

Type Approval Certificate Extension

This is to certify that Certificate Nos. 96/10020(E3) and 03/10060(E1) 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 Kami-Higashi, Hirano-ku, Osaka, 547-0002 Japan Yabakei Factory 1073-1 Tobaru, Yabakei-machi, Shimoge-gun, 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, Back-Up Protection
TYPE	E, H, L, S, TB, TL, XE, XH and XS Series
APPLICATION	Protection and switching of distribution circuits for marine, offshore and industrial applications
DESIGN CODE	IEC 60947-1, IEC 60947-2; Annex A

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RATINGS

450 Va.c. Short-Circuit Breaking Current (Sym. r.m.s. kA) / Making Current (Asym. Peak kA) in Cascade Back-Up Protection

Back-up breaker Branch breaker	XS50NB XS60NS XE100NS	XS100NB	E125-NJ	E250-NJ	S100-NF S125-NJ	S160-NJ S225-NF S250-NJ	S400-CF S400-CJ
XS30NB	10/28.6	10/28.6	5/8.17	5/8.17	10/17.3	5/8.17	
XE50NB	10/28.6	10/28.6	5/8.17	5/8.17	10/17.3	5/8.17	
XS50CB	10/28.6	15/31.4	10/17.3		15/32.6		
XS50NB, XS60NS XE100NS		22/50.6	15/32.6	15/32.6	22/51.9	15/32.6	
XS100NB						25/56.2	30/70.8
E125-NJ						25/56.2	30/70.8
E250-NJ						25/56.2	30/70.8
S100-NF, S125-NJ						25/56.2	30/70.8
S160-NJ, S225-NF S250-NJ							30/70.8

Back-up breaker Branch breaker	XS600CS XS800CS	S50-GF S100-GF S125-GJ	S160-GJ S225-GF S250-GJ	XH225NE	S400-NF S400-NJ	S400-GF S400-GJ	XS400NE
XS50CB		15/32.6					
XS50NB, XS60NS XE100NS		22/51.9	15/32.6				
XS100NB	30/72.6	42/96.7	42/96.7	30/72.6	30/70.8	30/70.8	30/72.6
E125-NJ	30/70.8	30/70.8	30/70.8	30/70.8	30/70.8	30/70.8	30/70.8
E250-NJ	30/70.8		30/70.8	30/70.8	30/70.8	30/70.8	30/70.8
S100-NF, S125-NJ	30/70.8	42/96.7	42/96.7	30/70.8	30/70.8	30/70.8	30/70.8
S160-NJ, S225-NF S250-NJ	30/70.8		42/96.7	42/96.7	42/96.7	42/96.7	42/96.7
S400-CF, S400-CJ					50/121	50/121	50/121

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450 Va.c. Short-Circuit Breaking Current (Sym. r.m.s. kA) / Making Current (Asym. Peak kA) in Cascade Back-Up Protection

Back-up breaker Branch breaker	XS600NS	XS600NE	XS800NS XS800NE	XH800PS	H100-NF H125-NJ	H225-NF H160-NJ H225-NJ H250-NJ	H400-NF H400-NJ
XS50NB, XS60NS XE100NS					22/50.1		
XS100NB	30/72.6	30/72.6	30/72.6	30/70.8	50/121	50/121	50/121
E125-NJ	30/70.8	30/70.8	30/70.8	30/70.8	50/121	50/121	50/121
E250-NJ	30/70.8	30/70.8	30/70.8	30/70.8		50/121	50/121
S100-NF, S125-NJ	30/70.8	30/70.8	30/70.8	30/70.8	50/121	50/121	50/121
S160-NJ, S225-NF S250-NJ	42/96.7	42/96.7	42/96.7	42/96.7		70/165	70/165
S400-CF, S400-CJ	50/117	50/117	50/117	50/117			100/230
XS600CS	50/125	50/125	50/125	50/117			
XS800CS			50/125	50/117			
S50-GF, S100-GF S125-GJ					70/165	70/165	70/165
S160-GJ, S225-GF S250-GJ						70/165	70/165
XH225NE							100/230
XS400NE							100/230
S400-NF, S400-NJ							100/230
S400-GF, S400-GJ							100/230

