

TREND SMART + SMARTBOX20 / PLD

FS Assessment Statement : FSAS_360001040

according to EN 13849-1:2015 and EN 13849-2:2012


Manufacturer information		
Manufacturer name	Sistematica S.r.l.	
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Table 1

This document refers to the product and model indicated within the next table 2 here below.
It includes the emergency stop function which is the only safety related function within the product.

Product information	
Product:	Radio Remote Control
Transmitter Model	TREND SMART / PLD Code XTD14PPSEN10X_L
Receiver Model	SMARTBOX20 / PLD Code XSB20RPSE000X_L

Table 2



Transmitter ¹	Receiver ²
	

Table 3

The emergency stop function provide a stop category 0 according to EN 60204-1:2018 § 9.2.2.
The reliability of the emergency stop function was evaluated to fullfil the safety requirements for the performance level "pl d" according to EN 13849-1:2015 § 4.5.1.

Follow, in the next table 4, the relevant safety parameters

Parameters	Value	Note
Category	2	Single channel + Test channel
MTTF _d Functional Channel	50 years	High
MTTF _d Testing Channels	345 years	==
DC _{avg}	90 %	Medium
Performance Level	Pl d ³	==
CCF	65%	==
PFH _{du}	4,57E-07	457 FIT

Table 4

¹ Picture is indicative; the transmitter could be different in some details

² Picture is indicative; the receiver could be different in some details

³ Ref also to EN 13849-1:2015 – Annex K – Table K.1 for PFHD value related to the performance level "pl d". It is matched

The standards used as basis for the assessment are specified within the next table 5

Standard list	Date
EN ISO 13849-1 Safety related parts of control systems Part 1: General principles for design	2015
EN ISO 13849-2 Safety related parts of control systems Part 2: Validation	2012
EN ISO 13850 Emergency stop function - Principles for design	2015
EN 60204-1 Safety of machinery - Electrical equipment of machines Part 1: General requirements (in those parts considered applicable - § 9.2.2 and § 9.2.4)	2018
EN 60204-32 Safety of machinery - Electrical equipment of machines Part 32: Requirements for hoisting machines (in those parts considered applicable - § 9.2.7)	2008
IEC 61784-3 Industrial communication networks – Profiles – Part 3: Functional safety fieldbuses – General rules and profile definitions (in those parts considered applicable - § 5.4 and § 5.5)	2010

Table 5

Additional information:

The instructions included within the relevant documents listed into next table 6 shall be taken into account.


Documents list	Number	Date
Installation Operation & Maintenance Manual	PD2-SSM-MAN-1-0901-1.0	06.2020
Safety Manual for compliance items	PD2-SSM-MAN-1-0900-1.0	12.2020

Table 6

The complete FS assessment can be found into the following document:

Document	Number	Date
S4PA - FS Assessment Report ⁴	FSAR_360001040 v0.1	27.01.2021

Table 7

Company in charge of the FS Assessment	
 S4PA Engineering Safety for Process Automation	S4PA Engineering Sas Gianluca Marradi - Via Mandane 2/A I – 22030 Montorfano (CO)

Signature:

Montorfano (CO) : **January 27th 2021**

⁴ The FS Assessment Report is a manufacturer's property. It could be delivered under a written NDA