

European Fire and Security Group

The Secretary
Amsterdamer Strasse 172-174
D-50735 Köln, GERMANY

Date : 25 November 2010

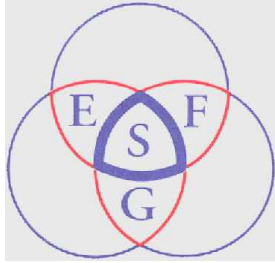
BASIC AGREEMENT on

THE COMPONENTS OF INTRUDER ALARM SYSTEMS

Participants:

Certification Body	Signature
AFNOR Certification F-93571 La Plaine Saint Denis Cedex	
CNPP F-27950 Saint-Marcel	
VdS Schadenverhütung D-50735, Köln	
BRE Global Ltd GB-WD25 9XX Watford	
Associated Laboratories	Signature
CNPP F-27950 Saint-Marcel	
VdS Schadenverhütung D-50735 Köln	
BRE Global Ltd GB-WD25 9XX Watford	

The certification bodies, which are members in the European Fire and Security Group (EFSG) and associated laboratories signing this Basic Agreement (BA) agree to accept the conditions.



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1 GENERAL

This basic agreement specifies the conditions for the mutual recognition of test results for components of intruder alarm systems according to the standards and tables listed in the technical part (ANNEX 1) of this agreement, for the purposes of granting permission to use the certification marks of the certification body signatories.

The agreement has been made on the understanding that the participating certification bodies are accredited in accordance with EN 45011 by a member of EA (European co-operation for Accreditation) with a scope covering the relevant equipment.

This basic agreement is based on the Terms of Reference of EFSG revision 14 dated March 2009.

2 OBJECT

It is the object of this agreement on the mutual recognition of test results to make it easier for manufacturers to obtain authorisation to use the mark of each Certification Body. To achieve this, test results as specified below, will be considered to be acceptable for all certification bodies within this basic agreement.

3 SCOPE

This agreement applies to components of intruder detection systems in accordance with the standards listed in the technical part of this agreement.

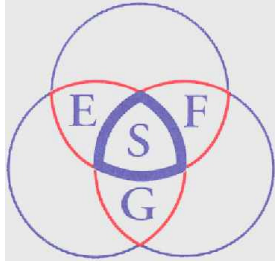
As a first step, individual additional requirements such as application procedures, surveillance of manufacturing and additional quality requirements are not covered by this agreement. (Note: As a second step this agreement could be extended to surveillance activity).

Every new applicant to EFSG operating in the field intruder alarm systems shall be checked for compliance with the requirements of this basic agreement.

4 APPLICATION PROCEDURE

If a manufacturer wants to be licensed for the certification mark of another party of the agreement, he shall apply to that certification body and shall agree to abide by its regulations.

For comparison of test results, it is necessary, that the manufacturer gives written permission to the certification body and its associated laboratory, to exchange information (e.g. test results) between the signatories of this agreement.



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The test results from one of the associated test laboratories according to the technical part of this agreement (see ANNEX 1 defining the relevant tests), shall be mutually accepted by the certification bodies involved in this agreement, within the bounds of the respective regulations.

5 ASSOCIATED TESTING LABORATORIES

The associated testing laboratories shall operate in conformity with standards and tables listed in the technical part (ANNEX 1) of this basic agreement and shall be accredited in accordance with ISO 17025 by a member of the EA for the relevant testing.

The results of the tests shall be given in a test report issued in English, French or German. Translations may be provided for better understanding by the manufacturer or certification body but the original report shall be used in case of dispute.

The testing laboratories shall participate in the inter-laboratory comparison programme set up by EFSG and agree to exchange experiences.

6 COMMON COMMITTEES

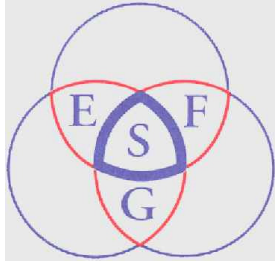
At least, once a year or at the request of one signatory of the multilateral agreement, all parties will meet for a review regarding the implementation of the basic agreement including testing.

