

# CERTIFICATE

Issued to:  
Applicant:  
**HIMEL TECHNOLOGY S.L.**  
Calle Bac de Roda, No. 52,  
Edificio A 08019  
Barcelona, Spain

Licensee:  
**DELIXI ELECTRIC LTD**  
Delixi High-Tech Industrial Park  
Liushi Town, Yueqing City  
325604 Zhejiang Province, China

Product : Moulded-Case Circuit Breaker  
Trade name(s) : HIMEL  
Type(s)/model(s) : HDM3 series

The product and any acceptable variation thereto is specified in the Annex to this certificate and the documents therein referred to.

DEKRA hereby declares that the above-mentioned product has been certified on the basis of:

- a type test according to the standard EN 60947-2:2017
- an inspection of the production location according to CENELEC Operational Document CIG 021
- a certification agreement with the number 2028558

DEKRA hereby grants the right to use the KEMA-KEUR certification mark.

The KEMA-KEUR certification mark may be applied to the product as specified in this certificate for the duration of the KEMA-KEUR certification agreement and under the conditions of the KEMA-KEUR certification agreement.

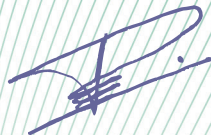
This certificate is issued on 14 December 2017 and expires upon withdrawal of one of the above mentioned standards.

Certificate number: 33-101424

DEKRA Certification B.V.



drs. G.J. Zoetbrood  
Managing Director



Folkert Strikwerda  
Certification Manager

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**SPECIFICATION OF THE CERTIFIED PRODUCT**
**Product data**

|   |   |
|---|---|
| Product   | : Moulded-Case Circuit Breaker  |
| Trade name(s)                                       | : HIMEL   |
| Type(s)/model(s)                                    | : HDM3-100F, HDM3-100M, HDM3-100N, HDM3-100T, HDM3-160F, HDM3-160L, HDM3-160M, HDM3-160N, HDM3-160S, HDM3-160T, HDM3-250F, HDM3-250L, HDM3-250M, HDM3-250N, HDM3-250S, HDM3-250T, HDM3-400F, HDM3-400L, HDM3-400M, HDM3-400N, HDM3-400S, HDM3-400T, HDM3-630F, HDM3-630L, HDM3-630M, HDM3-630N, HDM3-630S and HDM3-630T |
| Number of poles                                     | : 3P or 4P (3P+N, N pole does not have protection, N is interrupted or uninterrupted)   |
| Protected poles                                     | : 3P  |
| Rated operational current (I <sub>e</sub> )         | : Equal to I <sub>n</sub>   |
| Conventional thermal current (I <sub>th</sub> )     | : Equal to I <sub>n</sub>   |
| Rated operational voltage (U <sub>e</sub> )         | : 400 Vac / 415 Vac   |
| Rated insulation voltage (U <sub>i</sub> )          | : 800 V   |
| Rated impulse withstand voltage (U <sub>imp</sub> ) | : 8 kV  |
| Rated frequency                                     | : 50/60 Hz  |
| Suitable for isolation                              | : Yes   |
| Utilization category                                | : A   |
| Method of mounting                                  | : Fixed   |
| EMC Environment                                     | : A and B   |
| Reference temperature                               | : 40 °C   |
| Circuit-breaker for use on phase-earthed systems    | : N/A   |
| Inverse time delay release                          | : Thermal type, Fixed   |
| Tripping time at 2I <sub>n</sub>                    | : 180 s to 420 s  |
| Instantaneous release                               | : Magnetic type, fixed,<br>2 poles in series: I <sub>i</sub> = 10 I <sub>n</sub><br>single pole: 12 I <sub>n</sub>  |
| Line/load terminal Connection                       | : Marked<br>Copper conductor with cable lug or copper bars (start from 400 A)   |

**Product data – type HDM3-100F**

|   |  |
|---|--|
| Rated current (I <sub>n</sub> )                                   | : 40 A, 50 A, 63 A, 70 A, 80 A, 100 A                              |
| Circuit-breaker for use in IT systems                             | : Yes, 1,2 kA at 415 Vac   |
| Safety distance   | : Up: 50 mm, Down: 0 mm,<br>Left/Right: 10 mm,<br>Front/Back: 0 mm |
| Rated ultimate short-circuit breaking capacity (I <sub>cu</sub> ) | : 35 kA  |
| Rated service short-circuit breaking capacity (I <sub>cs</sub> )  | : 26 kA  |

