
**Information technology — 8-bit single-byte
coded graphic character sets —**

Part 5:
Latin/Cyrillic alphabet

*Technologies de l'information — Jeux de caractères graphiques codés sur
un seul octet —*
Partie 5: Alphabet latin/cyrillique

ISO/IEC 8859-5:1999

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and nongovernmental, in liaison with ISO and IEC, also take part in the work.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75% of the national bodies casting a vote.

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International Standard ISO/IEC 8859-5 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 2, *Coded character sets*.
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This second edition cancels and replaces the first edition (ISO/IEC 8859-5:1988) which has been technically revised.

ISO/IEC 8859 consists of the following parts, under the general title *Information technology – 8-bit single-byte coded graphic character sets*:

- Part 1: *Latin alphabet No. 1*
- Part 2: *Latin alphabet No. 2*
- Part 3: *Latin alphabet No. 3*
- Part 4: *Latin alphabet No. 4*
- Part 5: *Latin/Cyrillic alphabet*
- Part 6: *Latin/Arabic alphabet*
- Part 7: *Latin/Greek alphabet*
- Part 8: *Latin/Hebrew alphabet*
- Part 9: *Latin alphabet No. 5*
- Part 10: *Latin alphabet No. 6*

Annexes A to C of this part of ISO/IEC 8859 are for information only.

Introduction

ISO/IEC 8859 consists of several parts. Each part specifies a set of up to 191 graphic characters and the coded representation of these characters by means of a single 8-bit byte. Each set is intended for use for a particular group of languages.

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Information technology – 8-bit single-byte coded graphic character sets – Part 5: Latin/Cyrillic alphabet

1 Scope

This part of ISO/IEC 8859 specifies a set of 191 coded graphic characters identified as the Latin/Cyrillic alphabet.

This set of coded graphic characters is intended for use in data and text processing applications and also for information interchange.

The set contains graphic characters used for general purpose applications in typical office environments in at least the following languages:

Bulgarian, Byelorussian, English, Latin, (Slavic) Macedonian, Russian, Serbian and Ukrainian.

NOTE – Two letters recently added to the Ukrainian official alphabet are not included in the character set of this part. For a background the GEN/CENELEC/PT004 Report may be consulted (in Bibliography).

This set of coded graphic characters may be regarded as a version of an 8-bit code according to ISO/IEC 2022 or ISO/IEC 4873 at level 1.

This part of ISO/IEC 8859 may not be used in conjunction with any other parts of ISO/IEC 8859. If coded characters from more than one part are to be used together, by means of code extension techniques, the equivalent coded character sets from ISO/IEC 10367 should be used instead within a version of ISO/IEC 4873 at level 2 or level 3.

The coded characters in this set may be used in conjunction with coded control functions selected from ISO/IEC 6429. However, control functions are not used to create composite graphic symbols from two or more graphic characters (see clause 6).

NOTE – ISO/IEC 8859 is not intended for use with Telematic services defined by ITU-T. If information coded according to ISO/IEC 8859 is to be transferred to such services, it will have to conform to the requirements of those services at the access-point.

2.1 Conformance of information interchange

A coded-character-data-element (CC-data-element) within coded information for interchange is in conformance with this part of ISO/IEC 8859 if all the coded representations of graphic characters within

that CC-data-element conform to the requirements of clause 6.

2.2 Conformance of devices

A device is in conformance with this part of ISO/IEC 8859 if it conforms to the requirements of 2.2.1, and either or both of 2.2.2 and 2.2.3. A claim of conformance shall identify the document which contains the description specified in 2.2.1.

2.2.1 Device description

A device that conforms to this part of ISO/IEC 8859 shall be the subject of a description that identifies the means by which the user may supply characters to the device, or may recognize them when they are made available to him, as specified respectively in 2.2.2 and 2.2.3.

2.2.2 Originating devices

An originating device shall allow its user to supply any sequence of characters from those specified in clause 6, and shall be capable of transmitting their coded representations within a CC-data-element.

2.2.3 Receiving devices

A receiving device shall be capable of receiving and interpreting any coded representations of characters that are within a CC-data-element, and that conform to clause 6, and shall make the corresponding characters available to its user in such a way that the user can identify them from among those specified there, and can distinguish them from each other.

3 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC 8859. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO/IEC 8859 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO/IEC 2022:1994, *Information technology – Character code structure and extension techniques*.

ISO/IEC 4873:1991, *Information technology – ISO 8-bit code for information interchange – Structure and rules for implementation*.

