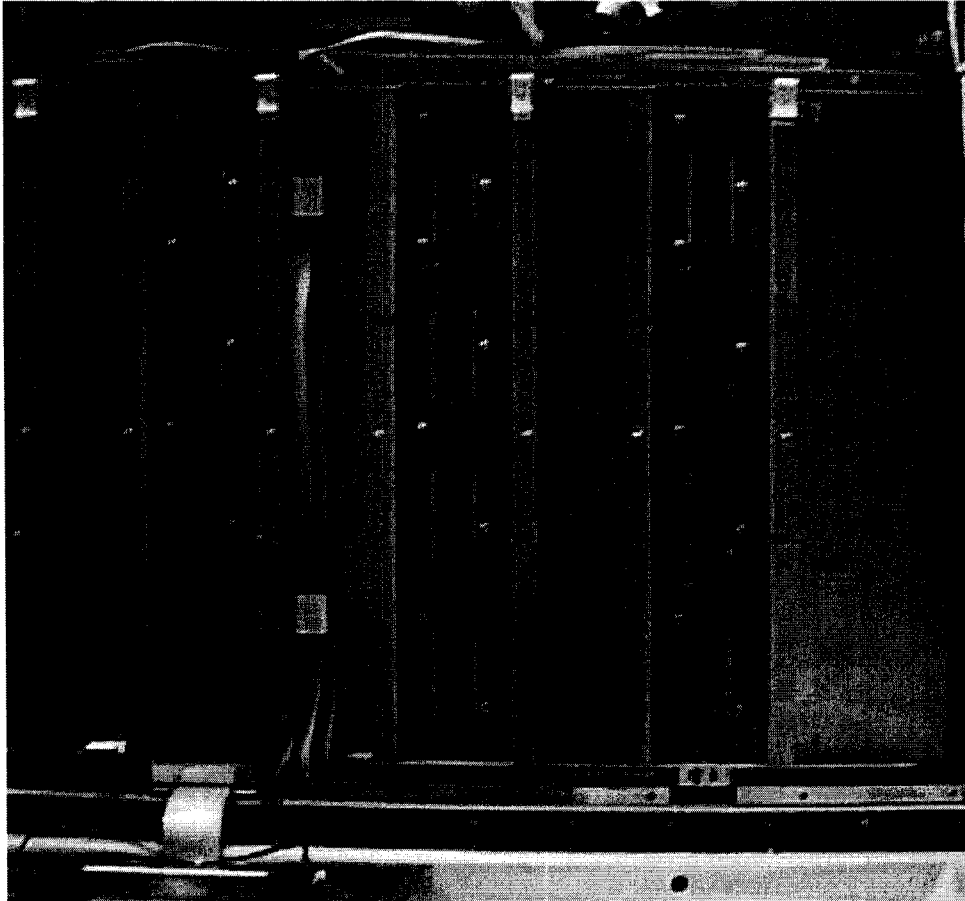


Photo:



TRF No.: 60950__E

TRF originator: FIMKO