Unless otherwise agreed, one representative respectively for each signatory of the agreement will participate at the review. This representative can participate with consultative participants. The resolutions of the meetings shall be minuted.

The place and date of the review shall be discussed and agreed by the signatories of the agreement.

7 DISPUTES

In case of a breach of the basic agreement, the signatories are obliged to attempt to resolve the problem in a fair discussion before dissolution of the multilateral agreement.



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8 DISSOLUTION OF OR WITHDRAWAL FROM THE BASIC AGREEMENT

Dissolution of the agreement will occur when a simple majority of the signatories give 12 months notice, to all the signatories, of their request to dissolve the agreement.

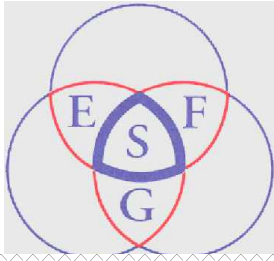
Withdrawal from the agreement by one signatory will occur when that organisation gives 12 months notice to all the signatories of its intention to withdraw from the agreement.

A dissolution of, or withdrawal from, the basic agreement does not invalidate certifications, based on mutually accepted results, that have been granted before the dissolution or withdrawal.

9 IMPLEMENTATION

This basic agreement is valid for a period of 3 years commencing from the date of signatures. Tests results issued after the date of the signatures are fully valid for implementation: those issued before signature shall be scrutinised individually for acceptance by the members.

After this period, the agreement will be renewed for a further three years.



ANNEX 1 to the Basic Agreement on the components of intruder alarm systems

EFSG Members (certification bodies) involved in the certification of the components of intruder detection systems accept test results as indicated in the following tables from any associated test laboratory.

A certification body may request additional testing for the certification of a product, e.g. where a higher severity for a certain test may be required, etc...

The following product standards are under consideration:

EN 50131-2-2:2008	Alarm systems - Intrusion and hold-up systems - Part 2-2: Requirements for passive infrared detectors
EN 50131-2-3:2008	Alarm systems - Intrusion systems - Part 2-3: Requirements for microwave detectors
EN 50131-2-4:2008	Alarm systems - Intrusion and hold-up systems - Part 2-4: Requirements for combined passive infrared and microwave detectors
EN 50131-2-5:2008	Alarm systems - Intrusion systems - Part 2-5: Requirements for combined passive infrared and ultrasonic detectors
EN 50131-3:2009	Alarm systems - Intrusion and hold-up systems - Part 3: Control and indicating equipment
EN 50131-6:2008	Alarm systems - Intrusion and hold-up systems - Part 6: Power supplies

Mutual recognition is based on the fact, that the products to be certified are identical to those tested and the test reports issued by any of the associated test laboratories contain the same level of detailed information (i.e. a harmonised form of test report).

As stated in the EFSG Terms of Reference, the associated test laboratories shall have taken part in the inter-laboratory testing programme and/or expert exchange that has satisfactorily confirmed the test methods and test results.

The following table(s) list the clauses included in the mutual agreement. A "No" in the 'MUTUAL RECOGNITION' column, means that the certification body is free to accept or not to accept results from the test laboratory in question.

A "YES" means that the certification body has to accept the result.

A "YES (*)" means that additional testing is requested by one or more certification body.

In case of uncertainty a certification body may request further information. This may lead to further testing.

If the member test laboratory needs to subcontract part of the testing to another test laboratory not included in this EFSG basic agreement this shall be stated in the test report. The report shall contain the name and address of the subcontract test laboratory and information about the tests that have been conducted.

Only test laboratories accredited to ISO 17025 for the relevant test method shall be used for subcontract test work and the basic functional test shall be performed by the EFSG member laboratory. No more than two tests shall be subcontracted to another test laboratory not included in this EFSG basic agreement.

For each standard listed in the Basic Agreement the associated labs must fulfil witness testing and/or the 'round robin' test programmes based on the content of the standards. Test reports published by the associated labs shall be taken into account only if the results of the 'round robin' test programmes and/or the witness testing are satisfactory.

