

Zertifikat

Certificate



Zertifikat Nr. *Certificate No.*
R 50574082

Blatt *Sheet*
0001

Ihr Zeichen *Client Reference*
TUV-0350N

Unser Zeichen *Our Reference*
ZJL-WURO-JP23BZBO 001

Ausstellungsdatum
14.02.2023

Date of Issue
(day/mo/yr)

Genehmigungsinhaber *License Holder*
Sato Parts Co., Ltd.
3-3-8, Sotokanda,
Chiyoda-ku, Tokyo
101-0021 Japan

Fertigungsstätte *Manufacturing Plant*
Sato Parts Co., Ltd. Niigata Factory
2255-2 Torigoe
Nagaoka-shi, Niigata
940-2316 Japan

Prüfzeichen *Test Mark*



Type Approved
Safety
Regular Production
Surveillance

www.tuv.com
ID 1111264796

Geprüft nach *Tested acc. to*
EN IEC 60947-7-4:2019

**Zertifiziertes Produkt (Geräteidentifikation)
*Certified Product (Product Identification)***

**Lizenzentgelte - Einheit
*License Fee - Unit***

Serial Terminal Block PCB terminal blocks

Type Designation: ML-350-xP 7
x = 2 or 3, - is optional

Number of Poles: 2, 3
Rate Insulation Voltage: AC/DC 600V
Rated (Thermal) Current: 40A
Rated Withstand Impulse Voltage: 6kV
Pollution Degree: 3
Protection Degree: IP00
Rated Connecting Capacity:
Prepared: "f" 0.2mm² - 8mm² / AWG 24 - AWG 8
Un-prepared: "f" 1.25mm² - 5.5mm² / AWG 16 - AWG 10
"r" Φ 1.2mm - Φ 2mm / AWG 16 - AWG 12

Lower/Upper Limit Temperature: -40°C/130°C
Ambient Temperature Range at Rated Current: -20°C - 85°C



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ANLAGE (Appendix): 1.0

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.

Zertifizierungsstelle

TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg

http://www.tuv.com/safety E-mail: markcheck@tuv.com
Fax: +49 221 806-3935

Dipl.-Ing. (FH) F. Becker

Constructional Data Form for Terminal Block

License-holder : Sato Parts Co., Ltd.
 (full address) 3-3-8 Sotokanda, Chiyoda-ku, Tokyo 101-0021 Japan

Factory : Sato Parts Co., Ltd. Niigata Factory
 (full address) 2255-2 Torigoe Nagaoka-shi, Niigata 940-2316 Japan

Type or Model Number : **ML-350 series**

Kind of device: **PCB Screw Terminal Block**

General specifications	
Type designation	ML-350 series
Type of clamping units	<input checked="" type="checkbox"/> screw-type <input type="checkbox"/> screwless-type
Number of poles	2, 3
Rated insulation voltage (Ui)	AC/DC 600V
Rated Current / Rated Thermal Current (Ith, if applicable)	40A
Short-time withstand current	1008A (120A/mm ²)
Rated Frequency (if applicable)	50/60Hz or DC
Upper Limiting Temperature (if applicable)	130°C
Lower Limit Temperature (if applicable)	-40°C
Max. ambient temp. / range (at rated current)	-20°C - 85°C
Overvoltage category / Uimp	III / 6kVp
Pollution degree	3
IP code	IP00
Shock condition (if applicable)	N/A
Vibration condition (if applicable)	N/A

TÜV Rheinland

 8 February 2023
 (Date) (Signature)

Akihabara, Tokyo
 (Place)

8 February 2023
 (Date)

TAKESHI MIURA


 (Stamp and Signature of Applicant)

Constructional Data Form for Terminal Block

Terminal block specifications	
Terminal Assembly	One clamping units / terminal
Method of fixing the terminal block to the support	PCB mounting
Rated cross-section	Prepared (fitted with flat lug terminals) : 8 mm ² /AWG 8 Un-prepared: 5.5 mm ² / AWG10
Rated Connecting Capacity	Prepared conductor (fitted with flat lug terminals) Flexible : 0.2 mm ² - 8 mm ² , AWG 24 - AWG 8 Un-prepared conductor Flexible : 1.25 mm ² – 5.5 mm ² , AWG 16 - AWG 10 Rigid : Φ1.2mm – Φ2mm , AWG 16 – AWG 12
Kind of conductor	<input checked="" type="checkbox"/> Prepared conductor : Fitted with Flat lug terminals
	<input checked="" type="checkbox"/> Un-prepared conductor
	<input checked="" type="checkbox"/> Rigid <input checked="" type="checkbox"/> Stranded <input checked="" type="checkbox"/> Flexible
Max. Stripping length	8 mm (for Un-prepared conductor)
Max. Number of conductors per clamping unit	2
Clamping units	M4 Pressure wire connector - Screw with square washer
Size of screws / Specified tightening torque	M4 / 1.8 N·m
Material of clamping units	<input checked="" type="checkbox"/> Fixed part : Copper alloy (Cu≥99%) , Tin plated <input checked="" type="checkbox"/> Screw : Steel with Nickel plated <input checked="" type="checkbox"/> Clamping plate : Steel with Nickel plated <input checked="" type="checkbox"/> Locking means(spring washer) : Steel with Nickel plated

