

ISO/TR 24119:2015-11 (E)

Safety of machinery - Evaluation of fault masking serial connection of interlocking devices associated with guards with potential free contacts

| Contents | | Page |
|------------------------------|---|-------------|
| Foreword | | iv |
| 1 | Scope | 1 |
| 2 | Normative references | 1 |
| 3 | Terms and definitions | 1 |
| 4 | Fault masking | 5 |
| 4.1 | General | 5 |
| 4.2 | Direct fault masking | 6 |
| 4.3 | Unintended reset of the fault | 6 |
| 4.4 | Cable fault with unintended reset | 7 |
| 5 | Methodology for evaluation of DC for series connected interlocking devices | 8 |
| 6 | Limitation of DC by effects of series connected devices | 9 |
| 6.1 | General | 9 |
| 6.2 | Simplified method for the determination of the maximum achievable DC | 9 |
| 6.3 | Regular method for the determination of the maximum achievable DC | 9 |
| 6.3.1 | Estimation of the fault masking probability | 9 |
| 6.3.2 | Determination of the maximum achievable DC | 10 |
| 6.4 | Interlocking devices with potential free contacts and other potential free contacts of devices with different functionality connected in series | 12 |
| 7 | Avoiding fault masking | 13 |
| Annex A (informative) | Examples of the application of the evaluation methods described in 6.2 and 6.3 | 14 |
| Bibliography | | 20 |