

# CERTIFICATE

This certifies, that the company

**ENAPTER S.r.l.**  
**Via di Lavoria, 56/G**  
**56040 Crespina Lorenzana (PI)**  
**Italy**

Is authorized to provide the product mentioned below

Description of product: **Electrolyser EL4.1**

In accordance with: **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)**

Registration No 23 23733 01  
Test Report No PS-23733-23-M-01  
File reference 23 23733-01



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



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

Validity  
from 2023-11-15  
until 2026-11-14

Cerro Maggiore, 2023-11-15  
[prodotto@tuev-nord.it](mailto:prodotto@tuev-nord.it)

<b>Mode of operation</b>	Low Demand Mode
<b>Proof Test Coverage</b>	75%
<b>Demand period</b>	10 years

Results for DCDC Version (either with TDK or with LITTLEFUSE relay)				
SIF	Description	HFT	PFD	SIL
SIF 1	Hydrogen stack pressure – PT101A	0	4,16E-02	1
SIF 3	Water leakage detection – WPS104	0	1,02E-02	1
SIF 4	Tank overpressure – PSH102	0	2,79E-02	1
SIF 5	Dilution fan for hydrogen concentration – ST104B	0	5,21E-02	1
SIF 6	Safety Electronic board temperature – TE108	0	7,32E-03	1

Results for ACDC Version (ABB relay)				
SIF	Description	HFT	PFD	SIL
SIF 1	Hydrogen stack pressure – PT101A	0	4,19E-02	1
SIF 3	Water leakage detection – WPS104	0	1,06E-02	1
SIF 4	Tank overpressure – PSH102	0	2,83E-02	1
SIF 5	Dilution fan for hydrogen concentration – ST104B	0	5,24E-02	1
SIF 6	Safety Electronic board temperature – TE108	0	7,70E-03	1

<b>Remarks:</b>	<ul style="list-style-type: none"> <li>• These results are valid for both version EL4.1 35 barg and EL4.1 8 barg</li> <li>• For Proof Test Interval see Safety Manual at paragraph 7</li> </ul>
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