Unless specifically stated in this basic agreement document environmental tests and EMC tests shall be conducted in accordance with the most recent version of the standards at least once the date of withdrawal (DOW) has been reached, even if the publication date of the standard is explicitly stated in the product standard. Alternatively, the previous version of those standards shall be accepted by the EFSG members provided testing has been completed prior to the date of withdrawal.

PASSIVE INFRA RED DETECTORS

TESTS ACCORDING TO EN 50131-2-2:2008	CLAUSE	MUTUAL RECOGNITION	Comments
FUNCTIONAL REQUIREMENTS	4		
MARKING, IDENTIFICATION AND DOCUMENTATION	5	No	
BASIC DETECTION TEST	6.2	YES	
WALK TESTING	6.3	No	
SWITCH-ON DELAY, TIME INTERVAL BETWEEN SIGNALS AND INDICATION OF DETECTION	6.4	No	
SELF TESTS	6.5	No	
IMMUNITY TO INCORRECT OPERATION	6.6	No	
TAMPER SECURITY	6.7	No	
ELECTRICAL TESTS	6.8	No	

TESTS ACCORDING TO EN 50131-2-2:2008	CLAUSE	MUTUAL RECOGNITION	Comments
ENVIRONMENTAL CLASSIFICATION AND CONDITIONS	6.9		
Dry Heat	6.9	YES	Note 1
Cold (Operational)	6.9	YES	Note 1
Damp Heat ,Steady State (Operational)	6.9	YES	Note 1
Damp Heat , Cyclic (Operational)	6.9	YES	Note 1
Impact (Operational)	6.9	YES(*)	Note 2
Water Ingress	6.9	YES(*)	Note 3
Mechanical Shock (Operational)	6.9	YES	Note 1
Vibration, Sinusoidal (Operational)	6.9	YES	Note 1
Electrostatic Discharge (Operational)	6.9	YES	Note 4
Radiated Electromagnetic Fields (Operational)	6.9	YES(*)	Note 5
Fast Transient Bursts (Operational)	6.9	YES	Note 6
Slow High Energy Voltage Surges (Operational)	6.9	YES	Note 6
Mains Voltage Dips And Interruptions (Operational)	6.9	YES	
Conducted Disturbances Induced By Electromagnetic Fields (Operational)	6.9	YES	Note 5 and 7
Damp Heat Steady State (Endurance)	6.9	YES	
Damp Heat Cyclic (Endurance)	6.9	YES	
Vibration, Sinusoidal (Endurance)	6.9	YES	
SO ₂ Corrosion (Endurance)	6.9	No	
MARKING, IDENTIFICATION AND DOCUMENTATION	6.10	No	

MICROWAVE DETECTORS

TESTS ACCORDING TO EN 50131-2-3:2008	CLAUSE	MUTUAL RECOGNITION	Comments
FUNCTIONAL REQUIREMENTS	4		
MARKING, IDENTIFICATION AND DOCUMENTATION	5	No	
BASIC DETECTION TEST	6.2	YES	
WALK TESTING	6.3	No	
VERIFICATION OF DETECTION PERFORMANCE	6.4	No	
SWITCH-ON DELAY, TIME INTERVAL BETWEEN SIGNALS AND INDICATION OF DETECTION	6.5	No	
FAULT CONDITION SIGNALS OR MESSAGES : SELF TESTS	6.6	No	
IMMUNITY TO MICROWAVE SIGNAL ATTENUATION BY FLUORESCENT LIGHTS	6.7	No	
TAMPER SECURITY	6.8	No	
ELECTRICAL TESTS	6.9	No	
ENVIRONMENTAL CLASSIFICATION AND CONDITIONS	6.10		
Dry Heat	6.10	YES	Note 1
Cold (Operational)	6.10	YES	Note 1
Damp Heat ,Steady State (Operational)	6.10	YES	Note 1
Damp Heat , Cyclic (Operational)	6.10	YES	Note 1
Impact (Operational)	6.10	YES(*)	Note 2
Water Ingress	6.10	YES(*)	Note 3
Mechanical Shock (Operational)	6.10	YES	Note 1
Vibration, Sinusoidal (Operational)	6.10	YES	Note 1
Electrostatic Discharge (Operational)	6.10	YES	Note 4
Radiated Electromagnetic Fields (Operational)	6.10	YES(*)	Note 5
Fast Transient Bursts (Operational)	6.10	YES	Note 6

