

Intertek C&E Management System		Page 1 of 4
Work Instruction (Inspection)		Document No.: WI-R-EMEA-CERT-INSP-PCS027
EMEA CERTIFICATION SCHEMES - PRODUCT CONTROL SPECIFICATIONS		
Issue Date: 11 th February 2015	Revision Date: 04 th September 2017	Approved by: Fredrik Wennersten
	Effective Date: 04 th October 2017	

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: Equipment for measurement, control and laboratory use
Standards: EN 61010-1
Marks: GS, S, BEAB, BAUART and TICK

3.0 Routine inspections and tests

3.1 General

The following requirements apply to most products.

Variations may be permitted by a 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

Inspection/test	Test parameters	Sampling plan															
<p>Protective Earth impedance test (duration 2-5 sec.)</p> <p>For Class I equipment a current of at least 10 A, derived from an a.c. source having a no-load voltage not exceeding 12 V, is passed between the Protective Earth terminal and each accessible metal part, which has to be protectively earthed for safety reasons.</p>	<p>For permanently installed equipment and equipment with an appliance inlet the impedance shall not exceed 0.1 ohm.</p> <p>For equipment with a non-detachable power supply cord the impedance shall not exceed 0.2 ohm when measured from the earth contact in the mains plug.</p>	100%															
<p>Dielectric strength test according to table below.</p>	Test duration 2-5 seconds.	100%															
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 35%;">Application of test voltage at 150 - 300 V mains rated voltage.</th> <th colspan="2" style="text-align: center;">Test voltage a.c. rms or d.c.</th> </tr> <tr> <th></th> <th style="text-align: center;">Installation Category II</th> <th style="text-align: center;">Installation category III</th> </tr> </thead> <tbody> <tr> <td>Between mains and all accessible conductive parts incl. secondary parts (signal connectors etc.)</td> <td style="text-align: center;">1,400 Va.c. or 2,000 Vd.c.</td> <td style="text-align: center;">2,200 Va.c. or 3,100 Vd.c.</td> </tr> <tr> <td>Between primary and secondary of mains transformers. ¹⁾ (to be performed on transformers separately and prior to assembly)</td> <td style="text-align: center;">2,900 Va.c. or 4,100 Vd.c.</td> <td style="text-align: center;">3,400 Va.c. or 4,800 Vd.c.</td> </tr> <tr> <td>Between terminals of hazardous floating input/output circuits and accessible conductive parts.</td> <td style="text-align: center;">1.5 times the working voltage</td> <td style="text-align: center;">1.5 times the working voltage</td> </tr> </tbody> </table> <p>¹⁾ A certificate of conducted test, issued by the transformer manufacturer, will be sufficient.</p> <p>Note: Intertek may require other test voltages depending on the type and design of the equipment.</p>			Application of test voltage at 150 - 300 V mains rated voltage.	Test voltage a.c. rms or d.c.			Installation Category II	Installation category III	Between mains and all accessible conductive parts incl. secondary parts (signal connectors etc.)	1,400 Va.c. or 2,000 Vd.c.	2,200 Va.c. or 3,100 Vd.c.	Between primary and secondary of mains transformers. ¹⁾ (to be performed on transformers separately and prior to assembly)	2,900 Va.c. or 4,100 Vd.c.	3,400 Va.c. or 4,800 Vd.c.	Between terminals of hazardous floating input/output circuits and accessible conductive parts.	1.5 times the working voltage	1.5 times the working voltage
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Correct Operation Test	If incorrect operation of the equipment might result in a hazard, the correct operation is checked for example by electrical measurements, by verifying the functional devices, such as switches and manually-operated controls, by verifying the direction of movements and by verifying performance and accuracy.	
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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 (standard clause numbers)
S	(Annual)	PVT is not mandatory but it is recommended to demonstrate ongoing compliance with EU Directives. The two following PVT steps for BEAB is recommended: - See below.
BEAB GS BAUART TICK	Annual	5: Marking, marking durability and documentation (e.g. valid revision of operating manual). 6.2-6.3: Protection against electric shock and earth leakage current. 6.7: Creepage distances, air clearances, distances through insulation and the securing of wiring. 9: Abnormal operation (check operation of protective devices). 11: Protection against hazards from fluids. 14: Comparison of used components with the approved version, for example power supply units, flexible cords, switches, opto-couplers, EMC filters, fans, fuses, motors, DC/DC converters, batteries etc.
	Annual	Tests for equipment covered by EN 61010-2-XXX. To be decided by Intertek in conjunction with certification.

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In cases where the manufacturer does not have the resources to perform the Product Verification Tests, partly or in whole, Intertek is of course happy to assist.

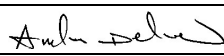
If you have any questions or need assistance, please contact Intertek or simply send us necessary samples with a request for any or all of the above mentioned Product Verification Tests.

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
S GS BAUART TICK	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.
BEAB-Mark	Surveillance Samples are selected at the request of the Surveillance Coordinator

Document History				
Revision No.	Date	Changes	Name & Title	
			Author	Approving Official
1	11/02/2015	Original issue	Paul Klemets/ R W Hayward	
2	04/09/2017	Removed edition of standard and corrections in 4.0 PVT tests	Christoffer Johansson/ Paul Klemets	Fredrik Wennersten

End of Document

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