



Review of ELV Wiring Guidelines

2nd September 2015

Product: *ELV Wiring Guidelines***Modifications Req:** *No***Retrospective Action Req:** *No***Priority of Change:** *Information only*

- ✓ Introduction
- ✓ Initial Status
- ✓ Actions to Date
- ✓ Conclusions (at this time)

Introduction

Recently there have been some concerns raised that Siemens ELV wiring guidelines do not align with those expressed in the IET wiring regulations.

In order to address these and clarify the situation, this bulletin details both the review we have conducted and the conclusion reached.

Initial Status

The Siemens wiring design guidance for our ELV traffic signal system is that, for specific maximum wiring lengths and loads, 1mm² cores are suitable. This is calculated on both the voltage drops and currents that the specific design applications have, in conjunction with the known operating characteristics of the signals approved for use in our ELV traffic signals system.

Whereas regulation 715.524.201, simply states 1.5mm² minimum core size.

The harmonised document, on which the latest version of the IET wiring regulations section 715 is based, HD 6034-7-715, states:

"The minimum cross-sectional area of the ELV conductors which are connected to the output terminals or terminations of transformers/convertors shall be chosen according to the load current"

Actions to Date

We have discussed this with both the IET and The Lighting Industry Association, and the conclusion at this time is that this clause was not intended to be applied to a closed wiring system where the performances of the overall system and lighting is closely specified and controlled through the electrical design and equipment selection.

This is now due to be raised at the next meeting of the IET/BSI Committee JPEL/64/Panel B who are responsible for the lighting sections, in September.

Our suggestion is that this could lead to re-wording similar in nature to section 714.1 (vi) of the IET Wiring Regulations, where road traffic signal systems are excluded.

Conclusions (at this time)

Whilst the wording and application are debated, and until there is unequivocal guidance, we believe that our design philosophy, based on the basic IET guidance on electrical design for circuit protection (over current, fault current and voltage drop), and our practical knowledge and experience, remains the correct guidance at this time and can continue to be applied.

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