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450 V.a.c. Short-Circuit Breaking Current (Sym. r.m.s. kA) / Making Current (Asym. Peak kA) in Cascade Back-Up Protection

Back-up Breaker Branch Breaker	TL- 600NE	TL- 800NE	L100-NF L125-NJ	L225-NF L160-NJ L225-NJ L250-NJ	TL-400	TL-600	TL-800
XS50NB, XS60NS XE100NS			180/430				
XS100NB	30/65.2	30/65.2	180/430	70/165	70/165	30/72.6	30/72.6
E125-NJ	30/65.2	30/65.2	180/430	70/165	70/165	30/70.8	30/70.8
E250-NJ	30/65.2	30/65.2		70/165	70/165	30/70.8	30/70.8
S100-NF, S125-NJ	30/65.2	30/65.2	180/430	70/165	70/165	30/70.8	30/70.8
S160-NJ, S225-NF S250-NJ	50/112	50/112		130/311	130/307	85/203	85/203
S400-CF, S400-CJ	70/165	70/165				100/230	100/230
XS600CS	100/230	100/230				130/312	130/312
XS800CS		100/230					130/312
S50-GF, S100-GF S125-GJ			180/430	85/203	85/203		
S160-GJ, S225-GF S250-GJ				130/311	130/307	85/203	85/203
XH225NE	100/230	100/230			130/312	130/312	130/312
XS400NE	100/230	100/230			130/312	130/312	130/312
S400-NF, S400-NJ	100/230	100/230				130/303	130/303
S400-GF, S400-GJ	100/230	100/230				130/303	130/303
XS600NE	100/230	100/230				130/312	130/312
XS600NS	100/230	100/230				130/312	130/312
XS800NE		100/230					130/312
XS800NS		100/230					130/312
H100-NF H125-NJ			180/430				
H225-NF, H160-NJ H225-NJ, H250-NJ				130/311			
H400-NF, H400-NJ						180/396	180/396

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450 Va.c. Short-Circuit Breaking Current (Sym. r.m.s. kA) / Making Current (Asym. Peak kA) in Cascade Back-Up Protection

Back-up breaker / Branch breaker	XE225NS	XS225NS	XS400CS	XS600CS XS800CS	XH50NS	XH100NS	XH225NS
XS30NB	5/9.4	5/9.4					
XE50NB	5/9.4	5/9.4					
XS50CB					15/31.4	15/31.4	
XS50NB, XS60NS XE100NS	15/31.4	15/31.4			22/50.6	22/50.6	15/31.4
XS100NB		25/56.6	30/72.6			42/96.8	42/96.8
E125-NJ			30/70.8				
XE225NS		25/56.6	30/72.6	30/72.6			30/72.6
E250-NJ			30/70.8				
S100-NF, S125-NJ			30/70.8				
XS225NS			30/72.6	30/72.6			42/96.8
S160-NJ, S225-NF S250-NJ			30/70.8				

Back-up breaker / Branch breaker	XH225NE	XS400NS	XS400NE	XS600NS XS600NE XS800NS XS800NE	XH800PS
XS100NB		30/72.6			
E125-NJ		30/70.8			
XE225NS	30/72.6	30/72.6	30/72.6	30/72.6	30/70.8
E250-NJ		30/70.8			
S100-NF, S125-NJ		30/70.8			
XS225NS	42/96.8	42/96.8	42/96.8	42/96.8	42/96.7
S160-NJ, S225-NF S250-NJ		42/96.7			
XS400CS		50/125	50/121	50/125	50/117

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450 Va.c. Short-Circuit Breaking Current (Sym. r.m.s. kA) / Making Current (Asym. Peak kA) in Cascade Back-Up Protection

