

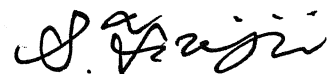
## Type Approval Certificate Extension

This is to certify that Certificate No. 91/10291(E4) for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

<b>PRODUCER</b>	Terasaki Electric Co., Ltd. 7-2-10 Hannan-cho, Abeno-ku, Osaka, 545-0021 Japan
<b>PLACE OF PRODUCTION</b>	Kami Factory 6-13-47 Kami-Higashi, Hirano-ku, Osaka, 547-0002 Japan  Yabakei Factory 1073-1 Tobaru, Yabakei-machi, Shimoge-gun, Oita-ken, 871-0404 Japan
<b>DESCRIPTION</b>	Moulded Case Circuit Breakers
<b>TYPE</b>	E400-NJ, S400-CF, S400-CJ, S400-GF, S400-GJ, S400-NF, S400-NJ, S630-CF, S800-CF, S800-CJ, S630-NF, S800-NF, S800-NJ, S630-NE, S630-NEH, S800-NE, S800-NEH, H630-NE, H800-NE, L630-NE, L800-NE, XH225NE, XS400NE, XS600NE, XS800NE, XS1200NE, XS1600NE, XS2000NE, XS2000ND
<b>APPLICATION</b>	Protection and switching of distribution circuits for marine, offshore and industrial applications
<b>DESIGN CODE STANDARD</b>	IEC 60947-1, IEC 60947-2, JIS C 8370 (1986)

Certificate No.	91/10291(E5)
Issue Date	8 August 2011
Expiry Date	7 August 2016
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Lloyd's Register

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

## RATINGS 1

Complied with IEC 60947-1, IEC60947-2

Type	Poles	Current Rating at 45°C (A)	Rated Voltage (V)	Breaking current (r.m.s.) (kA) Icu / Ics	Making current (peak asymmetrical) (kA) Icu / Ics	Power factor / Time constant (ms) Icu / Ics	Icw (kA)	Over current Release
E400-NJ	3	160 - 400	AC 525	15 / 15	34.5 / 34.5	0.15 / 0.15	-	
			AC 450	22 / 22	50.7 / 50.7	0.15 / 0.15		
			AC 415	25 / 25	52.5 / 52.5	0.25 / 0.25		
			AC 240	35 / 35	83.6 / 83.6	0.12 / 0.12		
			DC 250	25 / 19	25 / 19	16.1 / 11.8*	-	
S400-CF	3	125 - 400	AC 690	15 / 15	32.6 / 32.6	0.20 / 0.20	-	
			AC 450	30 / 30	70.8 / 70.8	0.13 / 0.13		
S400-CJ		160 - 400	AC 415	36 / 36	75.6 / 75.6	0.25 / 0.25		
			AC 240	50 / 50	121 / 121	0.11 / 0.11		
			DC 250	40 / 40	40 / 40	15.1 / 15.1*	-	Thermal & Inst
S400-GF	3	125 - 400	AC 690	20 / 15	43.0 / 32.6	0.21 / 0.20	-	
			AC 450	65 / 50	157 / 121	0.11 / 0.11		
S400-GJ		160 - 400	AC 415	70 / 50	154 / 105	0.20 / 0.25		
			AC 240	100 / 85	233 / 211	0.14 / 0.09		
			DC 250	40 / 40	40 / 40	15.1 / 15.1*	-	
S400-NF	3	125 - 400	AC 690	20 / 15	43.0 / 32.6	0.21 / 0.20	-	
			AC 450	45 / 45	109 / 109	0.11 / 0.11		
S400-NJ		160 - 400	AC 415	50 / 50	105 / 105	0.25 / 0.25		
			AC 240	85 / 85	211 / 211	0.09 / 0.09		
			DC 250	40 / 40	40 / 40	15.1 / 15.1*	-	

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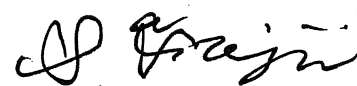
Type	Poles	Current Rating at 45°C (A)	Rated Voltage (V)	Breaking current (r.m.s.) (kA) Icu / Ics	Making current (peak asymmetrical) (kA) Icu / Ics	Power factor / Time constant (ms) Icu / Ics	Icw (kA)	Over current Release
S630-CF	3	500 - 630	AC 690	10 / 10	21.1 / 21.1	0.23 / 0.23		
			AC 525	15 / 15	30 / 30	0.30 / 0.30		
S800-CF		700, 800	AC 450	30 / 30	70.8 / 70.8	0.13 / 0.13		
S800-CJ		400 - 800	AC 415	36 / 36	75.6 / 75.6	0.25 / 0.25		
			AC 240	50 / 50	117 / 117	0.14 / 0.14		
S630-NF	3	500 - 630	AC 690	20 / 20	43.0 / 43.0	0.21 / 0.21		Thermal & Inst
			AC 525	30 / 30	63 / 63	0.25 / 0.25		
S800-NF		700,800	AC 450	50 / 50	121 / 121	0.11 / 0.11		
S800-NJ		400 - 800	AC 415	50 / 50	105 / 105	0.25 / 0.25		
			AC 240	85 / 85	211 / 211	0.09 / 0.09		
XS2000ND	2**,3	2000	DC 250	40 / -	- / -	24.0 / - *	-	
H630-NE	3	250 - 630	AC 690	25 / 20	53.8 / 43.0	0.21 / 0.21	10 (0.3sec)	Elect-Long, Short & Inst
			AC 525	45 / 34	94.5 / 71.4	0.25 / 0.25		
H800-NE		252 - 800	AC 450	125 / 94	295 / 225	0.13 / 0.12		
			AC 415	125 / 94	275 / 206.8	0.20 / 0.20		
			AC 240	150 / 150	350 / 350	0.14 / 0.14		
L630-NE	3	250 - 630	AC 690	25 / 20	53.8 / 43.0	0.21 / 0.21	10 (0.3sec)	
			AC 525	45 / 34	94.5 / 71.4	0.25 / 0.25		
		AC 450	180 / 135	430 / 315	0.12 / 0.14			
L800-NE		252 - 800	AC 415	200 / 150	440 / 330	0.20 / 0.20		
			AC 240	200 / 150	484 / 350	0.11 / 0.14		

