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ANNEXES 1 to 9

## **ANNEXES**

**to the**

**Commission Delegated Regulation**

**supplementing Regulation (EU) 2017/1369 of the European Parliament and  
of the Council with regard to energy labelling of electronic displays**

**and repealing Commission Delegated Regulation (EU) No 1062/2010**

## ANNEX I

### Definitions for the purposes of the Annexes

The following definitions shall apply for the purposes of the Annexes:

- (1) '*High Dynamic Range (HDR)*' means a method to increase the contrast ratio of the image of an electronic display by using metadata generated during the creation of the video material and that the display management circuitry interprets to produce a contrast ratio and colour rendering perceived by the human eye as more realistic than that achieved by non HDR-compatible displays;
- (2) '*contrast ratio*' means the difference between the peak brightness and black level in an image;
- (3) '*luminance*' means the photometric measure of the luminous intensity per unit area of light traveling in a given direction, expressed in units of candelas per square meter ( $\text{cd/m}^2$ );
- (4) '*Automatic Brightness Control (ABC)*' means the automatic mechanism that, when enabled, controls the brightness of an electronic display as a function of the ambient light level illuminating the front of the display;
- (5) '*by default*' means a specific feature or setting that is activated or set at the factory and available when the customer uses the product for the first time or after performing a "reset to factory settings" action, if allowed by the product. A change of a setting parameter by the user shall not automatically change any other parameter set as default without notifying the user;
- (6) '*pixel (picture element)*' means the area of the smallest element of a picture that can be distinguished from its neighbouring elements, as defined in standard IEC 60050;
- (7) '*on mode*' means a condition in which the product is connected to a power source, has been activated and is providing one or more of its display functions;
- (8) '*forced menu*' means a specific menu, appearing upon initial start-up of the electronic display or upon a reset to factory settings, offering a set of display settings, pre-defined by the supplier;
- (9) '*normal configuration*' or '*home configuration*', '*standard mode*' or, for televisions, '*home mode*', means a display screen setting which is recommended to the end-user by the supplier from the initial set up menu or the factory setting that the electronic display has for the intended product use. It must deliver the optimal quality for the end user in a typical domestic or office environment. The normal configuration is the condition in which the declared values for off, standby, networked standby and on mode are measured;
- (10) '*brightest on mode configuration*' or '*shop mode*' means the configuration of the electronic display, pre-set by the supplier, which provides an acceptable picture with the highest measured luminance. This includes a pre-set mode incorporated for use specifically in the context of demonstrating the electronic display, for example in high illumination (retail) conditions and not involving an auto power-off if no user action or presence is detected;
- (11) '*screen area*' means the viewable screen area of the electronic display calculated by multiplying the maximum viewable image width by the maximum viewable image height along the surface of the panel (both flat or curved);

- (12) *'room presence sensor'* or *'gesture detection sensor'* or *'occupancy sensor'* means a sensor monitoring and reacting to the movements in the space around the product whose signal can trigger the switching to on mode. Lack of movement detection for a predetermined time can be used to switch into standby mode or networked standby mode;
- (13) *'off mode'* means a condition in which the equipment is connected to the mains power source and is not providing any function;
- (14) *'standby mode'* means a condition where the electronic display is connected to the mains or DC power source, depends on energy input from that source to work as intended and provides only the following functions, which may persist for an indefinite time:
- reactivation function, or reactivation function and only an indication of enabled reactivation function or
  - information or status display.
- (15) *'reactivation function'* means a function that via a remote switch, a remote control unit, an internal sensor, a timer or, for networked displays, the network, provides a switch from any standby mode to a mode, other than off-mode, providing additional functions;
- (16) *'display mechanism'* means any screen, including tactile screen, or other visual technology used for displaying internet content to users;
- (17) *'nested display'* means visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;
- (18) *'tactile screen'* means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;
- (19) *'alternative text'* means text provided as an alternative to a graphic allowing information to be presented in non-graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications;
- (20) *'external power supply (EPS)'* means a device as defined in Commission Regulation (EU) [OP – please insert the number of the Ecodesign Regulation laying down ecodesign requirements for external power supplies, repealing Regulation (EC) No 278/2009].
- (21) *'standardised EPS'* means an external power supply designed to provide power to various devices and that is complying to a standard issued by an international standardization organization.
- (22) *'quick response (QR) code'* is a matrix barcode included on the energy label of a product model that links to that model's information in the public part of the product registration database;
- (23) *'audio-set configuration'* means an on mode test condition for the electronic display that disables or minimizes the power demand of the internal audio system during the on mode power measurement for the purposes of calculating the Energy Efficiency Index (EEI);

### A. Energy efficiency classes

The energy efficiency class of an electronic display shall be determined on the basis of its Energy Efficiency Index (EEI) as set out in Table 1. The Energy Efficiency Index (EEI) of an electronic display shall be determined in accordance with part B of this Annex.

