

Diakritische Zeichen		Konvention
		DZ-1.0
		Ergebnis der AG
	Vorgehensweise für die einheitliche Verarbeitung (Transkription, Eingabe und Suche) diakritischer Zeichen.	
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Unter-Version ... : TT.MM.JJJJ	Fristablauf: TT.MM.JJJJ <i>(Länderangabe bei ablehnender Stellungnahme)</i>
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Detail-Version ... : TT.MM.JJJJ	Freigabe: TT.MM.JJJJ <i>(Detailangaben zur Freigabe)</i>
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Diakritische Zeichen

(1) Einleitung

Art. 8 EMRK beinhaltet ein verfassungsgesetzlich gewährleistetes Recht auf Achtung des Privat- und Familienlebens. Das umfasst auch ein Recht auf Achtung des eigenen Namens und erfordert die korrekte Behandlung diakritischer Zeichen in den österreichischen E-Government-Anwendungen und zentralen Registern.

Eine Vielzahl der österreichischen E-Government-Anwendungen (z.B. Grundbuch, Firmenbuch, Zentrales Gewereregister, Finanzanwendungen) müssen daher für den korrekten Umgang mit diakritischen Zeichen adaptiert werden. Eine einheitliche Behandlung von diakritischen Zeichen in der Verwaltung ist aus Gründen der Interoperabilität bzw. zur Reduktion von Kosten wünschenswert.

Dieses Dokument ergänzt bzw. konkretisiert die bestehende BLSG-Konvention „Handbuch diakritische Zeichen“ in der Version 1.2.0.

Es hält fest, welche Zeichen jedenfalls in Namen unterstützt werden, wie sie jeweils in lateinische Schrift transkribiert werden, wie sie kodiert und übertragen werden, und wie man nach Wörtern mit diakritischen Zeichen suchen kann.

(2) Zulässige Zeichen

Alle Anwendungen sollen lateinische Zeichen im „westeuropäischen Kernsinn“ unterstützen. Darüber hinaus gehende weitere Zeichen (z.B. chinesische Zeichen, Sanskrit, zyrillische und griechische Zeichen) sollen in den Anwendungen nur in begründeten Ausnahmefällen verwendet werden können.

Die jedenfalls zu unterstützenden *diakritischen Zeichen und Sonderzeichen* sind in der „Transkriptionstabelle“ (S. 6 ff.) dargestellt. Sonderzeichen (siehe S. 21-22) wie \$, @ und € müssen bei der Verarbeitung juristischer Personen unterstützt werden.

(3) Kodierung

Für den elektronischen Datenaustausch zwischen Anwendungen ist grundsätzlich UTF-8 zu verwenden bzw. zu erwarten und zu akzeptieren. Die Zeichen sollen mit den Unicode-Codepoints laut Tabelle im Anhang kodiert werden. Das schließt die Verwendung von „combining marks“ aus.

Web-Anwendungen müssen für Benutzereingaben zumindest die Kodierungen UTF-8 und ISO Latin-1 unterstützen, da von Browsern bei der Übertragung von Web-Forms beide Kodierungen häufig verwendet werden. Je mehr Kodierungen empfangen (und intern weiterverarbeitet bzw. umgewandelt) werden können, desto besser. Zum Senden sollte wann immer möglich UTF-8 verwendet werden.

(4) Transkription

Transkription bezeichnet in diesem Dokument die Abbildung von lateinischen Zeichen mit Diakritika und Sonderzeichen auf die 26 Zeichen des modernen lateinischen Alphabets.

Anwendungen sollen zum Zwecke des Datenaustausches folgende Varianten anbieten:

- Vollständige Transkription laut Tabelle im Anhang. Zeichen, für die keine Transkription angegeben ist, werden dabei aus der zu transkribierenden Zeichenkette entfernt. Es handelt sich dabei großteils um ohnehin sehr selten vorkommende Zeichen, die teilweise in keiner natürlichen Schrift vorkommen, sondern von Sprachforschern zur Niederschrift von Sprachen verwendet wurden, die noch keine eigene Schrift entwickelt hatten.
- Teilweise Transkription: Alle Buchstaben bis auf Ö, Ü, Ä, ö, ü, ä und ß werden lt. Tabelle im Anhang transkribiert
- Originalschreibweise ohne Transkription.

Die Spalte SEPA der Transkriptionstabelle im *Bereich der Sonderzeichen* gibt die Transkriptionsregeln für gültige Sonderzeichen des SEPA-Standards (Single Euro Payments Area) vor.

(5) Eingabe diakritischer Zeichen

Anwendungen sollen eine sprachspezifische Eingabe diakritischer Zeichen ermöglichen (d.h. der/die Benutzer/in wählt eine Sprache und bekommt die zur Sprache gehörenden diakritischen Zeichen zur Auswahl). Die (ungefähre) Sprachzuordnung der zu unterstützenden diakritischen Zeichen ist in der Tabelle im Anhang dargestellt. Die Sprachzuordnung dient ausschließlich dem Benutzerkomfort, nämlich um schnell die gewünschten Zeichen zu finden. Eine „exakte“ Sprachzuordnung von Zeichen zu Sprachen ist z.B. aufgrund von Lehnwörtern gar nicht möglich und auch nicht erforderlich, da jedem Benutzer auf Wunsch auch immer die komplette Liste aller Zeichen angezeigt werden soll.

