



TYPE APPROVAL CERTIFICATE
No. **ELE188012PU**

This is to certify that the product below is found to be in compliance with the applicable requirement of the RINA type approval system.

<i>Description</i>	MOULDED CASE CIRCUIT BREAKER
<i>Type</i>	SUSOL TD & TS SERIES (MODELS LISTED ON THE ENCLOSURE)
<i>Applicant</i>	LSIS CO., LTD. 1 SONGJEONG-DONG, HEUNGDEOK-GU 361-720 CHEONGJU-CITY, CHUNGBUK KOREA, REPUBLIC OF
<i>Manufacturer</i>	LSIS CO., LTD.
<i>Place of manufacture</i>	1 SONGJEONG-DONG, HEUNGDEOK-GU 361-720 CHEONGJU-CITY, CHUNGBUK KOREA, REPUBLIC OF
<i>Reference standards</i>	IEC 60947-2

Issued in **BUSAN** on **January 4, 2013**. This Certificate is valid until **January 3, 2018**



RINA

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This certificate consists of this page and 1 enclosure

This certificate annuls and replaces the existing certificate No. ELE108107PU issued on 10/10/2007



SUSOL TD & TS Series

Product Description

+ Moulded case circuit breaker type SUSOL applicable to the marine environment with following rating :

Type	Rated Freq. [Hz]	Rated Current at 45°C In[A]	Rated Oper. Volt. Ue[V]	Service Short-circuit Breaking Capacity Ics[kA]	Ultimate Short-circuit Breaking Capacity Icu[kA] (E / N / S / H / P / L)	Rated Short-circuit Making Capacity Icm[kA] (E / N / S / H / P / L)	Util. Category
TD100 TD160 E/N/S/H/P/L	50/60	16~100 16~160	480/500 440/460 380/415 220/240	Ics = Icu	18/30/42/50/60/65 35/50/65/70/100/130 35/50/65/85/130/150 65/85/85/100/150/200	36/63/88.2/105/132/143 73.5/105/143/154/220/286 73.5/105/143/187/286/330 143/187/187/220/330/440	A
TS100 TS160 TS250 E/N/S/H/P/L	50/60	40~100 40~160 40~250	480/500 440/460 380/415 220/240	Ics = Icu	25/42/50/65/70/85 42/50/65/70/100/130 42/50/65/85/130/150 85/100/120/120/150/200	52.5/88.2/105/143/154/187 88.2/105/143/154/220/286 88.2/105/143/187/286/330 187/220/264/264/330/440	A
TS100 TS160 TS250 E/N/S/H/P/L ETS	50/60	40, 80 40~160 40~250	480/500 440/460 380/415 220/240	Ics = Icu	25/42/50/65/70/85 42/50/65/70/100/130 42/50/65/85/130/150 85/100/120/120/150/200	52.5/88.2/105/143/154/187 88.2/105/143/154/220/286 88.2/105/143/187/286/330 187/220/264/264/330/440	A
TS400 TS630 E/N/S/H/P/L	50/60	300, 400 300~630	480/500 440/460 380/415 220/240	Ics = Icu	35/42/50/65/70/85 50/65/70/85/100/130 50/65/70/85/130/150 85/100/120/120/150/200	73.5/88.2/105/143/154/187 105/143/154/187/220/286 105/143/154/187/286/330 187/220/264/264/330/440	A
TS400 TS630 E/N/S/H/P/L ETS/ETM	50/60	160~400 160~630	480/500 440/460 380/415 220/240	Ics = Icu	35/42/50/65/70/85 50/65/70/85/100/130 50/65/70/85/130/150 85/100/120/120/150/200	73.5/88.2/105/143/154/187 105/143/154/187/220/286 105/143/154/187/286/330 187/220/264/264/330/440	A
TS800 E/N/S/H/P/L	50/60	800	480/500 440/460 380/415 220/240	Ics = Icu	42/50/65/85/85/100 50/65/85/100/120/130 50/65/85/100/130/150 85/100/120/120/150/200	88.2/105/143/187/187/220 105/143/187/220/264/286 105/143/187/220/286/330 187/220/264/264/330/440	A
TS800 E/N/S/H/P/L ETS/ETM	50/60	630, 800	480/500 440/460 380/415 220/240	Ics = Icu	42/50/65/85/85/100 50/65/85/100/120/130 50/65/85/100/130/150 85/100/120/120/150/200	88.2/105/143/187/187/220 105/143/187/220/264/286 105/143/187/220/286/330 187/220/264/264/330/440	A

*Note : ETS/ETM – electronic type overcurrent trip unit, others – thermal magnetic type overcurrent trip unit

Reference Documents

- + Performance Test : KEMA Test Certificate No. NL-9937/A1 dated 22/03/2006, KEMA Test Report No. 2086029.50~56 dated 12/12/2005
- + Environmental Test (including Vibration & Inclination Test) : PT&T Report No. R36-0770~0773 dated 26/09/2006, KIMM Test Report No. 2006320823 dated 13/09/2006
- + Test for Electronic Device (EMC Test) : KEMA Test Certificate No. 2087-QUA/EMC 05-4962, 4964, 4966 dated 22/03/2006, KEMA Test Report No. 2087-QUA/EMC 05-4961, 4963, 4965 dated 27/10/2005, PT&T Test Report No. R36-0774~0777 dated 11/08/2006

Note/Remark

- + The product is subject to the compliance with RINA Rules and other Standards mentioned on certificate.
- + Any modification or change shall not be valid until approval is granted by RINA as a result of due assessment.

* This certificate annuls and replaces the existing certificate No. ELE108107PU issued on 10/10/2007.

BUSAN 04/01/2013



Signature

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