**Table 1: Energy efficiency classes of electronic displays**

Energy Efficiency Class	Energy Efficiency Index (EEI)
A (most efficient)	$EEI < 0.30$
B	$0.30 \leq EEI < 0.40$
C	$0.40 \leq EEI < 0.50$
D	$0.50 \leq EEI < 0.60$
E	$0.60 \leq EEI < 0.75$
F	$0.75 \leq EEI < 0.90$
G (least efficient)	$0.90 \leq EEI$

### B. Energy Efficiency Index (EEI)

The Energy Efficiency Index (EEI) of the electronic display shall be calculated using the following equation:

$$EEI = \frac{(P_{measured} + 1)}{(3 \times [90 \times \tanh(0,02 + 0,004 \times (A - 11)) + 4] + 3) + corr_{lum}}$$

where:

$A$  represents the viewing surface area in  $dm^2$ ;

$P_{measured}$  is the measured power in on mode set as indicated in Table 2;

$corr_{lum}$  is a correction factor set as indicated in Table 3.

**Table 2:  $P_{measured}$  measurement**

Dynamic Range level	$P_{measured}$
Standard Dynamic Range (SDR): $P_{measured_{SDR}}$	Power demand in Watts (W) in on mode, measured when displaying standardised dynamic broadcast content moving picture test sequences. Where allowances are applicable according to part C of this Annex, they should be deducted from $P_{measured}$ for the EEI calculation.
High Dynamic Range (HDR) $P_{measured_{HDR}}$	Power demand in Watts (W) in on mode, measured as for $P_{measured}$ but with the HDR functionality activated by metadata in the

	standardised HDR dynamic broadcast content moving picture test sequence. Where allowances are applicable according to part C of this Annex, they should be deducted from $P_{measured}$ for the EEI calculation.
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**Table 3:  $corr_{lum}$  value**

<b>Electronic Display type</b>	<b><math>corr_{lum}</math> value</b>
Television	0.0
Monitor	0.0
Digital signage	$0.00062 * (lum - 500) * A$ <i>where "lum" is the peak white luminance, in <math>cd/m^2</math>, of the brightest pre-set mode of the display and A is the display area in <math>dm^2</math></i>

### C. Allowances

Allowances reducing the value of  $P_{measured}$  for the purposes of calculating the EEI.

#### (1) Electronic display audio system

The audio-set configuration must be achievable through the electronic display product remote control or through an externally accessible control or through a network interface. Information describing the procedure to establish the *audio-set* configuration must be provided as required in Annex VI.(5).(d).iv. If it is not provided, then the on mode power requirement must be measured for EEI calculation purposes with the electronic display audio set configuration meeting the on mode testing requirements of a suitable harmonised measurement standard.

#### (2) Electronic display with ABC enabled by default

Electronic displays shall qualify for a 15 % reduction in  $P_{measured}$ , in the calculation of the EEI if they meet all of the following requirements:

- (a) ABC is enabled by default in the normal configuration of the electronic display and persists in any other standard dynamic range configuration, with the exception of the brightest on mode configuration.
- (b) the value of  $P_{measured}$ , in the normal configuration, is measured, with ABC disabled or if ABC cannot be disabled, in an ambient light condition of 100 lux measured at the ABC sensor;
- (c) the value of  $P_{measured}$  with ABC disabled shall be equal to or greater than the on mode power measured with ABC enabled in an ambient light condition of 100 lux measured at the ABC sensor;
- (d) with ABC enabled, the measured value of the on mode power must decrease by 20 % or more when the ambient light condition, measured at the ABC sensor, is reduced from 100 lux to 12 lux;

