

ECS operational staff meeting household appliances decision sheet			OSM HA N°348
Sub cl.	Meeting	Agenda item	Document
22.33	18	6.17	(SI)03/04
Standard	EN 60335-2-105:2005 +A1 :2008 + A11 :2010	Date	2017-02-08
Question	<p>Performing the a test on multifunction shower cabinet with a vaporiser according to EN 60335-2-105 requirements, level sensor of the vaporiser is in a direct contact with water as well as earthed metal enclosure of a vaporiser.</p> <p>According to the requirement of-sub-clause 22.33 conductive liquids which are accessible in normal use shall not be in direct contact with live parts. Any energized part is considered to be a live part regardless of the voltage.</p> <p>Level sensor is connected to SELV parts over »Black Box«.</p> <p>Since there is some doubts that the actual requirement of the sub-clause 22.33 spatially wording "not be in direct contact with live parts including SELV parts" and "energized" in our case over "Black Box" is fulfilled:</p> <ul style="list-style-type: none"> - Are the parts separated with protective impedance also energized? - Which are the insulation requirements for "Black Box"? 		
Decision	This construction is acceptable if only steam is in contact with the people inside the cabinet, because the water is not accessible from inside.		
Explanatory notes	Standard changes from EN 60335-2-60 to EN 60335-2-105 (2017-02-08)		
<p>The diagram illustrates a cross-section of a shower cabinet vaporiser. On the left, a 'HEATING ELEMENT' is shown with electrical leads. A wavy line represents 'WATER' inside the cabinet. A 'LEVEL SENSOR' is positioned vertically, touching the water surface. Above the water, 'VAPOUR' is shown rising. To the right, a 'BLACK BOX' is connected to the level sensor and is labeled 'SELV' (Safety Extra Low Voltage). The diagram highlights the electrical connection between the SELV black box and the level sensor, which is in direct contact with the water.</p>			