52016-1
Annex A

2 References

The references, identified by the EPB module code number, are given in Table A.1.

Table A.1 - References

Reference	Reference document [a]	
	Number	Title
M1-4	ISO 52003-1	Energy performance of buildings - Indicators, requirements, ratings and certificates - Part 1: General aspects and application to the overall energy performance
M1-6	ISO 17772-1 EN 16798-1	Energy performance of buildings - Indoor environmental Quality - part 1: Indoor environmental input parameters for the design and assessment of energy performance of buildings Energy performance of buildings - Ventilation for buildings - Part 1: Indoor environmental input parameters for design and assessment of energy performance of buildings addressing indoor air quality, thermal environment, lighting and acoustics (Module M1-6)
M1-8	ISO 52000-1	Energy performance of buildings - Overarching EPB assessment - Part 1: General framework and procedures
M1-13	ISO 52010-1	Energy performance of buildings - External climatic conditions - Part 1: Conversion of climatic data for energy calculations
M2-4	ISO 52018-1	Energy performance of buildings — Indicators for partial EPB requirements related to thermal energy balance and fabric features — Part 1: Overview of options
M2-5.1	ISO 13789	Thermal performance of buildings - Transmission and ventilation heat transfer coefficients - Calculation method
M2-5.2	ISO 13370	Thermal performance of buildings - Heat transfer via the ground - Calculation methods
M2-5.3	ISO 6946	Building components and building elements - Thermal resistance and thermal transmittance - Calculation method
M2-5.4	ISO 10211	Thermal bridges in building construction - Heat flows and surface temperatures - Detailed calculations
M2-5.5	ISO 14683	Thermal bridges in building construction - Linear thermal transmittance - Simplified methods and default values
M2-5.6	ISO 10077-1	Thermal performance of windows, doors and shutters - Calculation of thermal transmittance - Part 1: General
M2-5.7	ISO 10077-2	Thermal performance of windows, doors and shutters - Calculation of thermal transmittance - Part 2: Numerical method for frames
M2-8	ISO 9050 ISO 15099 ISO 52022-3	Glass in building - Determination of light transmittance, solar direct transmittance, total solar energy transmittance, ultraviolet transmittance and related glazing factors [for non-scattered glazings] Thermal performance of windows, doors and shading devices - Detailed calculations [for windows with scattering glazing and/or solar shading devices] Energy performance of buildings - Thermal, solar and daylight properties of building components and elements - Part 3: Detailed calculation method of the solar and daylight characteristics for solar protection devices combined with glazing [for normal incidence angle] (or see Subjects 4, 5 and 6 in Table C.1)
M3-1	EN 15316-1	Energy performance of buildings - Method for calculation of system energy requirements and system efficiencies - Part 1: General and Energy performance expression, Module M3-1, M3-4, M3-9, M8-1, M8-4
M3-4b	EN 15316-1	See M3-1
M3-5	EN 15316-2	Energy performance of buildings - Method for calculation of system energy requirements and system efficiencies - Part 2: Space emission systems (heating and cooling), Module M3-5, M4-5
a If a reference comprises more than one document, the references can be differentiated. b Informative.		

Reference	Reference document a	
	Number	Title
M4-1	EN16798-9	Energy performance of buildings — Ventilation for buildings — Part 9: Calculation methods for energy requirements of cooling systems (Modules M4-1, M4-4, M4-9) — General
M4-4b	EN16798-9	See M4-1
M4-5	EN 15316-2	See M3-5
M5-1	EN 16798-3	Energy performance of buildings — Ventilation for buildings — Part 3:For non-residential buildings - Performance requirements for ventilation and room-conditioning systems (Modules M5-1, M5-4)
M5-5	EN 16798-7	Energy performance of buildings — Ventilation for buildings — Part 7: Calculation methods for the determination of airflow rates in buildings including infiltration (Module M5-5)
M5-6	EN 16798-5-1 EN 16798-5-2	Energy performance of buildings — Ventilation for buildings - Part 5-1: Calculation methods for energy requirements of ventilation and air conditioning systems (Modules M5-6, M5-8, M6-5, M6-8, M7-5, M7-8) -- Method 1: Distribution and generation Energy performance of buildings — Ventilation for buildings — Part 5-2: Calculation methods for energy requirements of ventilation systems (Modules M5-6, M5-8, M6-5, m6-8, M7-5, M7-8) — Method 2: Distribution and generation
M6-1	EN 16798-3	See M5-1
M6-4b	EN 16798-3	See M5-1
M6-5	EN 16798-5-1 EN 16798-5-2	See M5-6
M7-1	EN 16798-3	See M5-1
M7-4b	EN 16798-3	See M5-1
M7-5	EN 16798-5-1 EN 16798-5-2	See M5-6
M9-1	EN 15193-1	Energy performance of buildings - Energy requirements for lighting - Part 1: Specifications, Module M9
M10-1	EN 15232-1	Energy performance of buildings - Part 1: Impact of Building Automation, Controls and Building Management - Modules M10-4,5,6,7,8,9,10
a If a reference comprises more than one document, the references can be differentiated. b Informative.		