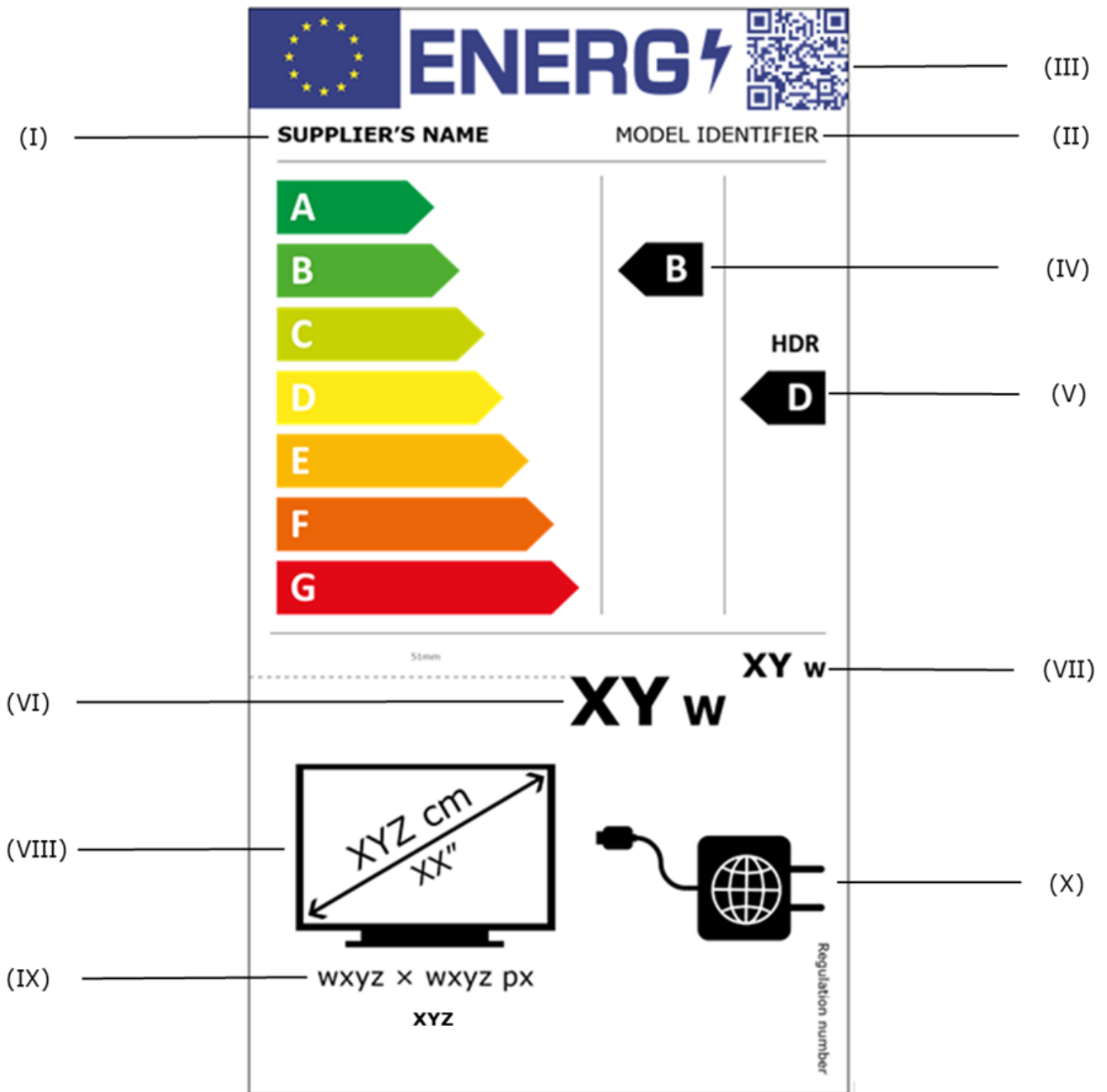
- (e) the ABC control of the display screen luminance must meet all of the following characteristics when the ambient light condition measured at the ABC sensor changes:
- the measured screen luminance at 60 lux is between 65 % and 95 % of the screen luminance measured at 100 lux;
  - the measured screen luminance at 35 lux is between 50 % and 80 % of the screen luminance measured at 100 lux;
  - the measured screen luminance at 12 lux is between 35 % and 70 % of the screen luminance measured at 100 lux.

(3) Electronic displays requiring an external standardised AC to DC EPS

For electronic display products supplied with a standardised DC power connection and placed on the market without the suitable standardised external AC to DC power supply in the packaging,  $P_{measured}$  for the purposes of the EEI calculation shall be the DC input power.

ANNEX III  
Label for electronic displays

1. LABEL INFORMATION:



The following information shall be included in the label for electronic displays:

- (I) supplier's name or trade mark;
- (II) supplier's model identifier;
- (III) QR code;
- (IV) the energy efficiency class determined in accordance with Annex II.A when using  $P_{measured_{SDR}}$ . The head of the arrow containing the energy efficiency class of

the electronic display shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

(V) the energy efficiency class determined in accordance with Annex II.A when using  $P_{measured_{HDR}}$ ;

(VI) on mode power consumption in Watts, when playing content with SDR, rounded to the nearest integer;

(VII) on mode power consumption in Watts, when playing content with HDR, rounded to the nearest integer;



(VIII) visible screen diagonal in centimetres and inches;

(IX) horizontal and vertical resolution in pixels;

(X) EPS logo, if the display is placed on the market with a standardised external power supply.

