

2023-09-11

**SÄHKÖTEKNINEN SANASTO – OSA 428: KONETURVALLISUUS**

Lähetämme kommentoitavaksenne oheisen standardiehdotuksen, jonka suomenkieliset vastintermit on laatinut SK 44 Koneiden sähköturvallisuus

Tämä ehdotus perustuu kansainväliseen standardiin IEC 60050-428 *International electrotechnical vocabulary –Part 428 - Safety of machinery* (2023 ED 1).

Standardiehdotusta koskevat kirjalliset huomautukset pyydämme lähettämään toimistoomme

**viimeistään 11. marraskuuta 2023**

Toivomme, että käytätte lausunnoissanne lomakepohjaa, joka löytyy SESKOn verkkosivuilta (<https://sesko.fi/sanastolausunto>).

Lisätietoja ehdotuksesta voi tiedustella toimistossamme

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Terveisin

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## SÄHKÖTEKNINEN SANASTO –

### Osa 428: Koneturvallisuus

#### 1 Soveltamisala

Tämä IEC 60050 -standardin osa sisältää yleisen terminologian, jota käytetään koneiden turvallisuuden soveltamisen alalla, sekä yleiset termit, jotka liittyvät tiettyihin sovelluksiin ja niihin liittyviin teknologioihin. Se on horisontaalinen julkaisu ohjeen IEC Guide 108 *Guidelines for ensuring the coherence of IEC publications – Horizontal functions, horizontal publications and their application* mukaisesti.

Tämä osa on yhdenmukainen IEC:n muissa osissa kehitetyn terminologian kanssa.

Tämä horisontaalinen julkaisu on ensisijaisesti tarkoitettu teknisten komiteoiden käyttöön IEC-julkaisujen valmistelussa oppaan IEC Guide 108 mukaisesti.

Yksi teknisen komitean tehtävistä on tarvittaessa käyttää horisontaalisia julkaisuja dokumenttinsa valmistelussa.

#### 2 Velvoittavat viittaukset

Tässä dokumentissa ei ole velvoittavia viittauksia.

#### 3 Termit ja määritelmät

**Luku 482-01 - Yleistä****428-01-01**

<koneen sähkölaitteiston> **ympäristön lämpötila**

**ambient temperature**, <of electrical equipment of machinery>

temperature of the air or other medium within the proximity of electrical equipment (IEV 428-02-07)

SOURCE: IEC 826-10-03, modified – In the definition, "electrical installation" has been replaced with "electrical equipment"

fr **température ambiante**

**428-01-02**

<koneen sähkölaitteiston> **ohjauspiiri**

**control circuit**, <of electrical equipment of machinery>

circuit used for the control, including monitoring, of a machine and electrical equipment (IEV 428-02-07)

SOURCE: IEC 60204-1:2016, 3.1.10

fr **circuit de commande**

**428-01-03**

**ohjauspaneeli**  
**käyttöpaneeli**

**control station**  
**operator control station**

assembly of one or more control actuators (IEV 428-02-01) fixed on the same panel or located in the same enclosure (IEV 428-01-14)

Note 1 to entry: A control station (IEV 428-01-03) can also contain related equipment, for example: potentiometers, signal lamps, instruments, display devices.

SOURCE: IEC 441-12-08 modified – control switches replaced by control actuator, Note amended with more examples

fr **poste de commande, m; poste de commande opérateur, m**

**428-01-04**

**sähkölaitteiden käyttöpaikka**

**electrical operating area**

room or location for electrical equipment (IEV 428-02-07) to which access is intended to be restricted to skilled persons (IEV 195-04-01) or instructed persons (IEV 195-04-02), by the opening of a door or the removal of a barrier without the use of a key or tool, and which is clearly marked by appropriate warning signs

SOURCE: IEC 60204-1:2016, 3.1.19

fr **zone de service électrique, f**

**428-01-05**  
**suljettu sähkötila****enclosed electrical operating area**  
**closed electrical operating area**

room or location for electrical equipment (IEV 428-02-07) to which access is intended to be restricted to skilled persons (IEV 195-04-01) or instructed persons (IEV 195-04-02) by the use of a key or tool to open a door, or to remove a barrier, and which is clearly marked by appropriate warning signs

SOURCE: IEC 60204-1:2016, 3.1.23

fr **zone fermée de service électrique**, f

**428-01-06**  
**kone**  
**koneet****machinery**

assembly, fitted with or intended to be fitted with a drive system consisting of linked parts or components, at least one of which moves, and which are joined together for a specific application

Note 1 to entry: The term "machinery" also covers a machine or an assembly of machines which, in order to achieve the same end, are arranged and controlled so that they function as an integral whole.

fr **machine**, f

**428-01-07**  
**koneen ohjausjärjestelmä****machine control system**

system that responds to input signals (IEV 351-41-17) from the machine, a process and/or from an operator and generates output signals causing the machine to operate in the desired manner

Note 1 to entry: The machine control system includes input and output devices, including sensors and actuators (IEV 428-02-01).

Note 2 to entry: The signals can also be data.

SOURCE: IEC 61508-4:2010, 3.3.3, modified – The term defined has been changed from "EUC control system"; in the definition, "from the process" has been changed to "from the machine"; Note 1 to entry has been amended and Note 2 to entry has been added

fr **système de commande de machine**, m

**428-01-08**

<koneen sähkölaitteiston> merkintä

**marking, <of electrical equipment of machinery>**

signs or inscriptions primarily for the purpose of identifying equipment, components and devices

SOURCE: IEC 60204-1:2016, 3.1.41

fr **marquage**, <d'un équipement électrique de machine> m

**428-01-09**

<koneen sähkölaitteiston> päävirtapiiri

**power circuit, <of electrical equipment of machinery>**

circuit that supplies power to units of equipment used for productive operation and to transformers supplying control circuits (IEV 428-01-02)

SOURCE: IEC 60204-1:2016, 3.1.47

fr **circuit de puissance**, <d'un équipement électrique de machine> m

**428-01-10**

suojaavan potentiaalintasauksen piiri

**protective bonding circuit**

electric circuit (IEV 151-12-01) consisting of protective conductors (IEV 195-02-09) and conductive parts connected together to provide protection against electric shock in the event of an insulation failure

SOURCE: IEC 60204-1:2016, 3.1.50, modified – "electric circuit (IEV 151-12-01) consisting of" has been added to the definition

fr **circuit de protection**, m

**428-01-11**

huoltotaso

**servicing level**

plane at which persons operate or maintain the electrical equipment (IEV 428-02-07)

EXAMPLE Floor level, platform level.

SOURCE: IEC 60204-1:2016, 3.1.58, modified – In the definition, "level on" has been replaced by "plane at" and "stand when operating or maintaining" has been replaced by "operate or maintain"

fr **plancher de service**, m

**428-01-12****<koneen sähkölaiteiston> toimittaja****supplier**, <of electrical equipment of machinery>

entity who provides equipment or services associated with the machine

EXAMPLE Manufacturer, contractor, installer, integrator.