A.3 Selection of main method

Table A.2 — Choice between hourly or monthly calculation method (see 5.2)

Type of object and/or application	All applications	b
Description	Choice [a]	
Only hourly method allowed	No	
Only monthly method allowed	No	
Both methods are allowed	Yes	
a Only one Yes per column possible. b Add more columns if needed to differentiate between type of object, type of building or space, type of application or type of assessment. Use the list of identifiers from ISO 52000-1:2017, Tables A.2 to A.7 (normative template, with informative default choices in Tables B.2 to B.7).		

A.4 Zoning

Table A.3 — Thermal zoning rules (see 6.4.2.12)

	Application: a	
Description b	Apply the described method?	If "No”: Alternative method If the described method is not used, describe details of the alternative method or give reference to source document
Zoning step 1. Assessment of thermal envelope	Yes	Not applicable
Zoning step 2. Grouping according to space category	Yes	Not applicable

Zoning step 3. Grouping in case of large openings	Yes	Not applicable
Zoning step 4. Split to have same combination of services	Yes	Not applicable
Zoning step 5. Further grouping according to similar thermal conditions	Yes	Not applicable
Zoning step 6. Split according to specific system or subsystem properties	No	Not applicable
Zoning step 7. (Further) split to have sufficient homogeneity in thermal balance	No	The same zone is considered to be the spaces where the difference between the penetration (monthly global radiation, kWh / m2 season) do not exceed 30% and the difference in heat storage capacity is less than two classes. If any of these conditions are not met, the zone must be divided. If the resulting second zone is less than 25% of the original zone, the division is optional.
Zoning step 8. (Further) grouping of thermally unconditioned zones	Yes	Not applicable
Zoning step 9. Simplification in case of small thermal zones	Yes	Not applicable
Zoning step 10. Simplification in case of very small thermal zones	Yes	Not applicable
a Add more columns to differentiate per application, if needed. b Additional rows may be added for alternative steps.		

Table A.4 — Choice of method for thermally unconditioned zones (see 6.4.5)

Situation	Default value of bztu;m in case of a thermally unconditioned zone, type: external	
	bztu;m winter, spring, autumn	bztu;m for summer months
Attic slab non insulated	0,9	-2,0
Internal wall or slab to unheated space	0,5	-0,8
Wall to unheated staircase	0,7	-0,8
Wall to sunspace - single glazed - double glazed - insulated	 0,8 0,7 0,5	-0,8
Wall or slab to uninsulated cellar	0,7	1,5
Wall or slab to insulated cellar	0,5	1,5
Internal thermally unconditioned zone type allowed?		
Choice	No	
If Yes: (optionally) specify default values for the adjustment factor (free text)		
Situation	Default value of bztu;m in case of a thermally unconditioned zone, type: internal a	
	No default values provided	

Table A.5 — Default contribution of ventilation in external construction of a thermally unconditioned zone (see 6.4.5.4)

Application	All applications a	
Description	Choice	
Default allowed?	No	
If Yes:		
Coefficient for default contribution of ventilation, cztu;ve	-	
a Add more columns if needed.		

Table A.6 — Choice of spatial temperature averaging in residential buildings

Description		Choice a
Application of the given formula for spatial temperature averaging		No
If No:		
No application of the given formula for spatial temperature averaging	It is assumed that the same temperature set-point for heating applies also to partly or moderately thermally conditioned residential spaces.	Yes
	Calculate the fully and partly or moderately thermally conditioned residential spaces as separate, thermally uncoupled thermal zones.	Not applicable
	Calculate the fully and partly or moderately thermally conditioned residential spaces as separate, thermally coupled thermal zones.	Not applicable
a Only one Yes possible.		

