DNV·GL

Certificate No:
TAA00000MH

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Position Controller

with type designation(s)
SIPART PS2 6DR5abc-0defg-0hAi-(Z) ...

Issued to
Siemens AG
Karlsruhe, Germany

is found to comply with
DNV GL rules for classification – Ships

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Temperature	**D**
Humidity	**B**
Vibration	**B**
EMC	**B**
Enclosure	**B / *C**

***C - not for devices with order code 'i' = 9**

This Certificate is valid until **2021-09-20**.

Issued at **Hamburg** on **2016-09-21**
DNV GL local station: **Augsburg** for **DNV GL**

Approval Engineer: **Dariusz Lesniewski**

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.

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Product description

Electropneumatic positioner for linear and rotary actuators, model SITRANS PS2
Supply pressure: 1.4 bar – 7 bar
Supply voltage: 24 Vdc
Output: 4...20mA 2-wire (loop-powered) or 3-/4-wire, HART,
PROFIBUS PA, FOUNDATION Fieldbus
Software- / Firmware Versions:
5.xx.yy - HART electronics
6.xx.yy - PA electronics
3.xx.yy - FF electronics

The type approval covers the following type designations:

6DR5abc-0defg-0hAi (-Z) ....

a Electronics
- 0 PS2 2-wire without HART
- 1 PS2 2-wire with HART
- 2 PS2 2-, 3- 4-wire with HART
- 3 PS2 2-, 3- 4-wire without HART
- 5 PS2 with PROFIBUS PA connection
- 6 PS2 with FOUNDATION Fieldbus connection
- 9 PS2 with connector module

b Pneumatics
- 1 Single-Acting
- 2 Double-Acting

c Enclosure
- 0 Plastic
- 1 Aluminum small
- 2 Stainless steel
- 3 Aluminum
- 5 Aluminum flameproof
- 6 Stainless steel flameproof

0 Standard Mechanical drive

d Explosion protection
- E Equipment protection by intrinsic safety "i"
  Equipment protection by flameproof enclosure "d"
  Equipment protection by Dust ignition proof "t"
- G Equipment protection by type of protection "n"
- D Equipment dust ignition protection by enclosure "t"
  Equipment protection by type of protection "n"
- F Equipment protection by intrinsic safety "i"
  Equipment protection by type of protection "n"
- K Equipment protection by intrinsic safety "i"
  Equipment protection by type of protection "n"
  Equipment dust ignition protection by enclosure "t"

e Connection thread (electrical/pneumatic)
- G M20 x 1,5 / G 1/4
- M ½" NPT / ¼" NPT
- P ½" NPT / G ¼
- R Plug M12 / G ¼
- S Plug M12 / ¼-18 NPT
- Q M25 x 1,5 / ¼" NPT

6DR5abc-0defg-0hAi (-Z) ....

f Limit monitor installed
- 0 Without
- 1 Alarm module; electronic
- 2 SIA module; slot-type initiators
- 3 Limit value contact module
- 9 Others (Internal NCS-module = L1A)

g Optional modules installed
- 0 Without
- 1 Feedback (Iy) module
- 2 EMC filter module for external position sensor
- 3 Feedback (Iy) module and EMC filter module for external position sensor

0 Standard design

h Brief instructions
- A German/English
- B French/Spanish/Italian

A Siemens Labeling

i Accessories pneumatic
- 0 Without
- 9 Other options (9+…)

i = 9+ …
- R1A Aluminum gauge block single-action G¼, steel gauge (bar, MPA, psi)
- R1B Aluminum gauge block double-action G¼, steel gauge (bar, MPA, psi)
- R2A Aluminum gauge block single-action ¼-18 NPT, steel gauge (bar, MPA, psi)
- R2B Aluminum gauge block double-action ¼-18 NPT, steel gauge (bar, MPA, psi
- R1C Stainless steel gauge block single-action G¼, Stainless Steel gauge (bar, MPA, psi)
- R2C Stainless Steel gauge block double-action G¼, Stainless Steel gauge (bar, MPA, psi)
- R1D Stainless Steel gauge block single-action ¼-18 NPT, Stainless Steel gauge (bar, MPA, psi)
- R2D Stainless Steel gauge block double-action ¼-18 NPT, Stainless Steel gauge (bar, MPA, psi)

-Z … ; … ; … Accessories
- A40 Stainless steel sound absorbers for 6DR5xx1
- A20 TAG plate made of stainless steel
- C20 Functional Safety (SIL 2)
- F01 Fail in Place
- K18 Stainless steel terminal strip
- K20 OPOS-Adapter
- M40 Temperature range enhancement -40 °C … 80 °C
- D5x Additional M12 connector
- S10 GL Germanischer Lloyd Certificate
- S13 DNV Det Norske Veritas Certificate
- Yxx Customer specific settings

Other accessories:
Non Contacting Position Sensor (NCS), type **6DR4004-xNNx0**

Place of Manufacture

Siemens S.A.S
I IA SC MF-H
1, chemin de la Sandlach B.P. 60189
67506 Haguenau Cedex, France

Siemens Industry Inc
1201 Sumneytown Pike
PO Box 900
Spring House
PA 19477-0900, USA

Siemens Sensor Communication Ltd. (SSCL)
No. 117 GuangXian Road, QixianLing, High-Tech Industrial Zone
Dalian, 116023, P.R. CHINA

ARCA-Regler GmbH
Kempener Str. 18
47918 Tönisvorst, GERMANY

Job Id:
Certificate No: **TAA00000MH**

Siemens Canada Limited
1954 Technology Drive
PO Box 4225
Peterborough
Ontario, K9J 7B1, Canada

Application/Limitation

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV GL Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

Ex installations to be approved in each case according to the Rules and Ex-Certification **/** Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

Type Approval documentation

Tests carried out

Applicable tests according to Class Guidance DNVGL-CG-0339, November 2015.
IP 66 enclosure test according to IEC 60529.

Marking of product

The products to be marked with:
- model name
- manufacturer name
- serial number

Periodical assessment

The scope of the periodical assessment 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 assessment 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

Periodical assessment is to be performed at least once in the period of validity and at renewal of this certificate.

END OF CERTIFICATE