(6) Suche

Anwendungen sollen drei Arten der Suche unterstützen:

- Exakte Suche: Erwartet genaue Übereinstimmung des Namens
- Näherungsweise Suche: Suche nach bzw. mit obigen Transkriptionsarten (vollständig, teilweise sowie original)
- Phonetische Suche lt. Algorithmus BMI-ZMR („Formalisierung“), siehe folgenden Abschnitt

(7) Vereinfachung und Formalisierung

Zum Zwecke der phonetischen Suche sind auf die Zeichenketten die Schritte Vereinfachung und Formalisierung anzuwenden.

Prinzipiell werden in genau einem Durchlauf alle Vorkommen der Zeichenketten in der ersten Spalte durch die entsprechenden Zeichenketten in der zweiten Spalte ersetzt. Die Zeichenketten der ersten Spalte werden dabei in der angegebenen Reihenfolge (siehe Tabelle) abgearbeitet. Die Reduktionstabelle wird dabei genau einmal durchgegangen, d.h. es wird für jedes Element der Formalisierungstabelle einmal geprüft, ob es in der Zeichenkette vorhanden ist.

Formalisierungstabelle

Reihenfolge	Original	Übersetzung
1	CSCH	Z
2	TSCH	S
3	AIE	EI
4	AJE	EI
5	AYE	EI
6	SCH	S
7	EIE	EI
8	EJE	EI
9	EYE	EI
10	AI	EI
11	AJ	EI
12	AY	EI
13	AE	E
14	OE	O
15	UE	U
16	ST	S
17	SC	Z
18	CS	Z
19	CZ	Z
20	EJ	EI
21	EY	EI
22	IE	I
23	PH	F
24	QU	G
25	TS	S
26	TZ	Z
27	ZC	Z
28	C	G
29	D	T
30	J	I
31	K	G
32	P	B
33	V	F
34	Y	I

Die Funktion **Vereinfachung** lässt sich als Pseudo-Code wie folgt darstellen:

```

Funktion: Vereinfachung
Parameter: Input-String
Ergebniswert: Output-String

Ablauf:
Wiederholung: Für jedes Zeichen in Input-String
    Suche Zeichen in Transkriptions-Tabelle.
    Falls Zeichen gefunden:
        Setze Zeichen gemäß Transkriptionstabelle in den Output-String
        Wandle resultierende(s) Zeichen in Großbuchstaben im Output-String
    Ansonsten:
        Setze statt Zeichen ein Leerzeichen ' ' in den Output-String
    Ende Falls
Ende Wiederholung
Entferne alle Leerzeichen ' ' aus dem Output-String

```

Der Algorithmus für die Funktion **Formalisierung** lautet folgendermaßen:

```

Funktion: Formalisierung
Parameter: Input-String
Ergebniswert: Output-String

Ablauf:
Setze Vereinfachter-String als Vereinfachung des Input-String unter Beibehaltung
von Leerzeichen ' ' (d.h. der letzte Schritt der Funktion Vereinfachung entfällt).

Wiederholung: Für jedes Zeichen in Vereinfachter-String
  Falls Zeichen eines von A-Z, Ä, Ö, Ü, ß:
    Hänge Zeichen an Hilfs-String
  Ansonsten:
    Formalisiere Hilfs-String mit Funktion FormalisiereWort
    Hänge formalisierten Hilfs-String an Output-String
    Lösche Hilfs-String
    Falls Zeichen ist eine Ziffer 0-9:
      Hänge Zeichen an Output-String:
    Ansonsten:
      Hänge Leerzeichen ' ' an Output-String
    Ende Falls
  Ende Falls
Ende Wiederholung
Falls Hilfs-String vorhanden:
  Formalisiere Hilfs-String mit Funktion FormalisiereWort
  Hänge formalisierten Hilfs-String an Output-String
Ende Falls
Entferne alle Leerzeichen ' ' in Output-String

```

```

Funktion: FormalisiereWort
Parameter: Input-String
Ergebniswert: Output-String

Wiederholung: Für jede Zeichenkette in Formalisierungs-Tabelle
  Wiederholung: Für jedes Zeichen in Input-String
    Falls Input-String ab inkl. aktuellen Zeichen mit String
      aus Formalisierungs-Tabelle beginnt:
      Hänge String laut Formalisierungs-Tabelle an Output-
      String an
    Breche Schleife für Formalisierungs-Tabelle ab.
    Setze mit 1. Zeichen nach dem ersetzten Zeichen aus
      Input-String fort.
    Ende Falls
  Ende Wiederholung
  Falls kein String in Formalisierungs-Tabelle übernommen wurde:
    Hänge Zeichen an Output-String an.
Ende Wiederholung.
Entferne alle 'H' aus Output-String außer es ist an erster Stelle
Reduziere alle aufeinander folgenden gleichen Zeichen auf eines.

