STN	**Veterné elektrárne Časť 50-3: Použitie lidarov pripevnených na gondole na meranie vetra Oprava AC**	**STN EN IEC 61400-50-3/AC** 33 3136

Wind energy generation systems - Part 50-3: Use of nacelle-mounted lidars for wind measurements

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/24

Obsahuje: EN IEC 61400-50-3:2022/AC:2023, IEC 61400-50-3:2022/COR1:2023

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EN IEC 61400-50-3:2022/AC:2023-11

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English Version

Wind energy generation systems - Part 50-3: Use of nacelle-mounted lidars for wind measurements (IEC 61400-50-3:2022/COR1:2023)

Systèmes de génération d'énergie éolienne - Partie 50-3: Utilisation de lidars montés sur nacelle pour le mesurage du vent
(IEC 61400-50-3:2022/COR1:2023)

Windenergieanlagen - Teil 50-3: Verwendung von auf der Gondel montierten LiDARs für Windmessungen
(IEC 61400-50-3:2022/COR1:2023)

This corrigendum becomes effective on 24 November 2023 for incorporation in the English language version of the EN.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Endorsement notice

The text of the corrigendum IEC 61400-50-3:2022/COR1:2023 was approved by CENELEC as EN IEC 61400-50-3:2022/AC:2023-11 without any modification.

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

IEC 61400-50-3
Edition 1.0 2022-01

WIND ENERGY GENERATION SYSTEMS –

Part 50-3: Use of nacelle-mounted lidars for wind measurements

IEC 61400-50-3
Édition 1.0 2022-01

SYSTÈMES DE GÉNÉRATION D'ÉNERGIE ÉOLIENNE –

Partie 50-3: Utilisation de lidars montés sur nacelle pour le mesurage du vent

CORRIGENDUM 1

Corrections to the French version appear after the English text.

Les corrections à la version française sont données après le texte anglais.

4 Symbols and abbreviated terms

In the table, in the 22nd row before the end of the table (corresponding to ΔV_{hor}), *replace* "deg" *with* "m/s".

7.6.2.2 Horizontal wind speed uncertainty

After Formula (17), in "u_{cal} is the calibration uncertainty of the reference sensor used to measure …", *replace* "$V_{\mathrm{hor}} - u_{\mathrm{cal}}$" with "$V_{\mathrm{hor}} \cdot u_{\mathrm{cal}}$".

Table 1 – Summary of calibration uncertainty components

Renumber the entries in the table as follows, replacing the second "4" *with a* "5" *and inserting a* "10" *after* "9":

IEC 61400-50-3:2022-01/COR1:2023-11(en-fr)

No.	Component	Type	Description
Reference anemometer			
1	Calibration uncertainty, u_{cal}	B	Calibration uncertainty of the reference anemometer sensor according to IEC 61400-12-1:2017
2	Operational characteristics, u_{ope}	B	Anemometer class according to IEC 61400-12-1:2017
3	Mounting, u_{mast}	B	Mounting uncertainty of the anemometer
4	Lighting finial, u_{lgh}	B	Uncertainty of the reference anemometer due to due to lightning finial
5	Data acquisition, u_{daq}	B	Data acquisition system uncertainty
Lidar probe length			
6	Site effects, u_{probe}	B	Horizontal wind flow variation within the lidar probe volume
Height error			**Measurement errors due to wind shear**
7	Installation, $u_{\text{vert\_pos}}$	B	Height difference between reference anemometer and LOS due to installation of optical head
8	Measurement range, u_{inc}	B	Height difference between reference anemometer and LOS due to measurement range error
Relative wind direction, u_{θ_r}			
9	Reference wind direction sensor, u_{θ}	B	Deviation from linearity and other instrument uncertainties
10	Determination of line of sight, $u_{\theta_{\text{los}}}$	B	Uncertainty in the procedure of 7.5.6
Projection error			**Errors in the angle used in projection**
11	Installation, u_{φ}	B	The inclinometers' calibration uncertainty or the uncertainty of the direct measurement of φ (e.g. theodolite)
12	Flow inclination, u_{ψ}	B	Uncertainty due to neglecting the contribution of $W\sin\varphi$
Calibration measurements			
13	Statistical uncertainty	A	$\sigma_{\text{dev}} / \sqrt{N}$

Annex A − Example calculation of uncertainty of reconstructed parameters for WFR with two lines of sight

A.2 Uncertainty propagation through WFR algorithm

In the second paragraph, replace $f(x_{\text{y}}, x_2, \ldots x_{\text{N}})$ *with* $f(x_1, x_2, \ldots x_{\text{N}})$.

A.3 Operational uncertainty of the lidar and WFR algorithm

Replace (uope,lidar = 0) *with* ($u_{\text{ope,lidar}}$ = 0).