ISO/IEC 8824-1:1995, *Information technology – Abstract Syntax Notation One (ASN.1): Specification of basic notation*.

4 Definitions

For the purposes of this part of ISO/IEC 8859 the following definitions apply.

4.1 bit combination: An ordered set of bits used for the representation of characters.

4.2 byte: A bit string that is operated upon as a unit.

4.3 character: A member of a set of elements used for the organization, control, or representation of data.

4.4 code table: A table showing the characters allocated to each bit combination in a code.

4.5 coded character set; code: A set of unambiguous rules that establishes a character set and the one-to-one relationship between the characters of the set and their bit combinations.

4.6 coded-character-data-element (CC-data-element): An element of interchanged information that is specified to consist of a sequence of coded representations of characters, in accordance with one or more identified standards for coded character sets.

4.7 graphic character: A character, other than a control function, that has a visual representation normally handwritten, printed or displayed, and that has a coded representation consisting of one or more bit combinations.

NOTE – In ISO/IEC 8859 a single bit combination is used to represent each character.

4.8 graphic symbol: A visual representation of a graphic character or of a control function.

4.9 position: That part of a code table identified by its column and row coordinates.

5 Notation, code table and names

5.1 Notation

The bits of the bit combinations of the 8-bit code are identified by b_8 , b_7 , b_6 , b_5 , b_4 , b_3 , b_2 , and b_1 , where b_8 is the highest-order, or most-significant bit and b_1 is the lowest-order, or least-significant bit.

The bit combinations may be interpreted to represent numbers in binary notation by attributing the following weights to the individual bits:

Bit	b_8	b_7	b_6	b_5	b_4	b_3	b_2	b_1
Weight	128	64	32	16	8	4	2	1

Using these weights, the bit combinations are identified by notations of the form xx/yy , where xx and yy are numbers in the range 00 to 15. The correspondence between the notations of the form xx/yy and the bit combinations consisting of the bits b_8 to b_1 is as follows:

- xx is the number represented by b_8 , b_7 , b_6 and b_5 where these bits are given the weights 8, 4, 2, and 1 respectively.
- yy is the number represented by b_4 , b_3 , b_2 and b_1 where these bits are given the weights 8, 4, 2, and 1 respectively.

The bit combinations are also identified by notations of the form hk , where h and k are numbers in the range 0 to F in hexadecimal notation. The number h is the same as the number xx described above, and the number k the same as the number yy described above.

5.2 Layout of the code table

An 8-bit code table consists of 256 positions arranged in 16 columns and 16 rows. The columns and the rows are numbered 00 to 15. In hexadecimal notation the columns and the rows are numbered 0 to F.

The code table positions are identified by notations of the form xx/yy , where xx is the column number and yy is the row number. The column and row numbers are shown at the top and left edges of the table respectively. The code table positions are also identified by notations of the form hk , where h is the column number and k is the row number in hexadecimal notation. The column and row numbers are shown at the bottom and right edges of the table respectively.

The positions of the code table are in one-to-one correspondence with the bit combinations of the code. The notation of a code table position, of the form xx/yy , or of the form hk , is the same as that of the corresponding bit combination.

5.3 Names and meanings

ISO/IEC 10646-1 (E). This part of ISO/IEC 8859 also specifies an acronym for each of the characters SPACE, NO-BREAK SPACE and SOFT HYPHEN. For acronyms only Latin capital letters A to Z are used. It is intended that the acronyms be retained in all translations of the text.

Except for SPACE (SP), NO-BREAK SPACE (NBSP) and SOFT HYPHEN (SHY), this part of ISO/IEC 8859 does not define and does not restrict the meanings of graphic characters.

This part of ISO/IEC 8859 specifies a graphic symbol for each graphic character. This symbol is shown in the corresponding position of the code table. However, this part, or any other part, of ISO/IEC 8859 does not specify a particular style or font design for imaging graphic characters. Annex B of ISO/IEC 10367 gives further information on this subject.

5.3.1 SPACE (SP)

A graphic character the visual representation of which consists of the absence of a graphic symbol.

5.3.2 NO-BREAK SPACE (NBSP)

A graphic character the visual representation of which consists of the absence of a graphic symbol, for use when a line break is to be prevented in the text as presented.

5.3.3 SOFT HYPHEN (SHY)

A graphic character that is imaged by a graphic symbol identical with, or similar to, that representing HYPHEN, for use when a line break has been established within a word.