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Type	Poles	Current Rating at 45°C (A)	Rated Voltage (V)	Breaking current (r.m.s.) (kA) Icu / Ics	Making current (peak asymmetrical) (kA) Icu / Ics	Power factor / Time constant (ms) Icu / Ics	Icw (kA)	Over current Release
S630-NE	3	250 - 630	AC 690	20 / 20	43.0 / 43.0	0.21 / 0.21	10 (0.3sec)	Elect-Long, Short & Inst
S630-NEH		250 - 630	AC 525	30 / 30	63 / 63	0.25 / 0.25		
S800-NE		252 - 800	AC 450	50 / 50	121 / 121	0.11 / 0.11		
S800-NEH		252 - 800	AC 415	50 / 50	105 / 105	0.25 / 0.25		
S800-NEH		252 - 800	AC 240	85 / 85	211 / 211	0.09 / 0.09		

## RATINGS 2

Complied with JIS C 8370 (1986)

Type	Poles	Current Rating at 45°C (A)	Rated Voltage (V)	Breaking current (r.m.s.) (kA) Icu / Ics	Making current(peak asymmetrical) (kA) Icu / Ics	Power Factor Icu / Ics	Over current Release
XH225NE	3	75 - 225	AC 500	5.09 / -	9.4 / -	0.44 / -	Elect-Long & Short
			AC 250	5.09 / -	9.4 / -	0.44 / -	
			AC 500	51.9 / -	121 / -	0.11 / -	Elect-Long, short & Inst
			AC 250	88.8 / -	204 / -	0.14 / -	
XS400NE	3	125 - 400	AC 500	5.09 / -	9.4 / -	0.44 / -	Elect-Long & Short
			AC 250	5.09 / -	9.4 / -	0.44 / -	
			AC 500	51.9 / -	121 / -	0.11 / -	Elect-Long, short & Inst
			AC 250	88.8 / -	204 / -	0.14 / -	

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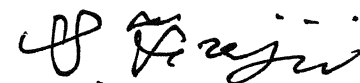
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Type	Poles	Current Rating at 45°C (A)	Rated Voltage (V)	Breaking current (r.m.s.) (kA) Icu / Ics	Making current(peak asymmetrical) (kA) Icu / Ics	Power Factor Icu / Ics	Over current Release
XS600NE	3	300 - 600	AC 500	10.2 / -	19.3 / -	0.32 / -	Elect-Long & Short
			AC 250	10.2 / -	19.3 / -	0.32 / -	
			AC 500	53.5 / -	125 / -	0.14 / -	Elect-Long, short & Inst
			AC 250	88.8 / -	204 / -	0.14 / -	
XS800NE	3	400 - 800	AC 500	10.2 / -	19.3 / -	0.32 / -	Elect-Long & Short
			AC 250	10.2 / -	19.3 / -	0.32 / -	
			AC 500	53.5 / -	125 / -	0.14 / -	Elect-Long, short & Inst
			AC 250	88.8 / -	204 / -	0.14 / -	
XS1200NE	3	200 - 1200	AC 500	15.4 / -	31.4 / -	0.24 / -	Elect-Long & Short
			AC 250	15.4 / -	31.4 / -	0.24 / -	
			AC 500	53.5 / -	125 / -	0.14 / -	Elect-Long, short & Inst
			AC 250	88.8 / -	204 / -	0.14 / -	
XS1600NE	3	800 - 1600	AC 500	21.5 / -	51.5 / -	0.15 / -	Elect-Long & Short
			AC 500	87.1 / -	194.9 / -	0.15 / -	Elect-Long, short & Inst
XS2000NE	3	1000 - 2000	AC 500	43 / -	102.9 / -	0.13 / -	Elect-Long & Short
			AC 500	87.1 / -	194.9 / -	0.15 / -	Elect-Long, short & Inst

Note : \* Time constant (ms)  
\*\* 3 poles with center pole omitted

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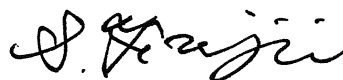
Thermal & Inst	: Thermal overload release and Instantaneous magnetic short-circuit release
Elect-Long & Short	: Electronic type overload release (long time delay trip & Short time delay trip) with adjustable current & trip setting
Elect-Long, Short & Inst	: Electronic type overload release ( long time delay trip & Short time delay trip) with adjustable current & trip setting and Instantaneous trip with adjustable current setting

*"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. 91/10291(E5) and its supplementary Type Approval Terms and Conditions form part of this Certificate.*

All other details remain as the previous Certificate No. 91/10291(E4) to which this extension should be attached.

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