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Work Instruction (Inspection)		Document No.: WI-R-EMEA-CERT-INSP-PCS020
EMEA CERTIFICATION SCHEMES - PRODUCT CONTROL SPECIFICATIONS		
Issue Date:	Revision Date: 23 Jan 2018	Approved by: Fredrik Wennersten
	Effective Date: 23 Feb 2018	

1.0 Purpose

Product Control Specifications (PCS) specify the requirements for routine inspections, tests, Product Verification Tests and sample selection for products certified under an Intertek EU Type 5 certification scheme (including GS, S, BEAB, ASTA, ENEC, BAUART and TICK MARK). They are for use by manufacturers and by factory inspectors.

2.0 Scope

Products: Luminaires
Standards: EN 60598

Marks: S, BEAB, ASTA, GS, BG, TICK, ENEC

3.0 Routine inspections and tests

3.1 General

The following requirements apply to most products.

Variations may be permitted by prior, written agreement from the certification body.

The factory should have a quality plan defining all inspections and tests on materials, components and completed products as appropriate.

Completed products shall be marked to confirm satisfactory completion of all required testing.

Any products which fail inspection or testing shall be segregated and not allowed to continue through the process until rectified and re-inspected or retested.

Products shall not be released until the testing equipment has been checked again following a production batch.

Records of inspections and test should be maintained and held for at least two years.

Records shall include:

- Type of product
- Date of test
- Place of manufacture
- Quantity tested
- Number of failures and actions taken

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3.2 Required inspections and tests (for Intertek Certification Marks)

Inspection/test	Test parameters	Sampling plan
Functional test	Functional or performance tests are to be carried out using a lamp, simulated lamp or, if providing sufficient assurance of correct operation, a suitable circuit.	100%
Earthing continuity test	For Class I products; a current of at least 10 amps, derived from a source having a no-load voltage of 6 to 12V, is passed between each accessible metal part and the earthing terminal or contact of the luminaire. If a flexible cable for the supply connection is fitted the earthing contact is at the plug or supply end of the cord. The current is passed for at least one second. The earth circuit resistance must not exceed 0,5 Ohms.	100%

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Insulation resistance test	<p>This test is carried out using the specified test voltage applied for a minimum of 1 second between live parts, with both poles of the mains supply cord or terminals connected together, and accessible metal parts using the d.c. voltage specified in the table below.</p> <p>Unless the duration of 1 second is controlled automatically a 2 second duration should be specified.</p>			100%	
	Insulation Class	Class I	Class II, metal encased		Class III, metal encased with working voltage >25V AC (or 60V DC)
	Test voltage d.c. Minimum resistance	500V 2 M Ohms	500V 2 M Ohms		100V 2 M Ohms

OR

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Dielectric strength test	<p>The test voltage is applied for a minimum of 1 second between live parts, with both poles of the mains supply cord or terminals connected together and accessible metal parts using a voltage of substantially sine wave form having a frequency of 50Hz or 60Hz and the value specified in the table below. Alternatively the d.c. voltage in the table may be used.</p> <p>Unless the duration of 1 second is controlled automatically a 2 second duration should be specified. The maximum breakdown current should be detected using an automatic trip that provides a clear indication of failure.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Insulation Class</th> <th style="text-align: center;">Class I</th> <th style="text-align: center;">Class II, metal encased</th> <th style="text-align: center;">Class III, metal encased with working voltage >25V AC (or 60V DC)</th> </tr> </thead> <tbody> <tr> <td>Test Voltage A.C.</td> <td style="text-align: center;">Minimum 1500V</td> <td style="text-align: center;">Minimum 1500V</td> <td style="text-align: center;">Minimum 400V</td> </tr> <tr> <td>Test Voltage D.C (minimum)</td> <td style="text-align: center;">Minimum 2122V</td> <td style="text-align: center;">Minimum 2122V</td> <td style="text-align: center;">Minimum 566V</td> </tr> <tr> <td>Maximum breakdown current</td> <td style="text-align: center;">5mA</td> <td style="text-align: center;">5mA</td> <td style="text-align: center;">5mA</td> </tr> </tbody> </table>	Insulation Class	Class I	Class II, metal encased	Class III, metal encased with working voltage >25V AC (or 60V DC)	Test Voltage A.C.	Minimum 1500V	Minimum 1500V	Minimum 400V	Test Voltage D.C (minimum)	Minimum 2122V	Minimum 2122V	Minimum 566V	Maximum breakdown current	5mA	5mA	5mA	100%
Insulation Class	Class I	Class II, metal encased	Class III, metal encased with working voltage >25V AC (or 60V DC)															
Test Voltage A.C.	Minimum 1500V	Minimum 1500V	Minimum 400V															
Test Voltage D.C (minimum)	Minimum 2122V	Minimum 2122V	Minimum 566V															
Maximum breakdown current	5mA	5mA	5mA															

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Final inspection	<p>The luminaire shall be subject to final visual inspection before packaging to ensure:</p> <ul style="list-style-type: none"> a) All specified labels are securely in place b) Manufacturer's instructions are placed with the luminaire, where necessary c) Luminaire is complete, and that mechanical check against a checklist for the product has been carried out. <p>N.B. For Luminaires carrying the ENEC Mark there are additional requirements detailed in ENEC Scheme Permanent Document 303.</p>	100%
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3.3 Required inspections and tests (for ENEC Marked products)

In addition to the inspections and tests detailed in section 3.2, the requirements of document ENEC 303 Annex A (for 60598 products) shall be fulfilled.

4.0 Product Verification Tests/Periodic testing (refer to CIG 021 clause 5.8)

Product verification tests are in addition to the production line inspection and routine tests and are performed on samples taken randomly from the production line.

The manufacturer is responsible for conducting or arranging for the following periodic testing to be completed. Records shall be available for review during factory inspection visits.

Certification Mark	Frequency	PVT/periodic testing required
GS, S, BEAB, ASTA, BAUART and TICK Mark	Annual	PVT is not mandatory but it is recommended to demonstrate ongoing compliance with EU Directives. The following PVT is recommended: <ul style="list-style-type: none"> • PVT according to document ENEC 303 Annex A
ENEC	Annual	PVT according to document ENEC 303 Annex A

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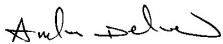
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5.0 Surveillance testing by the Certification Body

If required, samples are selected during the factory inspection and the manufacturer should send these to the address provided. If samples are required but not available at the time of the inspection, the manufacturer should send these as soon as they become available. If there is no stock or production, the manufacturer should advise the certification body that samples will not be provided due to no production.

The certification body will arrange for the required testing to be completed. This will be charged to the manufacturer or Licence holder. A report of the testing will be provided.

Certification Mark	Surveillance testing requirements
ASTA, BEAB	Samples to be selected each year as detailed on the sample selection record (ASTA: form AFT-17) provided to the inspector before each visit.
S, BG, TICK, GS	Regular selection of samples is not required. Samples may be required if any deviations to the type tested or non-compliance with the product standard are suspected. Required number of samples: 1
ENEC	Samples for product surveillance are selected by the inspector at the time of factory inspection, to be send to Intertek Semko AB. Required number of samples: 1

Document History				
Revision No.	Date	Changes	Name & Title	
			Author	Approving Official
1	11/02/2015	Original issue	Rajesh Sodha/ R W Hayward	
2	2018-01-23	Corrections in 3.2, 4.0 and 5.0	Paul Klemets	Fredrik Wennersten

End of Document

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