6 Specification of the coded character set

This part of ISO/IEC 8859 specifies 191 characters allocated to the bit combinations of the code table (table 2). None of these characters are combining characters.

NOTE – Combining characters are described in ISO/IEC 2022:1994 subclause 6.3.3.

Control functions, such as BACKSPACE or CARRIAGE RETURN, shall not be used to create composite graphic symbols, which are made up from the graphic representations of two or more characters.

6.1 Characters of the set and their coded representation

Bit combination	Hex	Identifier	Name
02/00	20	U+0020	SPACE
02/01	21	U+0021	EXCLAMATION MARK
02/02	22	U+0022	QUOTATION MARK
02/03	23	U+0023	NUMBER SIGN
02/04	24	U+0024	DOLLAR SIGN
02/05	25	U+0025	PERCENT SIGN
02/06	26	U+0026	AMPERSAND
02/07	27	U+0027	APOSTROPHE
02/08	28	U+0028	LEFT PARENTHESIS
02/09	29	U+0029	RIGHT PARENTHESIS
02/10	2A	U+002A	ASTERISK
02/11	2B	U+002B	PLUS SIGN
02/12	2C	U+002C	COMMA
02/13	2D	U+002D	HYPHEN-MINUS
02/14	2E	U+002E	FULL STOP
02/15	2F	U+002F	SOLIDUS
03/00	30	U+0030	DIGIT ZERO
03/01	31	U+0031	DIGIT ONE
03/02	32	U+0032	DIGIT TWO
03/03	33	U+0033	DIGIT THREE
03/04	34	U+0034	DIGIT FOUR
03/05	35	U+0035	DIGIT FIVE
03/06	36	U+0036	DIGIT SIX
03/07	37	U+0037	DIGIT SEVEN
03/08	38	U+0038	DIGIT EIGHT
03/09	39	U+0039	DIGIT NINE
03/10	3A	U+003A	COLON
03/11	3B	U+003B	SEMICOLON
03/12	3C	U+003C	LESS-THAN SIGN
03/13	3D	U+003D	EQUALS SIGN
03/14	3E	U+003E	GREATER-THAN SIGN
03/15	3F	U+003F	QUESTION MARK
04/00	40	U+0040	COMMERCIAL AT
04/01	41	U+0041	LATIN CAPITAL LETTER A
04/02	42	U+0042	LATIN CAPITAL LETTER B
04/03	43	U+0043	LATIN CAPITAL LETTER C
04/04	44	U+0044	LATIN CAPITAL LETTER D
04/05	45	U+0045	LATIN CAPITAL LETTER E
04/06	46	U+0046	LATIN CAPITAL LETTER F
04/07	47	U+0047	LATIN CAPITAL LETTER G
04/08	48	U+0048	LATIN CAPITAL LETTER H
04/09	49	U+0049	LATIN CAPITAL LETTER I
04/10	4A	U+004A	LATIN CAPITAL LETTER J
04/11	4B	U+004B	LATIN CAPITAL LETTER K
04/12	4C	U+004C	LATIN CAPITAL LETTER L
04/13	4D	U+004D	LATIN CAPITAL LETTER M
04/14	4E	U+004E	LATIN CAPITAL LETTER N
04/15	4F	U+004F	LATIN CAPITAL LETTER O
05/00	50	U+0050	LATIN CAPITAL LETTER P
05/01	51	U+0051	LATIN CAPITAL LETTER Q
05/02	52	U+0052	LATIN CAPITAL LETTER R
05/03	53	U+0053	LATIN CAPITAL LETTER S
05/04	54	U+0054	LATIN CAPITAL LETTER T
05/05	55	U+0055	LATIN CAPITAL LETTER U
05/06	56	U+0056	LATIN CAPITAL LETTER V
05/07	57	U+0057	LATIN CAPITAL LETTER W
05/08	58	U+0058	LATIN CAPITAL LETTER X
05/09	59	U+0059	LATIN CAPITAL LETTER Y
05/10	5A	U+005A	LATIN CAPITAL LETTER Z
05/11	5B	U+005B	LEFT SQUARE BRACKET
05/12	5C	U+005C	REVERSE SOLIDUS
05/13	5D	U+005D	RIGHT SQUARE BRACKET
05/14	5E	U+005E	CIRCUMFLEX ACCENT
05/15	5F	U+005F	LOW LINE

Table 1 (continued)

