

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Frequency Converter**with type designation(s)
S 120 CM

Issued to

Siemens AG
Erlangen Bayern, Germany

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft
DNV GL class programme DNVGL-CP-0395 – Type approval – Semiconductor converters**Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**Issued at **Hamburg** on **2017-04-05**This Certificate is valid until **2022-04-04**.DNV GL local station: **Augsburg**for **DNV GL**Approval Engineer: **Jens Altmann**

Duy Nam Le
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.



Product description

Electronic control equipment

Components

Electronic control equipment

Equipment	MLFB
Control Unit CU320-2 DP	6SL3040-1MA0x-0Axx
Control Unit CU 320-2 PN	6SL3040-1MA0x-0Axx
Basic Operator Panel BOP 20	6SL3055-0AA00-4Bxx
Communication Boards CBC 10	6SL3055-0AA00-2Cxx
DRIVE CLiQ Hub Modules DMC 20	6SL3055-0AA00-6Axx
Terminal Module TM 31	6SL3055-0AA00-3Axx
Voltage Sensing Modules VSM 10	6SL3053-0AA00-3Axx
Sensor Module SMC 30	6SL3055-0AA00-5Cxx
Advanced Operator Panel AOP 30	6SL3055-0AA00-4Cxx
Terminal Modul TM15	6SL3055-0AA00- 3Pxx
Communication Boards CBE 20	6SL3055-0AA00-2Exx
Terminal Module TM150	6SL3055-0AA00-3Lxx

Application/Limitation

This converter modules are destined for the installation in steel cabinets. Marine specific demands have to be considered. Instructions of the installation guide 6SL3097-4AH00-0AP6 have to be observed. The cubicles have to be equipped with anti condensation heating and air inlet filters.

Component characteristics: Temperature class B, Humidity class B, Vibration class A, EMC class A,
Degree of protection: IP 20.

The EMC measures of the manufacturer have to be observed.

This electronic components may be used for the construction of all types of drives including electric propulsion.

Type Approval documentation

According to Siemens Overview chart Drawing No.: A5E407430000A, Project No.: 262.1-021682-1

Tests carried out

According to Siemens Overview chart Drawing No.: A5E407430000A, Project No.: 262.1-021682-1
Please see Certificate documentation for certificates 1204710HH, 3323506HH, TAE00001BS and TAE00001ES

Marking of product

In accordance with Siemens Standard BCHW Appendix 10, Version: V1.5, Released 24.11. 2016

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable).
- Results from Production Sample Tests (PST) and Routines (RT) checked (if not available tests according to PST and RT to be carried out).
- Review of type approval documentation.
- Review of possible change in design, materials and performance.
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Assessment to be performed at 2 and 3,5 years.