Table A.7 — Choice between calculations with thermally coupled or uncoupled thermal zones (see 6.4.7)

Application	All applications
Description	Choice a
Thermally uncoupled calculations	Yes
Thermally coupled calculations	No
Both methods are allowed	No
a Only one Yes per column possible. b Add more columns if needed to differentiate between applications (e.g. building categories, new or existing buildings, etc.). Note the link with the choice in Table A.9.	

Table A.8 — Default thermal coupling properties in case of thermally coupled zones (see 6.4.7)

		Choice	
Heat transfer part	Quantity	Default value	Unit
Transmission heat transfer between zones z and y	Not applicable	Not applicable	
ventilation heat transfer from zone z to	Not applicable	Not applicable	
ventilation heat transfer from zone y to	Not applicable	Not applicable	...a
a Add more rows if needed.			

A.5 Hourly calculation procedures

Table A.9 — Factor for consideration of internal heat gains in design heat load calculation (see 6.5.5.5)

Application	All applications	... a
Description	Choice	Choice
Value for factor fH;ig	0	Not applicable
a Add more rows if needed.		

Table A.10 — Alternative choices in modelling (see 6.5.5.2, 6.5.6.3.1 and 6.5.7.1)

Description	Choice	If choice is No, describe or give reference to the applied alternative meth-
Use the method in 6.5.5.2 to calculate the actual temperatures and loads	Yes	Not applicable
Use method in 6.5.6.3.1 for the calculation of the thermal (longwave) radiation exchange	Yes	Not applicable
Use method in 6.5.7.1 for the conversion of physical properties of building elements into properties per layer (node)	Yes	Not applicable
NOTE In case of one or more "No", the procedures are validated using the validation cases in 7.2., as described in that subclause.		

Table A.11 — Convective fractions (see 6.5.6.2)

fint;c a	fsol;c	fH;c	fC;c
0,40 for all source types	0,10	0,40	0,40
a Can be differentiated per source type.			

Table A.12 — Specification of internal partitions (see 6.5.6.3.1)

	Choice
Internal partitions need to be specified?	No
If by default: specify the default thermal characteristics	
Default	Specification a
Not applicable	Not applicable
a Add more rows if needed.	

Class	Specification of the class
Class I (mass concentrated at internal side)	Construction with external thermal insulation (main mass component near inside surface) , or equivalent
Class E (mass concentrated at external side)	Construction with internal thermal insulation (main mass component near outside surface) , or equivalent
Class IE (mass divided over internal and external side)	Construction with thermal insulation in between two main mass components, or equivalent
Class D (mass equally distributed)	Uninsulated construction (e.g. solid or hollow bricks, heavy or lightweight concrete, or lightweight construction with negligible mass (e.g. steel sandwich

Table A.13 — Distribution of mass of opaque and ground floor elements (see 6.5.7.2 and 6.5.7.3)

Table A.14 — Specific heat capacity of opaque and ground floor elements (see 6.5.7.2 and 6.5.7.3)

Class	κm;op J/(m2-K)	Specification of the class
Light	95 000	Lightweight envelope, light internal constructions
Medium	190 000	- Mixed construction (heavy envelope, light internal constructions) - large halls
Heavy	280 000	Heavy construction, normal room height (< 4,5 m).
Very heavy	560 000	Very heacy construction (wight of elements ≥ 1600 kg/m^3), normal room height (< 4,5 m).

Table A.15 — Solar absorption coefficient of external opaque surfaces (see 6.5.7.2)

	Choice
Differentiation in solar absorption coefficient?	No
If Yes: specify the procedure to classify the three categories (free text)	
Category	Specification
Category 1 αsol = 0,3 (light colour)	Not applicable
Category 2 αsol = 0,6 (intermediate colour)	Not applicable
Category 3 αsol = 0,9 (dark colour)	Not applicable
	Choice
If No: choose the default category	2

Table A.16 — Coefficient to limit assumed temperature in adjacent thermally unconditioned zone (see 6.5.9)

Application	All applications	... a
	cztu,h;max	cztu,h;max
Value	1,0	Not applicable
a Add more columns if needed to differentiate between applications (e.g. building categories, new or existing buildings, etc.).		

