

TYPE EXAMINATION CERTIFICATE

Issued by Liftinstituut B.V.

Certificate no. : NL18-400-1002-301-01 Revision no.: -

Description of the product : Lift Control Printed Circuit Board with safety chain monitoring circuits and interface for lift control elements

Trademark, type : MT70-MCB-A

Name and address of the manufacturer : Shenzhen Hpmont Technology Co. Ltd.
3F, Building 28, Wangjingkeng Industry Park, xili dakan, Nanshan District
518055 Shenzhen, CHINA

Name and address of the certificate holder : Shenzhen Hpmont Technology Co. Ltd.
3F, Building 28, Wangjingkeng Industry Park, xili dakan, Nanshan District
518055 Shenzhen, CHINA

Certificate issued on the following requirements : Lift Directive 2014/33/EU
EN 81-20:2014 clause 5.11.1.1 and 5.11.2.1.2 and
EN 81-50:2014 clause 5.15

Test laboratory : None

Date and number of the laboratory report : None

Date of type-examination : July 2017– August 2018


Additional document with this certificate : Report belonging to the type examination certificate
no.: NL18-400-1002-301-01

Additional remarks : -


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

Amsterdam

Date : 24-08-2018
Valid until : 24-08-2023



ing. P. J. Peeters
Manager



Certification decision by

Report type-examination

Report belonging to type-examination certificate no.	: NL18-400-1002-301-01
Date of issue of original certificate	: August 24, 2018
Concerns	: Lift controller
No. and date of revision	: -
Requirements	: Lifts Directive 2014/33/EU Standard EN 81-20:2014 clause 5.11.1.1 and 5.11.2.1.2 and EN 81-50:2014 clause 5.15
Project no.	: P170246

1. General specifications

Name and address manufacturer	: Shenzhen Hpmont Technology Co. Ltd. 3F, Building 28, Wangjingkeng Industry Park, xili dakan, Nanshan District 518055 Shenzhen, CHINA
Description of component	: Lift Control Printed Circuit Board with safety chain monitoring circuits and interface for lift control elements
Type	: MT70-MCB-A
Laboratory	: None
Date of examination	: July 2017 – August 2018
Examination performed by	: T.M.J. Molema / P.J. Schaareman

2. Description lift controller

The MT70-MCB-A is a lift controller capable of running hydraulic and traction lifts. The PCB has monitoring inputs for several points in the safety chain: terminals X25, X26, X27 and X28.

On-board relays are used to interface the safety chain to the main contactors, drive and/or valves. These connections are available on terminals CM1 / Y1, CM2 / Y2, CM3 / Y3, CM4 / Y4, CM5 / Y5, CM6 and Y6.

3. Examinations and tests

The examination covered a check whether compliance with the Lift Directive 2014/33/EU is met based on the EN 81-20 and EN 81-50. The PCB is checked for creepage and clearance distances. The safety chain has a voltage of 110V. Only material group 3 is used. For the outer layers pollution degree 3 was used. For inner layers pollution degree 2 was used. All fields are inhomogeneous electrical fields.

Under these assumptions the required creepage distances of the PCB are checked for outer layers with a minimum distance of 2.4 mm, and for inner layers with a minimum distance of 1.5 mm. The clearance distance is checked for 0.912 mm. The safety chain related used components such as optocouplers and interface relays shall fulfill the requirements of the harmonized standard EN 81-20/50.

4. Results

After the final examination the PCB and the technical file were found in accordance with the requirements of the EN 81-20 and EN 81-50. There is a full fault exclusion for terminals X25, X26, X27, X28, CM1 / Y1, CM2 / Y2, CM3 / Y3, CM4 / Y4, CM5 / Y5, CM6 and Y6.

The safety chain related used components optocouplers LTV217 and interface relays Hongfa HF46F and JZC-33F (HF-33F) fulfill the requirements of the harmonized standard EN 81-20/50.

5. Conditions

Additional to 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:

- The maximum altitude is 3000m above sea level (AMSL),
- The safety chain has a maximum voltage of 110VAC,
- The controller shall be installed according the manual
- Incoming ground is connected to one terminal "XCM_H", the ground used for the main contactors and/or hydraulic valves shall be supplied from the other terminal "XCM_H".



6. Conclusions

The creepage distances and clearances are fulfilling the requirements of clause 5.15 of the harmonized standard EN 81-50.

The used optocoupler LTV217 and interface relays Hongfa HF46F and JZC-33F (HF-33F) fulfill the requirements of the harmonized standard EN 81-20/50.

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.

