

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Multifunction Relay

with type designation(s)
VSGPM

Issued to

**SIEMENS AS AVD PROCESS INDUSTRIES AND DRIVES
TRONDHEIM, Norway**

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.

Issued at **Høvik** on **2018-01-30**

This Certificate is valid until **2023-01-29**.

DNV GL local station: **Trondheim**

for **DNV GL**

Approval Engineer: **Nicolay Horn**

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Andreas Kristoffersen
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

Multi Protection:

Variable Speed Generator Protection Module with the following protection functions:

ANSI Code	Protection Function
50	Overcurrent ($>>I$)
51	Short time circuit protection ($>I$)
59	Overvoltage ($>U$, $>>U$)
87G	Generator differensial ($>Idiff$, $>>Idiff$)
-	Diode short circuit protection
-	Temperature protection

Technical data*:

Nominal voltage AC	690 V (rms) $\pm$ 5 %
Nominal voltage DC	930 V $\pm$ 5 %
Voltage measuring range AC	965 (rms)
Voltage measuring range DC	1300 V
Frequency range	25-150 Hz
Nominal current transformer (CT) secondary current	1 A (rms) $\pm$ 2.5 %
Current measuring range	3 A (rms)
Maximum trip value	20 A (rms)
Protection degree	IP00, Voltage attenuator: IP20

*For additional technical data see Siemens Data Sheet: VSGP Datasheet v1 951.2450.004A.

Application/Limitation

To be installed in a cabinet with an IP degree in accordance with DNV GL Rules w.r.t. location.
To be installed in temperature controlled are (no condensation).

Location classes :

Temperature:	A
Humidity:	A
Vibration:	A
EMC:	A

Type Approval documentation

Tests carried out

Type tests (partly) in accordance with IEC 60255-1 (2009) and -127 (2010). Environmental tests in accordance with DNVGL -CG-0339 ed. November 2015: Temperature, Humidity, Cold, Vibration and EMC.

Marking of product

Siemens, type designation

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)



Job Id: **262.1-018826-1**
Certificate No: **TAE00002A4**

- Results from Routines (RT) checked (if not available tests according to 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 and at renewal.

END OF CERTIFICATE