

Zertifikat Certificate



Zertifikat Nr. Certificate No.
R 50204909

Blatt Page
0002

Ihr Zeichen Client Reference

Unser Zeichen Our Reference

Ausstellungsdatum

Date of Issue
(day/mo/yr)

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ZJL-MAS- 12023140 002

21.05.2012

Genehmigungsinhaber License Holder

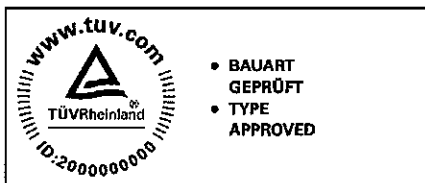
Hirose Electric Co., Ltd.
5-5-23 Osaki
Shinagawa-ku, Tokyo
141-8587 JAPAN

Fertigungsstätte Manufacturing Plant

Ichinoseki Hirose Electric Co., Ltd.
14-36 Higashidai
Ichinoseki-shi, Iwate
021-0822 JAPAN

Prüfzeichen Test Mark

Geprüft nach Tested acc. to
EN 61984:2009



Zertifiziertes Produkt (Geräteidentifikation)
Certified Product (Product Identification)

Lizenzentgelte - Einheit
License Fee - Unit

Steckverbinder Connector without breaking capacity, as page 0001

Addition

Type Designation: EM35MRA-4PC (zz)
(zz) = (01) - (99) or blank

1

1

ANLAGE (Appendix): 1.1

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde und es bestätigt die Konformität des Produktes mit den oben genannten Standards und Prüfgrundlagen. Zusätzliche Anforderungen in Ländern, in denen das Produkt in Verkehr gebracht werden soll, müssen zusätzlich betrachtet werden. Die Herstellung des zertifizierten Produktes wird überwacht.

This certificate is based on our Testing and Certification Regulation and states the conformity of the product with the standards and testing requirements as indicated above. Any additional requirements in countries where the product is going to be marketed have to be considered additionally. The manufacturing of the certified product is subject to surveillance.

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg
Tel.: (+49/221)8 06 - 13 71 e-mail: cert-validity@de.tuv.com
Fax: (+49/221)8 06 - 39 35 http://www.tuv.com/safety



Zertifizierungsstelle

Dipl.-Ing. (FH) J. Taylor



TÜVRheinland®
DIN CERTCO

Certificate No. R50204909
Our reference ZJL-MAS- 12023140 002
Appendix No. 1.1

(To be filled in by TÜV Rheinland)



Constructional Data Form

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License holder: Hirose Electric Co., Ltd.
5-5-23 Osaki, Shinagawa-ku, Tokyo 141-8587 Japan
Factory: Ichinoseki Hirose Electric Co., Ltd.
(Full address) 14-36 Higashidai, Ichinoseki-shi, Iwate 021-0822 Japan
Type or Model Number: EM35MP-4SC(zz), EM35MP-4PC(zz), EM35MR-4SC(zz),
EM35MR-4PC(zz), EM35MRA-4PC(zz)
EM-SC-113(zz), EM-PC-113(zz), EM-SC-143(zz), EM-PC-143(zz),
Kind of device: Connector without breaking capacity

Specifications	
Type designation	EM35MP-4SC(zz), EM35MP-4PC(zz), EM35MR-4SC(zz), EM35MR-4PC(zz), EM35MRA-4PC(zz) EM-SC-113(zz), EM-PC-113(zz), EM-SC-143(zz), EM-PC-143(zz), EM-GK(zz)
Contact material	Copper alloy, plating optional.
Number of poles	4
Rated voltage	AC / DC 500 V
Rated current	30 A(EM-xx-113) or 50 A(EM-xx-143)
Rated frequency	50 / 60 Hz
Mechanical endurance	100 times
Number of bendings (non-rewirable terminals only)	N/A
Classification	☐ CBC ☒ Non CBC ☐ other:
Upper limit temperature	125 °C
Lower limit temperature	- 40 °C
Max. ambient temp. at rated current	95 °C
IP code	IP 00

TÜV Rheinland

Tokyo, Japan

(Place)

2012-05-16

(Date)

Hirose Electric Co., Ltd.