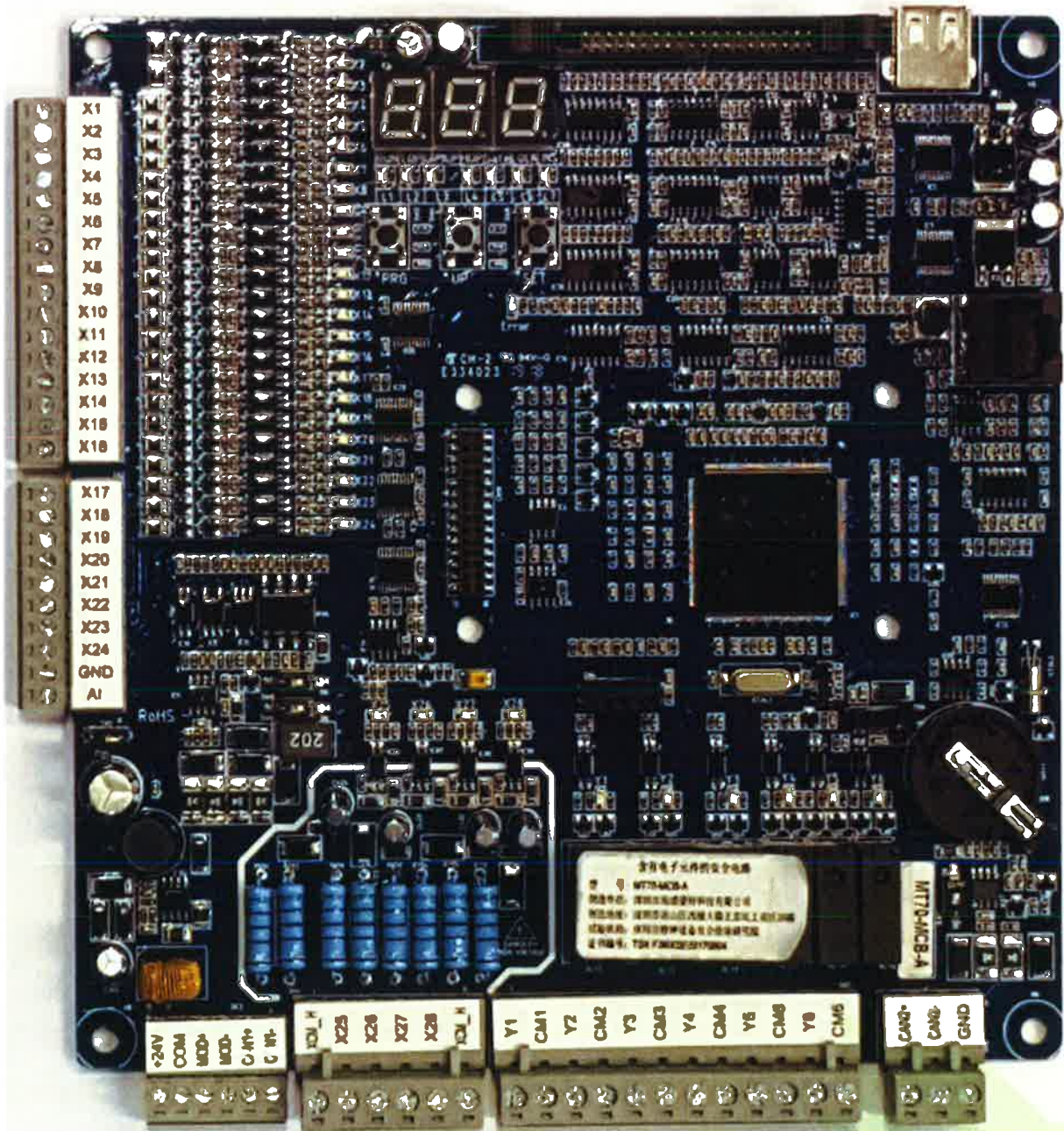
Prepared by:

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

Certification decision by:

Annexes

Annex 1 : Basic lay-out MT70-MCB-A V2.2



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

Title	Document type	Date
LTV-2x7 series 201610	Datasheet photocoupler	18-09-2017
HF46F	Datasheet interface relay	18-09-2017
HF33F	Datasheet interface relay	18-09-2017
FOP of MT70-MCB-A	Description functions and operations principles control board	18-09-2017
MONT70 series Elevator Integrated Controller	User manual Mont70 series	18-09-2017
T7045P5U1	Technical information PCB	16-11-2017
MONT70 ECCCD	Elevator Control Cabinet Circuit Drawing	18-09-2017
Gerber.zip	Gerberfiles PCB's	18-09-2017
MT70-MCB-A	Physical board V.2.2	29-11-2017

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
-	24-08-2018	Original