



Lloyd's
Register

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

This certificate is issued to:

PRODUCER	ABB Switzerland Ltd. Low Voltage Products Fulachstrasse 150 CH-8201 Schaffhausen Switzerland																		
DESCRIPTION	SMISLINE miniature circuit breaker, residual current circuit breaker, accessories and busbar system																		
TYPE	MCB series S400M-B MCB series S400M-C MCB series S400M-K RCBO series FS403M Auxiliary contacts HK4 and SK4 for MCB series S400M SMISLINE TP busbar system enclose following parts: <table> <tr> <td>ZLS906</td> <td>Busbar system 6 places</td> </tr> <tr> <td>ZLS908</td> <td>Busbar system 8 places</td> </tr> <tr> <td>ZLS920</td> <td>Busbar system end cover</td> </tr> <tr> <td>ZLS224</td> <td>Standard feeder block 3LN 160A</td> </tr> <tr> <td>ZLS224R</td> <td>Standard feeder block 3LN 160A right</td> </tr> <tr> <td>ZLS224LAB</td> <td>Standard feeder block 3LN 160A with terminals La, Lb</td> </tr> <tr> <td>ZLS225</td> <td>Standard feeder block 3L 160A</td> </tr> <tr> <td>ZLS225R</td> <td>Standard feeder block 3L 160A right</td> </tr> <tr> <td>ZLS225LAB</td> <td>Standard feeder block 3L 160A with terminals La, Lb</td> </tr> </table>	ZLS906	Busbar system 6 places	ZLS908	Busbar system 8 places	ZLS920	Busbar system end cover	ZLS224	Standard feeder block 3LN 160A	ZLS224R	Standard feeder block 3LN 160A right	ZLS224LAB	Standard feeder block 3LN 160A with terminals La, Lb	ZLS225	Standard feeder block 3L 160A	ZLS225R	Standard feeder block 3L 160A right	ZLS225LAB	Standard feeder block 3L 160A with terminals La, Lb
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Certificate No.	18/20009
Issue Date	30 January 2018
Expiry Date	29 January 2023
Sheet	1 of 5


 Thorsten Wolff
 Hamburg Technical Support Office
 Lloyd's Register EMEA
LR031.1.2013.12



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TYPE continued

SMISSLINE TP busbar system enclose following parts (continued):

- ZLS250 Feeder 200A (Neutral)
- ZLS251 Feeder 200A (Phase L1)
- ZLS252 Feeder 200A (Phase L2)
- ZLS253 Feeder 200A (Phase L3)
- ZLS260 Incoming block 63A L1, L3
- ZLS261 Incoming block 63A L2, N
- ZLS262 Incoming block 6A LA, LB
- ZLS100 Busbar cover
- ZLS101 Extension adapter

APPLICATION

Marine, Offshore and Industry applications for use in environmental categories ENV1 and ENV2 as defined in LR Test Specification No. 1: July 2015.

STANDARD

- EN 60947-2:2006+A1:2009+A2:2013
- EN 60898-1:2003+A1:2004+A11:2005+A12:2008+A13:2012
- EN 61009-1:2012+A1:2014+A2:2014+A11:2014+A12:2016
- EN 61009-2-1:1994+A11:1998
- EN 60947-5-1:2004+A1:2009
- EN 61439-6:2012

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Sheet

2 of 5


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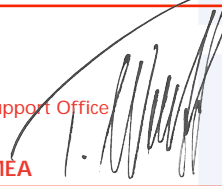


RATINGS

MCB series S400M

Type	Number of poles	Rated current [A]	Operational voltage [V AC]	Breaking capacity I _{cu} [kA] / I _{cs} [%]	Trip characteristic curve
S400M	1P 1P+N 2P 3P 3P+N	0.5 to 16	240 V (1P, 1P+N)	25 / 50	B,C,K
			415 V (2P)		
			415 V (3P, 3P+N)		
			254/440 V (3P +N)	15 / 50	
S400M	1P 1P+N 2P 3P 3P+N	20 to 63	240 V (1P, 1P+N)	15 / 50	B,C,K
			415 V (2P)		
			415 V (3P, 3P+N)		
			254/440 V (3P +N)	6 / 50	

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Sheet 3 of 5

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RATINGS (continued)

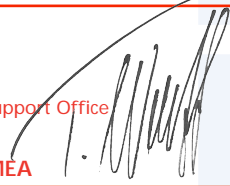

RCBO series FS403M

Type	Number of poles	Rated current [A]	Operational voltage [V AC] 50/60 Hz	Rated residual operating current I Δ n [mA]	Rated short circuit capacity I _{cn} [kA]	Trip characteristic curve
FS403M	3P+N	6 to 32	240/415	30	10	B,C
FS403M	3P+N	6	240/415	100	6	C
FS403M	3P+N	10 to 32	240/415	30	10	C

Auxiliary contact HK 400: 400V, 6A
Signal contact SK 400: 400V, 6A

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Sheet 4 of 5

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RATINGS (continued)

Busbar System SMISLINE TP:

Rated insulation voltage (Ui): 690V
Rated operational voltage (Ue): 690V
Rated frequency (f): 50 to 60 Hz
Rated Current: 63 A side feeding, 200 A mid feeding
Maximum back up fuse: 160A
Rated peak withstand current (Ipk): 34kA
Rated short-time withstand current (Icw): 10kA / 300ms
Enclosure: IP20B
Pollution degree: 3

OTHER CONDITIONS

The rated current of the components is based upon a mean/maximum ambient temperature of 30/40°C. Derating for ambient temperature 45°C to apply.

PLACE OF PRODUCTION

ABB Switzerland Ltd.
Low Voltage Products
Fulachstrasse 150
CH-8201 Schaffhausen
Switzerland

The Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.

If the specified standards are amended during the validity of this certificate, the product is to be re-approved prior to it being supplied to vessels to which the amended standards apply.

The Design Appraisal Document No. HTS/ETS 36421-18 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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Sheet

5 of 5

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