Back-up breaker Branch breaker	TL-100F	TL-225F	TL-400E	TL-600NE TL-800NE	TL-100C	TL-225B	TL-400
XS50NB, XS60NS XE100NS	22/50.1				180/416		
XS100NB	50/117	50/117	50/117		180/416	70/165	
E125-NJ	50/112	50/112	50/112		180/430	70/165	
XE225NS		50/117	50/117	30/65.2		70/165	70/165
E250-NJ		50/112	50/112			70/165	
S100-NF, S125-NJ	50/112	50/112	50/112		180/430	70/165	
XS225NS		70/161	70/161	70/161		130/312	130/312
S160-NJ, S225-NF S250-NJ		70/165	70/165			130/307	
XS400CS			100/225	70/161			130/312
XH50NS	70/161	70/161	70/161		180/416	85/198	85/198
XH100NS	70/161	70/161	70/161		180/416	85/198	85/198
S50-GF, S100-GF, S125-GJ	70/165	70/165	70/165		180/430	85/203	
XH225NS		70/161	70/161	70/161		130/312	130/312
S160-GJ, S225-GF, S250-GJ		70/165	70/165			130/307	
XH225NE			100/225				
XS400NE			100/225				
XS400NS			100/225	100/230			130/312
TL-100F					180/396		
TL-225F						130/311	

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Back-up breaker / Branch breaker	L400-NF	L400-NJ	TL-600	TL-800
XS100NB	70/165	70/165		
E125-NJ	70/165	70/165		
XE225NS			30/72.6	30/72.6
E250-NJ	70/165	70/165		
S100-NF, S125-NJ	70/165	70/165		
XS225NS			85/198	85/198
S160-NJ, S225-NF S250-NJ	130/311	130/311		
XS400CS			100/233	100/233
S400-CF, S400-CJ	130/311	130/311		
S50-GF, S100-GF, S125-GJ	85/203	85/203		
XH225NS			85/198	85/198
S160-GJ, S225-GF, S250-GJ	130/311	130/311		
XH225NE	130/311	130/311		
XS400NE	130/311	130/311		
XS400NS			130/312	130/312
S400-NF, S400-NJ	130/311	130/311		
S400-GF, S400-GJ	130/311	130/311		
H400-NF, H400-NJ	180/430	180/430		

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240 Va.c. Short-Circuit Breaking Current (Sym. r.m.s. kA) / Making Current (Asym. Peak kA) in Cascade Back-Up Protection

Back-up breaker / Branch breaker	XS50NB XS60NS XE100NS	XS100NB	E125-NJ	E250-NJ	S100-NF S125-NJ	S160-NJ S225-NF S250-NJ
TB-5S, TB-5D TB-5P	25/58.3	25/58.3	25/55.6		25/55.6	
XS30NB, XE50NB	25/53.2	30/69.2	25/55.6		30/68.3	
XS50CB	25/53.2	30/69.2	25/55.6	25/55.6	30/68.3	25/55.6
XS50NB, XS60NS XE100NS		50/116			50/115	50/115

Back-up breaker / Branch breaker	XE225NS	XS225NS
XS50CB	25/53.2	25/53.2
XS50NB, XS60NS XE100NS		50/116

125 Va.c. Short-Circuit Breaking Current (Sym. r.m.s. kA) / Making Current (Asym. Peak kA) in Cascade Back-Up Protection

Back-up breaker / Branch breaker	XS50CB XS50NB XS60NS XE100NS
XS30NB, XE50NB	42/96.9

"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 Asia of any modification or changes to the equipment in order to obtain a valid certificate."

The attached Design Appraisal Document No. 96/10020 (E4) and its supplementary Type Approval Terms and Conditions form part of this Certificate.

All other details remain as the previous Certificate Nos. 96/10020(E3) and 03/10060(E1) to which this extension should be attached.

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