ICS 27.180, 91.140.10 SLOVENSKÁ TECHNICKÁ NORMA November 2017

STN	**Energetická hospodárnosť budov Metóda výpočtu energetických požiadaviek systému a účinnosti systému Časť 4-10: Veterné systémy na výrobu elektriny**	**STN EN 15316-4-10 06 0237**

Energy performance of buildings - Method for calculation of system energy requirements and system efficiencies - Part 4-10: Wind power generation systems, Module M11-8-7

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. 10/17

Obsahuje: EN 15316-4-10:2017

125309

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 15316-4-10

May 2017

ICS 27.180; 91.140.10

English Version

Energy performance of buildings - Method for calculation of system energy requirements and system efficiencies - Part 4-10: Wind power generation systems, Module M11-8-7

Performance énergétique des bâtiments - Méthode de calcul des besoins énergétiques et des rendements des systèmes - Partie 4-10 : Systèmes de production d'électricité éolienne, Module M11-8-7

Enegetische Bewertung von Gebäuden - Verfahren zur Berechnung der Energieanforderungen und Nutzungsgrade der Anlagen - Teil 4-10: Windkraftanlagen, Modul M11-8-7

This European Standard was approved by CEN on 6 February 2017.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Ref. No. EN 15316-4-10:2017 E

Contents

Page

European foreword

This document (EN 15316-4-10:2017) has been prepared by Technical Committee CEN/TC 228 “Heating systems and waterbased cooling systems in buildings”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by November 2017, and conflicting national standards shall be withdrawn at the latest by November 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This document forms part of a series of standards aimed at European harmonization of the methodology for the calculation of the energy performance of buildings.

EPB standards deal with energy performance calculation and other related aspects (like system sizing) to provide the building services considered in the EPB directive.

CEN/TC 228 deals with heating systems in buildings. Subjects covered by CEN/TC 228 are:

— energy performance calculation for heating systems;

— inspection of heating systems;

— design of heating systems;

— installation and commissioning of heating systems.

This standard gives the procedure to take into account the energy performance of wind power systems (WPS).

To provide flexibility to the EU Member States in the application of the set of CEN standards, clearly identified options are given, with a rational for the choices.

In order to progress on alignment, reproducibility and transparency default CEN options are provided at relevant positions in the standards.

At national level these default CEN options may be replaced by a National Annex, following the models provided in the relevant standards.

1 Scope

This European Standard defines a method for the assessment of electricity generation onsite or nearby the building environment onsite or nearby the building through wind power systems (WPS) and energy performance calculation of wind power systems. The WPS described in this document are small plants as they may occur in domestic production and use of electricity in connection with specific buildings. This standard covers wind generation power systems ≤ 75 kW.

This European Standard does not cover sizing or inspection of WPS.

Other generation systems are covered in other sub modules of part M3-8.

Table 1 shows the relative position of this standard within the set of EPB standards in the context of the modular structure as set out in ISO 52000-1.

NOTE 1 In ISO/TR 52000-2 the same table can be found, with, for each module, the numbers of the relevant EPB standards and accompanying technical reports that are published or in preparation.

NOTE 2 The modules represent EPB standards, although one EPB standard may cover more than one module and one module may be covered by more than one EPB standard, for instance a simplified and a detailed method respectively. See also Clause 2 and Tables A.1 and B.1.

Table 1 —Position of this standard within the modular structure of the set of EPB standards

Overarching			Building (as such)		Technical Building Systems										
	Descriptions			Descriptions		Descriptions	Heating	Cooling	Ventilation	Humidification	Dehumidification	Domestic Hot water	Lighting	Automation and control	Electricity production
sub 1		M1	sub 1	M2	sub 1		M3	M4	M5	M6	M7	M8	M9	M10	M11
1	General		**1**	General	**1**	General	15316–1					15316–1			
2	Common terms and definitions; symbols, units and subscripts		**2**	Building Energy Needs	**2**	Needs						12831–3			
3	Applications		**3**	(Free) Indoor Conditions without Systems	**3**	Maximum Load and Power	12831–1					12831–3			
4	Ways to Express Energy Performance		**4**	Ways to Express Energy Performance	**4**	Ways to Express Energy Performance	15316–1					15316–1			
5	Building Functions and Building Boundaries		**5**	Heat Transfer by Transmission	**5**	Emission and control	15316–2	15316–2							
6	Building Occupancy and Operating Conditions		**6**	Heat Transfer by Infiltration and Ventilation	**6**	Distribution and control	15316–3	15316–3				15316–3			
7	Aggregation of Energy Services and Energy Carriers		**7**	Internal Heat Gains	**7**	Storage and control	15316–5					15316–4–3			
8	Building Partitioning		**8**	Solar Heat Gains	**8**	Generation									
					8–1	Combustion boilers	15316–4–1					15316–4–1			
					8–2	Heat pumps	15316–4–2	15316–4–2				15316–4–2			
					8–3	Thermal solar Photovoltaics	15316–4–3					15316–4–3			15316–4–3
					8–4	On-site cogeneration	15316–4–4					15316–4–4			15316–4–4
					8–5	District heating and cooling	15316–4–5	15316–4–5				15316–4–5			15316–4–5

					8–6	Direct electrical heater	15316–4–6					15316–4–6			
					8–7	Wind turbines									**15316–4–10**
					8–8	Radiant heating, stoves	15316–4–8								
9	Calculated Energy Performance		**9**	Building Dynamics (thermal mass)	**9**	Load dispatching and operating conditions									
10	Measured Energy Performance		**10**	Measured Energy Performance	**10**	Measured Energy Performance	15378–3					15378–3			
11	Inspection		**11**	Inspection	**11**	Inspection	15378–1					15378–1			
12	Ways to Express Indoor Comfort		**12**	–	**12**	BMS									
13	External Environment Conditions														
14	Economic Calculation	15459–1													

NOTE The shaded modules are not applicable.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 15603, *Energy performance of buildings - Overall energy use and definition of energy ratings*

EN 15316-1, *Heating systems in buildings - Method for calculation of system energy requirements and system efficiencies - Part 1: General*