Insulation system		
Insulation system	<i>pole-pole:</i>	<input type="checkbox"/> N/A <input type="checkbox"/> functional <input checked="" type="checkbox"/> basic <input type="checkbox"/> reinforced
	<i>live parts – outside:</i>	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> functional <input type="checkbox"/> basic <input type="checkbox"/> reinforced
	<i>live parts - mounting support:</i>	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> functional <input type="checkbox"/> basic <input type="checkbox"/> reinforced
Test voltages	<i>pole-pole:</i>	6kVpk (impulse withstanding voltage_7.3kVpk at sea level), 4200Vr.m.s withstanding voltage
	<i>live parts – outside:</i>	N/A
	<i>live parts - mounting support:</i>	N/A
Minimum creepage distances	<i>pole-pole:</i>	13.1 mm
	<i>live parts – outside:</i>	-
	<i>live parts - mounting support:</i>	-
	Note: Reference the min. creepage distance measured between the fixed part of clamping units, because the ring terminals were protected by insulation tubing.	
Minimum clearances	<i>pole-pole:</i>	9.9 mm
	<i>live parts – outside:</i>	-

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Constructional Data Form for Terminal Block

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	<i>live parts - mounting support:</i>	-
Note: Reference the min. clearances distance measured between the fixed part of clamping units, because the ring terminals were protected by insulation tubing.		

Additional information for attachment of terminal block on its support

Accessories & Attachment :	Insulation Terminal Cover, and/or Copper Alloy Jumper
Material of attachment for fixing :	See appended table for details
Other information :	Insulation Cover and Copper Alloy Jumper are optional.

Insulation / Plastic Materials

Part	Material	Type designation Manufacturer	RTI	Flammability	Material group
Base	PBT	Grade: CN7015, POLYPLASTICS CO LTD (UL File No.E213445)	130°C	V-0(0.66mm)	IIIa
Cover (Optional)	Polycarbonate	Grade: A2500, IDEMITSU KOSAN CO LTD (UL File No.E48268)	130°C	V-2 (0.36mm)	II
Jumper (Optional)	Copper Alloy	Copper Alloy (Cu \leq 64-68%), with Nickel plated	---	---	---

TYPE NOMENCLATURE:

Example : ML – 350 – x P

ML-350 – Basic construction (Model No.)

x – Number of Pole(s) : 2 or 3

Note : Dashes are optional.

End of the documentation.

TÜV Rheinland


8 February 2023

(Date)

(Signature)

Akihabara, Tokyo

(Place)

8 February 2023

(Date)

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NOTICE OF ALTERATIONS/MODIFICATION (変更通知)

Applicant (申請会社名):	SATO PARTS Co.,Ltd.	Page:	1 of 1
Signature (サイン):	<i>T. Miuchi</i>	Ref. No.:	Date: 2023.5.17
Product (製品名):	PCB Screw Terminal Blocks	Type designation (型式):	ML-350
Report No.:	JP23BZBO 002	License No.:	R 50574082

TÜV-Rheinland-Japan
Genehmigt/Approved
2023-06-07

Referen
Rep. No.:
JP23BZBO 002
(#150278577)

Methods (Design / Component) Presently Employed (変更前：現行)	Alteration/Modification to be Introduced (変更後)
<p style="text-align: center;">ML-350-2P ML-350-3P A-A SECTION</p>	<ul style="list-style-type: none"> Both end walls are thicker Back wall moved <p style="text-align: center;">ML-350-2P ML-350-3P A-A SECTION</p> <p style="margin-top: 10px;">Note: See the updated photo-documentation for details.</p>

● 記入の仕方： 変更前（現行）と変更後の対比、違いが明確に理解できる書き方（英語）をお願いします。
特に1次側の変更か2次側の変更かを明記下さい。