

Issued by Notified Body No. 0402 according to 2006/42/EG, the Machinery Directive, annex IX, regarding:

Remote Control “Tiger”

Issued to

Tele-Radio i Lysekil AB

August Barks gata 30A, SE-421 32 Västra Frölunda, Sweden

Product and product name

TIGER Remote Control

including receiver types TG-R4, TG-R9 and TG-R10

and transmitter types TG-T9, TG-T11, TG-T12, TG-T14 and TG-T15

Technical documentation

The manufacturer's technical file, latest dated 2022-11-04.

Certificate

RISE Research Institutes of Sweden AB, Notified Body No. 0402, hereby certifies that the manufacturer's technical file and the product have been inspected in accordance with the procedure described in Directive 2006/42/EG, the Machinery Directive, annex IX and found to fulfil the essential health and safety requirements of the Directive in respect of products listed in annex 4, paragraph 21 (Logic units to ensure safety functions). The certification is verified by a type test in accordance with EN 61508 (SIL 3) and EN ISO 13849-1 (PL e).

The safety function is an active stop function (shut down) within 500ms. The stop function is activated by the stop button.

Transmitter Stop function:

Probability of dangerous failure per hour

PFHd = 8.5 FITs (=λdu)

Fraction of total failure rate with dangerous
and detected consequence

λdd = 357 FITs

Diagnostic coverage

DC = 98.3%

Safe failure fraction

SFF = 99.1 %

Common cause failure

0 FIT

Level of hardware fault tolerance

HFT = 1

Proof test interval

10 years

Diagnostic test interval

Continuous

Receiver Stop function:

Probability of dangerous failure per hour

PFHd = 30.2 FITs(=λdu)

Fraction of total failure rate with dangerous
and detected consequence

λdd = 685.0 FITs

Certificate SC0376-13| issue 4 | 2022-11-24

RISE Research Institutes of Sweden AB | Certification

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|-----------------------------------|--------------|
| Diagnostic coverage | DC = 96.9% |
| Safe failure fraction | SFF = 98.7 % |
| Common cause failure | 8.0 FIT |
| Level of hardware fault tolerance | HFT = 1 |
| Proof test interval | 10 years |
| Diagnostic test interval | Continuous |

Radio communication between transmitter and receiver:
Probability of dangerous failure per hour PFHd = 3.0 FITs

Which SIL (Safety Integrity Level) that are reached for the safety function, where this product is used together with other products, must be determined by the end user.


The Council Directive 2006/42/EC is implemented in Swedish Law by the national regulation AFS 2008:3. RISE Certification Rule SPCR 305 dated 2022-03-08 has been applied.

Miscellaneous

The manufacturer's information, in English, on installation and safety, has been inspected and found to fulfil the relevant requirements of the Directive.

Validity

This certificate was first issued on 2013-03-13 and remains valid as long as the conditions laid down in the specification(s) in reference are not modified significantly or at the latest until 2027-11-24. The validity of this certificate can be verified at RISE homepage. This edition of the certificate replaces previous editions.

A blue ink signature of Martin Tillander, written in a cursive style.

Martin Tillander