

TYPE APPROVAL CERTIFICATE**This is to certify:****That the Programmable Electronic System**with type designation(s)
Modicon TSX 57 PremiumIssued to
SCHNEIDER ELECTRIC FRANCE
Carros, Franceis found to comply with
DNV GL 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 GL.****Location classes:**

Temperature	B
Humidity	B
Vibration	A
EMC	A/B (see "Application/Limitation")
Enclosure	Required protection according to the Rules shall be provided upon installation on board

This Certificate is valid until **2021-12-31**.Issued at **Høvik** on **2016-11-15**DNV GL local station: **Marseille**Approval Engineer: **Nils Jarem**for **DNV GL**

Odd Magne Nesvåg
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.

Job Id: **262.1-003799-8**
 Certificate No: **TAA00000VA**

Product description

Programmable Controller: Modicon TSX 57 Premium
 comprising:

CPU unit:	TSXP57 30/ 35/ 40/ 45 TSXP57 102M/ 202M/ 302M/ 402M/ 252M/ 352M/ 452M TSXP57 103M/ 153M/ 203M/ 303M/ 403M/ 253M/ 353M/ 453M TSXP57 303AM/ 353AM/ 453AM TSXP57353LAM TSXP57 2623M/ 3623M/ 2823M/ 4823M TSXP57 104M/ 154M/ 204M/ 304M/ 254M/ 354M/ 554M/ 0244M TSXP57 454M/ 1634M/ 2634M/ 3634M/ 4634M/ 5634M/ 6634M TSXP57 3623AM/ 4823AM
HotStandby CPU	TSXH5724M/ 5744M
Co-processors	TPCXP57 1012M, TPCXP57 3512M, TPCXP57 203M, TPCXP57 353M, TPCX57 203M/ 353M TSXPCI57 354M, TSXPCI57 204M
Power supply:	TSXPSY 1610M, 3610M, 5520M TSXPSY 2600M , 8500M, 5500M TSXPSI2010
Snap-on Plug and Extension:	TSXRKY 4/ 6/ 8/ 12, may be followed by EX TSXTVSY100
I/ O Base Units:	TSXDEY 08D2/ 16A2/ 16A3/ 16A4/ 16A5/ 16D2/ 16D3/ 16FK TSXDEY 32D2K/ 32D3K/ 64D2K TSXDSY 08R4D/ 08R5/ 08R5A/ 08S5/ 16S4/ 16S5/ 16R5 TSXDSY 08T2/ 08T22/ 16T2/ 08T31/ 08T3/ 16T3 TSXDSY 32T2K/ 64T2K TSXDMY 28FK/ 28RFK/
Analog I/ O Units:	TSXAey 1600/ 1614/ 414/ 420/ 800/ 810 TSXASY 410/ 800
Counter Units:	TSXCTY 2A/ 2C/ 4A
Weighting Units:	TSXISPY 101/ 101EX
Motion Control Units:	TSXCSY 84/ 85/ 164 TSXCAY 21/ 22/ 33/ 41/ 42
Memory Units:	TSXMRP xx/ MFP xx / MPCCxx x = memory size
Communication cards	TSXFPP 10/ 20 TSXMBP100 TSXCPP 100/ 110 TSXSCP 111/ 112/ 114/ 1114
Communication Units:	TSXSCY 11601/ 21601/ CM 6030/ 6530/ CU 6030/ 6530 TSXETY 110/ 110WS/ 210/ 4102/ 4103/ 5102/ 5103 TSXWMY100 TSXSAY 100/ 1000 TSXETG 1000 TSXPBY100 TCSEGPA23F14F/ FK
Cables:	TSXCBYxxxx / TSXMBPCE xxx
Bundle:	TSXP57 CA0244M/ CD0244M

The Product designations can be followed by "C" for coated PCB versions

Place of manufacture

Carros, ZI 06516 France

Application/Limitation

All units listed under Product description comply with EMC class A in any installation.
Units identified with **bold** font under Product description comply with EMC B when installed in metallic cabinet, without any means of power supply filtering arranged.
TSXCAY types complies with EMC B when installed with Schaffner FN 670 – 3/06 filter.