SOURCE: IEC 60204-1:2016, 3.1.62, modified – The note to entry has been deleted, and the specific use has been added.

fr **fournisseur**, <d'un équipement électrique de machine> m**428-01-13****<koneen sähkölaiteiston> käyttäjä****user**, <of electrical equipment of machinery>

entity who uses the machine and its associated electrical equipment (IEV 428-02-07)

SOURCE: IEC 60204-1:2016, 3.1.65

fr **utilisateur**, m <d'un équipement électrique de machine>**428-01-14****kotelo****enclosure**

See IEV 151-13-08

fr **enveloppe**, f

**Luku 482-02 – Sähkölaite****428-02-01**

&lt;koneen sähkölaiteiston&gt; ohjain

**actuator**, <of electrical equipment of machinery>

part of a device (IEV 151-11-20) to which an external action is to be applied

Note 1 to entry: The actuator can take the form of a handle, knob, push-button, roller, plunger, etc.

Note 2 to entry: There are some actuating means that do not require an external actuating force, but only an action, e.g. touchscreens.

SOURCE: IEC 60204-1:2016, 3.1.1, modified – Note 3 to entry has been deleted and the specific use has been added.

fr **organe de commande**, <d'un équipement électrique de machine> m**428-02-02**

&lt;koneen sähkölaiteiston&gt; avattava johtokanavajärjestelmä

**cable trunking system**, <of electrical equipment of machinery>

system of closed enclosures (IEV 428-01-14) comprising a base with a removable cover, intended for the complete surrounding of insulated conductors or cables

SOURCE: IEV 442-02-34, modified – The text "insulated conductors, cables, cords and/or for the accommodation of other electrical accessories" has been replaced by "insulated conductors or cables", and the specific use has been added.

fr **système de goulottes**, <d'un équipement électrique de machine> m**428-02-03**johdin  
johdinkisko**conductor wire**  
conductor bar

conductive wire or conductive bar of a feeder system with a sliding current collector

SOURCE: IEC 60204-1:2016, 3.1.8

fr **fil conducteur**, m**428-02-04**

&lt;ohjauspiirin&gt; ohjauslaite

**control device**, <of a control circuit>

device (IEV 151-11-20) connected into the control circuit (IEV 428-01-02) and used for controlling the operation of the machine

EXAMPLE Position sensor, manual control switch, relay, contactor, magnetically operated valve.

SOURCE: IEC 60204-1:2016, 3.1.11, modified – The specific use has been added.

fr **dispositif de commande**, <d'un circuit de commande> m

**428-02-05****<koskettimen> pakkotoiminen avautuminen****direct opening action**, <of a contact element>

achievement of contact separation as the direct result of a specified movement of the switch actuator (IEV 428-02-01) through non-resilient members

Note 1 to entry: The direct opening action is not dependent upon springs; a spring is typically resilient and therefore not suitable in contact elements for direct opening action.

SOURCE: IEC 60947-5-1:2016, K.2.2, modified – Note 1 to entry has been added and the text "(for example not dependent upon springs)" has been transferred to it from the definition.

fr **manœuvre positive d'ouverture**, <d'un élément de contact> f

**428-02-06****kaapelikanava**  
**johdinsuojakanava****duct**

enclosed channel designed expressly for holding and protecting electrical conductors, cables, and busbars

Note 1 to entry: Conduits (as defined in IEC 60204-1, 3.1.9), cable trunking systems (IEV 428-02-02) (as defined in IEC 60204-1, 3.1.6) and underfloor channels are types of duct.

SOURCE: IEC 60204-1:2016, 3.1.17

fr **canalisation**, f

**428-02-07****sähkölaite**  
**sähkölaitteisto****electrical equipment**

items used in connection with the use of electricity by machines or parts of machines

EXAMPLE Material, fittings, devices, components, appliances, fixtures, apparatus, and similar.

SOURCE: IEC 60204-1:2016, 3.1.25

fr **équipement électrique**, m

**428-02-08****elektroniikkalaite****electronic equipment**

part of the electrical equipment (IEV 428-02-07) containing circuitry dependent for its operation on electronic devices (IEV 531-11-01) and electronic components (IEV 904-01-09)

SOURCE: IEC 60204-1:2016, 3.1.20

fr **équipement électronique**, m



**428-02-09****häätäpysäytyslaite****emergency stop device**

manually actuated control device (IEV 428-02-04) used to initiate an emergency stop function

SOURCE: ISO 13850:2006, 3.2

fr **dispositif d'arrêt d'urgence**, m

**428-02-10****häätäpoiskytkentälaitte****emergency switching-off device**

manually actuated control device (IEV 428-02-04) used to switch off or to initiate the switching off of the supply of electrical energy to all or a part of an installation where a risk of electric shock (IEV 195-01-04) or another risk of electrical origin is involved

SOURCE: IEC 60204-1:2016, 3.1.22, modified – The Note to entry has been omitted.

fr **dispositif de coupure d'urgence**, m

**428-02-11****induktiivinen tehonsyöttöjärjestelmä****inductive power supply system**

system of inductive power transfer, consisting of a track converter and a track conductor, along which one or more pick-up(s) and associated pick-up converter(s) can move, without any galvanic or mechanical contact, in order to transfer electrical power, for example to a mobile machine

Note 1 to entry: The track conductor and the pick-up are analogous to the primary winding (IEV 421-03-06) and secondary winding (IEV 421-03-07) of a transformer, respectively.

SOURCE: IEC 60204-1:2016, 3.1.35

fr **système d'alimentation par induction**, m

**428-02-12****koneen toimilaite****machine actuator**

power mechanism of the machine used to effect motion

EXAMPLE Motor, solenoid, pneumatic or hydraulic cylinder.

SOURCE: IEC 60204-1:2016, 3.1.39

fr **actionneur**, m

**428-02-13****<koneen sähkölaitteiston> pistokytkin****plug/socket combination**, <of electrical equipment of machinery>

component and a suitable mating component, appropriate to terminate conductors, intended for connection or disconnection of two or more conductors

EXAMPLE 1 Connectors that fulfil the requirements of IEC 61984.

EXAMPLE 2 A plug and socket-outlet, a cable coupler, or an appliance coupler in accordance with IEC 60309-1.

EXAMPLE 3 A plug and socket-outlet in accordance with IEC 60884-1 or an appliance coupler in accordance with IEC 60320-1.

