

Sunday, November 07, 2010  
7:31 PM

### 5.3 Cap lamps (except for Group I) and hand lamps with their own source of supply

The lamp shall be protected against mechanical damage by a protective cover. The distance between this protective cover and the lamp when the latter is securely inserted shall be at least 1 mm. If the lamp is inserted in a spring-loaded lampholder and is in contact with the protective cover, the spring travel shall be at least 3 mm. The protective cover shall be:

- a) protected by a guard, or
- b) If not exceeding 50 cm<sup>2</sup> in area, protected by a protruding rim with a minimum height of 10 mm, or
- c) If exceeding 50 cm<sup>2</sup> in area, able to withstand the mechanical test requirements specified for guards and fan hoods in 22.4.3.1 of IEC 79-0.

Switching devices in the lamp circuit which produce sparks or arcs in normal service, including devices such as reed switches where the sparks or arcs are produced in hermetic enclosures, shall either be mechanically or electrically interlocked to prevent contact separation within the hazardous area or they shall be protected by one of the standard types of protection listed in IEC 79-0.

### 5.4 Measuring instruments and instrument transformers

5.4.1 Measuring instruments and instrument transformers shall be able to withstand continuously 1,2 times their rated current and/or their rated voltage, as appropriate, without exceeding the limiting temperatures according to 4.7.

5.4.2 Current transformers and the current-carrying parts of measuring instruments (excluding voltage circuits) shall be able to withstand thermal and dynamic stresses resulting from currents equal to at least the values stated in table 6 for the periods as indicated in 6.4 with no reduction in their level of security against explosions.

Table 6 - Resistance to the effect of short-circuit currents

Current	Current transformers and current-carrying parts of measuring instruments
$I_{th}$	$\geq 1,1 \times I_{so}$ (see 3.8 and note 2)
$I_{dyn}$	$\geq 1,25 \times 2,5 I_{so}$ (see notes 1 and 2)
NOTES	
1 $2,5 I_{so}$ is the maximum peak value of the short-circuit current.	
2 The factors 1,1 and 1,25 are safety factors. It follows that the r.m.s. value of the permissible short-circuit current in service may not exceed $I_{th}/1,1$ and its peak value may not exceed $I_{dyn}/1,25$ .	

5.4.3 The temperature attained during the passage of a current equal to the rated short-time thermal current  $I_{th}$  shall not exceed the limiting temperature specified in 4.7 and in no case shall it exceed 200 °C.