



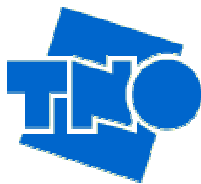
**TEST REPORT CONCERNING THE COMPLIANCE OF
A VOTING MACHINE FOR USE AT ELECTIONS IN
IRELAND, BRAND NEDAP, MODEL ESI 2, WITH
PARTS OF THE STANDARD IEC 60839-1-3**

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TNO Electronic Products & Services (EPS) B.V.
P.O. Box 15
9822 ZG Niekerk (NL)
Smidshornerweg 18
9822 TL Niekerk (NL)

Telephone: +31 594 505005
Telefax: +31 594 504804

E-mail: info@eps.tno.nl
Web: www.eps.tno.nl



Test specification(s): Parts of IEC 60839-1-3
Description of EUT: Voting machine for use at elections in Ireland
Manufacturer: N.V. Nederlandsche Apparatenfabriek NEDAP
Brand mark: NEDAP
Model: ESI 2

Description of test item





Test item : Voting machine for use at elections in Ireland
Manufacturer : N.V. Nederlandsche Apparatenfabriek NEDAP
Brand : NEDAP
Model : ESI 2
Serial numbers : R0D02367
Revision : --
Receipt number : 1
Receipt date : October 16, 2003

Applicant information

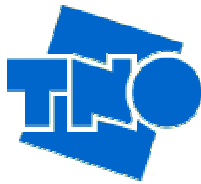
Applicant's representative : Mr. J.A.M. Hulshof
Company : N.V. Nederlandsche Apparatenfabriek NEDAP
Address : Parallelweg 2
Postal code : 7140 DC
City : Groenlo
PO-box : 6
Postal code : 7140 AA
City : Groenlo
Country : The Netherlands
Telephone number : +31 (0)544 471111
Telefax number : +31 (0)555 463475

Test(s) performed

Location : Niekerk
Test(s) started : October 20, 2003
Test(s) completed : October 24, 2003
Purpose of test(s) : Compliance with parts of the standard
Test specification(s) : IEC 60839-1-3

Test engineer : A.W. Kars 
Project leader : A.W. Kars 
Report written by : A.W. Kars 
Report approved by : P. de Beer 
Report date : October 29, 2003

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The test results relate only to the item(s) tested.



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1 General.

1.1 Applied standards.

The Voting machine for use at elections in Ireland, brand NEDAP, model ESI 2, has been tested in conformity with parts of the standard IEC 60839-1-3.

1.2 Detailed description of test configuration, input and output ports.

The Voting machine for use at elections in Ireland, brand NEDAP, model ESI 2, in the configuration as described below, will be referred to as EUT for the purpose of this test report.

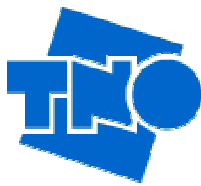
1.2.1 Description of test configuration.

Test item : Voting machine for use at elections in Ireland
Manufacturer : N.V. Nederlandsche Apparatenfabriek NEDAP
Brand : NEDAP
Model : ESI 2
Serial number : R0D02367
Remarks : --

1.2.2 Description of input and output ports.

Number	Terminal	From	To	Remarks
1	Mains power supply	Mains terminal	EUT	None
2	DC Power input	Battery	EUT	Not tested
3	Polling Staff control unit	Polling Staff Control box	EUT	< 2 m

Table 1



Test specification(s): Parts of IEC 60839-1-3
Description of EUT: Voting machine for use at elections in Ireland
Manufacturer: N.V. Nederlandsche Apparatenfabriek NEDAP
Brand mark: NEDAP
Model: ESI 2

1.2.3 Photograph of the EUT.



1.3 Test conditions.

1.3.1 Environmental conditions.

During all tests the environmental conditions were the following:

Temperature : 21 °C
Relative humidity : 55 %

1.3.2 Operational mode(s).

During all tests the EUT was set up to function according to the manufacturer's instructions and powered as necessary to the standard requirements where specified.



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Model: ESI 2

2 Test results

TEST	CONDITIONS	STANDARD	CRITERIA	RESULT
Power supply fluctuation	230 V +/- 10 % 50 Hz +/- 2 %	IEC 60839-1-3	Functional before and after test	No problem was found Between 207 – 253 V, 49 – 51 Hz
Power cuts	500 ms black out suppression up to 75 %	IEC 60839-1-3	Functional before and after test	No problem was found
Insulation	> 10 MΩ at 2kV for 10 seconds	IEC 60839-1-3	Functional before and after test	No problem was found 10 MΩ at 1 kV
Energy consumption	At least for 8 hours Consumption during normal use: 1.73 A at 12 Vdc	IEC 60839-1-3	Functional after 8 hours	By using prescribed battery (at least 12 V, 15 Ah)

Table 2

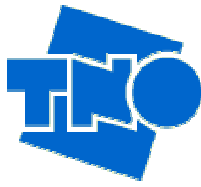
The results of the tests, carried out in conformity with the standard IEC 60839-1-3 on a voting machine for use at elections in Ireland, brand NEDAP, model ESI 2, are depicted in table 2.



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3 Conclusion.

The voting machine for use at elections in Ireland, brand NEDAP, model ESI 2, complies with the requirements of parts of the standard IEC 60839-1-3 in the configuration and operational mode(s) as stated in this test report.



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4 List of utilized test equipment.

<u>Inventory Number</u>	<u>Description</u>	<u>Marketing name</u>	<u>Model</u>
99416	Function generator	Tektronix	CFG250
99429	Power analyzer	Elcontrol	Nanovip
13451	Multimeter	H & P	34401A
08-9501	Power supply	Behlman	150-C-202-320
14836	Power supply	Clare	A-203G
15354	Power supply	Schaffner	Proflin system