

SAFETY DEVICES

## Certificate of compliance

### In accordance with EN 61508 and IEC 61508 standards

**SIL-INERIS No. 204993 /2021A**

The National Institute for Industrial Environment & Risks (INERIS - Institut National de l'Environnement Industriel et des Risques), a public organization, established by decree No.90-1089 of 7 December 1990, and accredited by COFRAC under number 5-0045 for certification of products and services (scope of accreditation available on the website [www.cofrac.fr](http://www.cofrac.fr))

issues the present certificate for the following model:

**Trade Mark :** SCHNEIDER ELECTRIC

**Denomination:** Multifunction Protection relay

**Model /Type:** Sepam Series 80

**Manufacturer:** SCHNEIDER ELECTRIC INDUSTRIES SAS  
35, rue Joseph MONIER  
F- 92500 Rueil Malmaison - France

**Applicant:** SCHNEIDER ELECTRIC INDUSTRIES SAS  
35, rue Joseph MONIER  
F- 92500 Rueil Malmaison - France

The rules of certification are available on the website [www.ineris.fr](http://www.ineris.fr) .

#### 1. Functional safety

This device, following laboratory inspection, is certified as complying with the requirements of:

**Standard:** EN 61508 and IEC 61508  
EN 61508 (parts 1, 2 and 3) December 2001 : SIL 1 or SIL 2  
EN 61508 (parts 1, 2 and 3) April 2010 : SIL 1 or SIL 2

**Level of compliance:** SIL 2, when used with “undervoltage coils”,  
SIL 1, when used with “shunt tripping coils”.

**SIL 2**, when used with “shunt tripping coils” and when associated with an external safety device (an upstream backup protection relay shall be connected to the downstream trip coil, either directly or through the watchdog relay of the downstream protection relay).

**Functions assessed:**

ANSI Code	Name	ANSI Code	Name
50/51	Phase overcurrent	81L	Underfrequency
50/51N	Earth fault (sensitive E/F)	81H	Overfrequency
59N	Neutral voltage displacement	87T	Transformer differential
59	Overvoltage	87R	Machine differential
27	Undervoltage	49RMS	Thermal overload

**Limitations of use:**

- Wiring schematics shall comply with requirements defined in user’s manual.
- Digital Inputs used in the safety functions shall be redundant and connected to two different MES modules. Sensors connected to these inputs shall have a safety level adapted to the requirements of the function provided by the Sepam series 80.
- Analogue sensors shall have a safety level adapted to the requirements of the function provided by the Sepam series 80.
- External actuators driven by Sepam series 80 outputs shall have an adequate level of safety.
- Parameter settings shall be coherent and be validated during set up.
- Periodic maintenance tests shall be carried out every 5 years to detect non-covered faults.

**2. Configuration version**

The Sepam series 80 system has been assessed according to the standard requirements; test results appear in the certification report reference Ineris-204993-2717284- SEPAM 80 V10.00 - SIL Assessment Report

The hardware and software versions covered by the present certificate are :

	Base UNIT 80.4	Cartridge
<b>Upgrade 5</b>		
Hardware	MIXT80-4 ref. NHA82733 indice 01 NUM80-4 ref. AAV70661-07	MMS020 ref BBV20536-02 / MMR020 ref S1B65533-02  Module MES120 ref .BBV20549-00
Software	V8.01	V8.04
<b>Upgrade 5.5 of 2015</b>		
Hardware	MIXT80-4 ref. NHA82733 indice 01 NUM80-4 ref. AAV70661-07	MMS020 ref BBV20536-02 / MMR020 ref S1B65533-02  Module MES120 ref. BBV20549-00
Software	V9.00	V9.03
Software	V10.00	V10.00

**3. Assessment**

The assessment of the safety functions in accordance with IEC 61508 standard is consigned in the Ineris-204993-2717284- SEPAM 80 V10.00 - SIL Assessment Report

**4. Safety for use**

Safety for use are described in the user guides references :

- SEPED303007EN V02\_01/09/2017
- SEPED303003EN V13\_26/03/2021
- SEPED303001EN V08\_26/03/2021

Verneuil-en-Halatte, 2021-07-27

The Chief Executive Officer of INERIS,  
By delegation  
Dominique CHARPENTIER  
Certification Division,  
Manager