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SINCE 1933

Report type-examination

Report belonging to type-examination certificate number	:	NL13-400-1002-184-01
Date of issue of original certificate	:	June 25, 2012
Certificate applies to	:	Lift component
Revision number / date	:	5; 06-02-2023
Requirements	:	Lifts Directive 2014/33/EU Standard: EN 81-20:2020 clause 5.6.6.2 and 5.6.7.3
Project number	:	P220414

1. General specifications

Description of the product	:	Brake monitoring as part of the protection against unintended car movement and/or ascending car overspeed means
Trademark	:	Yaskawa
Type no.	:	CIMR-LCxAxxxxxxx-910x and CIMR-LCxFxxxxxxx-91xx
Name and address of the manufacturer	:	Yaskawa Electric UK LTD 1 Hunt Hill Orchardton Woods Cumbernauld G68 9LF United Kingdom and Yaskawa Electric Corporation 2-13-1-Nishimiyaichi Yukuhashi-City Fukuoka 824-8511 Japan
Laboratory	:	-
Address of examined lift	:	-
Date of examination	:	December 2022 – January 2023
Examination performed by	:	W. Bijlsma

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2. Description liftcomponent

The brake monitoring described in this report shall be used in combination with a suitable detection system and a suitable brake to build an unintended car movement protection and/or ascending car overspeed means for lifts.

The monitoring function that is integrated in the frequency inverter becomes effective after parameter S6-17 is set to 1.

Two inputs can be programmed to monitor the correct opening and closing of brakes, it can be done with both normally closed or both normally open contacts.

The activated system will stop the lift when at least one programmed brake monitoring inputs detects one of the following situations:

- When the brake monitoring signal changes status for a time period longer than set with parameter “S6-06” during a trip (Default 500ms, range 0-60sec.) (This function is optional).
- When the brake monitoring signal does not change status within a time period set with parameter “S6-05” after the brake is ordered to open during a trip (Default 500ms, range 0-10sec.).
- When the brake monitoring signal does not change status within a time period set with parameter “S6-05” after the brake is ordered to close after a trip (Default 500ms, range 0-10sec.).

After detection of brake malfunction, the lift remains out of service, also after switching off- and on the supply power or using the “reset” button.

Resetting of the system is only possible by setting the parameter “S6-18 = 1”.

Technical data of the inputs:

Voltage	: +24 VDC
Switching level low/high	: typ. 11,85 VDC
Input current at 24 V	: typ. 12,6 mA

See annex 1 for a general overview of the product.

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3. Examinations and tests

The examination covered a check whether compliance with the Lifts Directive 2014/33/EU is met based on the harmonized product standard EN 81-20:2020. Issues not covered by or not complying these Standards are directly related to the above mentioned essential requirements based on the risk assessment, where applicable with the aid of harmonized A-and B-standards.

The examination included:

- Examination of the technical file (See annex 2):
- Examination of the representative model in order to establish conformity with the technical file.
- Inspections and tests to check compliance with the requirements.

4. Results

After the final examination the product and the technical file were found in accordance with the requirements. The functional tests passed without remarks.
The load tests passed without remarks and did not lead to permanent deformations or loss of stability.

5. Conditions

Additional to or in deviation of the applicable demands in the considered requirements / standards (see certificate and/or page 1 of this report), the following conditions shall be taken into account:

- Before taking the lift into service and after each change in the software of the Yaskawa, CIMR-LCxAxxxxxxx-910x or CIMR-LCxFxxxxxxx-91xx the proper functioning of the brake monitoring must be checked. The checking shall be done by disconnecting and short circuiting the brake monitoring switches one by one. Each time after a command is given, the manipulation shall be detected by the system and a manual reset shall be necessary to bring the lift back into operation.

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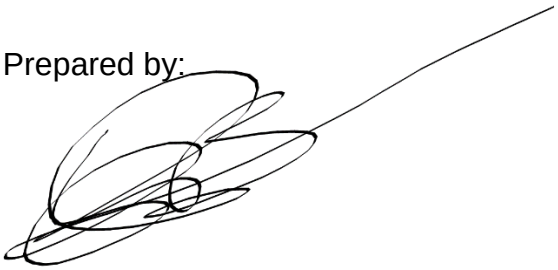
6. Conclusions

Based upon the results of the type-examination Liftinstituut B.V. issues a type-examination certificate.

The type-examination certificate is only valid for products which are in conformity with the same specifications as the type certified product. The type-examination certificate is issued based on the requirements that are valid at the date of issue. In case of changes of the product specifications, changes in the requirements or changes in the state of the art the certificate holder shall request Liftinstituut B.V. to reconsider the validity of the type-examination certificate.

Prepared by:



W. Bijlsma
Product Specialist Certification

Certification decision by:

W. Visser
Certification Expert

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Annexes

Annex 1 : Impression Yaskawa frequency inverter

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Annex 2 Documents of the Technical File which were subject of the examination

Title	Date
Software Functional Specification.docx	13-03-2013
Software Functional Specification.docx rev.1	09-04-2013
Brake Status Monitor Operation Manual	13-06-2013
A3-Brake Monitor complete.odp; (test report)	25-03-2020

Annex 3. Reviewed deviations from the standards

No deviations from EN 81-20:2020.

Annex 4 Revision of the certificate and its report

Rev.:	Date	Summary of revision
-	25-06-2013	Original
1	10-09-2013	Product name changed
2	30-03-2015	Addition of CIMR-LCxFxxxxxxx-91xx
3	27-06-2017	Addition of brake monitoring application for ascending car overspeed means and update to new Lifts Directive 2014/33/EU
4	27-03-2020	5-yearly reassessment and revalidation brake monitoring application
5	06-02-2023	Standard version updated

--- End of report ---

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