Table A.17 — Specific heat capacity of air and furniture (see 6.5.11)

κm;int J/(m2K)
10 000

Table A.18 — View factor to the sky (see 6.5.13.3)

	Unshaded horizontal roof	Unshaded vertical wall
Fsky	1,0	0,5

Table A.19 — Difference between external air temperature and sky temperature (see 6.5.13.3)

Climatic regiona	Intermediate
Δθsky;t (K)	11 (fixed value)
a Add more columns if needed to differentiate between climatic regions.	

Table A.20 — Choice of method for moisture absorption and desorption in materials (see 6.5.14.1)

Application	All applications	... a
Description	Choice	Choice
Moisture absorption and desorption calculated?	No	Not applicable
If No:	Gabs;zt;t = 0	Gabs;zt;t = 0
If Yes: give reference to method	Not applicable	Not applicable
a Add more columns if needed.		

Table A.21 — Choice of glazing area or frame area fraction (see E.2.1)

Description	Choice a
For each window: free choice between glazing area or fixed frame fraction	No
For all windows the same choice: either glazing area or fixed frame fraction	Yes
For all windows: only glazing area allowed	No
For all windows: only fixed frame fraction	No
a Only one Yes per column possible.	
In case of frame fraction:	Ffr
Frame fraction fixed value	0,3 in general 0,25 for old windows 0,1 for skylights and thin sunspace structures 0,5 for small windows under 0,5 m^2 surface

Table A.22 — Factors related to the solar energy transmittance (see E.2.2.1)

Correction and weighting factor for g-value non-scattering and scattering transparent glazings and				
Fw	ag	altg o		
0,9	0,75	45		
Default values of the total solar energy transmittance at normal incidence, gn, for typical types of				
Type		gn		
Single glazing (4 mm float)		0,85		
Double glazing (4-12-4 mm) without coating		0,75		
Double glazing (4-12-4 mm) with low-E ouside (ε=0,15)		0,7		
Double glazing (4-16-4 mm) egy szelektív low-e with low-E inside (ε<0,05), argon (>90%)		0,59		
Reflective (g=0,32) glazing (4-16-4 mm) low-E ouside, argon (>90%)		0,32		
Triple glazing (4-12-4-12-4 mm) double low-E coating (ε<0,05), argon (>90%)		0,55		
a Assuming a clean surface and normal, untainted and non-scattering glazing.				
Default values of the reduction factor, for typical types of blinds a				
Blind type	Optical properties of blind		Reduction factor with	
	absorption	transmission	blind inside	blind outside
Shutters, wood	not applicable	not applicable	not applicable	0,13
Shutters, metal	not applicable	not applicable	not applicable	0,14
Reluxa	not applicable	not applicable	not applicable	0,1
Reluxa, light	not applicable	not applicable	0,55	0,1
Reluxa, dark	not applicable	not applicable	0,75	0,15
Textile blind	not applicable	not applicable	0,4	0,15
Textil blind dark	not applicable	not applicable	0,65	0,2
Blind reflective (alu)	not applicable	not applicable	0,2	0,08
Curtain light	not applicable	not applicable	0,65	not applicable
Curtain dark	not applicable	not applicable	0,8	not applicable
a Add more rows or columns if needed.				

[NB1] megjegyzést írt: Ez energetikai szimulációnál nem különösebben releváns, hacsak nem a világítás energiaigényét ez alapján is számolnánk, amit elvileg nem teszünk.

Table A.23 — Rules for operation of shutters (see G.2.2.1.2)

Application	All applications a	... a
Control level	Rules	Rules
0 Manual operation	Closed: after sunset, if occupied Open: after sunrise, if occupied, but not during sleeping hours (between 23-06)	Not applicable
1 Motorized operation with manual control	Same	Not applicable
2 Motorized operation with automatic control	Closed: after sunset Open: after sunrise	Not applicable
3 Combined light/blind/HVAC	Same b	Not applicable
a Add more columns if needed. b Conservative rule; a level 3 combined control is not covered in this table.		

Table A.24 — Rules for operation of solar shading devices (see G.2.2.1.2)

[NB2] megjegyzést írt: Ez így marad, szakirodalomban van 300, de akár 500 is. Maradjunk a szabványosnál.

Application	All applications a	... a
Control level	Rules	Rules
0 Manual operation	Closed: if solar irradiance > 300 W/m2 Open: if solar irradiance < 200 W/m2	Not applicable
1 Motorized operation with manual control	Same	Not applicable
2 Motorized operation with automatic control	Closed: if solar irradiance > 200 W/m2 Open: if solar irradiance < 200 W/m2 and > 2 hours passed since closing	Not applicable
3 Combined light/blind/HVAC	Same b	Not applicable
a Add more columns if needed. b Conservative rule; a level 3 combined control is not covered in this table.		