Bit combination	Hex	Identifier	Name
06/00	60	U+0060	GRAVE ACCENT
06/01	61	U+0061	LATIN SMALL LETTER A
06/02	62	U+0062	LATIN SMALL LETTER B
06/03	63	U+0063	LATIN SMALL LETTER C
06/04	64	U+0064	LATIN SMALL LETTER D
06/05	65	U+0065	LATIN SMALL LETTER E
06/06	66	U+0066	LATIN SMALL LETTER F
06/07	67	U+0067	LATIN SMALL LETTER G
06/08	68	U+0068	LATIN SMALL LETTER H
06/09	69	U+0069	LATIN SMALL LETTER I
06/10	6A	U+006A	LATIN SMALL LETTER J
06/11	6B	U+006B	LATIN SMALL LETTER K
06/12	6C	U+006C	LATIN SMALL LETTER L
06/13	6D	U+006D	LATIN SMALL LETTER M
06/14	6E	U+006E	LATIN SMALL LETTER N
06/15	6F	U+006F	LATIN SMALL LETTER O
07/00	70	U+0070	LATIN SMALL LETTER P
07/01	71	U+0071	LATIN SMALL LETTER Q
07/02	72	U+0072	LATIN SMALL LETTER R
07/03	73	U+0073	LATIN SMALL LETTER S
07/04	74	U+0074	LATIN SMALL LETTER T
07/05	75	U+0075	LATIN SMALL LETTER U
07/06	76	U+0076	LATIN SMALL LETTER V
07/07	77	U+0077	LATIN SMALL LETTER W
07/08	78	U+0078	LATIN SMALL LETTER X
07/09	79	U+0079	LATIN SMALL LETTER Y
07/10	7A	U+007A	LATIN SMALL LETTER Z
07/11	7B	U+007B	LEFT CURLY BRACKET
07/12	7C	U+007C	VERTICAL LINE
07/13	7D	U+007D	RIGHT CURLY BRACKET
07/14	7E	U+007E	TILDE
10/00	A0	U+00A0	NO-BREAK SPACE
10/01	A1	U+0401	CYRILLIC CAPITAL LETTER IO
10/02	A2	U+0402	CYRILLIC CAPITAL LETTER DJE
10/03	A3	U+0403	CYRILLIC CAPITAL LETTER GJE
10/04	A4	U+0404	CYRILLIC CAPITAL LETTER UKRAINIAN IE
10/05	A5	U+0405	CYRILLIC CAPITAL LETTER DZE
10/06	A6	U+0406	CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I
10/07	A7	U+0407	CYRILLIC CAPITAL LETTER YI
10/08	A8	U+0408	CYRILLIC CAPITAL LETTER JE
10/09	A9	U+0409	CYRILLIC CAPITAL LETTER LJE
10/10	AA	U+040A	CYRILLIC CAPITAL LETTER NJE
10/11	AB	U+040B	CYRILLIC CAPITAL LETTER TSHE
10/12	AC	U+040C	CYRILLIC CAPITAL LETTER KJE
10/13	AD	U+00AD	SOFT HYPHEN
10/14	AE	U+040E	CYRILLIC CAPITAL LETTER SHORT U
10/15	AF	U+040F	CYRILLIC CAPITAL LETTER DZHE
11/00	B0	U+0410	CYRILLIC CAPITAL LETTER A
11/01	B1	U+0411	CYRILLIC CAPITAL LETTER BE
11/02	B2	U+0412	CYRILLIC CAPITAL LETTER VE
11/03	B3	U+0413	CYRILLIC CAPITAL LETTER GHE
11/04	B4	U+0414	CYRILLIC CAPITAL LETTER DE
11/05	B5	U+0415	CYRILLIC CAPITAL LETTER IE
11/06	B6	U+0416	CYRILLIC CAPITAL LETTER ZHE
11/07	B7	U+0417	CYRILLIC CAPITAL LETTER ZE
11/08	B8	U+0418	CYRILLIC CAPITAL LETTER I
11/09	B9	U+0419	CYRILLIC CAPITAL LETTER SHORT I
11/10	BA	U+041A	CYRILLIC CAPITAL LETTER KA
11/11	BB	U+041B	CYRILLIC CAPITAL LETTER EL
11/12	BC	U+041C	CYRILLIC CAPITAL LETTER EM
11/13	BD	U+041D	CYRILLIC CAPITAL LETTER EN
11/14	BE	U+041E	CYRILLIC CAPITAL LETTER O
11/15	BF	U+041F	CYRILLIC CAPITAL LETTER PE