TESTS ACCORDING TO EN 50131-2-3:2008	CLAUSE	MUTUAL RECOGNITION	Comments
Slow High Energy Voltage Surges (Operational)	6.10	YES	Note 6
Mains Voltage Dips And Interruptions (Operational)	6.10	YES	
Conducted Disturbances Induced By Electromagnetic Fields (Operational)	6.10	YES	Note 5 and 7
Damp Heat Steady State (Endurance)	6.10	YES	
Damp Heat Cyclic (Endurance)	6.10	YES	
Vibration, Sinusoidal (Endurance)	6.10	YES	
SO ₂ Corrosion (Endurance)	6.10	No	

COMBINED PASSIVE INFRA RED AND MICROWAVE DETECTORS

TESTS ACCORDING TO EN 50131-2-4:2008	CLAUSE	MUTUAL RECOGNITION	Comments
FUNCTIONAL REQUIREMENTS	4		
MARKING, IDENTIFICATION AND DOCUMENTATION	5	No	
BASIC DETECTION TEST	6.2	YES	
WALK TESTING	6.3	No	
SWITCH-ON DELAY, TIME INTERVAL BETWEEN SIGNALS AND INDICATION OF DETECTION	6.4	No	
SELF TESTS	6.5	No	
IMMUNITY TO INDIVIDUAL TECHNOLOGIES TO INCORRECT OPERATION	6.6	No	
TAMPER SECURITY	6.7	No	
ELECTRICAL TESTS	6.8	No	
ENVIRONMENTAL CLASSIFICATION AND CONDITIONS	6.9		
Dry Heat	6.9	YES	Note 1
Cold (Operational)	6.9	YES	Note 1
Damp Heat ,Steady State (Operational)	6.9	YES	Note 1

TESTS ACCORDING TO EN 50131-2-4:2008	CLAUSE	MUTUAL RECOGNITION	Comments
Damp Heat , Cyclic (Operational)	6.9	YES	Note 1
Impact (Operational)	6.9	YES(*)	Note 2
Water Ingress	6.9	YES(*)	Note 3
Mechanical Shock (Operational)	6.9	YES	Note 1
Vibration, Sinusoidal (Operational)	6.9	YES	Note 1
Electrostatic Discharge (Operational)	6.9	YES	Note 4
Radiated Electromagnetic Fields (Operational)	6.9	YES(*)	Note 5
Fast Transient Bursts (Operational)	6.9	YES	Note 6
Slow High Energy Voltage Surges (Operational)	6.9	YES	Note 6
Mains Voltage Dips And Interruptions (Operational)	6.9	YES	
Conducted Disturbances Induced By Electromagnetic Fields (Operational)	6.9	YES	Note 5 and 7
Damp Heat Steady State (Endurance)	6.9	YES	
Damp Heat Cyclic (Endurance)	6.9	YES	
Vibration, Sinusoidal (Endurance)	6.9	YES	
SO ₂ Corrosion (Endurance)	6.9	No	
MARKING, IDENTIFICATION AND DOCUMENTATION	6.10	No	