Table A.25 — Choices between options and methods for calculation of shading by external objects (see F.1)

Application b	All applications			Not applicable		
Description	Choice			Choice		
Calculation of the effect of shading by distant objects included in this document?	Yes			n.a.		
When calculating solar shading on building elements: which types of distant shading objects (not on site) may or shall be taken into account or ignored NOTE For instance landscape (such as hills or dikes), vegetation (such as trees), other constructions (such as buildings)	Shall be taken into account:	May be taken into account:	Shall be ignored:	Shall be taken into account:	May be taken into account:	Shall be ignored:
	Landscape (such as hills or dikes), other construc-tions (such as buildings)	vegetation (evergreen or deciduous) semi-transparent other constructions		n.a.	n.a.	n.a.
When calculating solar shading on opaque building elements such as roofs or facades: which types of on site shading objects can or shall be ignored NOTE For instance rebates, overhangs or other shading objects from the own build-	Shall be taken into account:	May be taken into account:	Shall be ignored:	Shall be taken into account:	May be taken into account:	Shall be ignored:
	not applicable	not applicable	Rebates, overhangs or other shading objects from the own building on ..	n.a.	n.a.	n.a.
	Shall be taken into account:	May be taken into account:	Shall be ignored:	Shall be taken into account:	May be taken into account:	Shall be ignored:

When calculating solar shading on transparent building elements: NOTE For instance window rebates, overhangs and side fins	Window rebates, overhangs and side fins if overhang and side angle is greater than 30°	Other window rebates, overhangs and side fins Semi-transparent		n.a.	n.a.	n.a.
Specific subdivision rules for the calculation of solar shading on building	None			n.a.		
Choice between the two methods for the solar shading calculation:	Choice a			Choice a		
Method 1, Shading of direct radiation	Yes			n.a.		
Method 2, Shading of direct and diffuse radiation	No			n.a.		
In case of method 2: give reference to calculation	n.a.			n.a.		
a Only one Yes per column possible. b Add more columns if needed to differentiate between applications (e.g. building categories, new						

Table A.26 — Number of skyline segments, nsh,segm for input solar shading objects (see F.3.3)

Application b	All applications	…
Description	Value of nsh;segm a	Value of nsh;segm a
Maximum number of segments over 360 degrees	unlimited, default value: 15	
Fixed width (= 360 / nsh;segm) c	No	
a Practical range, informative. b Add more columns if needed to differentiate between applications (e.g. building categories, new or existing buildings, etc.). c If not fixed, the width of each segment can be adapted to the width of the shading object, with limitation of maximum number of segments nsh;segm.		

A.6 Monthly calculation procedures

Table A.27 — Monthly ventilation heat transfer coefficient (see 6.6.6.2)

Application	All applications	.... b
Description	Choice a	Choice a
Method A	Yes	Not applicable
Method B c	No	Not applicable
Both methods c	No	Not applicable

a Only one Yes per column possible.

b Add more columns if needed to differentiate between applications (e.g. building categories, new or existing buildings, etc.).

c Method B is only allowed outside the CEN

Table A.28 — Dynamics correction factor for ventilation (see 6.6.6.2)

Dynamics correction factor for monthly mean air flow	Value
fve;dyn;k	1,0

Table A.29 — Solar absorption coefficient of external opaque surfaces (see 6.6.8.2)

	Choice
Differentiation in solar absorption coefficient?	No
If Yes: specify the procedure to classify the three categories (free text)	
Category	Specification
Category 1 αsol = 0,3 (light colour)	Not applicable
Category 2 αsol = 0,6 (intermediate colour)	Not applicable
Category 3 αsol = 0,9 (dark colour)	Not applicable
	Choice
If No: choose the default category	2

Table A.30 — View factor to the sky (see 6.6.8.3)

	Unshaded horizontal roof	Unshaded vertical wall
Fsky	1	0,5

Table A.31 — Difference between external air temperature and sky temperature (see 6.6.8.3)

Climatic region a	Intermediate
Δθsky;m (K)	11 (fixed value)
a Add more columns if needed to	

Table A.32 — Choice between detailed or simple method to determine the internal effective heat capacity (monthly method; see 6.6.9)

Application	All applications	
Description	Choice a	b
Only detailed method allowed	No	
Only simple method allowed	No	
Both methods allowed	Yes	

a Only one Yes per column possible.

b Add more columns if needed to differentiate between applications (e.g. construction types or building categories).

