



TYPE APPROVAL CERTIFICATE

Certificate No:
TAA0000227
Revision No:
3

This is to certify:

That the Programmable Electronic System

with type designation(s)
ET200SP

Issued to

Siemens AG SIMATIC Type Test
Amberg, Bayern, Germany

is found to comply with

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

Application :

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

Location classes:

Temperature	D
Humidity	B
Vibration	A
EMC	A*, B
Enclosure	Required protection according to the Rules shall be provided upon installation on board

* see Application/Limitation

Issued at **Hamburg** on **2023-06-28**

for **DNV**

This Certificate is valid until **2028-06-27**.

DNV local unit: **Augsburg**

Approval Engineer: **Heinz Scheffler**

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Joannis Papanuskas
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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

ET200SP

Interface Modules

Article Number	Product Description
6ES7 155-6AR00-0AN0	IM155-6PN Basic
6ES7 155-6AU00-0DN0	IM155-6PN HS
6ES7 155-6AU01-0BN0	IM155-6PN ST
6ES7 155-6AU01-0CN0	IM155-6PN/2 HF
6ES7 155-6AU30-0CN0	IM155-6PN/3 HF
6ES7 155-6AU00-0HM0	IM155-6 PN R1
6ES7 155-6BU00-0CN0	IM155-6DP HF
6ES7 155-6BA01-0CN0	IM155-6DP HF
6ES7 155-6MU00-0CN0	IM155-6MF HF

Central Processing Units:

Article Number	Product Description
6ES7 510-1DJ01-0AB0	CPU 1510SP-1 PN
6ES7 510-1DK03-0AB0	CPU 1510SP-1 PN
6ES7 512-1DK01-0AB0	CPU1512SP-1 PN
6ES7 512-1DM03-0AB0	CPU 1512SP-1 PN
6ES7 514-2DN03-0AB0	CPU 1514SP-2 PN
6ES7 677-2DB40-0AA0	CPU1515SP PC2

Digital Input Modules

Article Number	Product Description
6ES7 131-6BF00-0CA0	DI 8x24V DC HF, PU 1
6ES7 131-6BF00-0DA0	DI 8x24V DC High Speed
6ES7 131-6BF01-0AA0	DI 8x24V DC Basic
6ES7 131-6BF01-0BA0	DI 8x24V DC ST
6ES7 131-6BF61-0AA0	DI 8x24V DC SCR BA
6ES7 131-6BH01-0BA0	DI 16x24V DC ST
6ES7 131-6CF00-0AU0	DI 8x24V AC...48VUC BA
6ES7 131-6FD01-0BB1	DI 4x120...230V AC ST
6ES7 131-6TF00-0CA0	DI 8xNAMUR HF

Digital Output Modules

Article Number	Product Description
6ES7 132-6BD20-0BA0	DQ 4x24V DC/2A ST
6ES7 132-6BD20-0CA0	DQ 4x24V DC/2A HF
6ES7 132-6BD20-0DA0	DQ 4x24V DC/2A High Speed
6ES7 132-6BF00-0CA0	DQ 8x24V DC/0,5A HF
6ES7 132-6BF01-0AA0	DQ 8x24V DC/0,5A Basic
6ES7 132-6BF01-0BA0	DQ 8x24V DC/0,5A ST
6ES7 132-6BF61-0AA0	DQ 8x24VDC/0,5A SINK BA
6ES7 132-6BH00-0AA0	DQ 16x24V DC/0,5A BA
6ES7 132-6BH01-0BA0	DQ 16x24V DC/0,5A ST
6ES7 132-6FD00-0BB1	DQ 4x24...230V AC/2A ST
6ES7 132-6FD00-0CU0	DQ 4x24...230V AC/2A HF

Relay Modules

Article Number	Product Description
6ES7 132-6HC50-0BU0	RQ CO 3x120VDC...230VAC/5A ST
6ES7 132-6HC70-0BU0	RQ Coni 3x120VDC...230VAC/5A ST
6ES7 132-6GD51-0BA0	RQ CO 4x24VDC/2A ST
6ES7 132-6HD01-0BB1	RQ NO 4x120VDC...230VAC/5A
6ES7 132-6MD00-0BB1	RQ Coni 3x120VDC...230VAC/5A ST

