

## Type Approval Certificate Extension

*This is to certify* that Certificate No. 07/10024(E2) for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

PRODUCER	Terasaki Electric Co., Ltd. 7-2-10 Hannan-cho, Abeno-ku, Osaka, 545-0021 Japan
PLACE OF PRODUCTION	Kami Factory 6-13-47 Kamihigashi, Hirano-ku, Osaka, 547-0002 Japan  Yabakei Factory 1073-1 Tobaru, Yabakei-cho, Nakatsu-shi, Oita-ken, 871-0404 Japan  Terasaki Electric (M) Sdn. Bhd. Malaysia Factory Lot 3, Jalan 16/13D, 40000 Shah Alam, Selangor Darul Ehsan, Malaysia
DESCRIPTION	Moulded Case Circuit Breakers
TYPE	TL-100C, TL-100F, TL-225B, TL-225F, TL-400, TL-400E, TL-600, TL-800, XE100NS, E100-SF
APPLICATION	Protection and switching of distribution circuits for marine, offshore and industrial applications for use in environmental categories ENV1, ENV2 and ENV3 as defined in LR Type Approval System Test Specification No. 1-2002 where the Test Specification is satisfactory for the intended operation.
DESIGN CODE STANDARD	IEC 60947-2
Certificate No.	07/10024(E3)
Issue Date	19 September 2010
Expiry Date	10 September 2015
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H. Murase  
Yokohama Design Support Office  
Lloyd's Register

*Lloyd's Register, registered office:*  
71 Fenchurch Street, London EC3M 4BS

## RATINGS

Type	Poles	Current Rating at 45°C (A)	Rated Voltage (V.a.c.)	Breaking current (r.m.s.) (kA) Icu / Ics	Making current (peak asymmetrical) (kA)	Power factor Icu / Ics	Over current Release	Standard Utilisation category
TL-100C	3	15 - 100	690 450	50 / 38 180 / 135	115 419	0.15 / 0.17 0.14 / 0.14	Thermal & Inst	IEC 60947-2 Cat.A
TL-100F	3	15 - 100	450	120 / 60	287	0.12 / 0.11	Thermal & Inst	IEC 60947-2 Cat.A
TL-225B	3	125 - 225	690 450	50 / 38 180 / 135	115 419	0.15 / 0.17 0.14 / 0.14	Thermal & Inst	IEC 60947-2 Cat.A
TL-225F	3	125 - 225	450	120 / 60	287	0.12 / 0.11	Thermal & Inst	IEC 60947-2 Cat.A
TL-400	3	125 - 400	690 450	50 / 38 180 / 135	115 419	0.15 / 0.17 0.14 / 0.14	Thermal & Inst	IEC 60947-2 Cat.A
TL-400E	3	125 - 400	450	120 / 60	287	0.12 / 0.13	Thermal & Inst	IEC 60947-2 Cat.A
TL-600	3	450 - 600	690 450	50 / 38 180 / 135	115 419	0.15 / 0.17 0.14 / 0.14	Thermal & Inst	IEC 60947-2 Cat.A
TL-800	3	700 - 800	690 450	50 / 38 180 / 135	115 419	0.15 / 0.17 0.14 / 0.14	Thermal & Inst	IEC 60947-2 Cat.A
XE 100NS	2, 3	10 - 100	450 240 120	10 / 5 25 / 13 42 / -	17.2 60.5 97.9	0.47 / 0.51 0.11 / 0.28 0.14 / -	Thermal & Inst	IEC 60947-2 Cat.A
E100-SF	2,3	10-100	450 240 120	10 / 5 25 / 13 42 / -	17.2 60.5 97.9	0.47 / 0.51 0.11 / 0.28 0.14 / -	Thermal & Inst	IEC 60947-2 Cat.A

Note : Thermal & Inst : Thermal overload release and Instantaneous magnetic short-circuit release

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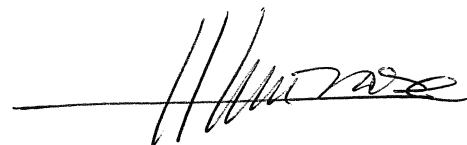
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*"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register of any modification or changes to the equipment in order to obtain a valid certificate."*

*The attached Design Appraisal Document No. 07/10024(E3) and its supplementary Type Approval Terms and Conditions form part of this Certificate.*

All other details remain as the previous Certificate No. 07/10024(E2) to which this extension should be attached.

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