```

Beispiele für Vereinfachung und Formalisierung

STRING	STRING VEREINFACHT	STRING FORMALISIERT
Östärücher	OESTAERUECHER	OSERUGER
Ästälrücher0Héri	AESTAELRUECHEROHERI	ESELRUGEROHERI
Csécsch-Höffer	CSECSCHHOEFFER	ZEZHOFER
Héribert	HERIBERT	HERIBERT
bert	BERT	BERT
Marianne	MARIANNE	MARIANE

Transkriptionstabelle Version 1.2 8.9.2010

DZ	Unicode	Sprachen	Trans.
0	U+0030		0
1	U+0031		1
2	U+0032		2
3	U+0033		3
4	U+0034		4
5	U+0035		5
6	U+0036		6
7	U+0037		7
8	U+0038		8
9	U+0039		9
A	U+0041		A
B	U+0042		B
C	U+0043		C
D	U+0044		D
E	U+0045		E
F	U+0046		F
G	U+0047		G
H	U+0048		H
I	U+0049		I
J	U+004A		J
K	U+004B		K
L	U+004C		L
M	U+004D		M
N	U+004E		N
O	U+004F		O
P	U+0050		P
Q	U+0051		Q
R	U+0052		R
S	U+0053		S
T	U+0054		T
U	U+0055		U
V	U+0056		V
W	U+0057		W
X	U+0058		X
Y	U+0059		Y
Z	U+005A		Z
a	U+0061		a
b	U+0062		b
c	U+0063		c
d	U+0064		d
e	U+0065		e
f	U+0066		f
g	U+0067		g
h	U+0068		h
i	U+0069		i
j	U+006A		j

k	U+006B		k
l	U+006C		l
m	U+006D		m
n	U+006E		n
o	U+006F		o
p	U+0070		p
q	U+0071		q
r	U+0072		r
s	U+0073		s
t	U+0074		t
u	U+0075		u
v	U+0076		v
w	U+0077		w
x	U+0078		x
y	U+0079		y
z	U+007A		z
À	U+00C0	ca, cy, fr, it, ml	A
Á	U+00C1	cs, cy, da, es, hr, hu, is	A
Â	U+00C2	cy, fr, pt, ro	A
Ã	U+00C3	pt	A
Ä	U+00C4	cy, de, et, hr	AE
Å	U+00C5	da	A
Æ	U+00C6	fr, is	Ae
Ç	U+00C7	ca, fr, pt, sq, tr	C
È	U+00C8	ca, cy, fr, it, ml	E
É	U+00C9	ca, cs, cy, da, es, fr, hr, is, it	E
Ê	U+00CA	cy, fr, pt	E
Ë	U+00CB	cy, fr, sq	E
Ì	U+00CC	cy, it, ml	I
Í	U+00CD	ca, cs, cy, da, es, hr, is, it	I
Î	U+00CE	cy, fr, ml, ro	I
Ï	U+00CF	ca, cy, fr, it	I
Ð	U+00D0	hr, is	D
Ñ	U+00D1	es	N
Ò	U+00D2	ca, cy, it, ml	O
Ó	U+00D3	ca, cs, cy, da, es, hr, hu, is, it, pl, pt	O
Ô	U+00D4	cy, fr, hr, pt	O
Õ	U+00D5	et, pt	O
Ö	U+00D6	cy, de, et, hu, is, tr	OE
Ø	U+00D8	da	O
Ù	U+00D9	cy, fr, it, ml	U
Ú	U+00DA	ca, cy, da, es, hr, hu, is, it	U
Û	U+00DB	cy, fr	U
Ü	U+00DC	ca, cy, de, et, hu, tr	UE
Ý	U+00DD	cs, cy, hr	Y
Þ	U+00DE	is	TH
ß	U+00DF	ca, de, fr, it	ss
à	U+00E0	cs, cy, es, hr, hu, is, ml	a

á	U+00E1	cs, cy, da, es, hr, hu, is	a
â	U+00E2	cy, fr, pt, ro, tr	a
ã	U+00E3	pt	a
ä	U+00E4	de, et, hr	ae
å	U+00E5	da	a
æ	U+00E6	fr, is	ae
ç	U+00E7	ca, es, fr, pt, sq, tr	c
è	U+00E8	ca, cy, fr, it, ml	e
é	U+00E9	ca, cs, cy, da, es, fr, hr, is, it	e
ê	U+00EA	cy, fr, pt	e
ë	U+00EB	cy, fr, nl, sq	e
ì	U+00EC	cy, it, ml	i
í	U+00ED	ca, cs, cy, da, es, hr, is, it	i
î	U+00EE	cy, fr, ro, tr	i
ï	U+00EF	ca, cy, fr, it, ml	i
ð	U+00F0	is	th
ñ	U+00F1	ca, es, hr, it	n
ò	U+00F2	ca, cy, it, ml	o
ó	U+00F3	ca, cs, cy, es, hr, hu, is, it, pl, pt	o
ô	U+00F4	cy, fr, hr, pt	o
õ	U+00F5	et, pt	o
ö	U+00F6	cy, de, et, hu, is, tr	oe
ø	U+00F8	da	o
ù	U+00F9	cy, fr, it, ml	u
ú	U+00FA	ca, cy, da, es, hr, hu, is, it	u
û	U+00FB	cy, fr, tr	u
ü	U+00FC	ca, cy, de, es, et, hu, pt, tr	ue
ý	U+00FD	cs, cy, hr	y
þ	U+00FE	is	th
ÿ	U+00FF	fr, is	y
Ā	U+0100	lv	A
ā	U+0101	lv	a
Ă	U+0102	ro	A
ă	U+0103	ro	a
Ą	U+0104	lt, pl	A
ą	U+0105	lt, pl	a
Ĉ	U+0106	hr, pl, ro	C
ĉ	U+0107	hr, pl, ro	c
Ċ	U+0108		C
ċ	U+0109		c
Č	U+010A	ml	C
č	U+010B	ml	c
Č̣	U+010C	cs, et, hr, lt, ro, sl	C
č̣	U+010D	cs, et, hr, lt, ro, sl	c
Ď	U+010E	cs, hr	D
ď	U+010F	cs, hr	d
Đ	U+0110	hr, ro	D
đ	U+0111	hr, ro	d
Ē	U+0112	lv	E