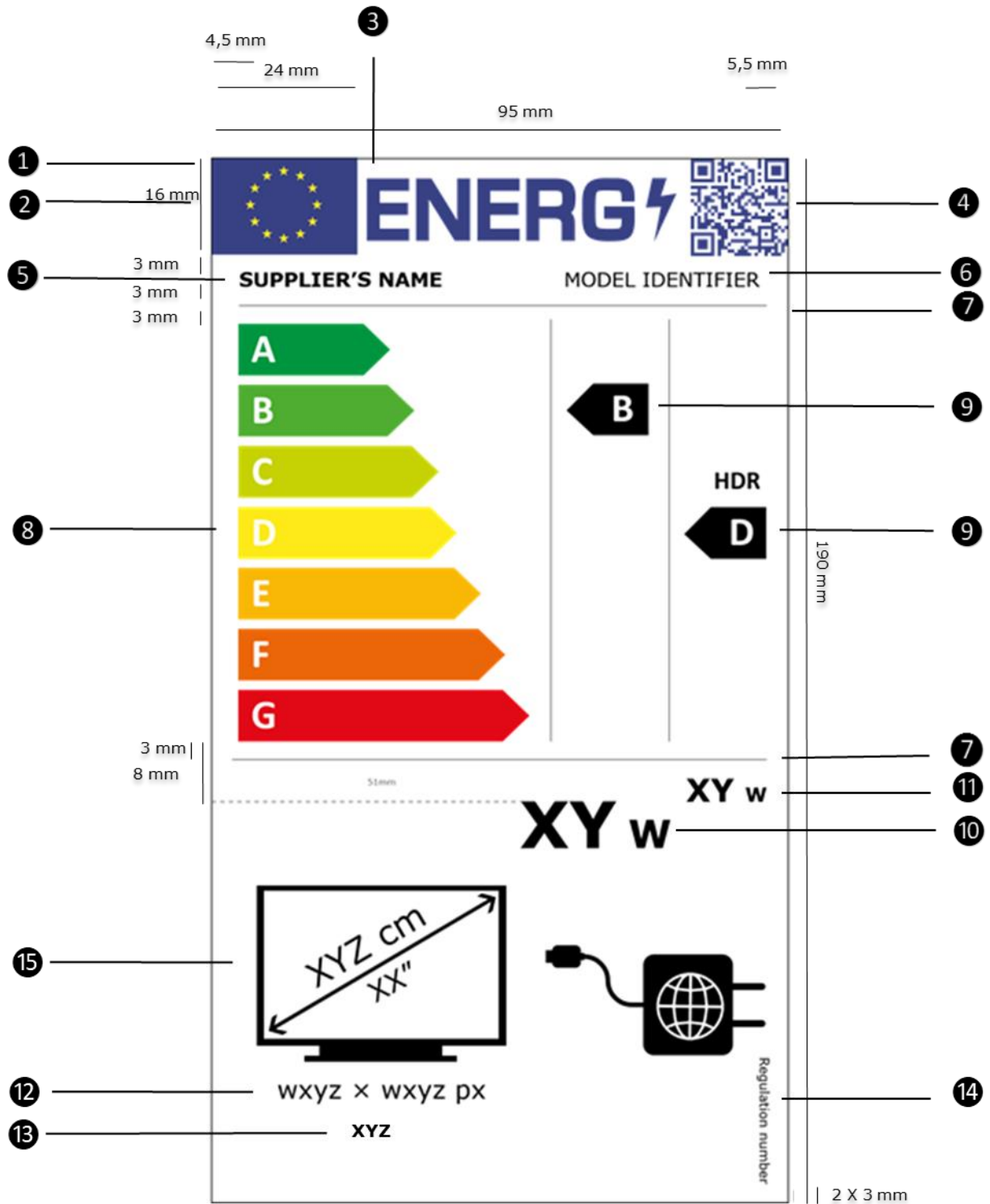
(XI) name for the combination of resolution with size ratio (optional).

**Table 4**  
**Standardised external power supply**

<b>Situation</b>	<b>Symbol to use and colour</b>
The displays is placed on the market with a standardised external power supply included in the electronic display package	 Colour: 0,0,0,100
The displays has a standardised power input for an external poer supply (not included in the package)	 Colour: 0,0,0,50
The displays is placed on the market with an internal or an external non standardised power supply.	



2. LABEL DESIGN:

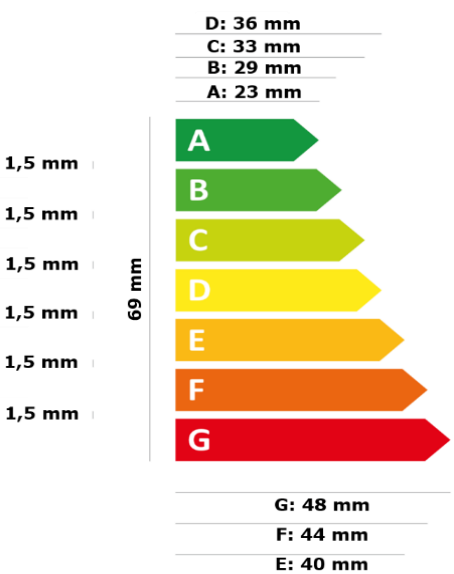


2.1. Description

Whereby:


- (a) The background of the label shall be white;
- (b) The single typeface shall be Verdana;

