Certificate – Сертификат – 證明書 – Certificat – 증명서 – شهادة

SIL

Functional Safety Certificate

No. 3N261009.LSECU73

Test Report / Technical Construction File no. JAT-25(01)221S

Certificate's Holder: Lihong Safety Engineering (Shanghai) Co.,Ltd.
No. Rooms E and F, 26th Floor, No. 828-838 Zhangyang Road, China (Shanghai) Pilot Free Trade Zone, Pudong, Shanghai

Product: Safety Interlock Switch

Model(s): D3NL, D3-B2S, D3SL series, FK-CL series, LMC3 series

Standard: Has been assessed per the relevant requirements of:
EN61508, IEC 61508:2010 Parts 1-7, EN ISO 13849-1:2023,
EN ISO 14119:2025 (Type4), IEC 60947-5-3, EN 60947-5-3:2013

And meets requirements providing a level of integrity to:
Systematic Capability: SC 3 (SIL 3 Capable)
Random Capability: Type A Element
SIL 3 @ HFT= 0; SIL 3@ HFT=1; Route 2_H
Performance Level: PL=d

* Safety function:
Safety Interlock Switch is mainly used between the safety-protection elements of the machine equipment. (such as switch for safety protection door, emergency stopping switch etc) and on/off control elements (such as motor contactor, hydraulic EMV), to confirm the safety of the machine (such as whether the safety door is closed in place, etc.).

* Application Restrictions:
The unit must be properly designed into a Safety Instrumented Function per the Safety Manual requirements.

** Is suitable to be safety function according to the description and the configuration defined in Annex I.*

Verification Mark:

The Verification Mark can be affixed on the product. It is NOT permitted to alter the Verification Mark in any way

Remark: This SIL Verification of Compliance has been issued on a voluntary basis. ECM confirms that a Test Report is existent for the above listed product(s) and found to meet the requirements of above standards for application in safety related system up to Safety Level of **SIL 3**. The unit must be properly designed into a Safety Instrument Function as per the requirements in the Safety Manual. The Verification Mark shown above can be affixed on the product. It is NOT permitted to alter the Verification Mark in any way. In addition the Verification's Holder is NOT allowed to transfer the Verification to third parties. This certificate can be checked for validity at www.entecerma.it

Date of issue 09 October 2026

Expiry date 08 October 2031

For online check:

Approver
Ente Certificazione Macchine
Legal Representative
Luca Bedonni

Ente Certificazione Macchine Srl
Via Cà Bella, 243 - 40053 Valsamoggia Loc. Castello di Serravalle (Bo) Italy
☎ +39.0516705141 🖷 +39.0516705156 ✉ info@entecerma.it 🌐 www.entecerma.it

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Annex I

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1. The use of the product must obey the required rules to conservation of SIL 3 properties. These rules are recalled in the §6 of the Assessment Report reference: [SIL Capability assessment report].

2. The product version of hardware components used for validation and type tests are the following:

Product:	Safety Interlock Switch
Model(s):	D3NL, D3-B2S, D3SL series, FK-CL series, LMC3 series

3. Acceptable environmental constraints for the system are recalled in the safety Manual. These elements must be checked for each integration operation of the product.

4. The SIL 3 capable certified safety instrumented function of the product is the following:
   - SF1: To Close on demand.
   - SF2: To Open on demand.

Component architecture	SIL Capability	Demand mode	PFH_D(1/h)
Loo1 configuration	SC3 / HFT	High	3.88E-07
Loo2 configuration	SC3 / HFT	High	3.99E-08

Safety function	Failure rate	Undetected dangerous failure rate	Tests intervals	MTTR
SF1	2.89E-06/h	3.88E-07/h	12months	8h
SF2	2.87E-06/h	3.86E-07/h	12months	8h

5. The Safety Integrated Level of the safety function using the product shall be calculated taking into account the characteristics of the whole system.