(2) **Equipment and protective systems intended for use in potentially explosive atmospheres Directive 94/9/EC**

(1) EC-TYPE EXAMINATION CERTIFICATE

(3) Number of the EC type examination certificate: **INERIS 08ATEX0011X**

(4) Equipment or protective system:

MOTOR MANAGEMENT SYSTEM
TYPE : Schneider Electric / Telemecanique / - Ref : Product range TeSys T , Type LTMR

(5) Manufacturer: **Schneider Electric**

(6) Address: 31, rue Pierre MENDES-FRANCE
F-38320 EYBENS - FRANCE

(7) This equipment or protective system and any other acceptable alternative of this one are described in the annex of this certificate and the descriptive documents quoted in this annex.

(8) The INERIS, notified body and identified under number 0080, in accordance with article 9 of Council Directive 94/9/EC of the 23rd March 1994, certifies that this equipment or protective system fulfils the Essential of Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, described in annex II of the Directive.

The examinations and the tests are consigned in confidential INERIS report No EQEN 020767.

(9) The respect of the Essential Health and Safety Requirements is ensured by conformity with :

EN 61508 (parts 1, 2 and 3) of December 2001 : SIL 1
EN 954-1 (December 1996) and EN ISO 13849-1 of august 2003 : category 2.
prEN50495 (2006) - Safety devices required for the safe functionning of equipment with respect to explosion risks.
IEC 60947-4-1 (2002-12)
IEC 60947-6-2 (2002-12)

IM1337AA

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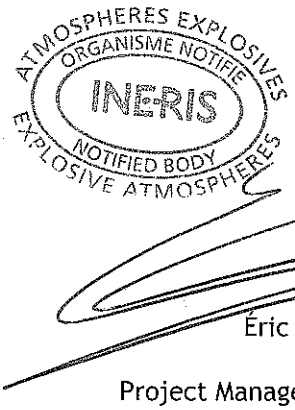
tél + 33(0)3 44 55 66 77 **fax** + 33(0)3 44 55 66 99 **internet** www.ineris.fr
Institut national de l'environnement industriel et des risques
Etablissement public à caractère industriel et commercial - RCS Senlis B 381 984 921 - Siret 381 984 921 00019 - APE 743B

(10) Sign X, when it is placed following the Number of the EC type examination certificate, indicates that this equipment and protective system is subjected to the special conditions for safe use, mentioned in the annex of this certificate.

(11) This EC type examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system, these are not covered by this certificate.

(12) The marking of the equipment or the protective system will have to contain:


II (2) GD + I (M2)



Verneuil-en-Halatte, 2008 April 28

Éric FAÉ

Project Manager at the ATEX
Equipment Certification Laboratory

Certification Division

Director of the Certifying Body,
By delegation
Thierry HOUEIX
Certification Officer

Certification Division

(13) # ANNEX

(14) EC TYPE EXAMINATION CERTIFICATE N°INERIS 08ATEX0011X

(15) DESCRIPTION OF THE EQUIPMENT OR THE PROTECTIVE SYSTEM

"TeSys T" is a motor management system that provides protection, metering and monitoring functions for single-phase and 3-phase, constant speed, a.c. motors up to 810 A.

This system that can be configured according to industrial application needs has been designed to meet the requirements regarding networks and architecture for integrated protection systems.

The system comprises:

- an LTM R motor management controller
- an LTM E extension module,
- an XBT N410 HMI terminal (option),
- configuration software incorporated in the PowerSuite software application,
- accessories for system set-up.

Only the LTM R motor management controller is covered by this EC-TYPE EXAMINATION CERTIFICATE

The LTM R motor management controller is the major key component for motor management system. The functions are :

- 3-phase current measure, via integral current transformers from 0.4 up to 100 A (above 100 A, by external current transformers up to 810 A),
- Measurement of earth current by external earth fault toroid,
- Thermal motor protection via PTC probes,
- Inputs / Outputs for motor control, diagnosis of faults and other functions.

Supply :

2 types of controller power supply are available

- 24 Vdc,
- 100-240 Vac.

Current ranges :

3 current ranges allow measurement of motor current from 0.4 to 100 A

- 0.4 - 8 A,
- 1.35 - 27 A,
- 5 - 100 A.

up to 100 A the use of an external current transformers is required.

Inputs / Outputs :

- 6 discrete logic inputs.
- 3 relay logic outputs (1N/O)
- 1 relay output for fault signalling (1N/O + 1N/C)

Measurements :

- connections for a temperature probe,
- connections for an earth fault toroid.