- (c) Colours shall be according to the CMYK – cyan, magenta, yellow and black, colour codes following this example: 0,70,100,0: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black. Black is 0,0,0,100 and white is 0,0,0,0;
- (d) The label shall fulfil all the following requirements (numbers refer to the numbers in the black bullets in the figure above):
- (1) the border of the label shall have weight of 1 pt;
  - (2) the colour of the background of the EU logo shall be 1,80,0,0 and the colour of the stars shall be 0,0,100,0;
  - (3) the colour of the energy logo shall be 100,80,0,0;
  - (4) the colour of the QR code shall be 100,80,0,0;
  - (5) the supplier’s name shall be in colour black in font bold, 9 pt;
  - (6) the model identifier shall be in colour black in font regular, 9 pt;
  - (7) the dividers shall be 86 mm wide and have a weight of 1 pt. The colour of the divider shall be black;
  - (8) the A to G scale shall be as follows:
    - the colour of the letter indicating energy rating scale shall be white and the font bold, 19 pt;
    - dimensions and colours of the energy rating scale shall be as follows:

Rating scale and class	Colours (CMYK)
	A-class: 100,0,100,0
	B-class: 70,0,100,0
	C-class: 30,0,100,0
	D-class: 0,0,100,0
	E-class: 0,30,100,0
	F-class: 0,70,100,0
	G-class: 0,100,100,0



- (9) the energy efficiency class shall be as follows:
  - the rating scale arrow and the energy efficiency class arrow shall be aligned;

– dimensions and colour shall be as follows:

Rating scale and class	Colours (CMYK)
	<p>The arrow: 0,0,0,100 (black)</p> <p>The letter: 0,0,0,0 (white)</p> <p>The letter font: bold, 33 pt</p>

- (10) the power consumption in SDR shall be in font bold, 30 pt, W shall be in font bold, 18 pt;
  - (11) the power consumption in HDR shall be in font bold, 16 pt, W shall be in font bold, 11 pt;
  - (12) the resolution indication shall be colour black in font regular, 9 pt;
  - (13) the optional name for the resolution and size ratio combination shall be colour black in font regular, 9 pt;
  - (14) the numbering of the regulation shall be in colour black and font regular, 6 pt.
  - (15) the diagonal size of the visible screen area in cm and inches shall be in colour black and font regular, 16 pt;
  - (16) the EPS logo shall be as indicated in **Error! Reference source not found..**
- (e) For electronic displays with a size of the diagonal of the viewable area less than cm 127 (50 inches), the label can be printed scaled down, but not less than 60% of its normal size; its content shall nevertheless be proportionate to the specifications above and the QR code still readable by a commonly available QR reader, such as those integrated into a smartphone.

**Table 5**  
**Standardised external power supply**

Situation	Symbol to use and colour
The displays is placed on the market with a standardised external power supply included in the electronic display package	 <p>Colour: 0,0,0,100</p>
The displays has a standardised power input for an external poer supply (not included in the package)	 <p>Colour: 0,0,0,50</p>
The displays is placed on the market with an internal or with an external non standardised power supply.	

**Measurement and calculation methods**

For the purposes of compliance and verification of compliance with the applicable requirements of this Regulation, measurements and calculations shall be made using harmonised standards, the reference numbers of which have been published in the *Official Journal of the European Union* or using other reliable, accurate and reproducible methods which take into account the generally recognised state-of-the-art. They shall be in line with the provisions set out in this Annex.

**1. MEASUREMENTS OF ON MODE POWER DEMAND**

Measurements of the on mode power demand shall fulfil all of the following conditions:

- (1) Conditions of electronic displays for measuring the on mode power demand:
  - (a) electronic displays shall be measured in the normal configuration;
  - (b) where an electronic display has an *audio-set* configuration, this shall be activated during on mode power demand measurements according to the instructions provided under Annex VI.5.(d)iv.
- (2) General conditions:
  - (a) measurements shall be made at an ambient temperature of 23 °C +/- 5 °C;
  - (b) measurements shall be made using a standardised dynamic broadcast video signal test loops representing typical broadcast content for electronic displays. For the HDR measurement the electronic display must automatically and correctly respond to the HDR metadata in the test loop. The measurement shall be the average power consumed over 10 consecutive minutes;
  - (c) measurements shall be made after the electronic display has been in the off-mode for a minimum of 1 hour immediately followed by a minimum of 1 hour in the on mode and shall be completed before a maximum of 3 hours in on-mode. The relevant video signal shall be displayed during the entire on mode duration. For electronic displays that are known to stabilise within 1 hour, these durations may be reduced if the resulting measurement can be shown to be within 2 % of the results that would otherwise be achieved using the durations described here;
  - (d) where the ABC function exists, measurements shall be made with it switched off. If the ABC function cannot be switched off, then the measurements shall be performed in an ambient light condition of 100 lux measured at the ABC sensor.