SOURCE: IEC 60204-1:2016, 3.1.46

fr **ensemble fiche/prise**, <d'un équipement électrique de machine> m**428-02-14****jännitteelle altis osa****exposed conductive part**

See IEV 195-06-10

Note 1 to entry: In the context of this IEV part, the equipment is "electrical equipment" (IEV 428-02-07).

fr **partie conductrice accessible**, f**428-02-15****muu johtava osa****extraneous conductive part**

See IEV 195-06-11

Note 1 to entry: In the context of this IEV part, the electrical installation is "electrical equipment" (IEV 428-02-07).

fr **élément conducteur étranger**, m

## Luku 428-03 – Sähköturvallisuus

### 428-03-01

<piirin> **ylikuormitus**

**overload**, <of a circuit>

time/current relationship that is in excess of the rated full load of the circuit when the circuit is not under a fault condition

Note 1 to entry: The term "overload" should not be used as a synonym for "overcurrent" (IEV 151-15-28).

SOURCE: IEC 60204-1:2016, 3.1.45, modified – The specific use has been added.

fr **surcharge**, <d'un circuit> f

### 428-03-02

$I_{cp}$

<tehosyötön> **prospektiivinen oikosulkuvirta**

**prospective short-circuit current**, <of an incoming supply>

RMS value of the current that would flow when the supply conductors to the electrical equipment (IEV 428-02-07) are short-circuited by a conductor of negligible impedance located as near as practicable to the supply terminals of the electrical equipment

SOURCE: IEC 60204-1:2016, 3.1.48

fr **courant de court-circuit présumé**, <d'une source d'alimentation> m

### 428-03-03

**suojaava potentiaalintasaus**

**protective bonding**

equipotential bonding (IEV 195-01-10) for protection against electric shock (IEV 195-01-04)

Note 1 to entry: Measures for protection against electric shock can also reduce the risk of burns or fire.

Note 2 to entry: Protective bonding can be achieved with protective conductors and protective bonding conductors and by conductive joining of conductive parts of the machine and its electrical equipment (IEV 428-02-07).

SOURCE: IEC 60204-1:2016, 3.1.49

fr **liaison de protection**, f

### 428-03-04

**oikosulun kestävyys**

**short-circuit current rating**

value of the prospective short-circuit current (IEV 428-03-02) that the electrical equipment (IEV 428-02-07) can withstand for the total operating time (clearing time) of the short-circuit protective device (SCPD), under specified conditions

SOURCE: IEC 60204-1:2016, 3.1.60

fr **courant de court-circuit assigné**, m

## Luku 428-04 – Toiminnallinen turvallisuus

### 428-04-01

**turvallisuuteen liittyvä ohjausjärjestelmä**  
**SCS**

**safety-related control system**  
**SCS**

part of the control system of a machine which implements a safety function (IEV 428-04-39) by one or more subsystems (IEV 428-04-40)

SOURCE: IEC 62061:2021, 3.2.3, modified – Note 1 to entry has been omitted

fr  **système de commande relatif à la sécurité**, m; **SCS**

### 428-04-02

**<toiminnallisen turvallisuuden> turvallisuuden eheyden taso**  
**SIL**

**safety integrity level**, <of functional safety>  
**SIL**, <of functional safety>

discrete level (three possible) for describing the capability to perform a safety function (IEV 428-04-39), where safety integrity level three has the highest level of safety integrity and safety integrity level one has the lowest

SOURCE: IEC 62061:2021, 3.2.24

fr  **niveau d'intégrité de sécurité**, <de la sécurité fonctionnelle> m; **SIL**, <de la sécurité fonctionnelle>

### 428-04-03

**<alijärjestelmän> rakenteelliset rajoitukset**

**architectural constraints**, <of a subsystem>

set of architectural requirements that limit the SIL (IEV 428-04-02) that can be claimed for a subsystem (IEV 428-04-40)

SOURCE: IEC 62061:2021, 3.2.46

fr  **contraintes architecturales**, <d'un sous-système> f pl

### 428-04-04

**<koneen/koneiston> valvottu pysäyttäminen**

**controlled stop**, <of machinery>

stopping of the motion of a machine with power to the machine actuators (IEV 428-02-12) maintained during the stopping process

SOURCE: IEC 60204-1:2016, 3.1.14

fr  **arrêt contrôlé**, <d'une machine> m

**428-04-05****<toiminnallisen turvallisuuden> vaade****demand**, <of a safety function>

event that causes the SCS (IEV 428-04-01) to perform a safety function (IEV 428-04-39)

Note 1 to entry: The demand mode of operation means that a safety function (IEV 428-04-39) is only performed on request (demand) in order to transfer the machine into a specified state. The SCS does not influence the machine until there is a demand on the safety function.

Note 2 to entry: The demand rate (DR), or the frequency of demands, is one of the main factors that is considered for assessing the demand mode of operation, low or high. For this purpose, the demand rate (DR) can be identified based on the rate of events where harm would occur without intervention of the safety function. This rate can be lower than the actual rate that triggers the safety function during operation.

Note 3 to entry: For an emergency stop function, the demand mode of operation is not defined. To determine the achieved SIL (IEV 428-04-02), the principle of evaluating the selected demand mode of operation of the other functions is usually applicable.

SOURCE: IEC 62061:2021, 3.2.25

fr **sollicitation**, <d'une fonction de sécurité> f**428-04-06****lukitus****interlock**

arrangement of devices operating together

- to prevent hazardous situations, or
- to prevent damage to equipment or material, or
- to prevent specified operations, or
- to ensure correct operations

SOURCE: IEC 60204-1:2016, 3.1.37

fr **verrouillage**, m**428-04-07****suojaustekninen laite****safeguard**

guard or protective device provided as a means to protect persons from a hazard

SOURCE: IEC 60204-1:2016, 3.1.55

fr **moyen de protection**, m

**428-04-08**  
**suojaustekninen toimenpide****safeguarding**

protective measure using safeguards (IEV 428-04-07) against hazards that cannot reasonably be eliminated, or risks that cannot be sufficiently reduced, by inherently safe design measures

SOURCE: ISO 12100:2010, 3.21, modified – "to protect persons from a hazard" replaced by "against hazards"; "from the risks" replaced by "risks"

fr **protection, f; mesure de protection, f**

**428-04-09**  
**<koneen> valvottoman pysähtyminen****uncontrolled stop, <of machinery>**

stopping of the motion of a machine by removing electrical power to the machine actuators (IEV 428-02-12)

Note 1 to entry: This definition does not imply that the other stopping devices (for example mechanical or hydraulic brakes) need be in any particular state.