Communication :

The LTM R controller is equipped with a communication interface to allow remote monitoring and control of the motor. All motor information is then available at automation system level.

The following networks are available : Modbus, CANopen, DeviceNet, ProfiBus DP.

The safe use of networks is defined on chapiter (17) of the present EC-TYPE EXAMINATION CERTIFICATE "Special conditions for safe use".

The LTM R controller safety function(LTM R only) concerned by the present EC-TYPE EXAMINATION CERTIFICATE is the "**Protection against thermal overload**" (according requirements defined in standard EN 60079-7 for the protection mode "increased safety").

The architecture of the Starter controller meets the qualitative and quantitative requirements of :

- **Category 2** according to EN 954-1 - EN ISO 13849-1 and
- **SIL 1** according to EN 61508 parts 1, 2 (table 2) and 3.

The data of the motor manufacturer and/or the data regarding explosion protection given in the Certificate of Conformity or in the EC-type-examination Certificate for explosion protected motors of the "Increased Safety" type of protection must be taken into account.

TeSys T Motor Management System for the protection of explosion-protected motors should only be installed outside potentially explosive atmospheres. When used inside potentially explosive atmospheres, the device must have the required type of protection (using an appropriate enclosure).

TeSys T Motor Management Systems have been tested by :

Laboratoire Central des Industries Electriques
33, avenue du Général LECLERC - BP 8,
92266 Fonteny-aux-Roses - FRANCE

according tests methods mentionned in standards :

- CEI 60947-4-1 édition 2.1 2002 + A2 2005

The references of test reports are : 60055823-00A1 up to 60055823-06A1 daté 2007-06-11 - issued 2007-02.

Additional information can be download from the internet website :
http://www.schneider-electric.com or http://www.telemecanique.com.

MARKING

Marking has to be readable and indelible; it has to include the following indications:

Schneider Electric and /or Telemecanique

INERIS 08ATEX0011X
(Batch number including manufacturing date) (*)
⟨Ex⟩ II (2) GD
I (M2)
(*) The information " Batch number including manufacturing date " are not clearly mentioned on the product, because they are available through the specific marking " DATAMATRIX ZONE".

The different LTMR products covered by the present certificate are listed below :

Type of fieldbus			Modbus		Profibus DP	
Supply voltage			24 VDC	100...240 VAC	24 VDC	100...240 VAC
References	Current range	0.4...8 A	LTMR08MBD	LTMR08MFM	LTMR08PBD	LTMR08PFM
		1.35...27 A	LTMR27MBD	LTMR27MFM	LTMR27PBD	LTMR27PFM
		5...100 A	LTMR100MBD	LTMR100MFM	LTMR100PBD	LTMR100PFM

Type of fieldbus			CANopen		DeviceNet	
Supply voltage			24 VDC	100...240 VAC	24 VDC	100...240 VAC
References	Current range	0.4...8 A	LTMR08CBD	LTMR08CFM	LTMR08DBD	LTMR08DFM
		1.35...27 A	LTMR27CBD	LTMR27CFM	LTMR27DBD	LTMR27DFM
		5...100 A	LTMR100CBD	LTMR100CFM	LTMR100DBD	LTMR100DFM

+ WARNINGS
Marking may be carried out in the language of the country of use.
The protective system or equipment has also to carry the marking normally stipulated by its construction standards.

ROUTINE EXAMINATIONS AND TESTS

None.

(16) DESCRIPTIVE DOCUMENTS

The descriptive documents quoted hereafter constitute the technical documentation of the equipment, subject of this certificate.

- Descriptive notice (11 pages + drawings) signed on 22/04/2008
- Instruction notice (2 pages) signed on 22/04/2008
- INERIS safety analysis of TeSys U n° CGR 92034/ CL 92035 - TeSys T - signed on 2008 April.

(17) SPECIAL CONDITIONS FOR SAFE USE

The special conditions for safe use are mentioned in the instruction notice of the safety device.

This instruction notice describe the provision to be taken into account regarding the programming conditions mainly with the use of networks.

The apparatus must be located out of explosive atmospheres or be protected by a standardized type of protection.

(18) ESSENTIAL SAFETY AND HEALTH REQUIREMENTS

The respect of the Essential Health and Safety Requirements is ensured by:

- Conformity to the standards quoted on the first page, clause (9)
- All provisions adopted by the manufacturer and defined in the descriptive documents
- Suitably selected and adjusted safety devices of this type are necessary for the safe operation of motors of the type of protection "increased safety". The devices themselves are installed outside potentially explosive atmospheres (article 1, section 1 of ATEX directive 94/9/CE).