COMBINED PASSIVE INFRA RED AND ULTRASONIC DETECTORS

TESTS ACCORDING TO EN 50131-2-5:2008	CLAUSE	MUTUAL RECOGNITION	Comments
FUNCTIONAL REQUIREMENTS	4		
MARKING, IDENTIFICATION AND DOCUMENTATION	5	No	
BASIC DETECTION TEST	6.2	YES	
WALK TESTING	6.3	No	
VERIFICATION OF DETECTION PERFORMANCE	6.4	No	
SWITCH-ON DELAY, TIME INTERVAL BETWEEN SIGNALS AND INDICATION OF DETECTION	6.5	No	
FAULT CONDITION SIGNALS OR MESSAGES: SELF TESTS	6.6	No	
IMMUNITY TO INCORRECT OPERATION	6.7	No	
TAMPER SECURITY	6.8	No	
ELECTRICAL TESTS	6.9	No	
ENVIRONMENTAL CLASSIFICATION AND CONDITIONS	6.10		
Dry Heat	6.10	YES	Note 1
Cold (Operational)	6.10	YES	Note 1
Damp Heat ,Steady State (Operational)	6.10	YES	Note 1
Damp Heat , Cyclic (Operational)	6.10	YES	Note 1
Impact (Operational)	6.10	YES(*)	Note 2
Water Ingress	6.10	YES(*)	Note 3
Mechanical Shock (Operational)	6.10	YES	Note 1
Vibration, Sinusoidal (Operational)	6.10	YES	Note 1
Electrostatic Discharge (Operational)	6.10	YES	Note 4
Radiated Electromagnetic Fields (Operational)	6.10	YES(*)	Note 5
Fast Transient Bursts (Operational)	6.10	YES	Note 6

TESTS ACCORDING TO EN 50131-2-5:2008	CLAUSE	MUTUAL RECOGNITION	Comments
Slow High Energy Voltage Surges (Operational)	6.10	YES	Note 6
Mains Voltage Dips And Interruptions (Operational)	6.10	YES	
Conducted Disturbances Induced By Electromagnetic Fields (Operational)	6.10	YES	Note 5 and 7
Damp Heat Steady State (Endurance)	6.10	YES	
Damp Heat Cyclic (Endurance)	6.10	YES	
Vibration, Sinusoidal (Endurance)	6.10	YES	
SO ₂ Corrosion (Endurance)	6.10	No	
MARKING, IDENTIFICATION AND DOCUMENTATION	6.11	No	

Table notes relating to EN 50131-2-2, EN 50131-2-3, EN 50131-2-4 and EN 50131-2-5

1. During the conditioning, attempts shall be made to ensure the detector is not influenced by the unwanted effects of the climatic conditioning, (i.e. air turbulence, vibration etc.), or by the unwanted effects of the vibration and/or mechanical shock conditioning (i.e. changes in background surface temperature). Where it is not possible to mask the detector without influencing the anti-masking function the test may be performed without shielding the detector from the unwanted effects, however in the event of a 'false' alarm during the conditioning the test laboratory must investigate to determine the cause of the alarm.
2. The material upon which the detector is mounted shall be concrete. The test laboratory shall show in the test report the positions of the impacts applied to the detector under test. The test laboratory shall visually examine the detector prior to the test to determine the areas likely to be most susceptible to the impacts.
3. The test report shall state if water was able to penetrate the detector enclosure or not following exposure to the water ingress conditioning.
4. The test laboratory shall show in the test report the positions where the ESD was applied to the detector under test. The test laboratory shall visually examine the detector prior to the test to determine the areas likely to be most susceptible to the ESD energy. The test report shall state if any air discharges occurred and their position with respect to the specimen.

5. The test laboratory shall consider the dwell time required, taking account of any delay, integration or processing times of the detector under test. The dwell time and any modification of the test specimen necessary to reduce the overall response time shall be stated in the test report.

The test report shall show (by means of a drawing or photograph) the position of the EUT and it's cabling in the field and the position of the antenna in all tested orientations of the Radiated Electromagnetic Fields test.

6. The test laboratory shall show in the test report the coupling method for each tested interface which was used to inject the transients into the cable. (i.e. CDN, capacitive coupling clamp etc...)
7. The test laboratory shall show in the test report the test setup, identifying all the specific CDN's or clamps used in the test.