Table A.33 — Simple method to determine the internal effective heat capacity. Specification of the classes (monthly method; see 6.6.9)

Class	Specification of the class
Light	Construction type is dominated by light constructions as specified in Table A.14
Medium	Construction type is dominated by medium constructions as specified in Table A.14
Heavy	Construction type is dominated by heavy constructions as specified in Table A.14
Very heavy	Construction type is dominated by very heavy constructions as specified in Table A.14

Table A.34 — Values of the reference numerical parameter aH,0 and the reference time constant τH,0 for the gain utilization factor (see 6.6.10.2)

aH,0	τh,0
1,0	15

Table A.35 — Values of the reference numerical parameter ac,0 and the reference time constant τc,0 for the loss utilization factor (see 6.6.10.3)

ac,0	τC,0
1,0	15

Table A.36 – Choice between methods A and B for heating intermittency (see 6.6.11.3)

Application	All applications	
Description	Choice a	b
Only Method A	No	
Only Method B	No	
Both methods are allowed	Yes	
a Only one Yes per column possible. b Add more columns if needed to differentiate between applications (e.g. building categories, new or existing buildings, etc.).		

Table A.37 — Choice between methods A and B for cooling intermittency (see 6.6.11.4)

Application	All applications	
Description	Choice a	b
Only method A	No	
Only method B	No	
Both methods are allowed	Yes	
a Only one Yes per column possible.		
If method A applies		
Correlation factor for method A for intermittent cooling	Value	
bC;red	0,3	

Table A.38 — Choice between methods A and B for overheating indicator (see 6.6.12)

Application	b	.... b
Description	Choice a	Choice a
Method A	Yes	
Method B	No	
a Only one Yes per column possible. b Add more columns if needed to differentiate between applications (e.g. building categories, new or existing buildings, etc.).		
If method B applies		
Provide details or reference to details	<free text>	

Table A.39 — The monthly fraction of energy need for humidification (see 6.6.14)

[AG3] megjegyzést írt: Tamás

	Monthly fraction of energy need for humidification /HU;m		
Formula?	Yes		
If Yes, give formula	for each month m: fHU;m = QH;nd;m/QH;nd;an where QH;nd;m/an is the monthly / annual energy		
If No, give fraction for each month (total = 1)	Monthly fraction of energy need for humidification		
January	Not applicable	July	Not applicable
February	Not applicable	August	Not applicable

	Monthly fraction of energy need for humidification		
March	Not applicable	September	Not applicable
April	Not applicable	October	Not applicable
May	Not applicable	November	Not applicable
June	Not applicable	December	Not applicable

Table A.40 — Efficiency of latent heat recovery (see 6.6.14)

Type of heat recovery unit	Efficiency of latent heat recovery
Provisions specifically made for transporting moisture from exhaust to supply air (such as a	0,55
Other provisions	0
-	-
- a	-
a Add more rows if needed to differentiate between types.	

[AG4] megjegyzést írt: Tamás

Table A.42 — Choice of glazing area or frame area fraction (see E.2.1)

Description	Choice a
For each window: free choice between glazing area or fixed frame fraction	No
For all windows the same choice: either glazing area or fixed frame fraction	Yes
For all windows: only glazing area allowed	No
For all windows: only fixed frame fraction	No
a Only one Yes per column possible.	
In case of frame fraction:	Ffr
Frame fraction fixed value	0,3 in general 0,25 for old windows 0,1 for skylights and thin sunspace structures 0,5 for small windows under 0,5 m^2 surface

Table A.43 — Factors related to the solar energy transmittance (see E.2.2.1))

Correction and weighting factor for g-value non-scattering and scattering transparent glazings and blinds:		
Fw	ag	altg o
0,9	0,75	45
Default values of the total solar energy transmittance at normal incidence, gn, for typical types of		
Type		gn
Single glazing (4 mm float)		0,85
Double glazing (4-12-4 mm) without coating		0,75
Double glazing (4-12-4 mm) with low-E ouside (ε=0,15)		0,7
Double glazing (4-16-4 mm) egy szelektív low-e with low-E inside (ε<0,05), argon (>90%)		0,59
Reflective (g=0,32) glazing (4-16-4 mm) low-E ouside, argon (>90%)		0,32
Triple glazing (4-12-4-12-4 mm) double low-E coating (ε<0,05), argon (>90%)		0,55
a Assuming a clean surface and normal, untainted and non-scattering glazing.		