Analog Output Modules

Article Number	Product Description
6ES7 135-6FB00-0BA1	AQ 2xU ST
6ES7 135-6GB00-0BA1	AQ 2xI ST
6ES7 135-6HB00-0CA1	AQ 2xU/I HF
6ES7 135-6HB00-0DA1	AQ 2xU/I HS
6ES7 135-6HD00-0BA1	AQ 4xU/I ST
6ES7 135-6TD00-0CA1	AQ 4xI HART HF

Analog Input Modules

Article Number	Product Description
6ES7 134-6FB00-0BA1	AI 2xU ST
6ES7 134-6FF00-0AA1	AI 8xU Basic
6ES7 134-6GB00-0BA1	AI 2xI 2-/4-Wire ST
6ES7 134-6GD01-0BA1	AI 4xI 2-/4-Wire ST
6ES7 134-6GF00-0AA1	AI 8xI 2-/4-Wire Basic
6ES7 134-6HB00-0CA1	AI 2xU/I 2-/4-Wire HF
6ES7 134-6HB00-0DA1	AI 2xU/I 2-/4-Wire HS
6ES7 134-6HD01-0BA1	AI 4xU/I 2-Wire ST
6ES7 134-6JD00-0CA1	AI 4xRTD/TC 2-/3-/4-Wire HF
6ES7 134-6JD00-0DA1	AI 4xTC HS
6ES7 134-6JF00-0CA1	AI 8xRTD/TC 2-Wire HF

Communication Modules

Article Number	Product Description
6ES7 137-6BD00-0BA0	CM 4xIO-Link ST
6ES7 137-6AA01-0BA0	CM PTP
6ES7 137-6CA00-0BU0	CM 1x Dali
6ES7 545-5DA00-0AB0	CM DP

Energy Meter

Article Number	Product Description
6ES7 134-6PA00-0CU0	AI Energy Meter 480V AC/CT HF
6ES7 134-6PA01-0BD0	AI Energy Meter 400V AC ST
6ES7 134-6PA01-0BU0	AI Energy Meter CT ST
6ES7 134-6PA01-0CU0	AI Energy Meter CT HF
6ES7 134-6PA20-0BD0	AI Energy Meter 480V AC ST
6ES7 134-6PA20-0CU0	AI Energy Meter 480V AC/RC HF
6ES7 134-6PA21-0BU0	AI Energy Meter RC ST
6ES7 134-6PA21-0CU0	AI Energy Meter RC HF

Technology Modules

Article Number	Product Description
6ES7 138-6AA01-0BA0	TM Count 1x24V
6ES7 138-6BA01-0BA0	TM Posinput
6ES7 138-6CG00-0BA0	TM Timer DI/DQ 10x24V
6ES7 138-6DB00-0BB1	TM Pulse 2x24V

Bus Adapter

Article Number	Product Description
6ES7 193-6AF00-0AA0	Busadapter BA 2xFC
6ES7 193-6AG00-0AA0	Busadapter BA 2XLC
6ES7 193-6AG20-0AA0	Busadapter BA LC/RJ45
6ES7 193-6AG40-0AA0	Busadapter BA LC/FC
6ES7 193-6AG50-0AA0	Busadapter BA 2xLC-LD
6ES7 193-6AG60-0AA0	Busadapter BA LC-LD/RJ45
6ES7 193-6AG70-0AA0	Busadapter BA LC-LD/M12
6ES7 193-6AM00-0AA0	Busadapter BA 2xM12
6ES7 193-6AP00-0AA0	Busadapter BA 2xSCRJ
6ES7 193-6AP20-0AA0	Busadapter BA SCRJ/RJ45
6ES7 193-6AP40-0AA0	Busadapter BA SCRJ/FC
6ES7 193-6AR00-0AA0	Busadapter BA 2xRJ45
6ES7 193-6AS00-0AA0	Busadapter BA-Send BA1XFC

Coupler

Article Number	Product Description
6ES7158-0AD01-0XA0	DP/DP Coupler
6ES7158-3AD10-0XA0	PN/PN Coupler
6ES7158-3MU10-0XA0	PN/MF Coupler