CONTROL AND INDICATING EQUIPMENT

TESTS ACCORDING TO EN 50131-3:2009	CLAUSE	MUTUAL RECOGNITION	Comments
EQUIPMENT ATTRIBUTES	4		
GENERAL	4.1		
FUNCTIONALITY	4.2	YES	
CIE CONSTRUCTION	5	YES	
SECURITY GRADE	6	YES	
ENVIRONMENTAL PERFORMANCE	7		
REQUIREMENTS	7.1		
ENVIRONMENTAL AND EMC TESTS	7.2		
FUNCTIONAL REQUIREMENTS	8		
INPUTS	8.1	YES	
OUTPUTS	8.2	YES	
OPERATION	8.3	YES (*)	
PROCESSING	8.4	YES (*)	
INDICATION	8.5	YES (*)	
NOTIFICATION OUTPUTS	8.6	YES (*)	
TAMPER SECURITY (DETECTION/PROTECTION)	8.7	YES (*)	
INTERCONNECTIONS	8.8	YES (*)	
TIMING	8.9	YES (*)	
EVENT RECORDING	8.10	YES (*)	
POWER SUPPLY	8.11	YES (*)	
PRODUCT DOCUMENTATION	9		
INSTALLATION AND MAINTENANCE	9.1	No	
OPERATING INSTRUCTIONS	9.2	No	
MARKING AND LABELLING	10	No	

TESTS ACCORDING TO EN 50131-3:2009	CLAUSE	MUTUAL RECOGNITION	Comments
TESTS	11		
TEST CONDITIONS	11.1		Note 1
TEST PROCEDURES	11.2		
REDUCED FUNCTIONAL TEST	11.3	YES	
FUNCTIONAL TESTS	11.4	YES (*)	
ACCESS LEVEL	11.5	YES (*)	
AUTHORIZATION REQUIREMENTS	11.6	YES (*)	
OPERATIONAL TESTS	11.7	YES (*)	
TAMPER SECURITY TESTS	11.8	YES (*)	
SUBSTITUTION TESTS	11.9	YES (*)	
TESTING OF I&HAS TIMING PERFORMANCE	11.10	YES (*)	
TESTING FOR INTERCONNECTIONS	11.11	YES (*)	
EVENT LOG	11.12	YES (*)	
MARKING AND DOCUMENTATION	11.13	No	
ENVIRONMENTAL AND EMC TESTS	11.14		Note 2
Dry heat (Operational)	11.14	YES	Note 3
Dry heat (Endurance)	11.14	YES	Note 3
Cold (Operational)	11.14	YES	Note 3
Damp heat, steady state (Operational)	11.14	YES	Note 3
Damp heat, steady state (Endurance)	11.14	YES	Note 3
Temperature change (Operational)	11.14	YES	Note 3
Damp heat, cyclic (Operational)	11.14	YES	Note 3
Damp heat, cyclic (Endurance)	11.14	YES	Note 3
Water ingress (Operational)	11.14	YES (*)	Note 4
Sulphur Dioxide (SO ₂) (Endurance)	11.14	No	
Salt mist, cyclic (Endurance)	11.14	No	

TESTS ACCORDING TO EN 50131-3:2009	CLAUSE	MUTUAL RECOGNITION	Comments
Impact (Operational)	11.14	YES (*)	Note 5
Shock (Operational)	11.14	YES	Note 6
Vibration, sinusoidal (Operational)	11.14	YES	
EMC Tests Operational	11.14		
Electrostatic Discharge (Operational)	11.14	YES	Note 7
Radiated Electromagnetic Fields (Operational)	11.14	YES (*)	Note 8
Fast Transient Bursts (Operational)	11.14	YES	Note 9
Slow High Energy Voltage Surges (Operational)	11.14	YES	Note 9
Mains Voltage Dips And Interruptions (Operational)	11.14	YES	
Conducted Disturbances Induced By Electromagnetic Fields (Operational)	11.14	YES	Notes 8 and 10

Table notes relating to EN 50131-3

1. The configuration of the test system shall be documented and details included in the test report.
2. Power supplies of CIE shall be tested with the Standby Device (SD) connected and fitted inside the enclosure of the EUT during the environmental conditioning, including climatic and whilst the reduced functional test is applied when the PS is integrated into the cabinet of the CIE.
3. All technology types of portable ancillary control equipment shall be used to check the correct operation of the CIE during the reduced functional tests before, during and after environmental and climatic conditioning. However, unless specifically requested by the client, environmental and climatic conditioning need not to be applied to passive portable ancillary control equipment (PACE) such as swipe cards and tokens used in the setting and unsetting procedure.
4. The test report shall state if any water was able to penetrate the enclosure of the specimen or not following exposure to the water ingress conditioning.
5. The material upon which the CIE and/or ancillary equipment is mounted shall be concrete. The test laboratory shall show in the test report the positions of the impacts applied to the specimen under test. The test laboratory shall visually examine the specimen prior to the test to determine the areas likely to be most susceptible to the impacts.
6. The shock conditioning shall be conducted using the 'shaker table' method.

