

# CERTIFICATE

This certifies, that the company

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

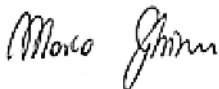
Is authorized to provide the product mentioned below

Description of product: **Melt pressure sensors with HART communication protocol series:**

- **HMFx-x-x-xxxx-x-x-x-P/S-x-x-(xxx) xxxxxxxxxxxx**
- **HWFx-x-x-xxxx-x-x-x-P/S-x-x-(xxx) xxxxxxxxxxxx**

In accordance with: **IEC/EN 62061:2005 + A1:2013 + A2:2015 + EN 62061 / EC:2010**  
**IEC/EN 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 22 22110 01  
Test Report No PS-22110-22-L  
File reference 22110-01



TÜV NORD Italia S.r.l. (TÜV NORD Group)  
Via Turati, 70 - 20023 Cerro Maggiore (MI)



[www.tuev-nord.it](http://www.tuev-nord.it)

Validity  
from 2022-04-29  
until 2025-04-29

Cerro Maggiore, 2022-04-29  
[prodotto@tuev-nord.it](mailto:prodotto@tuev-nord.it)

Please also pay attention to the information stated overleaf

# ANNEX

Annex 1, Page 2 of 2

To Certificate-Nr. 22 22110 01

<b>Safety functions</b>	1. Analog output
<b>Mode of operation</b>	High Demand Mode

Parameter	Results	
	Value	Measuring Unit
Architecture	1001	--
HFT	0	--
Category	2	--
$\beta, \beta_D$ factors	0,02	--
$\lambda_{DD}$	7,50E-07	1/h
$\lambda_{DU}$	1,13E-07	1/h
DCavg	90	%
SFF	92,68	%
MTTF <sub>D</sub>	132	years
PFH <sub>D</sub>	1,13E-07	1/h
Systematic Capability	2	--
SILCL (IEC/EN 62061)	2	--
SIL (IEC/EN 61508)	2	--
PL (EN ISO 13849)	d	--

The product can be declared as compliant to:	<b>IEC/EN 62061 SILCL 2, IEC/EN 61508 SIL 2, EN ISO 13849-1, EN ISO 13849-2, PL d</b>
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<b>Remarks:</b>	<ul style="list-style-type: none"> <li>• These results must be considered in combination with SIL/PL and <math>\lambda_D</math> values of other devices of a safety-related system in order to determine suitability for a specific SIL/PL</li> <li>• The results are "worst case" results, considering all the mechanical versions</li> <li>• The results of DCavg are rounded to 90%, in compliance with EN ISO 13849-1, Table 5, Note 2</li> </ul>
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