

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Overcurrent- and Short-Circuit Relay**

with type designation(s)

MT type thermal Overload Relay

Issued to

LSIS Co., Ltd.**Cheongju-si Chungcheongbuk-do, Korea, Republic of Korea**

is found to comply with

Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards**Application :****For installation inside switchboard/enclosures onboard ships and offshore units.**This Certificate is valid until **2018-12-31**.Issued at **Busan** on **2015-04-15**DNV GL local station: **Seoul**for **DNV GL**Approval Engineer: **Byoung So Lee**

Baeg Soon Choi
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

Certificate No: **E-13895**
File No: **824.10**
Job Id: **262.1-009656-3**

Product description

The type MT thermal overload relay is used for prevention of motor burn out in an overload or locked-rotor condition according to setting range and ampere range as listed below.

No	Type	Setting range - amperes	For combination with contactor types
1	MT-12	Various from 0.1 - 0.16 to 12 - 18	MC-6a,9a,12a,18a
	MT-32	Various from 0.1 - 0.16 to 28 - 40	MC-9b,12b,18b,22b,32a,40a
	MT-63	Various from 4 - 6 to 45 - 65	MC- 50a,65a
	MT-95	Various from 7 - 10 to 80 - 100	MC-75a,85a,100a
	MT-150	Various from 34 - 50 to 110 - 150	MC-130a,150a
2	MT-225	Various from 65 - 100 to 160 - 240	MC-185a,225a
3	MT-400	Various from 85 - 125 to 260 - 400	MC-265a,330a,400a
	MT-800	Various from 200 - 330 to 520 - 800	MC-500a,630a,800a

Remark: 1. MT-xx/2H,3H : Non differential type
2. MT - xx/3K : Differential type
3. MT - xx/3D : Delay Type

Application/Limitation

For installation inside switchboards/ enclosures onboard ships and mobile offshore units.

Type Approval documentation

Specification for magnetic contactor, MS-623-695 dated 2010-07-15

Test reports: R410-1291 MT-12 2H/3H/3K/3D dated 2010-08-27
R410-1292 MT-32 2H/3H/3K/3D dated 2010-08-27
R410-1293 MT-63 2H/3H/3K/3D dated 2010-08-27
R410-1294 MT-95 2H/3H/3K/3D dated 2010-08-27
R410-1295 MT-150 2H/3H/3K/3D dated 2010-08-27
R410-1296 MT-225 2H/3H/3K/3D dated 2010-08-27
R410-1297 MT-400 2H/3H/3K/3D dated 2010-08-27
R410-1298 MT-800 2H/3H/3K/3D dated 2010-08-27

Type assessment report for retention dated 2014-11-27

Tests carried out

Type tests according to IEC 60947-4-1. Environmental tests including dry heat, damp heat, vibration, high voltage,cold, inclination and insulation resistance test.

Marking of product

LSIS – Type designation – Rating

Certificate No: **E-13895**
File No: **824.10**
Job Id: **262.1-009656-3**

Periodical assessment

The scope of the retention/renewal survey is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the survey are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Retention survey is to be performed at least every second year and at renewal of this certificate.

END OF CERTIFICATE