



# Certificate / Certificat Zertifikat / 合格証

BHG 1805026 C001

*exida* hereby confirms that the:

## Nexus OnCore™ Safety System

**Baker Hughes  
Shanghai - China**

The manufacturer  
may use the mark:



Revision 1.2 March 19, 2021  
Surveillance Audit Due  
March 1, 2023

Has been assessed per the relevant requirements of:

**IEC 61508 : 2010 Parts 1-7**

and meets requirements providing a level of integrity to:

**Systematic Capability: SC 3 (SIL 3 Capable)**

**Random Capability: Type B Element**

**SIL 3 @ HFT=1; Route 1<sub>H</sub>**

**PFH/PFD<sub>avg</sub> and Architecture Constraints  
must be verified for each application**

### Safety Function:

The OnCore Safety System controller SPU60 reads inputs from the configured input modules (SAI60 or SDI60), performs the user-programmed safety logic and writes to the configured output modules (SDO60) in the specified time period.

### Application Restrictions:

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



Evaluating Assessor

Certifying Assessor

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**Systematic Capability: SC 3 (SIL 3 Capable)**

**Random Capability: Type B Element**

**SIL 3 @ HFT = 1; Route 1<sub>H</sub>**

**PFH/PFD<sub>avg</sub> and Architecture Constraints  
must be verified for each application**

**Nexus OnCore™  
Safety System**

**Systematic Capability:**

The product has met manufacturer design process requirements of Safety Integrity Level (SIL) 3. These are intended to achieve sufficient integrity against systematic errors of design by the manufacturer.

A Safety Instrumented Function (SIF) designed with this product must not be used at a SIL level higher than stated.

**Random Capability:**

The SIL limit imposed by the Architectural Constraints must be met for each element.

**IEC 61508 Failure Rates**

For detailed information on failure rates of the Nexus OnCore™ Safety System, contact the manufacturer.

**SIL Verification:**

The Safety Integrity Level (SIL) of an entire Safety Instrumented Function (SIF) must be verified via a calculation of PFH/PFD<sub>avg</sub> considering redundant architectures, proof test interval, proof test effectiveness, any automatic diagnostics, average repair time and the specific failure rates of all products included in the SIF. Each element must be checked to assure compliance with minimum hardware fault tolerance (HFT) requirements.

The following documents are a mandatory part of certification:

**Assessment Report:** BHG 18-05-026 R002 V1R1

**Safety Manual:** GEK-118616 Rev. 1.0 (or later)

NCM10080 Rev. A (or later)



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