SOURCE: IEC 60204-1:2016, 3.1.64

fr **arrêt non contrôlé, m**

**428-04-10**  
**vaarallisten vikaantumisten osuus**  
**RDF****ratio of dangerous failure**  
**RDF**

fraction of the overall failure rate (IEV 428-04-34) of an element that can result in a dangerous failure (IEV 428-04-32)

SOURCE: IEC 62061:2021, 3.2.55

fr **rapport de défaillance dangereuse, m; RDF**

**428-04-11**  
**turvallisten vikaantumisten osuus**  
**SFF****safe failure fraction**  
**SFF**

fraction of the overall failure rate (IEV 428-04-34) of a subsystem (IEV 428-04-40) that does not result in a dangerous failure (IEV 428-04-32)

Note 1 to entry: The diagnostic coverage (IEV 428-04-23) (if any) of each subsystem in SCS (IEV 428-04-01) is taken into account in the calculation of the probability of random hardware failures (IEV 428-04-35). The safe failure fraction is taken into account when determining the architectural constraints (IEV 428-04-03) on hardware safety integrity (IEV 428-04-28).

Note 2 to entry: "No effect failures" and "no part failures" (as defined in IEC 61508-4) are not used for SFF calculations.

SOURCE: IEC 62061:2021, 3.2.54

fr **proportion de défaillances en sécurité**, f; **SF**

#### 428-04-12

<turvallisuuteen liittyvän ohjausjärjestelmän> **sovellusohjelmisto**

**application software**, <of an SCS>

software specific to the application, which is implemented by the designer of the SCS (IEV 428-04-01), generally containing logic sequences, limits and expressions that control the appropriate input, output, calculations, and decisions necessary to meet the SCS's functional requirements

SOURCE: IEC 62061:2021, 3.2.59, modified – The specific use has been added.

fr **logiciel d'application**, m <d'un SCS>

#### 428-04-14

**yhteisvikaantuminen**  
**CCF**

**common cause failure**  
**CCF**

failure that is the result of one or more events, causing concurrent failures of two or more separate channels in a multiple channel subsystem (IEV 428-04-40), leading to failure of a safety function (IEV 428-04-39)

Note 1 to entry: Common cause failures are not mutually caused.

SOURCE: IEC 62061:2021, 3.2.56, modified – Note 1 to entry has been added

fr **défaillance de cause commune**, f; **CCF**

#### 428-04-15

**peruskokoonpano**

**baseline**  
**baseline configuration**

well-defined set of elements (hardware, software, documentation, tests, etc.) of an SCS (IEV 428-04-01) at a specific point in time.

Note 1 to entry: A baseline serves as a basis for verification, validation, modification and changes.

Note 2 to entry: If an element is changed, the status of the baseline is intermediate until a new baseline is defined.

SOURCE: IEC 62061:2021, 3.2.67

fr **référentiel**, m; **référentiel de configuration**, m

#### 428-04-16

**etukäteen suunniteltu turvallisuuteen liittyvä ohjausjärjestelmä (SCS) tai alajärjestelmä**

**pre-designed SCS or subsystem**

SCS (IEV 428-04-01) or subsystem (IEV 428-04-40) that meets the relevant requirements of a functional safety (IEV 428-04-30) standard

SOURCE: IEC 62061:2021, 3.2.5

fr **SCS ou sous-système préconçu**, m

#### 428-04-17

#### tiheiden vaateiden toimintatapa

#### high-demand mode of operation

mode of operation in which the frequency of demands (IEV 428-04-05) of a safety function (IEV 428-04-39) is greater than one per year

Note 1 to entry: Continuous mode (IEV 428-04-18) means that a safety function (IEV 428-04-39) is performed continuously, i.e. the SCS (IEV 428-04-01) is continuously controlling the machine and a (dangerous) failure of its function can result in a hazard.

Note 2 to entry: The distinction between high demand mode of operation and continuous mode of operation is relevant for the qualification of diagnostic measures. It is not relevant for target failure measurement and SIL (IEV 428-04-02) assignment.

SOURCE: IEC 62061:2021, 3.2.27, modified – The term has been changed from "high demand mode" to "high demand mode of operation"

fr **mode de fonctionnement à sollicitation élevée**, m

#### 428-04-18

#### jatkuva toimintatapa

#### continuous mode of operation

mode of operation where the safety function (IEV 428-04-39) retains the machine in a safe state as a part of normal operation

Note 1 to entry: A safety function is performed continuously, i.e. the SCS (IEV 428-04-01) is continuously controlling the machine and a (dangerous) failure of its function can result in a hazard.

Note 2 to entry: The distinction between high-demand mode of operation (IEV 428-04-17) and continuous mode of operation is relevant for the qualification of diagnostic measures. It is not relevant for target failure measurement and SIL (IEV 428-04-02) assignment.

SOURCE: IEC 61508-4:2010, 3.5.16, modified – Definition of "mode of operation" revised to retain only that part concerning "continuous mode of operation"; notes to entry added

fr **mode de fonctionnement continu**, m

#### 428-04-19

#### harvojen vaateiden toimintatapa

#### low demand mode of operation

mode of operation in which the frequency of demands (IEV 428-04-05) of a safety function (IEV 428-04-39) is no greater than one per year

SOURCE: IEC 61508-4:2010, 3.5.16, modified – Definition of "mode of operation" revised to retain only that part concerning "low demand mode of operation"

fr **mode de fonctionnement à faible sollicitation**, m



**428-04-20****hyvin koetellut turvallisuusperiaatteet****well-trying safety principles, pl**

principles that have proved effective in the design or integration of safety-related control systems (IEV 428-04-01) in the past, to avoid or control critical faults or failures that can influence the performance of a safety function (IEV 428-04-39)

Note 1 to entry: Newly developed safety principles can be considered as equivalent to "well-trying" if they are verified using principles that demonstrate their suitability and reliability for safety-related applications.

Note 2 to entry: Well-trying safety principles are effective not only against random hardware failures (IEV 428-04-35), but also against systematic failures (IEV 428-04-36), which can creep into the product during the product's life cycle, e.g. faults arising during product design, integration, modification or deterioration.

Note 3 to entry: Table A.2, Table B.2, Table C.2 and Table D.2 in the informative annexes of ISO 13849-2:2012 address well-trying safety principles for different technologies.

SOURCE: IEC 62061:2021, 3.2.44

fr **principes de sécurité éprouvés, m pl**

**428-04-21****hyvin koeteltu komponentti****well-trying component**

component for a safety-related application which has been either

- a) widely used in the past with successful results in similar safety-related applications, or
- b) made and verified using principles that demonstrate its suitability and reliability for safety-related applications

Note 1 to entry: ISO 13849-2:2012 lists a variety of components and the conditions for specific technologies under which the component can be considered well-trying.

Note 2 to entry: Newly developed components can be considered as equivalent to well-trying components if they fulfil the conditions of b).

Note 3 to entry: The decision to accept a particular component as being a well-trying component depends on the application (e.g. the effect of environmental influences) and can be impacted by product or manufacturer changes.

Note 4 to entry: Complex electronic components (e.g. PLC, microprocessor, application-specific integrated circuit) cannot be considered as equivalent to "well-trying components".