ē	U+0113	lv	e
Ē	U+0114		E
ē	U+0115		e
Ē	U+0116	lt	E
ē	U+0117	lt	e
Ē	U+0118	lt, pl	E
ē	U+0119	lt, pl	e
Ē	U+011A	cs	E
ē	U+011B	cs	e
Ġ	U+011C		G
ġ	U+011D		g
Ġ	U+011E	tr	G
ġ	U+011F	tr	g
Ġ	U+0120	ml	G
ġ	U+0121	ml	g
Ġ	U+0122	lv	G
ġ	U+0123	lv	g
Ĥ	U+0124		H
ĥ	U+0125		h
Ĥ	U+0126	ml	H
ĥ	U+0127	ml	h
ĩ	U+0128		I
ĩ	U+0129		i
Ī	U+012A	lv	I
ī	U+012B	lv	i
ĩ	U+012C		I
ĩ	U+012D		i
Ĳ	U+012E	lt	I
ĳ	U+012F	lt	i
Ĳ	U+0130	tr	I
ĳ	U+0131	tr	i
Ĳ	U+0132	nl	IJ
ĳ	U+0133	nl	ij
Ĵ	U+0134		J
ĵ	U+0135		j
Ķ	U+0136	lv	K
ķ	U+0137	lv	k
Ķ	U+0138		
Ĺ	U+0139	cs, hr	L
ĺ	U+013A	cs, hr	l
Ļ	U+013B	lv	L
ļ	U+013C	lv	l
Ļ	U+013D	cs, hr	L
ĺ	U+013E	cs, hr	l
Ł	U+013F	ca	L
ł	U+0140	ca	l
Ł	U+0141	pl	L
ł	U+0142	pl	l

Ń	U+0143	pl	N
ń	U+0144	pl	n
Ņ	U+0145	lv	N
ņ	U+0146	lv	n
Ň	U+0147	cs	N
ň	U+0148	cs	n
ŋ	U+0149		n
Ŋ	U+014A	da	N
ŋ	U+014B	da	n
Ō	U+014C	lv	O
ō	U+014D	lv	o
Ö	U+014E		O
ö	U+014F		o
Ő	U+0150	hu	O
ő	U+0151	hu	o
Œ	U+0152	fr	Oe
œ	U+0153	fr	oe
Ř	U+0154	hr	R
ř	U+0155	cs, hr	r
Ŗ	U+0156	cs, lv	R
ŗ	U+0157	lv	r
Ř	U+0158	cs	R
ř	U+0159	cs	r
Ś	U+015A	pl	S
ś	U+015B	pl	s
Ŝ	U+015C		S
ŝ	U+015D		s
Ș	U+015E	ro, tr	S
ș	U+015F	ro, tr	s
Š	U+0160	cs, et, hr, lt, ro, sl	S
š	U+0161	cs, et, hr, lt, ro, sl	s
Ț	U+0162	ro	T
ț	U+0163	ro	t
Ț	U+0164	cs, hr	T
ț	U+0165	cs, hr	t
Ț	U+0166	da	T
ț	U+0167	da	t
Û	U+0168		U
ũ	U+0169		u
Ū	U+016A	lt, lv	U
ū	U+016B	lt, lv	u
Ů	U+016C		U
ů	U+016D		u
Ű	U+016E	cs	U
ű	U+016F	cs	u
Û	U+0170	hu	U
ű	U+0171	hu	u
Ů	U+0172	lt	U

ų	U+0173	lt	u
Ŵ	U+0174	cy	W
ŵ	U+0175	cy	w
Ŷ	U+0176	cy	Y
ŷ	U+0177	cy	y
Ÿ	U+0178	cy, fr, is	Y
Ż	U+0179	pl	Z
ż	U+017A	pl	z
Ź	U+017B	ml, pl	Z
ź	U+017C	pl	z
Ž	U+017D	cs, et, hr, lt, ro, sl	Z
ž	U+017E	cs, et, hr, lt, ro, sl	z
ƒ	U+017F		
ƒ̄	U+0180		b
Ɔ	U+0181		B
Ɔ	U+0182		B
Ɔ̄	U+0183		b
Ɔ	U+0184		
Ɔ	U+0185		
Ɔ	U+0186		
Ɔ̇	U+0187		C
Ɔ̇	U+0188		c
Ɔ̈	U+0189		
Ɔ̈	U+018A		D
Ɔ̈	U+018B		D
Ɔ̈	U+018C		d
Ɔ̈	U+018D		
Ɔ̈	U+018E		
Ɔ̈	U+018F		
Ɔ̈	U+0190		
Ɔ̈	U+0191		F
Ɔ̈	U+0192		f
Ɔ̈	U+0193		G
Ɔ̈	U+0194		
Ɔ̈	U+0195		
Ɔ̈	U+0196		
Ɔ̈	U+0197		I
Ɔ̈	U+0198		K
Ɔ̈	U+0199		k
Ɔ̈	U+019A		l
Ɔ̈	U+019B		
Ɔ̈	U+019C		
Ɔ̈	U+019D		N
Ɔ̈	U+019E		n
Ɔ̈	U+019F		O
Ɔ̈	U+01A0		O
Ɔ̈	U+01A1		o
Ɔ̈	U+01A2		
Ɔ̈	U+01A3		