Kenichi SATO

(Stamp and Signature of Applicant)

2012 May 17 *M. Hasuda*
(Date) (Signature)



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Constructional Data Form

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Insulation Coordination	
Overvoltage category	III
Pollution degree	3
Test voltages	contact – contact :4,260 V Din rail – contact :4,260 V
Minimum creepage distances	EM35MP-4PC+ EM-PC-143 contact – contact :17.7 mm Din rail – contact :41.8mm
Minimum clearance	EM35MP-4PC+ EM-PC-143 contact – contact :9.8 mm Din rail – contact :24.2mm
Insulation system (IEC 60664-1) <i>Under the following conditions: U_i = 500V, OV-cat. III Material gr. IIIa, Poll. deg. 3</i>	contact– contact: ☒ basic ☐ reinforced ☐ N/A Din rail – contact: ☐ basic ☒ reinforced ☐ N/A

Specifications (terminals)	
Type of terminals	☐ WRAPPED CONNECTION ☒ CRIMPED CONNECTION ☐ CLIP CONNECTION ☐ PRESS-IN CONNECTIONS ☐ INSULATION DISPLACEMENT CONNECTION ☐ SCREWLESS TERMINALS ☐ SCREW TERMINALS ☐ FLAT, QUICK CONNECT TERMINATIONS ☐ SOLDER TERMINALS ☐ other:
Spec. Tightening torque	N/A
Rated cross section of conductor	EM-xx-113: 5.5 mm ² , EM-xx-143: 8.44–8.92 mm ²
Kind of conductor	Flexible
Required preparation of the conductor	N/A
Max. Stripping length	Male contact: 11 mm Female contact: 11 mm
Max. Number of conductors per terminal	1

TÜV Rheinland

Tokyo, Japan

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(Date) (Signature)



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Materials	
Contact material	Copper alloy, plating optional.
Contact block	PBT: 1) type 420SE0J (SABIC INNOVATIVE PLASTICS) CTI: 175 V, RTI: 130 °C 2) type BT-2235-BLAC-10 (DIC) CTI: 250 V, RTI: 125 °C
Connector body	Same as above
Other parts	Retainer: PBT , Guide key: PBT

TÜV Rheinland

Tokyo, Japan

(Place)

2012-05-16

(Date)

3rd. May. 17 *M. Hasuda*
(Date) (Signature)

Hirose Electric Co., Ltd.

Kenichi SATO

(Stamp and Signature of Applicant)

K. SATO



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Constructional Data Form

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TYPE NOMENCLATURE:

1. Plug

Example: EM35MP- 4 xx (zz)

(i) (ii)

(i) Contact type

SC: female contact (crimp contact)

PC: male contact (crimp contact)

(ii) Customer specifications (packaging and color)

none or (01) to (99)

2. Receptacle

Example1: EM35MR- 4 xx (zz)

(i) (ii)

(i) Mounted contact type

SC: female contact (crimp contact)

PC: male contact (crimp contact)

(ii) Customer specifications (packaging and color)

none or (01) to (99)

Example2: EM35MRA- 4 xx (zz)

(i) (ii)

(i) Mounted contact type

PC: male contact (crimp contact)

(ii) Customer specifications (packaging and color)

none or (01) to (99)

TÜV Rheinland

Tokyo, Japan

(Place)

2012-05-16

(Date)

2012. May 17

(Date)

K. Sasada

(Signature)

Hirose Electric Co., Ltd.

Kenichi SATO

(Stamp and Signature of Applicant)

K. Sato



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3. Crimp contact

Example: EM- xx -yy (zz)

(i) (ii) (iii)

(i) Contact type

SC: female contact

PC: male contact

(ii) Discriminate contact shape

113 or 143

(iii) Customer specifications (packaging and color)

none or (01) to (99)

4. Guide key

Example: EM- GK (zz)

(iii)

(iii) Customer specifications (packaging and color)

none or (01) to (99)

TÜV Rheinland

Tokyo, Japan

(Place)

2012-05-16

(Date)

2012. May. 17 *M. Hasuda*
(Date) (Signature)

Hirose Electric Co., Ltd.

Kenichi SATO

(Stamp and Signature of Applicant)

K. Sato