

QUESTIONS AND ANSWERS

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1	WHAT IS A BROKEN NEUTRAL SAFETY DEVICE (BNSD) ?	A BNSD unit is designed to detect a broken or loose neutral cable condition on the incoming supply and trip the main earth leakage unit, so as to protect people, animals, equipment and appliances from over voltages, shock, electrocution, fires and other hazards, as a result of a broken neutral.
2	WHY DO I NEED A BNSD ?	A broken or loose neutral is considered a serious and major electrical system fault. This condition can cause your neutral wire to rise in voltage, from +/- zero, to 220V or even 400V, causing major equipment or appliance damage. In addition, depending on the earthing design, your equipment frame / cover may become live (220V) and be a life threatening hazard.
3	WHERE AND HOW DO I FIT THE BNSD ?	The BNSD should be fitted on the distribution board where the earth leakage unit is fitted. Note : only qualified electricians are allowed to work inside the distribution board.
4	DOES THE BNSD NEED TO EVER BE REPLACED ?	Under normal conditions, the BNSD should last as long as all the other equipment in the distribution board. However, if your installation has been struck by lightning, all equipment in the distribution board should be checked.
5	WHAT ELSE DOES THE BNSD PROTECT AGAINST ?	The BNSD is mainly designed to detect a broken or loose neutral, but it also has overvoltage protection components to keep the neutral at a low voltage, while tripping the earth leakage.
6	WHAT IS AN EARTH LEAKAGE UNIT ?	An earth leakage unit, sometimes called a RCD (Residual Current Device) is a device fitted to distribution boards, intended to detect earth fault currents and disconnect the related circuits, so as to protect humans and animals as well as equipment.
7	DO ALL INSTALLATIONS NEED A BNSD ?	Yes. A broken or loose neutral can cause damage to equipment and appliances, shock, and electrocution to humans or animals as well as fires. Hence a BNSD should always be fitted.
8	DOES A BNSD WORK IN A THREE PHASE SYSTEM	Yes. The BNSD only connect to the neutral and earth. Hence it will trip a single or a three phase RCD / Earth leakage unit, should the neutral become loose or broken.