

BIA-Report 6/97: Categories for Safety-related Control Systems in Accordance with EN 954-1

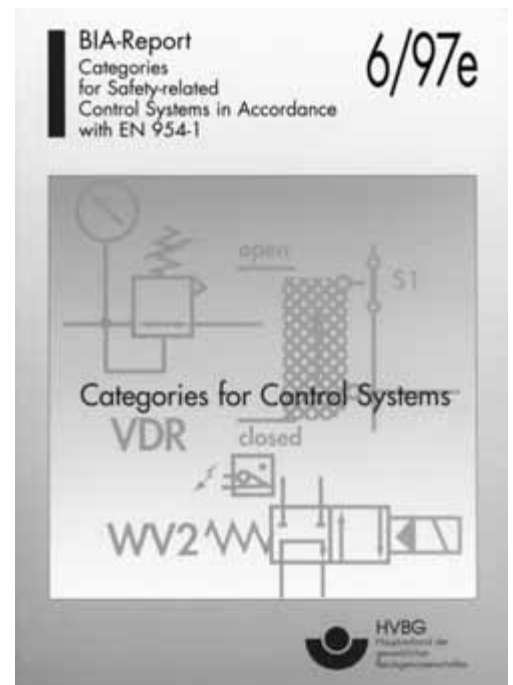
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This report describes the main elements of EN 954 „Safety of machinery – safety-related parts of control systems, Part 1: General design principles“ and deals with the application of this standard, drawing on numerous examples from electromechanics, fluid technology, electronics and computing.

Information is also provided on the link between EN 954 and the basic safety requirements laid down in the machinery directive, and possible means of risk assessment are also described. On the basis of this information, the report can be used as an aid in the selection of the category of safety-related parts for control-systems for machinery.

The requirements of each category are covered in detail and, where necessary, the relevant background information of these requirements for control systems in practice is also provided. Three comprehensive tables depict the fundamental safety principles, those safety principles that have become established and component parts that have proved to be safe. The tables are partly broken down into specific applications. The examples show how categories B to 4 can be implemented in practice, going as far as giving examples of component parts. Information is also provided on the safety principles used and on component parts that have a proven track record in terms of safety. Numerous bibliographical references are also given for readers who want to look into individual examples in more depth.

As well as detailed electric, hydraulic and pneumatic error lists, the two appendices also contain several examples for assessing the risk presented by machinery.



The report shows that the requirements stipulated in EN 954-1 can be implemented in practice and therefore makes an initial contribution to promoting the uniform application and interpretation of categories throughout Europe.

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