ADDITION

(3) INERIS 08ATEX0011X/01

(4) MATERIEL MOTOR STARTER-controllers ACP and Starters P TYPE TeSys T Product range - LTMR

(5) Made by Schneider Electric / Telemecanique

(15) PURPOSE OF THE ADDITION

- Extension of the range of certified products by the introduction of a new communication network that support the following protocol Modbus/TCP (Ethernet TCP/IP).
- Update of the list of references of the certified products.
- Taking into account of the normative evolution and addition of new standards.
- Extension of marking to mining industries.

The paragraph 9 of the of EC type Examination certificate INERIS 08ATEX0011X is modified as follows:

(9) The respect of the Essential Health and Safety Requirements is guaranted by the conformity to :

EN 61508 (parts 1, 2 and 3) (2001) : SIL 1
EN 954-1 (1996) : category 2
EN ISO 13849-1 (2008) : category 2 PL c
EN 62061 (2005) : SIL 1
prEN50495 (2008) - Safety devices required for the safe functionning of equipment with respect to explosion risks.
IEC 60947-4-1 (2002)
IEC 60947-6-2 (2002)

The paragraph 12 of the of EC type Examination certificate INERIS 08ATEX0011X is modified as follows:

(12) The marking of the apparatus or protective system shall contain:

 II (2) GD
OR
 I (M2)
OR
 II (2) GD -  I (M2)

The paragraphs 15 and 16 of the of EC type Examination certificate INERIS 08ATEX0011X are modified as follows

(15) DESCRIPTION OF THE EQUIPMENT OR THE PROTECTIVE SYSTEM

"TeSys T" is a motor management system that provides protection, metering and monitoring functions for single-phase and 3-phase, constant speed, a.c. motors up to 810 A.

This system that can be configured according to industrial application needs has been designed to meet the requirements regarding networks and architecture for integrated protection systems.

The system comprises:

- an LTM R motor management controller
- an LTM E extension module,
- an XBT N410 HMI terminal (option),
- configuration software incorporated in the PowerSuite software application,
- accessories for system set-up.

Only the LTM R motor management controller is covered by this EC-TYPE EXAMINATION CERTIFICATE

The LTM R motor management controller is the major key component for motor management system. The functions are :

- 3-phase current measure, via integral current transformers from 0.4 up to 100 A (above 100 A, by external current transformers up to 810 A),
- Measurement of earth current by external earth fault toroid,
- Thermal motor protection via PTC probes,
- Inputs / Outputs for motor control, diagnosis of faults and other functions.

Supply :

2 types of controller power supply are available

- 24 Vdc,
- 100-240 Vac.

Current ranges :

3 current ranges allow measurement of motor current from 0.4 to 100 A

- 0.4 - 8 A,
- 1.35 - 27 A,
- 5 - 100 A.

up to 100 A the use of an external current transformers is required.

Inputs / Outputs :

- 6 discrete logic inputs.
- 3 relay logic outputs (1N/O)
- 1 relay output for fault signalling (1N/O + 1N/C)

Measurements :

- connections for a temperature probe,
- connections for an earth fault toroid.

Communication :

The LTM R controller is equipped with a communication interface to allow remote monitoring and control of the motor. All motor information is then available at automation system level.

The following networks are available : Modbus, CANopen, DeviceNet, ProfiBus DP, ETHERNET.

The safe use of networks is defined on chapiter (16) of the present EC-TYPE EXAMINATION CERTIFICATE "Special conditions for safe use".

The LTM R controller safety function(LTM R only) concerned by the present EC-TYPE EXAMINATION CERTIFICATE is the "**Protection against thermal overload**" (according requirements defined in standard EN 60079-7 for the protection mode "increased safety").

The architecture of the Starter controller meets the qualitative and quantitative requirements of :

- **Category 2** according to EN 954-1
- **Category 2** PL c according to EN ISO 13849-1 and
- **SIL 1** according to EN 61508 parts 1, 2 (table 2) and 3.
- **SIL 1** according to EN 62061

Additional information can be download from the internet website : http://www.schneider-electric.com

The data of the motor manufacturer and/or the data regarding explosion protection given in the Certificate of Conformity or in the EC-type-examination Certificate for explosion protected motors of the "Increased Safety" type of protection must be taken into account.

TeSys T Motor Management System for the protection of explosion-protected motors should only be installed outside potentially explosive atmospheres. When used inside potentially explosive atmospheres, the device must have the required type of protection (using an appropriate enclosure).