Approval conditions

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 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 GL for evaluation and approval. Major changes in the software are to be approved before being installed in the computer

Type Approval documentation

"Premium Automation Platform". Catalogue dated November 2000
"Modicon Premium Automation Platform". Catalogue dated May 2012
TSX Premium PLCs TSX 57 User's Manual TSX DM 572E

Schneider Test Reports:

Report no.:	Date:	Report no.:	Date:
9522M12Q	01,1996	0106S07Q	21-10-02
9522M13Q	02,1996	0106S08Q	13-11-02
9522M14Q	03,1996	0106S09Q	19-05-03
9606S04Q	10,1996	0106S10Q	20-05-03
9606S05Q	10,1996	0107S01Q	25-02-03
9606S06Q	11,1996	0107S02Q	15-04-03
9703008A	05,1997	0107S03Q	18-03-03
97127	09,1997	0107S05Q	17-04-03
9909M01Q	03-03-00	0107S06Q	16-04-03
9909M03Q		0107S07Q	21-05-03
9909M04Q	29-03-00	0107S08Q	18-04-03
9909M06Q	07-04-00	0107S09Q	14-03-03
9909M07Q	14-04-00	0107S10Q	30-04-03
9913M04Q	10-02-00	0209M01Q	29-11-02
9913M05Q	25-02-00	0209M02Q	19-09-02
9913M06Q	25-02-00	0209M08Q	02-01-03
9913M07Q	25-02-00	0209M09Q	14-10-02
9913M08Q	27-03-00	0209M10Q	03-12-02
9913M09Q		0209M13Q	28-04-02
9913M10Q	02-06-00	0212S01Q	14-03-03
9913M11Q	02-06-00	0212S02Q	12-05-03
9913M12Q		0212S03Q	27-03-03
9913M13Q	09-06-00	0212S06Q	10-04-03
9913M14Q	09-06-00	0212S07Q	10-04-03
9913M15Q	09-06-00	0212S08Q	14-03-03

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Report no.:	Date:	Report no.:	Date:
9913M17Q	23-01-00	0212S09Q	28-02-03
9913M18Q	17-07-00	0212S10Q	22-05-03
9913M21Q	09-10-00	0214S01Q	12-07-04
9913M22Q		0214S02Q	12-07-04
9913M23Q	10-10-00	0214S03E	24-05-04
9913M25Q		0214S04Q	25-05-04
9913M26Q	29-09-00	0214S05Q	06-06-04
9913M27Q	21-12-00	0214S06Q	01-06-04
0106S01Q	08-04-03	0214S07Q	07-07-04
0106S02Q	23-10-02	0214S08Q	07-07-04
0106S04Q	25-10-02	0214S12Q	08-07-04
0106S05Q	07-01-03	0310S01Q	19-04-04
0106S06Q	29-10-02	0310S02Q	20-04-04
0310S03Q	16-04-04	9822M03Q	08-09-99
0310S04Q	26-05-04	9822M04Q	07-09-99
0310S06Q	15-06-04	9822M05Q	09-09-99
0310S07Q	10-06-04	9822M06Q	08-08-99
0310S08Q	21-06-04	9822M07Q	23-06-99
0310S09Q	18-06-04	9822M08Q	23-06-99
0310S10Q	14-05-04	9822M09Q	08-09-99
0310S11Q	25-05-04	59765883-TUS	02-10-02
0310S12Q	28-06-04	59765909-TUS	17-03-03
0311S01Q	27-04-04	61472237-TUS	28-06-04
0311S03Q	03-05-04	61472238-TUS	
0403S01Q	08-11-04	R0211296C-E-C	
9822M01Q	30-09-99	R0404110C-E Schneider	05/06-05-04
9822M02Q	07-09-99	RG-04-91140-1A	01-12-04
0906S01C	29-07-09	R0906213C1-E-C	31-08-09
0906S02V	29-07-09	R0910373C-E-C	28-12-09
0906S03V	29-07-09	1002S10V	25-05-10
1002S02V	03-05-10	R1001030C-E-C-A1	05-05-10
1002S03V	06-05-10	1002S11V	11-05-10
1002S05V	30-04-10	1206M01C	24-07-12
1002S07V	28-05-10	1206M01V	04-09-12
200903721_001	27-11-09	1206M02V	03-09-12
200903728_001	27-11-09	1206M03V	17-09-12
ENVTR-4497	20-06-10	092-906019-000	08-01-10
NC905937.1 RevB	29-02-10	10316 Rev. D	08-02-10
SST-092-EN61326-1	18-06-10		
1206M08V	23-09-13		
1206M09E	20-09-13		

Type approval periodical assessment report for A-13443, Carros on 2016-10-18

Tests carried out

Applicable tests according to Standard for Certification No. 2.4.

Marking of product

The products to be marked with:

- manufacturer name
- model name
- serial number
- power supply ratings

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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 every second year and at renewal of this certificate.

END OF CERTIFICATE