Server Module

Article Number	Product Description
6ES7 193-6PA00-0AA0	Servermodul

Base Units

Article Number	Product Description
6ES7 193-6BP00-0BA0	BaseUnit Typ A0, BU15-P16+A0+2B
6ES7 193-6BP00-0BA1	BaseUnit Typ A1, BU15-P16+A0+2B/T
6ES7 193-6BP00-0BD0	BaseUnit Typ D0, BU20-P12+A0+0B
6ES7 193-6BP00-0BU0	BaseUnit Typ U0, BU20-P16+A0+2B
6ES7 193-6BP00-0DA0	BaseUnit Typ A0, BU15-P16+A0+2D
6ES7 193-6BP00-0DA1	BaseUnit Typ A1, BU15-P16+A0+2D/T
6ES7 193-6BP00-0DU0	BaseUnit Typ U0, BU20-P16+A0+2D
6ES7 193-6BP20-0BA0	BaseUnit Typ A0, BU15-P16+A10+2B
6ES7 193-6BP20-0BB0	BaseUnit Typ B0, BU20-P12+A4+0B
6ES7 193-6BP20-0BB1	BaseUnit Typ B1, BU20-P12+A0+4B
6ES7 193-6BP20-0BC1	BaseUnit Typ C1, BU20-P6+A2+4B
6ES7 193-6BP20-0BF0	BaseUnit Typ F0, BU20-P8+A4+0B
6ES7 193-6BP20-0DA0	BaseUnit Typ A0, BU15-P16+A10+2D
6ES7 193-6BP20-0DC0	BaseUnit Typ C0, BU20-P6+A2+4D
6ES7 193-6BP40-0BA1	BaseUnit Typ A1, BU15-P16+A0+12B/T
6ES7 193-6BP40-0DA1	BaseUnit Typ A1, BU15-P16+A0+12D/T
6ES7 193-6BP60-0BA0	BaseUnit Typ A0, 2BU15-P16+A0+2B
6ES7 193-6BP60-0DA0	Base Unit Typ A0, 2BU15-P16+A0+2DB
6ES7 193-6BR00-0HM0	Base Unit Typ M0
6ES7 193-6UP00-0BP1	PotDis-BU Typ P1, dark-colored
6ES7 193-6UP00-0BP2	PotDis-BU Typ P2, dark-colored
6ES7 193-6UP00-0DP1	PotDis-BU Typ P1, light-colored
6ES7 193-6UP00-0DP2	PotDis-BU Typ P2, light-colored
6ES7 193-6TP00-0TN0	PotDis-TB-n-c-G, PU 1
6ES7 193-6TP00-0TP0	PotDis-TB-BR-W, PU 1
6ES7 193-6TP00-0TP1	PotDis-TB-P1-R, PU 1
6ES7 193-6TP00-0TP2	PotDis-TB-P2-B, PU 1

Application/Limitation

Location classes:

EMC class A: 6ES7 134 Energy Meter; 6ES7 132-6BD20-0DA0 DQ 4x24 VDC / 2A, High speed

EMC class B: Only with filter type Epcos B84113-CB30

Surge Immunity: External Protective circuits required for DC systems. See the current System Manual (A5E03461486) for recommendations. Installation of the units described in manufacturer's instructions.

Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, 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 rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

Product certificate

If specified in the Rules, ref. Pt.4 Ch.9 Sec.1, the control and monitoring system in which the above listed hardware is used shall be delivered with a product certificate. For each such delivery the certification test is to be performed at the manufacturer of the application system before the system is shipped to the yard. The test shall be done according to an approved test program. After the certification the clause for application software control will be put into force.

Clause for application software control

All changes in software are to be recorded as long as the system is in use on board. The records of all changes are to be forwarded to DNV for evaluation and approval. Major changes in the software are to be approved before being installed in the computer.

Type Approval documentation

Test reports: TAA0000227 List of Test Reports Rev04

Documents: System Manual A5E03576849-AK, A5E03576849-AM; Equipment Manual A5E41449003-AC, A5E51513670-AA, A5E50983437-AA; Internal Drawing No. A5E46059371A, Rev.002

Tests carried out

Applicable tests according to class guideline DNV-CG-0339, August 2021

Place of manufacture

- Siemens AG, Elektronikwerk Amberg
- Siemens AG, Breslauer Strasse 5, 90766 Fürth
- Siemens AG, Ind. Automation Products Ltd. Chengdu

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 after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE