FUNCTIONAL SAFETY

CERTIFICATE

CERTIFICATO – ZERTIFIKAT – CERTIFICADO – CERTIFICAT

The product:

Control board for load detection systems
EVO

Manufactured by:

Dinamic Oil S.p.A.
Via Togliatti, 15
41030 Bomporto - Italy

suitable for the following safety function(s):

To provide, in a single output or with two different outputs, the measurement of the applied load and the status of the rope wrapped around the drum.

has been assessed per the relevant requirements of

IEC 61508:2010 Parts 1 to 3

and meets the requirements providing the following:

Systematic Capability: The compliance with the requirements for the avoidance of systematic faults and the requirements for the control of systematic faults have been achieved following the compliance Route 1_S.	SC 2
Hardware Safety Integrity: The constraints on hardware safety integrity have been verified in order to achieve a sufficiently robust architecture taking into account the level of element and subsystem complexity following the compliance Route 1_H.	Type B
Random Safety Integrity: The estimated safety integrity, for each safety function, due to random hardware safe and dangerous failures rates (excluding "no part" and "no effect" contribution).	See page 2

The architectural constraints and the effects of random failures (PFH/PFD_{AVG}) must be verified for each specific application and safety function implemented by the E/E/PE safety-related system.

Certified by:

BYHON

BYHON Certification Director:

Rosati Francesco

CERTIFICATE No:
DOIL-EVOBD-ESE-A01

Issued:
February 24th, 2025

Valid until:
February 23th, 2028

The owner of a valid certificate for an assessed product is authorized to affix the following mark to all recognized devices which are identical to the product assessed.

BYHON SIL

ANAB
ANSI National Accreditation Board
ACCREDITED
ISO/IEC 17065
PRODUCT CERTIFICATION BODY
#8914

The design of each Safety Instrumented Function (SIF) shall meet the requirements listed in the reference standards that shall be selected by taking into account the specific application. Specific activities necessary to investigate and reach a judgment on the adequacy of the functional safety achieved by the E/E/PE safety-related system or compliant items (elements/subsystems) has been conducted by an independent assessor.

The following failure rates data shall be used to the PFH/PFD_{AVG} estimation, taking into consideration all parameters such as redundancy, architectural constraints, diagnostic capability, also introduced by the whole system, including the considerations about the proof test and its effectiveness, mean time of restoration, up to the maintenance capability and its minimum characteristics.

Device failure rates

Element	Configuration	λ_S	λ_{DU}	λ_{DD}
EVO Control board	--	1	25	781

Note:

- All failure fates are in FIT (Failure In Time 1 FIT = 1 failure / 10^9 hours).
- The prescriptions contained in the EVO Control Board safety manual shall be followed.
- The device can be used in applications up to SIL 2.

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The Functional Safety Assessment report no.

25-DIN-EVOBD-FSA-01

dated:
February 24th, 2025

is an integral part of this certificate

Mod_12_CB Rev09

BYHON
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