# Customer Information – RTB Sensor Push Button 230V

Recently, we informed you about isolated incidents in which pedestrians experienced a slight electric current passing through their bodies when touching pedestrian push buttons. We have thoroughly investigated these incidents and would now like to inform you about the findings. Against this background, we would also like to provide additional information and recommendations regarding the maintenance and servicing of our pedestrian push buttons.

The pedestrian push buttons listed in the attachment were developed, tested, and placed on the market in compliance with applicable standards – most recently confirmed by an independent body. Compliance is based in particular on adherence to the enclosure protection requirements according to DIN EN 60529 (IP54), as well as the protective measure “Protection Class II / double or reinforced insulation” according to DIN EN 61140 and the associated electrotechnical principles. Furthermore, the insulation clearances are designed in accordance with DIN EN IEC 60664-1. For traffic signal systems, the system-specific requirements of DIN EN 50556, DIN VDE V 0832-110, and the RiLSA guidelines must also be observed.

Although the pedestrian push buttons reliably comply with the relevant standards and the current state of the art, under special circumstances foreign objects or moisture may enter the interior of the push button during its service life. The causes for this may vary. For example, the housing may become minimally or hardly visibly deformed due to external forces – such as vandalism or accidents. Such changes may reduce the protective effect of the housing seals, thereby facilitating the ingress of dirt or moisture into the housing interior. In addition, climatic conditions for outdoor-operated components have changed over recent years. Longer periods of humidity, more frequent fluctuations between temperature and weather extremes, as well as increased precipitation intensity, place greater strain on traffic signal systems (especially housings and seals) over long-term operation than was previously the case.

Even though, following thorough and critical review, we do not identify any danger to life or limb, we nevertheless wish to take the new field findings into account. In order to prevent similar incidents, we recommend carrying out enhanced visual inspections of the pedestrian push buttons as part of annual maintenance. If wear or external damage is detected, replacement of the cover or replacement of the affected push button is recommended.

For pedestrian push buttons operated with 230 V AC, we additionally recommend that, within suitable intervals determined as part of the operational risk assessment, but at the latest every 60 months, the interior of the housing should be inspected for contamination or signs of corrosion. This inspection includes opening the push-button housing and visually inspecting the interior. Before opening the housing, the equipment must be placed in a safe condition and disconnected from the power supply. The inspection should focus in particular on identifying contamination. It must also be checked whether there is a closed layer of dirt on housing surfaces or corrosion/corrosion traces on circuit boards or terminals. If corresponding contamination or corrosion characteristics are identified, the affected assembly must be replaced. This assessment must be carried out taking into account the ongoing compliance with the requirements for creepage and clearance distances according to DIN EN IEC 60664-1 as well as the protective measure “double or reinforced insulation” according to DIN EN 61140 / DIN VDE 0100-410.

Please find the updated maintenance recommendation attached as Annex 2.

Please also note the following: Due to the increased safety requirements ultimately resulting from environmental influences, maintenance efforts for push buttons operated with 230 V are higher compared with push buttons operated with low voltage. This is because mains voltage is present inside the push-button housing and the long-term effectiveness of Protection Class II must be maintained during operation. This should be taken into account in the maintenance planning of the system.

In order to eliminate any remaining technical risk in the future, we recommend reducing the operating voltage of the sensor request circuit – where technically feasible – to a low-voltage supply (for example 40 V). This would exclude any risk even under the most unfavorable and unforeseen conditions.

Should you have any questions, please do not hesitate to contact us. We kindly ask you to forward this information to your customers.