**Product data – type HDM3-100M**

|   |  |
|---|--|
| Rated current (I <sub>n</sub> )                                   | : 40 A, 50 A, 63 A, 70 A, 80 A, 100 A                              |
| Circuit-breaker for use in IT systems                             | : Yes, 1,2 kA at 415 Vac   |
| Safety distance   | : Up: 50 mm, Down: 0 mm,<br>Left/Right: 10 mm,<br>Front/Back: 0 mm |
| Rated ultimate short-circuit breaking capacity (I <sub>cu</sub> ) | : 26 kA  |



Rated service short-circuit breaking capacity (Ics) : 26 kA

**Product data – type HDM3-100N**

Rated current (In) : 40 A, 50 A, 63 A, 70 A, 80 A, 100 A  
Circuit-breaker for use in IT systems : Yes, 1,2 kA at 415 Vac  
Safety distance : Up: 50 mm, Down: 0 mm,  
Left/Right: 10 mm,  
Front/Back: 0 mm  
Rated ultimate short-circuit breaking capacity (Icu) : 50 kA  
Rated service short-circuit breaking capacity (Ics) : 30 kA

**Product data – type HDM3-100T**

Rated current (In) : 40 A, 50 A, 63 A, 70 A, 80 A, 100 A  
Circuit-breaker for use in IT systems : Yes, 1,2 kA at 415 Vac  
Safety distance : Up: 50 mm, Down: 0 mm,  
Left/Right: 10 mm,  
Front/Back: 0 mm  
Rated ultimate short-circuit breaking capacity (Icu) : 30 kA  
Rated service short-circuit breaking capacity (Ics) : 30 kA

**Product data – type HDM3-160F**

Rated current (In) : 100 A, 125 A, 140 A, 160 A  
Circuit-breaker for use in IT systems : Yes, 3 kA at 415 Vac  
Safety distance : Up: 50 mm, Down: 0 mm,  
Left/Right: 10 mm,  
Front/Back: 0 mm  
Rated ultimate short-circuit breaking capacity (Icu) : 50 kA  
Rated service short-circuit breaking capacity (Ics) : 30 kA

**Product data – type HDM3-160L**

Rated current (In) : 100 A, 125 A, 140 A, 160 A  
Circuit-breaker for use in IT systems : Yes, 3 kA at 415 Vac  
Safety distance : Up: 50 mm, Down: 0 mm,  
Left/Right: 10 mm,  
Front/Back: 0 mm  
Rated ultimate short-circuit breaking capacity (Icu) : 21 kA  
Rated service short-circuit breaking capacity (Ics) : 21 kA

**Product data – type HDM3-160M**

Rated current (In) : 100 A, 125 A, 140 A, 160 A  
Circuit-breaker for use in IT systems : Yes, 3 kA at 415 Vac  
Safety distance : Up: 50 mm, Down: 0 mm,  
Left/Right: 10 mm,  
Front/Back: 0 mm

Rated ultimate short-circuit breaking capacity (Icu) : 30 kA  
Rated service short-circuit breaking capacity (Ics) : 30 kA

**Product data – type HDM3-160N**

Rated current (In) : 100 A, 125 A, 140 A, 160 A  
Circuit-breaker for use in IT systems : Yes, 3 kA at 415 Vac  
Safety distance : Up: 50 mm, Down: 0 mm,  
Left/Right: 10 mm,  
Front/Back: 0 mm  
Rated ultimate short-circuit breaking capacity (Icu) : 60 kA  
Rated service short-circuit breaking capacity (Ics) : 36 kA

**Product data – type HDM3-160S**

Rated current (In) : 100 A, 125 A, 140 A, 160 A  
Circuit-breaker for use in IT systems : Yes, 3 kA at 415 Vac  
Safety distance : Up: 50 mm, Down: 0 mm,  
Left/Right: 10 mm,  
Front/Back: 0 mm  
Rated ultimate short-circuit breaking capacity (Icu) : 35 kA  
Rated service short-circuit breaking capacity (Ics) : 21 kA

**Product data – type HDM3-160T**

Rated current (In) : 100 A, 125 A, 140 A, 160 A  
Circuit-breaker for use in IT systems : Yes, 3 kA at 415 Vac  
Safety distance : Up: 50 mm, Down: 0 mm,  
Left/Right: 10 mm,  
Front/Back: 0 mm  
Rated ultimate short-circuit breaking capacity (Icu) : 36 kA  
Rated service short-circuit breaking capacity (Ics) : 36 kA

**Product data – type HDM3-250F**

Rated current (In) : 100 A, 125 A, 140 A, 150 A, 160 A, 175 A, 180 A,  
200 A, 225 A, 250 A  
Circuit-breaker for use in IT systems : Yes, 3 kA at 415 Vac  
Safety distance : Up: 50 mm, Down: 0 mm,  
Left/Right: 10 mm,  
Front/Back: 0 mm  
Rated ultimate short-circuit breaking capacity (Icu) : 50 kA  
Rated service short-circuit breaking capacity (Ics) : 30 kA

**Product data – type HDM3-250L**

Rated current (In) : 100 A, 125 A, 140 A, 150 A, 160 A, 175 A, 180 A,  
200 A, 225 A, 250 A  
Circuit-breaker for use in IT systems : Yes, 3 kA at 415 Vac

|  |  |
|--|--|
| Safety distance                                      | : Up: 50 mm, Down: 0 mm,<br>Left/Right: 10 mm,<br>Front/Back: 0 mm |
| Rated ultimate short-circuit breaking capacity (Icu) | : 21 kA  |
| Rated service short-circuit breaking capacity (Ics)  | : 21 kA  |

**Product data – type HDM3-250M**

|  |   |
|--|---|
| Rated current (In)                                   | : 100 A, 125 A, 140 A, 150 A, 160 A, 175 A, 180 A,<br>200 A, 225 A, 250 A |
| Circuit-breaker for use in IT systems                | : Yes, 3 kA at 415 Vac  |
| Safety distance                                      | : Up: 50 mm, Down: 0 mm,<br>Left/Right: 10 mm,<br>Front/Back: 0 mm        |
| Rated ultimate short-circuit breaking capacity (Icu) | : 30 kA   |
| Rated service short-circuit breaking capacity (Ics)  | : 30 kA   |

**Product data – type HDM3-250N**

|  |   |
|--|---|
| Rated current (In)                                   | : 100 A, 125 A, 140 A, 150 A, 160 A, 175 A, 180 A,<br>200 A, 225 A, 250 A |
| Circuit-breaker for use in IT systems                | : Yes, 3 kA at 415 Vac  |
| Safety distance                                      | : Up: 50 mm, Down: 0 mm,<br>Left/Right: 10 mm,<br>Front/Back: 0 mm        |
| Rated ultimate short-circuit breaking capacity (Icu) | : 60 kA   |
| Rated service short-circuit breaking capacity (Ics)  | : 36 kA   |

**Product data – type HDM3-250S**

|  |   |
|--|---|
| Rated current (In)                                   | : 100 A, 125 A, 140 A, 150 A, 160 A, 175 A, 180 A,<br>200 A, 225 A, 250 A |
| Circuit-breaker for use in IT systems                | : Yes, 3 kA at 415 Vac  |
| Safety distance                                      | : Up: 50 mm, Down: 0 mm,<br>Left/Right: 10 mm,<br>Front/Back: 0 mm        |
| Rated ultimate short-circuit breaking capacity (Icu) | : 35 kA   |
| Rated service short-circuit breaking capacity (Ics)  | : 21 kA   |

**Product data – type HDM3-250T**

|  |   |
|--|---|
| Rated current (In)                                   | : 100 A, 125 A, 140 A, 150 A, 160 A, 175 A, 180 A,<br>200 A, 225 A, 250 A |
| Circuit-breaker for use in IT systems                | : Yes, 3 kA at 415 Vac  |
| Safety distance                                      | : Up: 50 mm, Down: 0 mm,<br>Left/Right: 10 mm,<br>Front/Back: 0 mm        |
| Rated ultimate short-circuit breaking capacity (Icu) | : 36 kA   |
| Rated service short-circuit breaking capacity (Ics)  | : 36 kA   |