**2. MEASUREMENTS OF PEAK LUMINANCE**

Measurements of the peak luminance shall fulfil both of the following conditions:

- (1) measurements of peak luminance shall be made with the electronic display in SDR and not HDR mode with a luminance meter detecting that portion of the screen exhibiting a full (100 %) white image which is part of a 'full screen test' test pattern. The average picture level (APL) of the test pattern must not exceed the point where the electronic display luminance is affected by power limiting or other irregularities in the pixel drive system of the electronic display;

- (2) measurements of luminance shall be made without disturbing the luminance meter's detection point on the electronic display. The required measurements are the value of peak white luminance in the normal configuration and the value of peak white luminance in the brightest on mode configuration. The latter setting should be as provided for in Annex I(12)

ANNEX V

**Product information sheet**

The information part of the product information sheet pursuant to Article 3(d) shall be provided by the supplier in the product registration database established by Regulation (EU) 2017/1369 according to Table 5.

The product manual or other literature provided with the product shall clearly indicate the link to the model in the database as a human-readable Uniform Resource Locator (URL) or as QR-code or providing the product registration number.

**Table 5: Information, order and format of the product information sheet**

	INFORMATION	Value and precision	Unit	Notes		
1.	Supplier's name, registered trade name or registered trade mark and contact details		TEXT			
2.	Supplier's model identifier		TEXT			
3.	Energy efficiency class for standard Definition Range (SDR)	[A/B/C/D/E/F/G]				
4.	On mode power demand for Standard Definition Range (SDR)	X,X	W	Rounded to the first decimal place for power values below 100 W, and rounded to the first integer for power values from 100 W		
5.	Energy efficiency class (HDR)	[A/B/C/D/E/F/G]				
6.	On mode power demand in High Definition Range (HDR) mode	X,X	W	Rounded to the first decimal place for power values below 100 W, and rounded to the first integer for power values from 100 W		
7.	Off mode, power demand	X,X	W			
8.	Standby mode power demand	X,X	W			
9.	Networked standby mode power demand	X,X	W			
10.	Electronic display category	[television/monitor/ signage / other]	TEXT	Select one		
a	Annual energy consumption (if television)	X	kWh/a	Considering 4 on, 20 h standby, 365 days, rounded to the first decimal place		
b	Annual energy consumption (if monitor)	X	kWh/a	Considering 8 on, 16 h standby, 220 days, 24 h standby 145 days, Rounded to the first decimal place		
c	Annual energy consumption (if signage)	X	kWh/a	Considering 24 h on, rounded to the first decimal place		
d	Annual energy consumption (if other)	X	kWh/a	Hours in on mode and in standby mode to be indicated, rounded to the first decimal place		
11.	Size ratio		:	E.g. 16:9 or 21:9		
12.	Screen resolution (pixels)	H	x	V	pixels	Horizontal and vertical pixels
13.	Resolution and size ratio combination				TEXT	Optional, e.g. UHD 4k, WQHD
14.	Screen diagonal	X,X /X inches	cm/inc hes			In cm according to the International System of Units (SI) (and, optionally, according to the imperial system). Size in cm rounded to the first decimal place (in inches, rounded to the integer place)
15.	Visible screen area	X,X	cm <sup>2</sup>			Rounded to the first decimal
16.	Panel technology used	LCD / LED LCD / QLED LCD / OLED / Microled LED / QDLESD	TEXT			Select one

			/ FED / EPD / Other		
17.	Automatic Brightness Control (ABC) available		[YES/NO]		Must be activated as default.
18.	Voice recognition sensor available		[YES/NO]		
19.	Room presence sensor available		[YES/NO]		Must be activated as default.
20.	Image refresh frequency rate		X	Hz	
21.	Minimum guaranteed availability of software and firmware updates (until):		GG MM AAAAA	date	
22.	Minimum guaranteed availability of spare parts (until):		GG MM AAAAA	date	
23.	Minimum guaranteed product support (until):		GG MM AAAAA	date	
24.	Power supply type:		Internal / external /, standardised		If external and standardised ( <i>c</i> or <i>d</i> ) the suitable pictogram is added in the energy label
<i>a.</i>	Internal power supply spare part code			TEXT	If internal power supply
<i>b.</i>	External power supply (non standard) spare part code			TEXT	If external power supply
<i>c.</i>	External power supply standardised (included in the product box)	Standard name		TEXT	If external power supply and standardised. If the 3 fields are filled, a black EPS symbol is displayed on the label
		Input voltage	X	V	
		Output voltage	X	V	
<i>d.</i>	External and standardised suitable power supply (if not included in the product box)	Standard name		TEXT	Mandatory only if EPS not included in the box, non mandatory otherwise. If the 4 fields are filled, a grey EPS symbol is displayed on the label
		Required output voltage	X,X	V	
		Required delivered current	X,X	A	
		Required current frequency	xx	Hz	



*ANNEX VI*  
**Technical documentation**

The technical documentation referred to in Article 3(e) shall include:

- (1) Identification data (general description of the model):
  - (a) brand and model identifier;
  - (b) supplier's name, address, registered trade name.
- (2) references to the harmonised standards applied, other measurement standards and specifications used in measuring the technical parameters and calculations performed;
- (3) specific precautions to be taken when the model is assembled, installed and tested;
- (4) measured technical parameters of the model and calculations performed with the measured parameters as listed in Table 6;

**Table 6: Measured technical parameters**

		<b>Value and precision</b>	<b>Unit</b>	<b>Notes</b>
	<b>General</b>			
1.	Ambient temperature	XX,XX	°C	
2.	Test voltage	X	V	
3.	Frequency	X,X	Hz	
4.	Total harmonic distortion (THD) of the electricity supply system			
	<b>For On-mode</b>			
5.	Peak luminance of the brightest on mode configuration	X	cd/m <sup>2</sup>	
6.	Peak luminance of the normal configuration	X	cd/m <sup>2</sup>	
	Calculated peak luminance ratio	X,X	%	Value row 6 above divided by value row 5 above times 100
	<b>For APD</b>			
8.	Duration of the on mode condition, before the electronic display reaches automatically standby, or off mode, or another condition which does not exceed the applicable power demand requirements for off mode and/or standby mode.	mm:ss		
	<b>For ABC</b>			If available and activated by default
9.	Average on mode power demand of the electronic display at an ambient light intensity, measured at the ABC sensor of the electronic display, of 100 lux and 12 lux.	X,X	W	
	Percentage of power reduction due to ABC action between the 100 lux and 12 lux ambient	XX,X	%	

	light conditions.			
	Display peak white luminance at each of the following ambient light intensities measured at the at the ABC sensor of the electronic display, 100 lux, 60 lux, 35 lux, 12 lux.	x	cd/m <sup>2</sup>	

- (5) Additional information requirements:
- (a) input terminal for the audio and video test signals used for testing;
  - (b) information and documentation on the instrumentation, set-up and circuits used for electrical testing;
  - (c) any other testing condition not described or determined in point (b);
  - (d) for on mode:
    - (i) the characteristics of the dynamic broadcast-content video signal representing typical broadcast TV content; for the HDR dynamic broadcast content video signal the display must be automatically switched to HDR mode by the HDR metadata of that signal;
    - (ii) the sequence of steps for achieving a stable condition with respect to power demand level;
    - (iii) the picture settings used for the brightest peak luminance measurement and the test pattern for the video signal used for the measurement; and
    - (iv) information describing the procedure to establish the *audio-test* configuration. If no information is provided it shall be assumed that the audio system does not have an *audio-test* configuration and that the audio system power shall be included in the declared average on mode power.
  - (e) For standby and off mode:
    - (i) the measurement method used;
    - (ii) description of how the mode was selected or programmed including any enhanced reactivation functions;
    - (iii) sequence of events to reach the mode where the electronic display automatically changes modes.
  - (f) For displays with a designated computer signal interface:
    - (i) confirmation that the display product prioritises the computer display power management protocols set out in Point 6.2.3 of Annex II of Commission Regulation (EU) No 617/2013<sup>1</sup>. Any deviation from the protocols should be reported;
  - (g) For networked electronic displays only:
    - (i) number and type of network interfaces and, except for wireless network interfaces, their position in the electronic display;
    - (ii) whether the electronic display qualifies as electronic display with HiNA functionality; if no information is provided the electronic display is considered not to be HiNA display or display with HiNA functionality;

<sup>1</sup> Commission Regulation (EU) No 617/2013 of 26 June 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for computers and computer servers (OJ L 175, 27.6.2013, p. 13).

- (iii) information whether networked electronic display provides functionality allowing the power management function and/or the end-user to switch the electronic display being in a condition providing networked standby into standby mode, or off mode or another condition which does not exceed the applicable power demand requirements for off mode and/or standby mode including enhanced reactivation function power allowance where applicable.
  - (h) For each type of network port:
    - (i) the default time (mm:ss) after which the power management function, switches the display into a condition providing networked standby;
    - (ii) the trigger to be used to reactivate the electronic display.
- (6) where the information included in the technical documentation file for a particular electronic display model has been obtained:
  - (a) from an equivalent model, or
  - (b) by calculation on the basis of design or extrapolation from another model of the same or a different supplier, or both,

the technical documentation shall include, as appropriate, a list of the all equivalent electronic display models, the details of such calculation, the assessment undertaken by suppliers to verify the accuracy of the calculation and, where appropriate, the declaration of identity between the models of different suppliers.
- (7) the contact details of the person empowered to bind the supplier, if not included in the technical information uploaded into the database, shall be made available, on request, to market surveillance authorities or to the Commission for carrying out their tasks under this Regulation.