Note 5 to entry: A well-trying component is not a proven-in-use component; as defined in IEC 61508-4:2010, 3.8.18.

SOURCE: IEC 62061:2021, 3.2.43

fr **composant éprouvé, m**

**428-04-22**<toiminnallisen turvallisuuden> **ohitus****bypass**, <of functional safety>

action or facility to prevent all or parts of the SCS (IEV 428-04-01) functionality from being executed

Note 1 to entry: Examples of bypassing include:

- the input signal is blocked from the trip logic while still presenting the input parameters and alarm to the operator;
- the output signal from the trip logic to a final element is held in the normal state preventing final element operation;
- a physical bypass line is provided around the final element;
- preselected input state (e.g., on/off input) or set is forced by means of an engineering tool (e.g., in the application program).

Note 2 to entry: Other terms are also used to refer to bypassing, such as override, defeat, disable, force, inhibit or muting.

SOURCE: IEC 62061:2021, 3.2.17, modified – The specific use has been added.

fr **dérivation**, <de la sécurité fonctionnelle> f**428-04-23**<vaarallisen vikaantumisen> **diagnoosiin kattavuus**  
**DC****diagnostic coverage**, <of dangerous failures>**DC**, <of dangerous failures>

fraction of dangerous failures (IEV 428-04-32) detected by automatic on-line diagnostic tests

Note 1 to entry: The fraction of dangerous failures is computed by using the rates of dangerous failure (IEV 428-04-34) associated with the detected dangerous failures divided by the total rate of dangerous failures.

Note 2 to entry: The dangerous failure diagnostic coverage is computed using the following formula, where  $\lambda_{DD}$  is the detected dangerous failure rate and  $\lambda_{Dtotal}$  is the total dangerous failure rate:

$$\frac{\sum \lambda_{DD}}{\sum \lambda_{Dtotal}}$$

Note 3 to entry: This definition is applicable provided that the individual components have constant failure rates.

SOURCE: IEC 62061:2021, 3.2.49, modified – "where DC is the diagnostic coverage" has been deleted from Note 2 to entry.

fr **couverture du diagnostic**, <de défaillances dangereuses> f; **DC**, <de défaillances dangereuses> f

**428-04-24**

<turvallisuuteen liittyvän ohjausjärjestelmän> **diagnostiikkatoiminto**

**diagnostic function**, <of the safety-related control system>

function intended to detect faults in the SCS (IEV 428-04-01) and initiate a specified fault reaction function (IEV 428-04-26) when a fault is detected

Note 1 to entry: The diagnostic function is intended to detect faults that could lead to a dangerous failure (IEV 428-04-32) of a safety function (IEV 428-04-39) and initiate a specified fault reaction function (IEV 428-06-10).

SOURCE: IEC 62061:2021, 3.2.19, modified – The specific use has been added, and "(SCS)" has been deleted from the term.

fr **fonction diagnostic**, <du système de commande relatif à la sécurité> f

**428-04-25**

**diagnostiikan testausväli**

**diagnostic test interval**

interval between on-line tests to detect faults in a subsystem (IEV 428-04-40) that has a specified diagnostic coverage (IEV 428-04-23)

SOURCE: IEC 62061:2021, 3.2.50

fr **intervalle entre essais de diagnostic**, m

**428-04-26**

<turvallisuuteen liittyvän ohjausjärjestelmän> **vikareaktiotoiminto**

**fault reaction function**, <of the safety-related control system>

function that is initiated when a fault within an SCS (IEV 428-04-01) is detected by the SCS's diagnostic function (IEV 428-04-24)

SOURCE: IEC 62061:2021, 3.2.20, modified – The specific use has been added, and "(SCS)" has been deleted from the term.

fr **fonction réaction à l'anomalie**, <du système de commande relatif à la sécurité> f

**428-04-27**

<turvallisuuteen liittyvän ohjausjärjestelmän alajärjestelmän> **vikasietoisuus**

**fault tolerance**, <of an SCS, a subsystem>

ability of an SCS (IEV 428-04-01), a subsystem (IEV 428-04-40), or subsystem element to continue to perform a required function in the presence of faults or failures

SOURCE: IEC 62061:2021, 3.2.34, modified – The specific use has been added.

fr **tolérance aux anomalies**, <d'un SCS ou d'un sous-système> f

**428-04-28****laitteiston turvallisuuden eheys****hardware safety integrity**

part of the safety integrity of an SCS (IEV 428-04-01) or its subsystems (IEV 428-04-40) relating to random hardware failures (IEV 428-04-35) in a dangerous mode of failure

Note 1 to entry: Hardware safety integrity relates to failures in a dangerous mode, i.e. those failures of a safety-related system that would impair its safety integrity.

Note 2 to entry: Hardware safety integrity includes architectural constraints (IEV 428-04-03).

SOURCE: IEC 62061:2021, 3.2.22

fr **intégrité de sécurité du matériel**, f

**428-04-29****laitteiston vikasietoisuus****HFT****hardware fault tolerance****HFT**

property of a subsystem (IEV 428-04-40) to potentially lose the safety function (IEV 428-04-39) upon at least  $N+1$  faults

Note 1 to entry: A hardware fault tolerance (IEV 428-04-29) of  $N$  means that  $N+1$  faults of a subsystem could cause a loss of the safety function.

SOURCE: IEC 62061:2021, 3.2.35

fr **tolérance aux anomalies du matériel**, f; **HFT**

**428-04-30****<koneen> toiminnallinen turvallisuus****functional safety**, <of machinery>

part of the overall safety of the machine and the machine control system (IEV 428-01-07) that depends on the correct functioning of the SCS (IEV 428-04-01) and other risk reduction measures

SOURCE: IEC 62061:2021, 3.2.10, modified – The specific use has been added.

fr **sécurité fonctionnelle**, <des machines> f

**428-04-31****käyttökelpoinen elinikä****useful lifetime**

minimum elapsed time between the installation of the SCS (IEV 428-04-01) or subsystem (IEV 428-04-40) or subsystem element and the point in time when component failure rates (IEV 428-04-34) of the SCS or subsystem or subsystem element can no longer be predicted with any accuracy

Note 1 to entry: Typically it will be 20 years or less unless the manufacturers of the SCS and its subsystems (IEV 428-04-40) can justify a longer lifetime by providing evidence, based on calculations, showing that reliability data is valid for the longer lifetime.