**Product data – type HDM3-400F**

|  |   |
|--|---|
| Rated current (In)                                   | : 200 A, 225 A, 250 A, 300 A, 315 A, 350 A, 400 A                   |
| Circuit-breaker for use in IT systems                | : Yes, 7,56 kA at 415 Vac   |
| Safety distance                                      | : Up: 100 mm, Down: 0 mm,<br>Left/Right: 30 mm,<br>Front/Back: 0 mm |
| Rated ultimate short-circuit breaking capacity (Icu) | : 50 kA   |
| Rated service short-circuit breaking capacity (Ics)  | : 30 kA   |

**Product data – type HDM3-400L**

|  |   |
|--|---|
| Rated current (In)                                   | : 200 A, 225 A, 250 A, 300 A, 315 A, 350 A, 400 A                   |
| Circuit-breaker for use in IT systems                | : Yes, 7,56 kA at 415 Vac   |
| Safety distance                                      | : Up: 100 mm, Down: 0 mm,<br>Left/Right: 30 mm,<br>Front/Back: 0 mm |
| Rated ultimate short-circuit breaking capacity (Icu) | : 21 kA   |
| Rated service short-circuit breaking capacity (Ics)  | : 21 kA   |

**Product data – type HDM3-400M**

|  |   |
|--|---|
| Rated current (In)                                   | : 200 A, 225 A, 250 A, 300 A, 315 A, 350 A, 400 A                   |
| Circuit-breaker for use in IT systems                | : Yes, 7,56 kA at 415 Vac   |
| Safety distance                                      | : Up: 100 mm, Down: 0 mm,<br>Left/Right: 30 mm,<br>Front/Back: 0 mm |
| Rated ultimate short-circuit breaking capacity (Icu) | : 30 kA   |
| Rated service short-circuit breaking capacity (Ics)  | : 30 kA   |

**Product data – type HDM3-400N**

|  |   |
|--|---|
| Rated current (In)                                   | : 200 A, 225 A, 250 A, 300 A, 315 A, 350 A, 400 A                   |
| Circuit-breaker for use in IT systems                | : Yes, 7,56 kA at 415 Vac   |
| Safety distance                                      | : Up: 100 mm, Down: 0 mm,<br>Left/Right: 30 mm,<br>Front/Back: 0 mm |
| Rated ultimate short-circuit breaking capacity (Icu) | : 70 kA   |
| Rated service short-circuit breaking capacity (Ics)  | : 39 kA   |

**Product data – type HDM3-400S**

|  |   |
|--|---|
| Rated current (In)                                   | : 200 A, 225 A, 250 A, 300 A, 315 A, 350 A, 400 A                   |
| Circuit-breaker for use in IT systems                | : Yes, 7,56 kA at 415 Vac   |
| Safety distance                                      | : Up: 100 mm, Down: 0 mm,<br>Left/Right: 30 mm,<br>Front/Back: 0 mm |
| Rated ultimate short-circuit breaking capacity (Icu) | : 35 kA   |

Rated service short-circuit breaking capacity (Ics) : 21 kA

**Product data – type HDM3-400T**

Rated current (In) : 200 A, 225 A, 250 A, 300 A, 315 A, 350 A, 400 A  
Circuit-breaker for use in IT systems : Yes, 7,56 kA at 415 Vac  
Safety distance : Up: 100 mm, Down: 0 mm,  
Left/Right: 30 mm,  
Front/Back: 0 mm  
Rated ultimate short-circuit breaking capacity (Icu) : 39 kA  
Rated service short-circuit breaking capacity (Ics) : 39 kA

**Product data – type HDM3-630F**

Rated current (In) : 200 A, 225 A, 250 A, 315 A, 350 A, 400 A, 450 A,  
500 A, 600 A, 630 A  
Circuit-breaker for use in IT systems : Yes, 7,56 kA at 415 Vac  
Safety distance : Up: 100 mm, Down: 0 mm,  
Left/Right: 30 mm,  
Front/Back: 0 mm  
Rated ultimate short-circuit breaking capacity (Icu) : 50 kA  
Rated service short-circuit breaking capacity (Ics) : 30 kA