P	U+01A4
þ	U+01A5
R	U+01A6
2	U+01A7
z	U+01A8
Σ	U+01A9
ł	U+01AA
ł	U+01AB
T	U+01AC
f	U+01AD
T	U+01AE
U	U+01AF
u	U+01B0
Ü	U+01B1
U	U+01B2
Y	U+01B3
y	U+01B4
Z	U+01B5
z	U+01B6
3	U+01B7
ε	U+01B8
ε	U+01B9
z	U+01BA
2	U+01BB
5	U+01BC
5	U+01BD
3	U+01BE
p	U+01BF
	U+01C0
	U+01C1
‡	U+01C2
!	U+01C3
DŽ	U+01C4
Dž	U+01C5
dž	U+01C6
LJ	U+01C7
Lj	U+01C8
lj	U+01C9
Nj	U+01CA
Nj	U+01CB
nj	U+01CC
Ä	U+01CD
ä	U+01CE
ï	U+01CF
ï	U+01D0
Ö	U+01D1
ö	U+01D2
Ů	U+01D3
ů	U+01D4

P
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Ū	U+01D5		U
ū	U+01D6		u
Ú	U+01D7		U
ú	U+01D8		u
Û	U+01D9		U
ű	U+01DA		u
Û	U+01DB		U
ű	U+01DC		u
ə	U+01DD		
Ā	U+01DE		A
ā	U+01DF		a
Ā	U+01E0		A
ā	U+01E1		a
Æ	U+01E2		
æ	U+01E3		
Ĝ	U+01E4		G
g	U+01E5		g
Ĝ	U+01E6		G
g	U+01E7		g
Ķ	U+01E8		K
ķ	U+01E9		k
Ō	U+01EA		O
o	U+01EB		o
Ō	U+01EC		O
o	U+01ED		o
Ź	U+01EE		
ź	U+01EF		
Ĵ	U+01F0		j
DZ	U+01F1		
Dz	U+01F2		
dz	U+01F3		
Ĝ	U+01F4		G
g	U+01F5		g
Hu	U+01F6		
ρ	U+01F7		
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Ǻ	U+01FA	da	A
ǻ	U+01FB	da	a
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ø	U+01FF	da	o
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Â	U+0202		A
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ě	U+0207		e
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ī	U+0209		i
Î	U+020A		I
î	U+020B		i
Ö	U+020C		O
ö	U+020D		o
Û	U+020E		O
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ř	U+0213		r
Û	U+0214		U
ú	U+0215		u
Û	U+0216		U
û	U+0217		u
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ş	U+0219	sl	s
Ť	U+021A	sl	T
ť	U+021B	sl	t
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Ĥ	U+021E		H
ĥ	U+021F		h
Ŋ	U+0220		N
Ɔ	U+0221		
Ɔ	U+0222		
Ɔ	U+0223		
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z	U+0225		z
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à	U+0227		a
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Ɖ	U+0229		e
Ö	U+022A		O
ö	U+022B		o
Ö	U+022C		O
ö	U+022D		o
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ó	U+022F		o
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ö	U+0231		o
Ý	U+0232		Y
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ᐢ	U+1E0B	d
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ᐯ	U+1E18	E

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Ɔ	U+1E1B	e
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Ǝ̇	U+1E1E	F
Ɔ̇	U+1E1F	f
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Ḥ	U+1E28	H
ḥ	U+1E29	h
Ḥ̇	U+1E2A	H
ḥ̇	U+1E2B	h
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ĭ	U+1E2D	i
Ĭ̇	U+1E2E	I
ĭ̇	U+1E2F	i
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Ł̣̇	U+1E3C	L
ł̣̇	U+1E3D	l
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ṁ	U+1E3F	m
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ṁ̇	U+1E41	m
Ṃ̇	U+1E42	M
ṃ̇	U+1E43	m
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ṃ̇̇	U+1E45	n
Ṃ	U+1E46	N
ṃ	U+1E47	n
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Ñ	U+1E4A
ñ	U+1E4B
Ö	U+1E4C
ö	U+1E4D
Ö	U+1E4E
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ü	U+1E7B		u
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ũ	U+1E7D		v
Ƶ	U+1E7E		V
ƶ	U+1E7F		v
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ø	U+1ED7		o
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Ò	U+1EDA		O
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ò	U+1EDD		o
Õ	U+1EDE		O
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Û	U+1EE4		U
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Ù	U+1EE6		U
ú	U+1EE7		u
Ú	U+1EE8		U
ú	U+1EE9		u
Û	U+1EEA		U
ü	U+1EEB		u
Û	U+1EEC		U
ü	U+1EED		u
Ü	U+1EEE		U
ü	U+1EEF		u
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ÿ	U+1EF2	cy	Y
ÿ	U+1EF3	cy	y
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ÿ	U+1EF6		Y
ÿ	U+1EF7		y
ÿ	U+1EF8		Y
ÿ	U+1EF9		y
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Sonderzeichen	Unicode	Trans.	SEPA
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#	U+0023		
\$	U+0024	USD	USD
&	U+0026		