Default values of the reduction factor, for typical types of blinds a				
Blind type	Optical properties of blind		Reduction factor with	
	absorption	transmission	blind inside	blind outside
Shutters, wood	not applicable	not applicable	not applicable	0,13
Shutters, metal	not applicable	not applicable	not applicable	0,14
Reluxa	not applicable	not applicable	not applicable	0,1
Reluxa, light	not applicable	not applicable	0,55	0,1
Reluxa, dark	not applicable	not applicable	0,75	0,15
Textile blind	not applicable	not applicable	0,4	0,15
Textil blind dark	not applicable	not applicable	0,65	0,2
Blind reflective (alu)	not applicable	not applicable	0,2	0,08
Curtain light	not applicable	not applicable	0,65	not applicable
Curtain dark	not applicable	not applicable	0,8	not applicable
a Add more rows or columns if needed.				

Table A.44 — Movable shutter reduction factor, /sht;with, and movable solar shading reduction factor /sh;with (see G.2.2.2.2)

Not applicable

[NB5] megjegyzést írt: Mi az árnyékolószerkezetekre egy fix értéket adunk meg, annak típusának függvényében. Nincsenek külön havi értékek. Órai bontású számítás esetén pedig meghatározott szabány van az árnyékolók üzemeltetésére.

Table A.45 — Choices between options and methods for calculation of shading by external objects (see F.1)

Application b	All applications			Not applicable		
Description	Choice			Choice		
Calculation of the effect of shading by distant objects included in this document?	Yes			n.a.		
When calculating solar shading on building elements: which types of distant shading objects (not on site) may or shall be taken into account or ignored NOTE For instance landscape (such as hills or dikes), vegetation (such as trees), other constructions (such as buildings)	Shall be taken into account:	May be taken into account:	Shall be ignored:	Shall be taken into account:	May be taken into account:	Shall be ignored:
	Landscape (such as hills or dikes), other construc-tions (such as buildings)	vegetation (evergreen or deciduous) semi-transparent other constructions		n.a.	n.a.	n.a.
When calculating solar shading on opaque building elements such as roofs or facades: which types of on site shading objects can or shall be ignored NOTE For instance rebates, overhangs or other shading objects from the own build-	Shall be taken into account:	May be taken into account:	Shall be ignored:	Shall be taken into account:	May be taken into account:	Shall be ignored:
	not applicable	not applicable	Rebates, overhangs or other shading objects from the own building on ..	n.a.	n.a.	n.a.
	Shall be taken into account:	May be taken into account:	Shall be ignored:	Shall be taken into account:	May be taken into account:	Shall be ignored:

When calculating solar shading on transparent building elements: NOTE For instance window rebates, overhangs and side fins	Window rebates, overhangs and side fins if overhang and side angle is greater than 30°	Other window rebates, overhangs and side fins Semi-transparent		n.a.	n.a.	n.a.
Specific subdivision rules for the calculation of solar shading on building	None			n.a.		
Choice between the two methods for the solar shading calculation:	Choice a			Choice a		
Method 1, Shading of direct radiation	Yes			n.a.		
Method 2, Shading of direct and diffuse radiation	No			n.a.		
In case of method 2: give reference to calculation	n.a.			n.a.		
a Only one Yes per column possible. b Add more columns if needed to differentiate between applications (e.g. building categories, new						

Application b	All applications	Not applicable
Description	Choice	Choice
Method 1, Shading of direct radiation	Yes	n.a.
Method 2, Shading of direct and diffuse radiation	No	n.a.
In case of method 2: give reference to calculation	n.a.	n.a.
a Only one Yes per column possible. b Add more columns if needed to differentiate between applications (e.g. building categories, new or existing buildings, etc.).		

Table A.46 — Parameters for monthly solar shading due to overhangs (See F.3.5.1.2)

not applicable

Table A.47 — Parameters for monthly solar shading due to fins (See F.3.5.1.2)
not applicable

Table A.48a — Parameters for monthly solar shading by obstacles; more detailed method (See F.3.1.2 and F.3.5.2.2) not applicable

Table A.48b — Parameters for monthly solar shading by obstacles; more detailed method (See F.3.1.2 and F.3.5.2.2) not applicable