**Product data – type HDM3-630L**

Rated current (In) : 200 A, 225 A, 250 A, 315 A, 350 A, 400 A, 450 A,  
500 A, 600 A, 630 A  
Circuit-breaker for use in IT systems : Yes, 7,56 kA at 415 Vac  
Safety distance : Up: 100 mm, Down: 0 mm,  
Left/Right: 30 mm,  
Front/Back: 0 mm  
Rated ultimate short-circuit breaking capacity (Icu) : 21 kA  
Rated service short-circuit breaking capacity (Ics) : 21 kA

**Product data – type HDM3-630M**

Rated current (In) : 200 A, 225 A, 250 A, 315 A, 350 A, 400 A, 450 A,  
500 A, 600 A, 630 A  
Circuit-breaker for use in IT systems : Yes, 7,56 kA at 415 Vac  
Safety distance : Up: 100 mm, Down: 0 mm,  
Left/Right: 30 mm,  
Front/Back: 0 mm  
Rated ultimate short-circuit breaking capacity (Icu) : 30 kA  
Rated service short-circuit breaking capacity (Ics) : 30 kA

**Product data – type HDM3-630N**

Rated current (In) : 200 A, 225 A, 250 A, 315 A, 350 A, 400 A, 450 A,  
500 A, 600 A, 630 A  
Circuit-breaker for use in IT systems : Yes, 7,56 kA at 415 Vac

Safety distance : Up: 100 mm, Down: 0 mm,  
Left/Right: 30 mm,  
Front/Back: 0 mm

Rated ultimate short-circuit breaking capacity (Icu) : 70 kA

Rated service short-circuit breaking capacity (Ics) : 39 kA

**Product data – type HDM3-630S**

Rated current (In) : 200 A, 225 A, 250 A, 315 A, 350 A, 400 A, 450 A,  
500 A, 600 A, 630 A

Circuit-breaker for use in IT systems : Yes, 7,56 kA at 415 Vac

Safety distance : Up: 100 mm, Down: 0 mm,  
Left/Right: 30 mm,  
Front/Back: 0 mm

Rated ultimate short-circuit breaking capacity (Icu) : 35 kA

Rated service short-circuit breaking capacity (Ics) : 21 kA

**Product data – type HDM3-630T**

Rated current (In) : 200 A, 225 A, 250 A, 315 A, 350 A, 400 A, 450 A,  
500 A, 600 A, 630 A

Circuit-breaker for use in IT systems : Yes, 7,56 kA at 415 Vac

Safety distance : Up: 100 mm, Down: 0 mm,  
Left/Right: 30 mm,  
Front/Back: 0 mm

Rated ultimate short-circuit breaking capacity (Icu) : 39 kA

Rated service short-circuit breaking capacity (Ics) : 39 kA

**TESTS****Test requirements**

EN 60947-2:2017

**Test result**

The test results are laid down in DEKRA test file 331163800.



**Additional information**

Nomenclature breakdown:

HDM3-100 F/A3XX

a b c d

a - code denoting the frame size: 100, 160, 250, 400 or 630

b - code denoting the short-circuit capacity: F, N, M, T, S or L (S and L are not available for frame 100)

c - code denoting the number of poles: 'A' means 4P MCCBs with uninterrupted Neutral; 'B' means 4P MCCBs with interrupted Neutral; '3' means 3P MCCBs

d - code denoting no auxiliary circuit and control circuit

This certificate is based on KEMA KEUR certificate 33-102249 issued on 2017-12-11 and replaces KEMA KEUR certificate 3308159.02 issued on 2015-08-05.

The referred test reports are 3311638.50, 3312804.50, 3311637.50, 3308159.50, 3306791.50, 3306940.50, 3306941.50, 3306942.50 and 3306943.50.

The product also complies with IEC 60947-2:2016

**Conclusion**

The examination proved that all requirements were met.

**Factory locations**

DELIXI ELECTRIC (WUHU) LTD  
Wuhu Machinery Industrial Park,  
Wuhu City,  
241100 Anhui Province, China

DELIXI ELECTRIC LTD  
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325604 Zhejiang Province, China