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(U+0028		(
)	U+0029)
,	U+002C		,
;	U+003B		
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%	U+0025		
'	U+0027		'
]	U+005D		
-	U+005F		
{	U+007B		
}	U+007D		
*	U+002A		
+	U+002B		+
-	U+002D		-
.	U+002E		.
/	U+002F		/
:	U+003A		:
=	U+003D		
?	U+003F		?
@	U+0040	at	at
\	U+005C		
^	U+005E		
'	U+0060		
	U+007E		
i	U+00A1		
¢	U+00A2		
£	U+00A3		
¤	U+00A4		
¥	U+00A5		
¦	U+00A6		
§	U+00A7		
¨	U+00A8		
©	U+00A9	C	C
ª	U+00AA		
«	U+00AB		
¬	U+00AC		
-	U+00AD		
®	U+00AE	R	R
-	U+00AF		
°	U+00B0		
±	U+00B1		
²	U+00B2		
³	U+00B3		
´	U+00B4		
µ	U+00B5		
¶	U+00B6		
·	U+00B7		
¸	U+00B8		
¹	U+00B9		

◊	U+00BA		
»	U+00BB		
¼	U+00BC		
½	U+00BD		
¾	U+00BE		
¿	U+00BF		
×	U+00D7		
÷	U+00F7		
€	U+20AC	EUR	EUR
™	U+2122	TM	TM

Zeichen je Sprache

ca (Katalanisch)

À (U+00C0) Ç (U+00C7) È (U+00C8) É (U+00C9) Í (U+00CD)
 Î (U+00CF) Ò (U+00D2) Ó (U+00D3) Ú (U+00DA) Û (U+00DC)
 ß (U+00DF) ç (U+00E7) è (U+00E8) é (U+00E9) í (U+00ED)
 ï (U+00EF) ñ (U+00F1) ò (U+00F2) ó (U+00F3) ú (U+00FA)
 ü (U+00FC) Ì (U+013F) † (U+0140)

cs (Tschechisch)

Á (U+00C1) É (U+00C9) Í (U+00CD) Ó (U+00D3) Ý (U+00DD)
 à (U+00E0) á (U+00E1) é (U+00E9) í (U+00ED) ó (U+00F3)
 ý (U+00FD) Č (U+010C) č (U+010D) Ď (U+010E) ď (U+010F)
 ě (U+011A) ě (U+011B) Ĺ (U+0139) Í (U+013A) Ľ (U+013D)
 ě (U+013E) Ň (U+0147) ň (U+0148) ř (U+0155) Ř (U+0156)
 Ř (U+0158) ř (U+0159) Š (U+0160) š (U+0161) Ť (U+0164)
 ť (U+0165) Ů (U+016E) ů (U+016F) Ž (U+017D) ž (U+017E)

cy (Walisisch)

À (U+00C0) Á (U+00C1) Â (U+00C2) Ä (U+00C4) È (U+00C8)
 É (U+00C9) Ê (U+00CA) Ë (U+00CB) Ì (U+00CC) Í (U+00CD)
 Î (U+00CE) Ï (U+00CF) Ò (U+00D2) Ó (U+00D3) Ô (U+00D4)
 Ö (U+00D6) Ù (U+00D9) Ú (U+00DA) Û (U+00DB) Ü (U+00DC)
 Ý (U+00DD) à (U+00E0) á (U+00E1) â (U+00E2) è (U+00E8)
 é (U+00E9) ê (U+00EA) ë (U+00EB) ì (U+00EC) í (U+00ED)
 î (U+00EE) ï (U+00EF) ò (U+00F2) ó (U+00F3) ô (U+00F4)
 ö (U+00F6) ù (U+00F9) ú (U+00FA) û (U+00FB) ü (U+00FC)
 ý (U+00FD) Ŵ (U+0174) ŵ (U+0175) Ŷ (U+0176) ŷ (U+0177)
 Ÿ (U+0178) Ź (U+0179) ź (U+017A) Ű (U+017B) ű (U+017C)
 Ų (U+017D) ų (U+017E) Ŵ (U+017F) ŵ (U+0180)

da (Dänisch)

Á (U+00C1) Å (U+00C5) É (U+00C9) Í (U+00CD) Ó (U+00D3)
 Ø (U+00D8) Ú (U+00DA) á (U+00E1) å (U+00E5) é (U+00E9)
 í (U+00ED) ø (U+00F8) ú (U+00FA) ŋ (U+014A) ŋ (U+014B)
 Ʀ (U+0166) Ƨ (U+0167) Ǻ (U+01FA) ǻ (U+01FB) Ǽ (U+01FC)
 æ (U+01FD) Ø (U+01FE) ø (U+01FF)

de (Deutsch)

Ä (U+00C4) Ö (U+00D6) Ü (U+00DC) ß (U+00DF) ä (U+00E4)
 ö (U+00F6) ü (U+00FC)

es (Spanisch)

