

TECHNICAL INFORMATION BULLETIN 2014-02

IK Rating for Enclosures

The European standard EN 62262 - the equivalent of international standard IEC 62262 (2002) - relates to IK ratings. This is an international numeric classification for the degrees of protection provided by enclosures for electrical equipment against external mechanical impacts. It provides a means of specifying the capacity of an enclosure to protect its contents from external impacts. The [IK Code](#) was originally defined in European Standard BS EN 50102 (1995, amended 1998). Following its adoption as an international standard in 2002, the European standard was renumbered EN 62262.

Before the advent of the IK code, a third numeral had been occasionally added to the closely related [IP Code](#) on ingress protection, to indicate the level of impact protection – e.g. IP66(9). Nonstandard use of this system was one of the factors leading to the development of this standard, which uses a separate two numeral code to distinguish it from the old differing systems. The standard came into effect in October 1995 and conflicting national standards had to be withdrawn by April 1997.

EN 62262 specifies the way enclosures should be mounted when tests are carried out, the atmospheric conditions that should prevail, the number of impacts (5) and their (even) distribution, and the size, style, material, dimensions etc. of the various types of hammer designed to produce the energy levels required.

The following table gives the meaning of the IK rating code, related to the impact energy that the test element (enclosure) must withstand:

IK code	IK00	IK01	IK02	IK03	IK04	IK05	IK06	IK07	IK08	IK09	IK10
Impact energy (joule)	*	0.14	0.2	0.35	0.5	0.7	1	2	5	10	20

Remember that a JOULE is the universal Unit for Energy (as such, for example, it cannot be converted to WATTS, which are units of Power). However, the power P in watts (W) is equal to the energy E in joules (J), divided by the time period t [the time during which the energy is applied] in seconds (s):

$$P_{(W)} = E_{(J)} / t_{(s)}$$

To get a feeling of how an IK10 impact test is made, watch this video on youtube:

<https://www.youtube.com/watch?v=Uln9pRpmD0Q>