Table 1 (concluded)

Bit combination	Hex	Identifier	Name
12/00	C0	U+0420	
12/01	C1	U+0421	
12/02	C2	U+0422	
12/03	C3	U+0423	
12/04	C4	U+0424	
12/05	C5	U+0425	
12/06	C6	U+0426	
12/07	C7	U+0427	
12/08	C8	U+0428	
12/09	C9	U+0429	
12/10	CA	U+042A	
12/11	CB	U+042B	
12/12	CC	U+042C	
12/13	CD	U+042D	
12/14	CE	U+042E	
12/15	CF	U+042F	
13/00	D0	U+0430	
13/01	D1	U+0431	
13/02	D2	U+0432	
13/03	D3	U+0433	
13/04	D4	U+0434	
13/05	D5	U+0435	
13/06	D6	U+0436	
13/07	D7	U+0437	
13/08	D8	U+0438	
13/09	D9	U+0439	
13/10	DA	U+043A	
13/11	DB	U+043B	
13/12	DC	U+043C	
13/13	DD	U+043D	
13/14	DE	U+043E	
13/15	DF	U+043F	
14/00	E0	U+0440	
14/01	E1	U+0441	
14/02	E2	U+0442	
14/03	E3	U+0443	
14/04	E4	U+0444	
14/05	E5	U+0445	
14/06	E6	U+0446	
14/07	E7	U+0447	
14/08	E8	U+0448	
14/09	E9	U+0449	
14/10	EA	U+044A	
14/11	EB	U+044B	
14/12	EC	U+044C	
14/13	ED	U+044D	
14/14	EE	U+044E	
14/15	EF	U+044F	
15/00	F0	U+2116	
15/01	F1	U+0451	
15/02	F2	U+0452	
15/03	F3	U+0453	
15/04	F4	U+0454	
15/05	F5	U+0455	
15/06	F6	U+0456	
15/07	F7	U+0457	
15/08	F8	U+0458	
15/09	F9	U+0459	
15/10	FA	U+045A	
15/11	FB	U+045B	
15/12	FC	U+045C	
15/13	FD	U+00A7	
15/14	FE	U+045E	
15/15	FF	U+045F	

6.2 Code table

For each character in the set the code table (table 2) shows a graphic symbol at the position in the code table corresponding to the bit combination specified in table 1.

The shaded positions in the code table correspond to bit combinations that do not represent graphic characters. Their use is outside the scope of ISO/IEC 8859; it is specified in other International Standards, for example ISO/IEC 6429.

Table 2 – Code table of Latin/Cyrillic alphabet

				b ₈	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1		
				b ₇	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1		
				b ₆	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1		
				b ₅	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1		
					00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15		
b ₄	b ₃	b ₂	b ₁		00			SP	0	ᄀ	P	`	p			NBSP	A		a	р	№	0
0	0	0	0	00				!	1	A	Q	a	q			Ё	Б	С	б	с	ё	1
0	0	1	0	02				"	2	B	R	b	r			Ђ	В	Т	в	т	ђ	2
0	0	1	1	03				#	3	С	S	с	s			Ѓ	Г	У	г	у	ѓ	3
0	1	0	0	04				\$	4	D	T	d	t			Є	Д	Ф	д	ф	є	4
0	1	0	1	05				%	5	E	U	e	u			Ѕ	Е	Х	е	х	ѕ	5
0	1	1	0	06				&	6	F	V	f	v			І	Ж	Ц	ж	ц	і	6
0	1	1	1	07				'	7	G	W	g	w			Ї	З	Ч	з	ч	ї	7
1	0	0	0	08				(8	H	X	h	x			Ј	И	Ш	и	ш	ј	8
1	0	0	1	09)	9	I	Y	i	y			Љ	Й	Щ	й	щ	љ	9
1	0	1	0	10				*	:	J	Z	j	z			Њ	К	Ъ	к	ъ	њ	А
1	0	1	1	11				+	;	K	Г	k	г			Ћ	Л	Ы	л	ы	ћ	В
1	1	0	0	12				/	<	L	\	l	l			Ќ	М	Ь	м	ь	ќ	С
1	1	0	1	13				-	=	M	Ј	m	ј			ШY	Н	Э	н	э	ш	Д
1	1	1	0	14				.	>	N	^	n	~			Ў	О	Ю	о	ю	ў	Е
1	1	1	1	15				/	?	O	_	o				Ѣ	П	Я	п	я	ѣ	Ф
					0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	hex	