

## OSM/EE DECISION SHEET

Category	Standard:	Clause	Document no.
ITAV	EN 62368-1:2014 + A11:2017 EN IEC 62368-1:2020 + A11:2020 EN IEC 62368-1:2024 + A11:2024	5.7.4	OSM-EE 18/5 rev 1
Subject		Key words	Meeting
Touch current measurement		Touch current, earthed part, switches	London 2018 Helsinki 2024
Question			
<p>Standard EN 62368-1 in clause 5.7.4 requires that at least one earthed accessible part shall be subjected to touch current measurement and refers to IEC/EN 60990:1999 (IEC/EN 60990:2016 for the 3rd and 4th editions of EN IEC 62368) for conditions of measurements.</p> <p>a) Is it required to open switch e while conducting relevant faults 6.2.2.2 to 6.2.2.8 (parallel operation of switch e open with other switches)?</p> <p>b) if a) is yes, doesn't this means double fault (fault in earthing and in addition fault in network)?</p>			
Decision			
<p>a) YES</p> <p>b) NO, OSM is of the opinion that opening switch "e" is a loss of a safeguard. For measurements on class I equipment switch "e" must be open together with any combination of the other switches in the figure one at the time. Except for the line conductor switch "I" which simulates a line/neutral fault in the installation. If however the equipment contains a single pole mains switch, it shall additionally be tested with the mains switch in the equipment open and closed</p> <p>Confirmed by TC108 at Busan, Korea, Oct 2018</p>			
Explanatory notes			
<p>Switch e simulates opening of protective earthing conductor in non-reliable earthed product.</p> <p>Switch n simulates opening of one pole switch in neutral conductor</p> <p>Switch p simulates polarity connection of the product.</p> <p>Switch I simulates line fault for products connected L to L or 3-phase products</p> <p>Switch g simulates fault in supply system – earthing of one phase in isolated mains system</p> <p>Combination of switch e open together with switch g is not considered as a double fault. Any measurement with switch e closed has no sense.</p> <p>Example of required measurements on product connected L to L of single star IT system (Fig 10 of EN 60990)</p> <p>In Helsinki 2024, OSM-EE decision 18/5 was modified with following changes:</p> <ul style="list-style-type: none"> <li>- add 3rd and 4th editions of EN IEC 62368-1</li> <li>- add reference to the latest edition of IEC/EN 60990:1999</li> <li>- change category from OFF to ITAV</li> </ul>			