7. The test laboratory shall show in the test report the positions where the ESD was applied to the CIE and/or ancillary equipment under test. The test laboratory shall visually examine the specimen(s) prior to the test to determine the areas likely to be most susceptible to the ESD energy. The test report shall state if any air discharges occurred and their position with respect to the specimen(s).

8. The test laboratory shall consider the dwell time required, taking account of any delay, integration or processing times of the equipment under test. The dwell time and any modification of the test specimen necessary to reduce the overall response time shall be stated in the test report.

The test report shall show (by means of a drawing or photograph) the position of the equipment under test and its cabling in the field and the position of the antenna in all tested orientations of the Radiated Electromagnetic Fields test.

9. The test laboratory shall show in the test report the coupling method for each tested interface which was used to inject the transients into the cable. (i.e. CDN, capacitive coupling clamp etc...).

10. The test laboratory shall show in the test report the test setup, identifying all the specific CDN's or clamps used in the test.

POWER SUPPLIES

TESTS ACCORDING TO EN 50131-6:2008	CLAUSE	MUTUAL RECOGNITION	Comments
FUNCTIONAL REQUIREMENTS	4		
GENERAL	4.1	YES (*)	
MONITORING OF PS	4.2	YES (*)	
APS CAPABILITY	4.3	YES (*)	
RECHARGING FOR PS TYPE A	4.4	YES (*)	
OVER-VOLTAGE PROTECTION	4.5	YES	
SHORT CIRCUIT PROTECTION	4.6	YES	
OVERLOAD PROTECTION	4.7	YES	
DEEP DISCHARGE PROTECTION	4.8	YES	
AUTOMATIC CHANGEOVER TO APS	4.9	YES	
RIPPLE	4.10	YES	
TAMPER SECURITY	4.11	YES	Note 1
ENVIRONMENTAL	4.12		
SAFETY	4.13	YES(*)	
EMC	4.14		
ELECTRICAL	4.15	YES(*)	
MARKING	5	No	
DOCUMENTATION	6	No	
TESTS	7		
GENERAL TEST CONDITIONS	7.1		
REDUCED FUNCTIONAL TEST	7.2	YES	Note 2
PS RATING	7.3	YES	
OUTPUT VOLTAGE STABILITY - GRADUAL LOAD VARIATION	7.4	YES	

TESTS ACCORDING TO EN 50131-6:2008	CLAUSE	MUTUAL RECOGNITION	Comments
OUTPUT VOLTAGE STABILITY – SWITCHED LOAD VARIATION	7.5	YES	
SIGNALLING: LOSS OF EPS	7.6	YES	
SIGNALLING: STORAGE DEVICE – LOW VOLTAGE	7.7	YES	
SIGNALLING: STORAGE DEVICE – FAILURE	7.8	YES	
SIGNALLING: LOW OUTPUT VOLTAGE	7.9	YES	
SIGNALLING: POWER UNIT FAILURE	7.10	YES	
SIGNALLING: POWER UNIT FAILURE - SD CHARGING	7.11	YES	
REMOTE TEST	7.12	YES	
SD RECHARGING	7.13	YES (*)	
OVER-VOLTAGE PROTECTION	7.14	YES	
SHORT CIRCUIT PROTECTION	7.15	YES	
OVERLOAD PROTECTION	7.16	YES	
DEEP DISCHARGE PROTECTION	7.17	YES	
AUTOMATIC CHANGEOVER TO APS	7.18	YES	
TAMPER PROTECTION	7.19	YES	
TAMPER PROTECTION – ACCESS TO THE INSIDE OF THE HOUSING	7.20	YES	
TAMPER DETECTION – REMOVAL FROM MOUNTING	7.21	YES	
TAMPER DETECTION – PENETRATION OF THE HOUSING	7.22	YES	
ENVIRONMENTAL AND EMC TESTS	7.23		
Dry heat (Operational)	7.23	YES(*)	
Dry heat (Endurance)	7.23	YES	
Cold (Operational)	7.23	YES	
Damp heat, steady state (Operational)	7.23	YES	
Damp heat, steady state (Endurance)	7.23	YES	

