



# Technical Warning Notice

**Subject: Stop switches**

## Introduction

Safety standards for new equipment include stopping devices (stop switches) to safeguard people accessing spaces such as lift pits, car tops and machinery spaces. These stop switches are required to meet European and International standards. To safeguard people, it is vital that stop switches are used and that they work.

It is possible, through an electrical or mechanical fault, that a stop switch might not work correctly. Recent experience has highlighted the possibility of failure of the switch through the actuator head breaking off (which would be evident) or contact block separating from the button itself – this could result in the button being pressed in for OFF but the contact being still closed (run).

To safeguard against such failures, BS 7255 recommends that personnel accessing the pit or car top should prove the effectiveness of all stop switches and other stopping devices. BS 7801 (safe working on escalators and moving walks) and BS 9102 (safe working on lifting platforms) have similar recommendations. **The recent cases underline the importance of proving the effectiveness of stop switches according to BS 7255, BS 7801 and BS 9102.**

This warning notice underlines the importance of checking the working of stop switches before relying on them. We would be interested to hear reports of where stop switches have been found not to work.

## Standards

BS EN 81-20:2014 has requirements for where stop switches should be installed (in the pit and on the car top, in pulley room, on inspection control stations, at lift machines, and at test panels), to meet the requirements for electric safety devices in BS EN 81-20, and for button type devices according to EN 60947-5-5 to be used as stopping device.

EN 60947-5-5 is the European and International standard for electrical emergency stop device with mechanical latching function.

BS EN 81-41:2011 requires stopping devices to be to BS EN ISO 13850 “Safety of machinery. Emergency stop function. Principles for design”.

## Stop switches with self-monitored contacts

The possibility of a contact block becoming separated from a stop switch body and actuator can be addressed by the stop switch using a self-monitored contact which opens under spring pressure if it becomes detached. Although this feature is not required by the standards for new equipment listed above, it could be considered as a safety enhancement where new or replacement stop switches are fitted.

A stop switch with a self-monitored contact looks the same as one with a standard contact and is not immune to failure so regardless of the type of stop switch fitted, **the effectiveness of the stop switch should be proved before accessing the lift well.**