SOURCE: IEC 61131-6:2012, 3.57, modified – Terminology adapted to machine, Note 1 to entry added, example deleted

fr **durée de fonctionnement utile**, f

#### 428-04-32

#### vaarallinen vikaantuminen

#### dangerous failure

failure of an SCS (IEV 428-04-01), a subsystem (IEV 428-04-40), or a subsystem element that plays a part in implementing the safety function (IEV 428-04-39) that:

- a) prevents a safety function (IEV 428-04-39) from operating when required (demand (IEV 428-04-05) mode) or causes a safety function to fail (continuous mode of operation (IEV 428-04-18)) such that the machine is put into a hazardous or potentially hazardous state; or
- b) decreases the probability that the safety function (IEV 428-04-39) operates correctly when required

SOURCE: IEC 62061:2021, 3.2.52

fr **défaillance dangereuse**, f

#### 428-04-33

#### vaarallisen vikaantumisen keskimääräinen taajuus tunnissa PFH

#### average frequency of a dangerous failure per hour PFH

average of the unconditional failure intensity, also called "failure frequency", of an SCS (IEV 428-04-01) or a subsystem (IEV 428-04-40)

Note 1 to entry: This entry is based on IEC 61508-4:2010, 3.6.19.

fr **fréquence moyenne de défaillance dangereuse par heure**, f; PFH

#### 428-04-34

$\lambda(t)$

#### vikataajuus

#### failure rate

See IEC 192-05-06

Note 1 to entry: A subsystem (IEV 428-04-40) element is characterized by a failure rate in the context of PFH (IEV 428-04-33) value evaluation.

fr **fr taux de défaillance**, m

#### 428-04-35

#### laitteiston satunnaisvika

#### random hardware failure

failure, occurring at a random time, which results from one or more of the possible degradation mechanisms in the hardware

Note 1 to entry: A subsystem (IEV 428-04-40) element is characterized by random hardware failure in the context of PFH (IEV 428-04-33) value evaluation.

SOURCE: IEC 61508-4:2010, 3.6.5, modified – The notes have been omitted and a new note to entry has been added

fr **défaillance aléatoire du matériel**, f

#### 428-04-36

#### systemaattinen vikaantuminen

#### systematic failure

See IEV 395-07-133

Note 1 to entry: Corrective maintenance without design modification will usually not eliminate the failure cause.

Note 2 to entry: A systematic failure can be induced by simulating the failure cause.

Note 3 to entry: Examples of causes of systematic failures include human error in

- the safety requirements specification;
- the design, manufacture, installation and/or operation of the hardware;
- the design and/or implementation of the software.

SOURCE: IEC 62061:2021, 3.2.58

fr **défaillance systématique**, f

#### 428-04-37

#### $B_{10}$

keskimääräinen testisyklien määrä jolloin 10 % komponenteista on voittunut

mean number of cycles until 10 % of the components fail

Note 1 to entry:  $B_{10D}$  corresponds to the mean number of cycles until 10 % of the components undergo dangerous failure (IEV 428-04-32), expressed by the following equation:

$$B_{10D} = \frac{B_{10}}{RDF}$$

fr nombre de cycles moyen jusqu'à ce que 10 % des composants subissent des défaillances

**428-04-39**<koneen> **turvatoiminto****safety function**, <of machinery>

function with a specified safety integrity level (IEV 428-04-02) that is intended to maintain the safe condition of the machine or to prevent an immediate increase in the risk(s) in respect of a specific hazardous event

Note 1 to entry: This definition only addresses risk reduction performed by safety-related control systems.

Note 2 to entry: A safety function typically starts with a detection and evaluation of an initiation event and ends with an output causing a reaction of a machine actuator.

Note 3 to entry: Parts of the machine-operating function(s), e.g. the reaction of a machine actuator, can also be part of the safety function(s).

SOURCE: IEC 62061:2021, 3.2.18, modified – The specific use has been added.

fr **fonction de sécurité**, <d'une machine> *f*

**428-04-40**<turvallisuuteen liittyvän ohjauksjärjestelmän> **alajärjestelmä****subsystem**, <of the safety-related control system>

entity of the top-level architectural design of a safety-related control system (IEV 428-04-01) where a dangerous failure (IEV 428-04-32) of the subsystem results in dangerous failure of a safety function (IEV 428-04-39)

SOURCE: IEC 62061:2021, 3.2.4, modified – The notes to entry have been omitted and the specific use has been added.

fr **sous-système**, <du système de commande relatif à la sécurité> *m*

## Luku 428-05 – Sähköherkkä suojausväline

### 428-05-01

<sähköherkän suojausvälineen> **havaitsemiskyky**

**detection capability**, <of the electro-sensitive protective equipment>

sensing function parameter limit that will cause actuation of the electro-sensitive protective equipment (IEV 428-05-03)

SOURCE: IEC 61496-1:2020, 3.3, modified – "specified by the supplier" has been deleted, and the specific use has been added.

fr **capacité de détection**, <de l'équipement de protection électrosensible> f

### 428-05-02

<sähköherkän suojausvälineen> **havaitsemisvyöhyke**

**detection zone**, <of the electro-sensitive protective equipment>

zone within which a specified test piece is detected by the electro-sensitive protective equipment (IEV 428-05-03)

SOURCE: IEC 61496-1:2020, 3.4, modified – The specific use has been added.

fr **zone de détection**, <de l'équipement de protection électrosensible> f

### 428-05-03

**sähköherkkä suojausväline**

**electro-sensitive protective equipment**

ESPE

assembly of devices and/or components working together for the protection of persons

Note 1 to entry: This entry is based on IEC 61496-1:2020, 3.5.

fr **équipement de protection électrosensible**, m; ESPE

### 428-05-04

<sähköherkän suojausvälineen> **vaarallinen vikaantuminen**

**failure to danger**, <of the electro-sensitive protective equipment>

failure that prevents or delays all output signal switching devices (IEV 428-05-08) going into, and/or remaining in, the OFF-state (IEV 428-05-06)

SOURCE: IEC 61496-1:2020, 3.8, modified – The definition has been simplified and the specific use has been added.

fr **défaillance dangereuse**, <de l'équipement de protection électrosensible> f

### 428-05-05

<sähköherkän suojausvälineen> **lukitustila**

<sähköherkän suojausvälineen> **estotila**

**lock-out condition**, <of the electro-sensitive protective equipment>



condition, initiated by a fault, preventing normal operation of the electro-sensitive protective equipment (IEV 428-05-03)

SOURCE: IEC 61496-1:2020, 3.13, modified – Note 1 to entry has been omitted and the specific use has been added.

fr **condition de blocage à l'arrêt**, <de l'équipement de protection électrosensible> f

#### 428-05-06

<sähköherkkä suojausväline> **poissa**

**OFF-state**, <of the OSSD>

state of the output(s) of the electro-sensitive protective equipment (IEV 428-05-03) in which the machinery (IEV 428-01-06) under control is caused to stop running and is prevented from starting

EXAMPLE The output circuit is interrupted and disables the flow of current.