TeSys T Motor Management Systems have been tested by :

Laboratoire Central des Industries Electriques
33, avenue du Général LECLERC - BP 8,
92266 Fonteny-aux-Roses - FRANCE

according tests methods mentionned in standards :

- CEI 60947-4-1 édition 2.1 2002 + A2 2005

The references of tests reports are : 60055823-00A1 up to 60055823-06A1 daté 2007-06-11 - issued 2007-02.

For the ETHERNET addition, the references of the tests reports are : 60055823-00A1 and 60055823-06A1 - 83183-573284-00 and 83183-573284-02 daté 2008-06-20 - and 2007-02.

(16) SAFETY CONDITIONS FOR SAFE USE

The special conditions for safe use are modified as follows :

After all parameter setting, it is necessary to check locally the parameters seized in the controller, and to take again the parameter setting if necessary.

MARKING

The marking is modified as follow :

SCHNEIDER ELECTRIC

INERIS 08ATEX0011X (*)
(Batch number including manufacturing date)
Ex II (2) GD
OR
Ex I (M2)
OR
Ex II (2) GD - Ex I (M2)

(*) The information " Batch number including manufacturing date " are not clearly mentioned on the product, because they are available through the specific marking " DATAMATRIX ZONE".

The different LTMR products covered by the present certificate are listed below :

Controllers

Setting range	Control voltage	Current range	Reference	Weight
A	V	A		kg
For Modbus				
8	⎓ 24	0.4...8	LTM R08MBD	0.530
	∿ 100...240 V	0.4...8	LTM R08MFM	0.530
27	⎓ 24	1.35...27	LTM R27MBD	0.530
	∿ 100...240 V	1.35...27	LTM R27MFM	0.530
100	⎓ 24	5...100	LTM R100MBD	0.530
	∿ 100...240 V	5...100	LTM R100MFM	0.530
For CANopen				
8	⎓ 24	0.4...8	LTM R08CBD	0.530
	∿ 100...240 V	0.4...8	LTM R08CFM	0.530
27	⎓ 24	1.35...27	LTM R27CBD	0.530
	∿ 100...240 V	1.35...27	LTM R27CFM	0.530
100	⎓ 24	5...100	LTM R100CBD	0.530
	∿ 100...240 V	5...100	LTM R100CFM	0.530
For DeviceNet				
8	⎓ 24	0.4...8	LTM R08DBD	0.530
	∿ 100...240 V	0.4...8	LTM R08DFM	0.530
27	⎓ 24	1.35...27	LTM R27DBD	0.530
	∿ 100...240 V	1.35...27	LTM R27DFM	0.530
100	⎓ 24	5...100	LTM R100DBD	0.530
	∿ 100...240 V	5...100	LTM R100DFM	0.530
For Profibus DP				
8	⎓ 24	0.4...8	LTM R08PBD	0.530
	∿ 100...240 V	0.4...8	LTM R08PFM	0.530
27	⎓ 24	1.35...27	LTM R27PBD	0.530
	∿ 100...240 V	1.35...27	LTM R27PFM	0.530
100	⎓ 24	5...100	LTM R100PBD	0.530
	∿ 100...240 V	5...100	LTM R100PFM	0.530
For Ethernet TCP/IP				
8	⎓ 24	0.4...8	LTM R08EBD	0.530
	∿ 100...240 V	0.4...8	LTM R08EFM	0.530
27	⎓ 24	1.35...27	LTM R27EBD	0.530
	∿ 100...240 V	1.35...27	LTM R27EFM	0.530
100	⎓ 24	5...100	LTM R100EBD	0.530
	∿ 100...240 V	5...100	LTM R100EFM	0.530

Marking may be carried out in the language of the country of use.

The protective system or equipment has also to carry the marking normally stipulated by its construction standards.

ROUTINE EXAMINATIONS AND TESTS

The routine examinations and tests are unchanged.

(17) DESCRIPTIVE DOCUMENTS

The descriptive documents quoted hereafter constitute the technical documentation describing the modification of the equipment, subject of this present addition.

- Descriptive note (31 items) signed on 2009.04.19
- Instructions notice signed on 2009.04.19

(18) ESSENTIAL SAFETY AND HEALTH REQUIREMENTS

The respect of the Essential Health and Safety Requirements is unchanged.

Verneuil-en-Halatte, 2009 12 04

ATMOSPHERES EXPLOSIVES ORGANISME NOTIFIE INERIS NOTIFIED BODY EXPLOSIVE ATMOSPHERES

D charp

Director of the Certifying Body,
By delegation
D. CHARPENTIER
Deputy Manager of Certification