

TYPE EXAMINATION CERTIFICATE FOR LIFTCOMPONENTS

Issued by Liftinstituut B.V.

Certificate no. : NL17-400-1002-206-03 Revision no.: -

Description of the product : Brake monitoring as part of the protection against unintended car movement and/or ascending car overspeed means

Trademark, type : Magnetek, HPV900 Series 2

Name and address of the manufacturer : Magnetek (UK) Ltd.
Unit 3 Bedford Business Centre
Mile Road
Bedford MK42 9TW
United Kingdom

Name and address of the certificate holder : Magnetek (UK) Ltd.
Unit 3 Bedford Business Centre
Mile Road
Bedford MK42 9TW
United Kingdom

Certificate issued on the following requirements : Lifts Directive 2014/33/EU

Certificate based on the following standard : EN 81-1:1998 + A3:2010 clause 9.11.3
EN 81-20:2014 clause 5.6.6.2 and 5.6.7.3

Test laboratory : None

Date and number of the laboratory report : None

Date of type examination : 17-08-2017

Additional document with this certificate : Report belonging to the type examination certificate no.: NL17-400-1002-206-03

Additional remarks : See report

Conclusion : The lift component meets the requirements referred to in this certificate taking into account any additional remarks mentioned above.

Amsterdam

Date : 17-08-2017
Valid until : 16-02-2021



ing. J.L. van Vliet
Managing Director



Certification decision by



Report type-examination

Report belonging to type-examination certificate no. : NL17-400-1002-206-03
Date of issue of original certificate : 17-08-2017
Concerns : Lift control function
No. and date of revision : -
Requirements : Lifts Directive 2014/33/EU
EN 81-1:1998 + A3:2010 clause 9.11.3
EN 81-20 :2014 clause 5.6.6.2 and 5.6.7.3
Project no. : P160408-01

1. General specifications

Name and address manufacturer : Magnetek (UK) Ltd.
Unit 3 Bedford Business Centre
Mile Road
Bedford MK42 9TW
United Kingdom
Description of lift component : Brake monitoring as part of the protection against unintended car movement and/or ascending car overspeed means
Type : Magnetek, HPV900 Series 2
Laboratory : -
Address of examined component : -
Date / Data of examination : August 17, 2017
Examination performed by : P.J. Schaareman

2. Description lift component

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 setting "Brake Pick Fault Enable" in the C1 menu to "Enable".

An output in the C3 menu should be configured to "Brake Pick Flt" to be monitored by the lift controller.

Up to two inputs can be programmed to monitor the proper operation of the brake. The brake switches should be normally open, and wired into inputs configured to "Mech Brake Pick 1" and "Mech Brake Pick 2".

The activated system will monitor the inputs and declare a "Brake Pick Fault" if the switch doesn't operate as expected. After detection of brake malfunction, the lift remains out of service, also after switching off- and on the supply power. Resetting of the system is only possible by setting the parameter "Brake Pick Fault Enable" in the C1 menu from "Active" to "Enable" and issue a fault reset.

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

Technical details	:: HPV900S2
Ratings digital inputs	:: ON State: Sinking Operation (High True): 18-26.4 Volts Sourcing Operation (Low True): 0-3.5 Volts OFF State: Sinking Operation (High True): 0-4.5 Volts Sourcing Operation (Low True): 22-26.4 Volts • Off state leakage current: 1mA • On state leakage current (nominal): 5.5mA • Scan Rate: 2 msec. • Update Rate: 4 msec.
Digital outputs	:: Two (2) programmable Form-C relays • Relay 1&2: 2A at 30VDC / 250VAC resistive (inductive load) • Update Rate: 2 msec. • Minimum recommended load 100mA, 5Vdc Four (4) programmable opto-isolated open-collectors • Voltage: 50 Volts DC (max.) • Capacity: ≤ 100 mA • Update Rate: 2 msec.

See Magnetek's technical information for more detailed specifications and applications.

3. Examinations and tests

The examination covered a check whether compliance with the Lift Directive 2014/33/EU is met, based on the product standards EN 81-1:1998 + A3:2010 and EN 81-20:2014.

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.

The drive SW version at the moment of testing was SW A4810-010220.17.

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.

5. Conditions

On the type-examination certificate the following conditions apply:

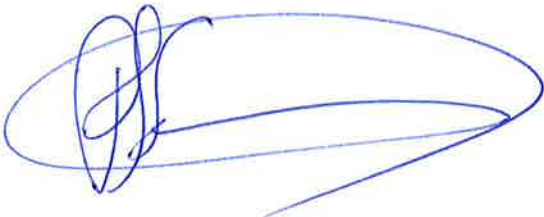
- Installation, setting and commissioning of the HPV900S2 drives shall be done accordingly the Magnetek HPV900S2 installation manual.
- Before taking the lift into service and after each change in the software of the HPV900S2 the proper functioning of the brake monitoring must be checked. The checking 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 reset shall be necessary to bring the lift back into operation.