SOURCE: IEC 61496-1:2020, 3.17, modified – Note 1 to entry has been changed to an example and the specific use has been added.

fr **état INACTIF**, <de l'OSSD> m

#### 428-05-07

<sähköherkkä suojausväline> **päällä**

**ON-state**, <of the OSSD>

state of the output(s) of the electro-sensitive protective equipment (IEV 428-05-03) in which the machinery (IEV 428-01-06) under control is allowed to run

EXAMPLE The output switching element is in contact and enables the flow of current.

SOURCE: IEC 61496-1:2020, 3.18, modified – Note 1 to entry has been changed to an example and the specific use has been added.

fr **état ACTIF**, <de l'OSSD> m

#### 428-05-08

**lähtösignaalin kytkentälaitte**

**output signal switching device**

**OSSD**

component of the electro-sensitive protective equipment (IEV 428-05-03) connected to the machine control system (IEV 428-01-07) which, when the sensing device is actuated during normal operation, responds by going to the OFF-state (IEV 428-05-06)

SOURCE: IEC 61496-1:2020, 3.19

fr **dispositif de commutation du signal de sortie**, m; **OSSD**

## Luku 428-06 – Turvallisuuden liittyvät anturit

### 428-06-01

#### yhtenäistäminen linjaus

##### alignment

processing of measurements to achieve a common time base and a common spatial reference

SOURCE: IEC TS 62998-1:2019, 3.5.1 modified – "measurements" replaced with "SRS measurements" in the definition.

fr **alignement**, m

### 428-06-02

#### automaatioon liittyvä vyöhyke

##### automation related zone

part of the sensing zone (IEV 428-06-21) within which specified objects(s) are detected in order to perform a function related to automation

SOURCE: IEC TS 62998-1:2019, 3.1.1

fr **zone liée à l'automatisation**, f

### 428-06-03

#### luottamustieto

##### confidence information

safety-related probability measure that supplements a measurement information (IEV 428-06-15) or a decision information (IEV 428-06-06)

Note 1 to entry: Confidence information includes coverage probability (IEV 428-06-05) and coverage interval (IEV 428-06-04) if measurement information is provided and decision probability (IEV 428-06-07) if decision information is provided.

SOURCE: IEC TS 62998-1:2019, 3.6.4 modified – "of an SRS/SRSS" has been deleted in the definition and in Note 1 to entry.

fr **information relative à la confiance**, f

### 428-06-04

#### <turvallisuuden liittyvän anturin> kattavuusväli

##### coverage interval, <of safety-related sensors>

interval containing the set of true quantity values of a measurement information (IEV 428-06-15) with a stated probability, based on the information available

Note 1 to entry: A coverage interval does not need to be centred on the chosen measured quantity value.

SOURCE: IEC TS 62998-1:2019, 3.6.2 modified – Exemplary reference has been deleted in Note 1 to entry and the specific use has been added.

fr **intervalle de couverture**, <des capteurs de sécurité> m

**428-06-05**

<turvallisuuteen liittyvän anturin> **kattavuuden todennäköisyys**

**coverage probability**, <of safety-related sensors>

probability that the set of true quantity values of a measurement information (IEV 428-06-15) is contained within a specified coverage interval (IEV 428-06-04)

SOURCE: IEC TS 62998-1:2019, 3.6.3 modified – Note 1 to entry has been omitted.

fr **probabilité de couverture**, <des capteurs de sécurité> f

**428-06-06**

**päätös**

**decision information**

information that represents the decision performed using a respective variable quantity

Note 1 to entry: An example is a decision representing the entrance of an object in a safety-related zone (IEV 428-06-20) resulting in a switching signal.

Note 2 to entry: A respective variable quantity could be the properties of the object or environmental information.

SOURCE: IEC TS 62998-1:2019, 3.6.13 modified – "of the SRS/SRSS" has been deleted in the definition

fr **information décisionnelle**, f

**428-06-07**

**päätöksen todennäköisyys**

**decision probability**

probability that the decision information (IEV 428-06-06) be correct

SOURCE: IEC TS 62998-1:2019, 3.6.5

fr **probabilité de décision**, f

**428-06-08**

<turvallisuuteen liittyvän anturin> **havaitseminen**

**detection**, <of safety-related sensors>

determination of the presence and/or value of a physical property (IEV 428-06-17)

Note 1 to entry: As an example, classification can be a step of detection containing other steps such as reception of physical signal and filtering.

SOURCE: IEC TS 62998-1:2019, 3.1.5, modified – The specific use has been added.

fr **détection**, <des capteurs de sécurité> f

**428-06-09**

<turvallisuuteen liittyvän anturin> **havaitsemiskyky**

**detection capability**, <of safety-related sensors>

ability to perform the detection (IEV 428-06-08) within the limits of use as specified by the manufacturer

SOURCE: IEC TS 62998-1:2019, 3.1.6, modified – The specific use has been added.

fr **capacité de détection**, <des capteurs de sécurité> f

#### 428-06-10

<turvallisuuteen liittyvän anturin> **vikareaktiotoiminto**

**fault reaction function**, <of safety-related sensors>

function that is initiated when a fault is detected by a diagnostic function (IEV 428-04-24) of safety-related sensors

SOURCE: IEC TS 62998-1:2019, 3.6.11 modified – "within an SRS/SRSS" has been deleted in the definition and the specific use has been added.

fr **fonction réaction à l'anomalie**, <des capteurs de sécurité> f

#### 428-06-11

**vian vasteaika**

**fault response time**

maximum time between initiation of the signal to initiate the fault reaction function (IEV 428-04-26) and achievement of the appropriate safety-related information provided

SOURCE: IEC TS 62998-1:2019, 3.6.12 modified – "SRS/SRSS signal" has been replaced with "signal" in the definition

fr **temps de réponse à l'anomalie**, m

#### 428-06-12

**fuusio**

**fusion**

act or process of combining or associating data or information in an explicit or implicit knowledge framework to improve the capability (or to provide a new capability) for detection (IEV 428-06-08), identification, or characterization of an entity

SOURCE: IEC TS 62998-1:2019, 3.5.3, modified – In the definition, "regarding one or more entities considered" has been deleted after "information" and "one's capacity" has been replaced by "the capacity".

fr **fusion**, f

#### 428-06-13

**havaitsemiskyvyn menetys**

**loss of detection capability**

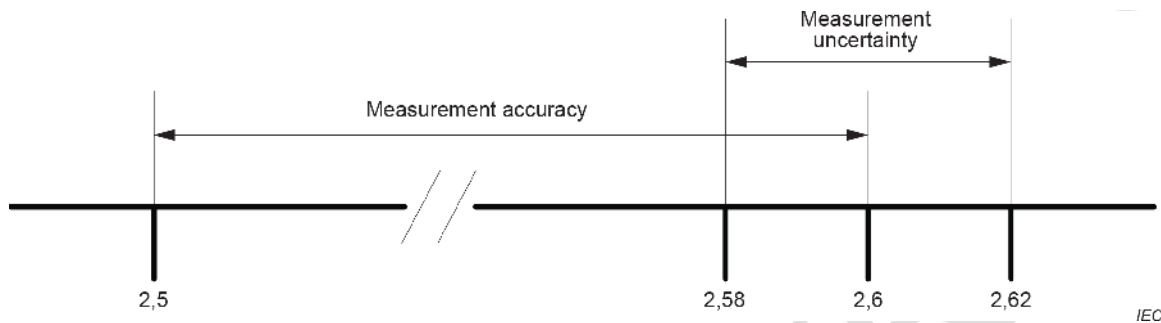
event when detection (IEV 428-06-08) is not achieved within the limits of use as specified by the manufacturer

