



Birmingham New Street has the most advanced and reliable AzLM deployment in the world

Birmingham New Street was the first UK implementation of a 2oo3 ACE, Redundant Detection Points and a serial interface to the interlocking.

The Birmingham New Street axle counter system was commissioned on 27th December 2022. As of 26th November 2024 (700 days) there have been no AzLM service affecting hardware failures. This means the Birmingham New Street system has a current hardware MTBF of >2,016,000 hours.

120 sections x 700 days x 24 hours x No AzLM service affecting hardware failures = MTBF > 2,016,000 hours

UK Install

2oo2 ACE



Birmingham New Street

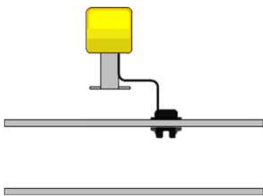
2oo3 ACE



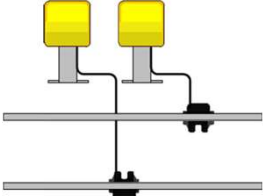
What is benefit?

A 2oo2 ACE has 2 CPU's. If one CPU fails the ACE halts and all sections become disturbed. A 2oo3 ACE has 3 CPU's. If one CPU fails the ACE remains operational.

Single Detection Point



Redundant Detection Points



Redundant Detection Points are 2 detection points installed together. Only one detection point affects the section occupancy. Upon disturbance of that detection point an automatic switch over occurs avoiding disturbance of the section.

Parallel interface



Serial interface



Across the UK, ACE's output the section status to the interlocking via parallel relay interface. At BNS, a serial interface over an Ethernet network connected directly to the CPUs is used, resulting in a reduction of external hardware interfaces.