

**CATEGORIES OF SAFETY RELATED PARTS OF CONTROL SYSTEMS
AS PER AS4024.1 & EN954-1**

Category	Summary of Requirements	System Behaviour	Main Principle to Achieve Safety
B	Safety related parts of machine control systems or their protective equipment, as well as their components, shall be designed, constructed, selected, assembled and combined in accordance with relevant Standards so that they can withstand the expected influences.	When a fault occurs it can lead to the loss of the safety function.	By selection of components
1	Requirements of B shall apply. Use well-tried safety components and safety principles.	As described for category B, but with higher safety related reliability of the safety function.	
2	Requirements of B and the use of well-tried safety principles shall apply. Safety function(s) shall be checked at suitable intervals by the machine control system. NOTE: What is suitable depends on the application and type of machine.	The occurrence of a fault can lead to the loss of safety function between the checking intervals. The loss of safety function is detected by the check.	
3	Requirements of B and the use of well-tried safety principles shall apply. Control systems shall be designed, so that – (a) a single fault in the control does not lead to the loss of the safety function(s), and (b) whenever reasonably practicable the single fault is detected.	When single fault occurs the safety function is always performed. Some but not all faults will be detected. Accumulation of undetected faults can lead to the loss of the safety function.	By structure
4	Requirements of B and the use of well-tried safety principles shall apply. A control system shall be designed, so that – (a) a single fault in the control does not lead to a loss of safety function(s), and (b) the single fault is detected at or before the next demand upon the safety function. If this is not possible, then an accumulation of faults shall not lead to a loss of safety function.	When the faults occur the safety function is always performed. The faults will be detected in time to prevent the loss of the safety function.	By structure