## ANNEX VII

### Information to be provided in visual advertisements, in promotional material in distance selling and in telemarketing

1. In visual advertisements, for the purposes of ensuring conformity with the requirements laid down in Article 3(1)(e) and Article 4(1)(c), the energy class and the range of efficiency classes available on the label shall be shown with an arrow matching the letter of the energy class, as indicated in Figure 1.
2. In promotional material, for the purposes of ensuring conformity with the requirements laid down in Article 3(1)(f) and Article 4(1)(d) the energy class and the range of efficiency classes available on the label shall be shown with an arrow matching the letter of the energy class, as indicated in Figure 1.
3. Any paper based distance selling must show the energy class and the range of efficiency classes available on the label shall be shown with an arrow matching the letter of the energy class, as indicated in Figure 1.
4. Telemarketing based distance selling must specifically inform the customer of the energy class of the product and of the range of energy classes available on the label.
5. For all the situations mentioned in points 1 to 4, it must be possible for the customer to access the full label and the product information sheet through a link to the product database website, or to request a printed copy.

**Figure 1: Coloured arrow example, with range of energy classes indicated**



For all the situations mentioned in points 1 to 4, it must be possible for the customer to access the full label and the product information sheet through a link to the product database website.

## ANNEX VIII

### Information to be provided in the case of distance selling through the Internet

1. The appropriate label made available by suppliers in accordance with Article 3(1)(g) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in Annex III. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 3 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.
2. The image used for accessing the label in the case of nested display shall:
  - (a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label;
  - (b) indicate on the arrow energy efficiency class of the product in white in a font size equivalent to that of the price; and
  - (c) have one of the two formats in **Error! Reference source not found.:**

**Figure 2: Coloured left/right arrow example, with range of energy classes indicated**



3. In the case of nested display, the sequence of display of the label shall be as follows:
  - (a) the image referred to in point 3 of this Annex shall be shown on the display mechanism in proximity to the price of the product;
  - (b) the image shall link to the label;
  - (c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;
  - (d) the label shall be displayed by pop up, new tab, new page or inset screen display;
  - (e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;
  - (f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;
  - (g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.
4. The appropriate product information sheet made available by suppliers in accordance with Article 3(1)(h) shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product information sheet is clearly visible and legible. The product information sheet may be displayed using a nested display, or by referring to the product registration database established under Regulation (EU) 2017/1369, 'Product information sheet'. If nested display is used,

the product information sheet shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

## ANNEX IX

### Verification procedure for market surveillance purposes

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by Member State authorities. These tolerances shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product information sheet shall not be more favourable for the supplier than the values reported in the technical documentation.

When verifying the compliance of a product model with the requirements laid down in this Regulation, for the requirements referred to in this Annex, the authorities of the Member States shall apply the following procedure:

- (1) The Member State authorities shall verify one single unit of the model.
- (2) The model shall be considered to comply with the applicable requirements if:
  - (a) the values given in the technical documentation pursuant to Article 3.3 of Regulation (EU) 2017/1369 (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports; and
  - (b) the values published on the label and in the product information sheet are not more favourable for the supplier than the declared values, and the indicated energy efficiency class is not more favourable for the supplier than the class determined by the declared values; and
  - (c) when the Member State authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 1.
- (3) If the results referred to in points 2(a) or (b) are not achieved, the model and all equivalent models shall be considered not to comply with this Regulation.
- (4) If the result referred to in point 2(c) is not achieved, the Member State authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more different models that have been listed as equivalent models in the supplier's technical documentation.
- (5) The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 7.
- (6) If the result referred to in point 5 is not achieved, the model and all equivalent models shall be considered not to comply with this Regulation.
- (7) The Member State authorities shall provide all relevant information to the authorities of the other Member States and to the Commission without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

The Member State authorities shall use the measurement and calculation methods set out in Annex IV.

The Member State authorities shall only apply the verification tolerances that are set out in Table 7 and shall only use the procedure described in points 1 to 7 for the requirements

referred to in this Annex. No other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

**Table 7: Verification Tolerances**

Parameter	Verification tolerances
On mode power demand in Watts	The determined value <sup>(1)</sup> shall not exceed the declared value by more than 7 %.
Standby, off mode and networked standby power demand in Watts, as applicable.	The determined value shall not exceed the declared value by more than 0,10 W.
The peak luminance ratio	Where applicable, the determined value shall not be lower than 60 % of the peak luminance of the brightest pre-set on mode condition provided by the electronic display.’
Visible screen diagonal in inches and centimetres	The determined value <sup>(1)</sup> does not deviate more than plus or minus 1 cm or 0,14 inches from the declared value.
Visible screen area in dm <sup>2</sup>	The determined value <sup>(1)</sup> does not deviate more than plus or minus 0,1 dm <sup>2</sup> from the declared value.
The screen resolution in horizontal and vertical pixels	The determined value <sup>(1)</sup> shall not deviate from the declared value.

<sup>(1)</sup> In the case of three additional units tested as prescribed in point 4, the determined value means the arithmetic average of the values determined for these three additional units.