SOURCE: IEC TS 62998-1:2019, 3.1.7 modified – "of SRS/SRSS" has been deleted in the definition.

fr **perte de capacité de détection**, f

**428-06-14**<turvallisuuteen liittyvän anturin> **mittaustarkkuus****measurement accuracy**, <of safety-related sensors>

closeness of agreement between a measured quantity value and a true quantity value of a measurand



SOURCE: IEC TS 62998-1:2019, 3.1.9, modified – The admitted terms have been deleted and the specific use has been added.

fr **exactitude de mesure**, <des capteurs de sécurité> f**428-06-15**<turvallisuuteen liittyvän anturin> **mittaustiedot****measurement information**, <of safety-related sensors>

information that represents the respective variable quantity

EXAMPLE The location of an object in a sensing zone (IEV 428-06-21) provided as a digital  $n$ -ary output signal.

SOURCE: IEC TS 62998-1:2019, 3.6.14 modified – Note 1 to entry has been changed into an example, "SRS/SRSS" has been deleted from the term, and the specific use has been added.

fr **information de mesure**, <des capteurs de sécurité> f**428-06-16**<turvallisuuteen liittyvän anturin> **mittausepävarmuus****measurement uncertainty**, <of safety-related sensors>

non-negative parameter characterizing the dispersion of the quantity values being attributed to a measurand, based on the information used

SOURCE: IEC TS 62998-1:2019, 3.1.10, modified – The specific use has been added.

fr **incertitude de mesure**, <des capteurs de sécurité> f**428-06-17****fyysinen ominaisuus****physical property**

individual measurable property of an object being observed

SOURCE : IEC TS 62998-1 :2019, 3.1.8

fr **propriété physique**, f

#### 428-06-18

#### **turvallisuuteen liittyvä anturi**

##### **safety-related sensor**

one or more sensing units combined to perform the safety-related function

Note 1 to entry: A safety-related sensor can be regarded as a subsystem (IEV 428-04-40) in a safety-related control system (IEV 428-04-01) or as a subsystem element in a safety-related control system if the safety-related sensor is used as part of a safety-related sensor system (IEV 428-06-19).

Note 2 to entry: A sensing unit can contain one or more sensing elements.

SOURCE: IEC TS 62998-1:2019, 3.3.11, modified – The admitted term "SRS" has been deleted.

fr **capteur de sécurité**, m

#### 428-06-19

#### **turvallisuuteen liittyvä anturijärjestelmä**

##### **safety-related sensor system**

combination of two or more safety-related sensors (IEV 428-06-18) performing the safety-related function

SOURCE: IEC TS 62998-1:2019, 3.3.12, modified – The admitted term "SRSS" has been deleted.

fr **ystème de capteurs de sécurité**, m

#### 428-06-20

#### **turvallisuuteen liittyvä vyöhyke**

##### **safety-related zone**

part of the sensing zone (IEV 428-06-21) within which specified safety-related objects(s) are detected

SOURCE : IEC TS 62998-1 :2019, 3.1.2

fr **zone de sécurité**, f

#### 428-06-21

#### **havaitsemisvyöhyke**

##### **sensing zone**

zone defined by length, area or volume within which objects are detected and a function is performed

SOURCE: IEC TS 62998-1:2019, 3.1.3 modified – "an SRS or SRSS function" has been replaced with "a function" in the definition.

fr **zone de détection**, f

**428-06-22**  
**simulointi****simulation**

modelling via calculation or via a software behavioural model used for a systematic and/or stochastic analysis of functional performance and the correct dimensioning and interaction of its subsystems (IEV 428-04-40)

SOURCE: IEC TS 62998-1:2019, 3.3.5 modified – In the definition, "modelling of an SRS/SRSS or of subparts via calculation" has been replaced with "modelling via calculation".

fr **simulation**, f

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## Luku 428-07 – Turvallisuusnäkökohdat

### 428-07-01

<koneen ohjausjärjestelmän> **kyberturvallisuus**

**cybersecurity**, <of the machine control system>

set of activities necessary to protect network and information systems (IEV 428-07-03) of the machine control system (IEV 428-01-07), the users (IEV 428-01-13) of such systems, and other persons from cyber threats (IEV 428-07-02), typically regarding the aspects of confidentiality, integrity and availability

SOURCE: IEC TS 63074:2023, 3.1.6

fr **cybersécurité**, <du système de commande de la machine> f

### 428-07-02

<koneen ohjausjärjestelmän> **kyberuhka**

**cyber threat**, <to the machine control system>

potential circumstance, event or action that could damage, disrupt or otherwise adversely impact network and information systems (IEV 428-07-03), the users (IEV 428-01-13) of such systems and other persons, typically exploiting vulnerabilities (IEV 428-07-04) of a machine control system (IEV 428-01-07)

SOURCE: IEC TS 63074:2023, 3.1.7

fr **cybermenace**, <pour le système de commande de la machine> f

### 428-07-03

<koneen ohjausjärjestelmän> **verkko- ja tietojärjestelmät**

**network and information systems**, <of the machine control system> pl

means or devices that contribute to or participate in the transmission or exchange of data

Note 1 to entry: Network and information systems can be:

- a) an electronic communications network within a transmission system and, where applicable, switching or routing equipment and other resources that permit the conveyance of signals by wire, by radio, by optical or by other electromagnetic means used for a machine or machinery (IEV 428-01-06);
- b) any device or group of interconnected or related devices, one or more of which, pursuant to a program, perform automatic processing of digital data; or
- c) digital data stored, processed, retrieved or transmitted by elements covered under points a) and b) for the purposes of their operation, use, protection and maintenance.

SOURCE: IEC TS 63074:2023, 3.1.12

fr **réseaux et systèmes d'information**, <du système de commande de la machine> m pl

### 428-07-04

<koneen ohjausjärjestelmän> **haavoittuvuus**

**vulnerability**, <of the machine control system>

weakness of a machine control system (IEV 428-01-07) or a countermeasure that can be exploited by one or more threats to violate the machine control system's integrity

Note 1 to entry: This entry is based on IEC TS 62443-1-1:2009, 3.2.135.



fr **vulnérabilité**, f <du système de commande de la machine>

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