C E R T I F I C A T E

This certifies, that the company

Gefran S.p.A.
Via Sebina, 74
25050 Provaglio d'Iseo (BS)
Italy

Is authorized to provide the product mentioned below

Description of product:	**Melt pressure sensors with HART communication protocol series:** • **HIXx-x-x-x-xxxx-x-x-x-P/S-x-x-(xxx) xxxxxxxxxx / HIEx-x-x-x-xxxx-x-x-x-P/S-x-(xxx) xxxxxxxxxx**
In accordance with:	**EN IEC 62061:2021** **IEC 61508:2010 Parts 1, 2, 3, 4, 5, 6, 7** **IEC 61511-1:2016 + A1:2017, IEC 61511-2/3:2016 (as far as applicable)** **EN ISO 13849-1:2015** **EN ISO 13849-2:2012**

Registration No 20 20036 02
Test Report No PS-23790-23-M
File reference 23790-02

Validity
from 2023-07-27
until 2026-07-27

TÜV NORD Italia S.r.l. (TÜV NORD Group)
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Cerro Maggiore, 2023-07-27
prodotto@tuev-nord.it

Please also pay attention to the information stated overleaf

ANNEX

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To Certificate-Nr. 20 20036 02

Safety functions	1. Analog output 2. Relay output (de-energise to trip)
Mode of operation	High Demand Mode

Results		
Parameter	**Value**	**Measuring Unit**
Architecture	1oo1(D)	--
HFT	0	--
Category	2	--
β, β_D factors	0,02	--
λ_{DD}		
Analog output	4,04E-07	1/h
Relay output	4,22E-07	1/h
λ_{DU}		
Analog output	6,18E-08	1/h
Relay output	3,20E-08	1/h
DC_{avg}		
Analog output	90	%
Relay output	90	%
SFF		
Analog output	94,21	%
Relay output	96,99	%
$MTTF_D$		
Analog output	245	years
Relay output	251	years
PFH		
Analog output	6,18E-08	1/h
Relay output	3,20E-08	1/h
Systematic Capability	2	--
SIL	2	--
PL	d	--

The product can be declared as compliant to:	**EN IEC 62061, IEC/EN 61508: SIL 2** **EN ISO 13849-1, EN ISO 13849-2 : PL d**

Remarks:	• These results must be considered in combination with SIL/PL and λ_D values of other devices of a safety-related system in order to determine suitability for a specific SIL/PL • The results are “worst case” results, considering all the mechanical versions • The results of DC_{avg} are rounded to 90%, in compliance with EN ISO 13849-1, Table 5, Note 2