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:



P.J. Schaareman
Product Specialist Certification
Liftinstituut B.V.

Certification decision by:



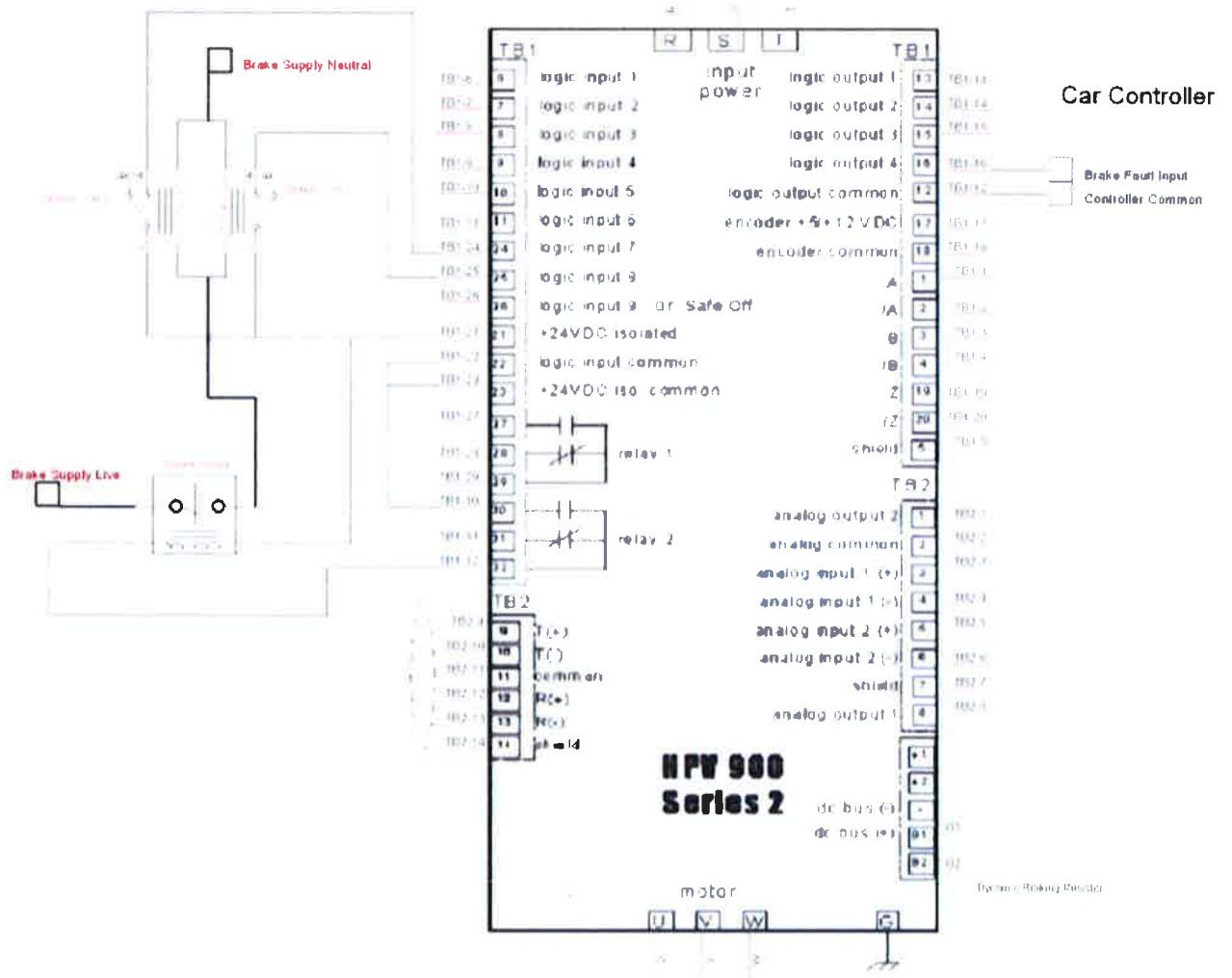
Annexes

Annex 1a : Impression drive HPV900S2



Annex 1b : Drive connections related to brake monitoring application

Example circuit:



Annex 2 : Documents of the technical file which were subject of the examination

Title	Document number	Date
Video test brake monitoring functionality	Brake Pick Function.mp4	01-12-2016
Video test fault persistency	Brake Pick Persists Through Power Cycle.mp4	01-12-2016
Brake monitoring guide document	900S2 Mech Brake Pick guide R01.0.pdf	08-12-2016
Update manual extract	HPV 900 Series2 Software Features 2 20 41.pdf	17-08-2017
Latest revision manual HPV 900S2	TM7333_R20.pdf	

Annex 3 : Reviewed deviations from the standards

EN xx-x par.	Requirement	Accepted design
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Annex 4 : Revision overview

Rev.:	Date	Summary of revision
-	17-08-2017	Original