

## **VTI Services Technical Bulletin (TB) Labelling of Optical Fibre Panels and Enclosures**

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### **Applicability**

The following applies only to telecommunication cabling installations in Australia and New Zealand seeking conformance of optical fibre labelling to the Wiring Rules - AS/CA S009:2020.

### **Summary**

It is mandatory to meet the labelling requirements for optical panels and enclosures in Australia as part of the cabling Wiring Rules AS/CA S009. It is also a requirement in New Zealand when AS/CA S009 is specified in project documentation. Labelling is a requirement placed on the registered cabler under AS/CA S009 because the positioning of the labels must be done at time of cabling installation.

There are two types of labels that shall be applied to optical fibre panels and enclosures:-

- A Warning Label – a triangular label containing the 'star-burst' laser symbol
- An Explanatory Label – a rectangular label stating the hazard and the caution

The location of the labels shall be:-

- A Warning Label on each fibre patch panel, even if it is inside an enclosure, and
- An Explanation Label on the front of a closed enclosure door and another Explanation Label clearly visible when front viewing after the door is opened.

### **Conformance requirements**

The Cabling Provider Rules require compliance with AS/CA S009, which sets out the requirements for labelling of optical fibre panels and enclosures.

The conformance requirements of AS/CA S009:2020 for labelling of optical fibre panels and enclosures, are based on the requirements of AS/NZS IEC 60825.1:2014 for label sizes and suggested wording, and AS/CA S008:2020 for label durability.

All optical fibre panels and enclosures shall be labelled with warning markings to warn of the potential that hazardous laser levels may be present.

The laser warning marking shall consist of:-

- (a) a **Warning Label** meeting the requirements of Figure 1 of AS/NZS IEC 60825.1:2014; and
- (b) an **Explanatory Label** meeting the requirements of Figure 2 of AS/NZS IEC 60825.1:2014.

## **Labelling of optical fibre panels and enclosures**

AS/CA S009:2020 Clause Numbers are shown here.

### **11.1.5.1 Warning of potential hazardous laser levels**

All optical fibre panels and enclosures **shall** be labelled to warn of the potential that hazardous laser levels may be present.

### **11.1.5.2 Access to emitted radiation**

Each optical connector, splice box or other part that may emit radiation when opened **shall** be marked, e.g. with a label, sleeve, tag or tape.

Note: The labelling for connectors may be located in close proximity where mounting the label on the connector itself is not practical.

### **11.1.5.3 Types of warning markings**

Laser warning marking **shall** consist of—

- (a) a Warning Label meeting the requirements of Fig 1 of AS/NZS IEC 60825.1; and
- (b) an Explanatory Label meeting the requirements of Fig 2 of AS/NZS IEC 60825.1.

### **11.1.5.4 Laser warning marking style**

Markings **shall** be coloured black on a yellow background appropriately sized and legible for the area served.

### **11.1.5.5 Laser explanatory label wording**

The Laser Explanatory Label **shall** provide a person with warnings of potentially dangerous laser radiation. Wording on the Label should be such that effective warning is given to any person who may or may not be familiar with laser radiation and the danger of exposure to it. Laser beams have the ability to damage eyesight.

The text for the Explanatory Label should be as follows:

<p>CAUTION VISIBLE AND INVISIBLE LASER BEAM AVOID EXPOSURE TO THE BEAM</p>
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The above wording for the Laser Explanation Label is not mandatory and other words that convey the same meaning may be used.

### **11.1.5.6 Marking durability**

The durability of the marking **shall** meet Clause 5.2.3.3 of AS/CA S008.

### **11.1.5.7 Fibre outlets in work areas**

Fibre outlets in work areas do not require a laser explanatory label.

### **11.1.5.8 Marking of groups of optical fibre connectors, outlets and access points**

Groups of optical fibre connectors, outlets or access points such as patch panels may be marked as a group. A single clearly visible triangular Laser Warning Label marking may be used rather than having one Laser Warning Label for each connector/outlet. A minimum of one Laser Explanatory Label **shall** be installed on the rack or frame for each location.

#### 11.1.5.9 Multiple markings

Where a group of optical fibre connectors/outlets are enclosed within a housing, then a Laser Explanatory Label **shall** be installed and clearly visible both before and after the housing is opened. This may require the use of more than one laser warning marking, such as one on the outside of a cabinet door and one inside on the rack/frame.

#### Laser Warning Markings



**Laser Warning Label** Figure 1 of AS/NZS IEC 60825.1:2014  
Detailed dimensions for this label are contained in AS/NZS IEC 60825.1:2014



**Explanation Label** Figure 2 of AS/NZS IEC 60825.1:2014  
Showing possible alternative wording  
Detailed dimensions for this label are contained in AS/NZS IEC 60825.1:2014

#### Acknowledgement

The clear and concise wording of the Labelling clauses in *italics* in this Technical Bulletin come with permission from the Communications Alliance Ltd that developed and maintains the installation requirements for customer cabling (Wiring Rules) - AS/CA S008 and S009, that are mandated by the Australian Communications and Media Authority as setting out mandatory minimum compliance requirements for all registered cabling.

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