Á (U+00C1) É (U+00C9) Í (U+00CD) Ñ (U+00D1) Ó (U+00D3)
 Ú (U+00DA) à (U+00E0) á (U+00E1) ç (U+00E7) é (U+00E9)
 í (U+00ED) ñ (U+00F1) ó (U+00F3) ú (U+00FA) ü (U+00FC)

et (Estnisch)

Ä (U+00C4) Ö (U+00D5) Ӧ (U+00D6) Ü (U+00DC) ä (U+00E4)
 ö (U+00F5) ӧ (U+00F6) ü (U+00FC) Č (U+010C) č (U+010D)
 Š (U+0160) š (U+0161) Ž (U+017D) ž (U+017E)

fr (Französisch)

À (U+00C0) Â (U+00C2) Æ (U+00C6) Ç (U+00C7) È (U+00C8)
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 Ò (U+00D4) Ù (U+00D9) Û (U+00DB) ß (U+00DF) â (U+00E2)
 æ (U+00E6) ç (U+00E7) è (U+00E8) é (U+00E9) ê (U+00EA)
 ë (U+00EB) î (U+00EE) ï (U+00EF) ô (U+00F4) ù (U+00F9)
 û (U+00FB) ÿ (U+00FF) Œ (U+0152) œ (U+0153) Ÿ (U+0178)

hr (Kroatisch)

Á (U+00C1) Ä (U+00C4) É (U+00C9) Í (U+00CD) Đ (U+00D0)
 Ó (U+00D3) Ő (U+00D4) Ú (U+00DA) Ý (U+00DD) à (U+00E0)
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 ó (U+00F3) ô (U+00F4) ú (U+00FA) ý (U+00FD) Č (U+0106)
 ć (U+0107) Ć (U+010C) č (U+010D) Ď (U+010E) đ (U+010F)
 Đ (U+0110) đ (U+0111) Ĺ (U+0139) Í (U+013A) Ľ (U+013D)
 ĩ (U+013E) Ŕ (U+0154) ř (U+0155) Š (U+0160) š (U+0161)
 Ť (U+0164) ť (U+0165) Ž (U+017D) ž (U+017E)

hu (Ungarisch)

Á (U+00C1) Ó (U+00D3) Ö (U+00D6) Ú (U+00DA) Ü (U+00DC)
 à (U+00E0) á (U+00E1) ó (U+00F3) ö (U+00F6) ú (U+00FA)
 ü (U+00FC) Ő (U+0150) ő (U+0151) Ű (U+0170) ű (U+0171)

is (Isländisch)

Á (U+00C1) Æ (U+00C6) É (U+00C9) Í (U+00CD) Đ (U+00D0)
 Ó (U+00D3) Ö (U+00D6) Ú (U+00DA) Þ (U+00DE) à (U+00E0)
 á (U+00E1) æ (U+00E6) é (U+00E9) í (U+00ED) ð (U+00F0)
 ó (U+00F3) ö (U+00F6) ú (U+00FA) þ (U+00FE) ÿ (U+00FF)
 Ÿ (U+0178)

it (Italienisch)

À (U+00C0) È (U+00C8) É (U+00C9) Ì (U+00CC) Í (U+00CD)
 Î (U+00CF) Ò (U+00D2) Ó (U+00D3) Ù (U+00D9) Ú (U+00DA)
 ß (U+00DF) è (U+00E8) é (U+00E9) ì (U+00EC) í (U+00ED)
 î (U+00EF) ñ (U+00F1) ò (U+00F2) ó (U+00F3) ù (U+00F9)
 ú (U+00FA)

lt (Litauisch)

Ą (U+0104) ą (U+0105) Č (U+010C) č (U+010D) Ė (U+0116)
 è (U+0117) Ę (U+0118) ę (U+0119) Į (U+012E) į (U+012F)
 Š (U+0160) š (U+0161) Ū (U+016A) ū (U+016B) Ų (U+0172)
 ų (U+0173) Ž (U+017D) ž (U+017E)

lv (Lettisch)

Ā (U+0100) ā (U+0101) Ē (U+0112) ē (U+0113) Ģ (U+0122)
 ģ (U+0123) Ī (U+012A) ī (U+012B) Ķ (U+0136) ķ (U+0137)
 Ļ (U+013B) ļ (U+013C) Ņ (U+0145) ņ (U+0146) Ō (U+014C)
 ō (U+014D) Ŗ (U+0156) ř (U+0157) Ū (U+016A) ū (U+016B)

ml (Maltesisch)

À (U+00C0) È (U+00C8) Ì (U+00CC) Î (U+00CE) Ò (U+00D2)
 Ù (U+00D9) à (U+00E0) è (U+00E8) ì (U+00EC) ï (U+00EF)
 ò (U+00F2) ù (U+00F9) Ċ (U+010A) ċ (U+010B) Ġ (U+0120)
 ġ (U+0121) Ҧ (U+0126) ҧ (U+0127) Ż (U+017B)

nl (Niederländisch)

ë (U+00EB) IJ (U+0132) ij (U+0133)

pl (Polnisch)

