

CERTIFICAT



CERTIFICADO



СЕРТИФИКАТ



認證證書



CERTIFICATE



ZERTIFIKAT



Italia

CERTIFICATE

Machinery Directive 2006/42/EC Annex. IX
EC type-examination certificate for logic units to ensure safety functions
(ref. Annex IV – 21)

Certificate No.:	TUV IT 0948 10 MAC 012 B Rev.06
Name and address of manufacturer:	STEM S.r.l. Via della Meccanica, 2 27010, Cura Carpignano (PV) Italy
Designation:	Safety module
Model/type:	NC95 - NC96MAT <input type="checkbox"/> Single sample <input checked="" type="checkbox"/> Group of samples
Reference Standards:	EN ISO 13849-1:2023 - EN ISO 13849-2:2012 EN ISO 13856-1:2013 - EN ISO 13856-2:2013 EN ISO 13856-3:2013 - EN 60204-1:2018 EN IEC 60947-1:2021
Test report:	RRTR-25-0948-MAC-722379812-03

We herewith certify, as per Notified Body no.0948, that the product for the respective scope of application stated in the annex to this EC type-examination certificate meets the requirements of the Directive:

2006/42/CE

Issue date:	26/03/2025
Expiry date:	29/03/2030



00077



TÜV Italia S.r.l.
Notified Body, Identification N° 0948

Alberto Carelli
Industrie Service Division Manager

First Issue date:	30/03/2010
Expiration date of the last certification cycle:	29/03/2025



Annex to EC type-examination certificate n° TUV IT 0948 10 MAC 012 B Rev.06

1. Scope:

The NC95 safety module is able to check the status of pressure-sensitive safety mats and edges: the output is activated by pressing and releasing the START (reset) button only if the two inputs (S11-S12 & S21-S22) are closed and if no operator is in the area covered by the mat (edge). When the safety device is pressed, the control unit opens the safe outputs 13-14 and 23-24.

Manual and monitored reset is only possible once the device is no longer pressed, as indicated by EN ISO 13856-1 (Appendix A) and EN ISO 13856-2 (Appendix A).

The NC95 can only be used with monitored manual start (reset).

The NC96MAT safety module is able to check the status of pressure-sensitive safety devices (mats, edges, bumpers): the output is activated automatically only if the two inputs (S11-S12 & S21-S22) are closed and if no operator is in the area covered by the device. When the safety device is pressed, the control unit opens the safe outputs 13-14 and 23-24.

Reset is only possible once the device is no longer pressed, in accordance with the requirements of EN ISO 13856-1 (Appendix A), EN ISO 13856-2 (Appendix A) and EN ISO 13856-3 (Appendix A).

The NC96MAT can only be used with automatic start.

For both safety modules (NC95, NC96MAT), the opening of even a single input connection determines a safety status, placing the safe outputs in the open state and preventing them from closing again even after the contacts have been reclosed and the START (reset) button has been pressed.

The component falls under Annex IV point 21 of the Machinery Directive 2006/42/EC as it belongs to the category *“Logic units to ensure safety functions”*.



2. Reference Standard:

EN ISO 13849-1:2023 - EN ISO 13849-2:2012

EN 60204-1:2018 - EN IEC 60947-1:2021

The standards cited on the reference certificate of this Annex (see above)

☒ have been fully applied

☐ have been partially applied

EN ISO 13856-1:2013

EN ISO 13856-2:2013

EN ISO 13856-3:2013

The standards cited on the reference certificate of this Annex (see above)

☐ have been fully applied

☒ have been partially applied (for applicable parts)

3. Main technical characteristics

General characteristics of the safety module

Power supply: 24 V ac +10%, -15% 50 – 60 Hz

24 V dc +10%, -15%

Current consumption: 25÷70mA@24Vdc

110÷220mA@24Vac

Short circuit protection: Fast fuse 630 mA

Housing material: PA 6.6

Mounting: 35 mm standard DIN rail

Protection degree: IP20

Operating temperature: -5°C ÷ +55°C

Storage temperature: -25°C ÷ +70°C

Connections: screw terminals (tightening torque 0.5 Nm)



Italia

Maximum voltage on the safety outputs (terminals 13-14, 23-24): 240 Vac/dc

Maximum current on the safety outputs: 3 A

Maximum power on the safety outputs (ohmic load): 720 VA

Maximum collector-emitter voltage of auxiliary output phototransistor: 24 V

Maximum collector current of auxiliary output phototransistor: 60 mA

Mechanical life: 10^7 operations

OFF state response time: 20ms

SIGNALS:

POWER, green LED = power supply

CH1, green LED = channel 1

CH2, green LED = channel 2

TERMINAL FUNCTION:

A1: Power supply +24 Vdc / 24 Vac

A2: Power supply GND / 24 Vac

INPUTS:

S11-S12: pressure sensitive device

S12-S22: pressure sensitive device

Y1-Y2: Start button input and control loop feedback

OUTPUTS:

13-14: First safe output

23-24: Second safe output

31-32: Auxiliary output NC



Reliability data:

Safety category and PL (EN ISO 13849-1:2023)	Cat.3			
	PL - d	PL - e	PL - e	
nop (n. operations / year)	66000	31900	19000	N.op / year
MTTFd	30	62	100	years
PFHd	2,65x10 ⁻⁷	8,84x10 ⁻⁸	4,29x10 ⁻⁸	
TM	20			years

4. Conditions of validity of the certificate

The validity of the EC type examination certificate is subject to review every five years. If the validity is not extended, the manufacturer has the obligation to stop placing the machine on the market.

The manufacturer has the obligation to communicate any modification made to the approved type. TÜV Italia reserves the right to confirm the validity of the EC type examination certificate issued.

5. Note

In accordance with the provisions of the Machinery Directive 2006/42/EC, the applicant must inform the notified body regarding the modifications, even of minor importance, that he has made or intends to make to the model of the machine to which the certificate refers.

Copy of the test report n.: **RRTR-25-0948-MAC-722379812-03** is delivered to the Manufacturer.

This annex is an integral part of the EC type examination certificate n°

TUV IT 0948 10 MAC 012 B Rev.06

Milan, 26/03/2025

CERTIFICAT



CERTIFICADO



СЕРТИФИКАТ



認證證書



CERTIFICATE



ZERTIFIKAT



Italia

Information regarding the TÜV Italia Certificate

This certificate is only valid for the referenced company and its facilities stated on the certificate. Only the Certification Body is allowed to transfer (assign) it to a third party.

The right to use the marking depicted on the certificate covers solely products, which match with the type approval and the specifications within the test report or within its complementary (additional) agreements.

Each product has to contain (be accompanied) the necessary operating and assembly instructions. Each product must bear the clearly visible identification of the manufacturer or importer as well as a type plate, in order to identify the compliance of the type approval with the product placed on the market.

The holder of the TÜV Italia certificate is obliged to continuously observe if the manufacture of the marked products complies with the test requirements; he is obliged to perform the control tests defined within the test requirements or by the Certification Body in an orderly manner.

Aside from the conditions referenced above, the conditions within the General Contract are effective for the TÜV Italia certificate.

It is valid as long as the state of the art requirements on which the test (approval) was based, are effective, if it was not withdrawn prior on conditions within the General Contract.

If this certificate expires or is withdrawn it has to be returned to the Certification Body immediately.