TESTS ACCORDING TO EN 50131-6:2008	CLAUSE	MUTUAL RECOGNITION	Comments
Temperature change (Operational)	7.23	YES	
Damp heat, cyclic (Operational)	7.23	YES	
Damp heat, cyclic (Endurance)	7.23	YES	
Water ingress (Operational)	7.23	YES (*)	Note 3
Sulphur Dioxide (SO ₂) (Endurance)	7.23	No	
Salt mist, cyclic (Endurance)	7.23	No	
Impact (Operational)	7.23	YES (*)	Note 4
Shock (Operational)	7.23	YES	
Vibration, sinusoidal (Operational)	7.23	YES	
EMC Tests Operational	7.23		
Electrostatic Discharge (Operational)	7.23	YES	Note 5
Radiated Electromagnetic Fields (Operational)	7.23	YES (*)	Note 6
Fast Transient Bursts (Operational)	7.23	YES	Note 7
Slow High Energy Voltage Surges (Operational)	7.23	YES	Note 7
Mains Voltage Dips And Interruptions (Operational)	7.23	YES	
Conducted Disturbances Induced By Electromagnetic Fields (Operational)	7.23	YES	Note 6 and 8
EMC Emissions (Operational)	7.23	YES(*)	
MARKING AND DOCUMENTATION	7.24	No	

Table notes relating to EN 50131-6

1. The attack test tools of EN 50131-3 are used to assess the Tamper Security requirements of Clause 4.11.
2. Power supplies shall be tested with the Standby Device (SD) connected and fitted inside the enclosure of the EUT during the environmental conditioning, including climatic and whilst the reduced functional test is applied.
3. The test report shall state if water was able to penetrate the enclosure of the specimen or not following exposure to the water ingress conditioning.

4. The material upon which the CIE and/or ancillary equipment is mounted shall be concrete. The test laboratory shall show in the test report the positions of the impacts applied to the specimen under test. The test laboratory shall visually examine the specimen prior to the test to determine the areas likely to be most susceptible to the impacts.
5. The test laboratory shall show in the test report the positions where the ESD was applied to the power supply under test. The test laboratory shall visually examine the specimen prior to the test to determine the areas likely to be most susceptible to the ESD energy. The test report shall state if any air discharges occurred and their position with respect to the specimen.
6. The test laboratory shall consider the dwell time required, taking account of any delay, integration or processing times of the equipment under test. The dwell time and any modification of the test specimen necessary to reduce the overall response time shall be stated in the test report.

The test report shall show (by means of a drawing or photograph) the position of the equipment under test and it's cabling in the field and the position of the antenna in all tested orientations of the Radiated Electromagnetic Fields test.

7. The test laboratory shall show in the test report the coupling method for each tested interface which was used to inject the transients into the cable. (i.e. CDN, capacitive coupling clamp etc...).
8. The test laboratory shall show in the test report the test setup, identifying all the specific CDN's or clamps used in the test.

Test report requirements

To ensure the basic requirements of the certification bodies can be met the test reports from the associated test laboratories shall adhere to the following:

The test reports shall

- a) be in accordance with the requirements of ISO 17025,
- b) contain a list of drawings identifying the build status of the products tested,
- c) incorporate a photograph of the product(s) tested,
- d) include a description of the basic functional test carried out before, during (where applicable), and after the environmental conditioning,
- e) CIE test reports shall include details of the configuration of the test system, i.e. the type and number of peripherals / ancillary equipment connected,
- f) Power supply test reports shall include details of the configuration of the test system, i.e. the connections to loads etc,
- g) contain a clear statement that the product has met the requirements of the test(s),
- h) include information regarding the specific requirements identified in the notes of this annex,
- i) include information about the subcontract test laboratory (where applicable).