Ó (U+00D3) ó (U+00F3) Ą (U+0104) ą (U+0105) Ć (U+0106)
 ć (U+0107) Ę (U+0118) ę (U+0119) ł (U+0141) ł (U+0142)
 Ń (U+0143) ń (U+0144) Ś (U+015A) ś (U+015B) Ź (U+0179)
 ź (U+017A) Ż (U+017B) ż (U+017C)

pt (Portugiesisch)

Â (U+00C2) Ã (U+00C3) Ç (U+00C7) Ê (U+00CA) Ó (U+00D3)
 Ô (U+00D4) Õ (U+00D5) â (U+00E2) ã (U+00E3) ç (U+00E7)
 ê (U+00EA) ó (U+00F3) ô (U+00F4) õ (U+00F5) ü (U+00FC)

ro (Rumänisch)

Â (U+00C2) Î (U+00CE) â (U+00E2) î (U+00EE) Ă (U+0102)
 ă (U+0103) Ć (U+0106) ć (U+0107) Č (U+010C) č (U+010D)
 Đ (U+0110) đ (U+0111) Ș (U+015E) ș (U+015F) Ș (U+0160)
 ș (U+0161) Ț (U+0162) ț (U+0163) Ž (U+017D) ž (U+017E)

sl (Slowenisch)

Č (U+010C) č (U+010D) Š (U+0160) š (U+0161) Ž (U+017D)
 ž (U+017E) Š (U+0218) š (U+0219) Ț (U+021A) ț (U+021B)

sq (Albanisch)

Ç (U+00C7) Ě (U+00CB) ç (U+00E7) ë (U+00EB)

tr (Türkisch)

Ç (U+00C7) Ö (U+00D6) Ü (U+00DC) â (U+00E2) ç (U+00E7)
î (U+00EE) ö (U+00F6) û (U+00FB) ü (U+00FC) Ğ (U+011E)
ğ (U+011F) İ (U+0130) ı (U+0131) Ş (U+015E) ş (U+015F)

Strukturierter Input zur autom. Verarbeitung

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dz(0x0056, [], "V").
dz(0x0057, [], "W").
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dz(0x0059, [], "Y").
dz(0x005A, [], "Z").
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dz(0x0063, [], "c").
dz(0x0064, [], "d").
dz(0x0065, [], "e").
dz(0x0066, [], "f").
dz(0x0067, [], "g").
dz(0x0068, [], "h").
dz(0x0069, [], "i").
dz(0x006A, [], "j").
dz(0x006B, [], "k").
dz(0x006C, [], "l").
dz(0x006D, [], "m").
dz(0x006E, [], "n").
dz(0x006F, [], "o").
dz(0x0070, [], "p").
dz(0x0071, [], "q").
dz(0x0072, [], "r").
dz(0x0073, [], "s").
dz(0x0074, [], "t").
dz(0x0075, [], "u").
dz(0x0076, [], "v").
dz(0x0077, [], "w").
dz(0x0078, [], "x").
dz(0x0079, [], "y").
```

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dz(0x007A, [], "z").
dz(0x00C0, [ca,cy,fr,it,ml], "A").
dz(0x00C1, [cs,cy,da,es,hr,hu,is], "A").
dz(0x00C2, [cy,fr,pt,ro], "A").
dz(0x00C3, [pt], "A").
dz(0x00C4, [cy,de,et,hr], "AE").
dz(0x00C5, [da], "A").
dz(0x00C6, [fr,is], "Ae").
dz(0x00C7, [ca,fr,pt,sq,tr], "C").
dz(0x00C8, [ca,cy,fr,it,ml], "E").
dz(0x00C9, [ca,cs,cy,da,es,fr,hr,is,it], "E").
dz(0x00CA, [cy,fr,pt], "E").
dz(0x00CB, [cy,fr,sq], "E").
dz(0x00CC, [cy,it,ml], "I").
dz(0x00CD, [ca,cs,cy,da,es,hr,is,it], "I").
dz(0x00CE, [cy,fr,ml,ro], "I").
dz(0x00CF, [ca,cy,fr,it], "I").
dz(0x00D0, [hr,is], "D").
dz(0x00D1, [es], "N").
dz(0x00D2, [ca,cy,it,ml], "O").
dz(0x00D3, [ca,cs,cy,da,es,hr,hu,is,it,pl,pt], "O").
dz(0x00D4, [cy,fr,hr,pt], "O").
dz(0x00D5, [et,pt], "O").
dz(0x00D6, [cy,de,et,hu,is,tr], "OE").
dz(0x00D8, [da], "O").
dz(0x00D9, [cy,fr,it,ml], "U").
dz(0x00DA, [ca,cy,da,es,hr,hu,is,it], "U").
dz(0x00DB, [cy,fr], "U").
dz(0x00DC, [ca,cy,de,et,hu,tr], "UE").
dz(0x00DD, [cs,cy,hr], "Y").
dz(0x00DE, [is], "TH").
dz(0x00DF, [ca,de,fr,it], "ss").
dz(0x00E0, [cs,cy,es,hr,hu,is,ml], "a").
dz(0x00E1, [cs,cy,da,es,hr,hu,is], "a").
dz(0x00E2, [cy,fr,pt,ro,tr], "a").
dz(0x00E3, [pt], "a").
dz(0x00E4, [de,et,hr], "ae").
dz(0x00E5, [da], "a").
dz(0x00E6, [fr,is], "ae").
dz(0x00E7, [ca,es,fr,pt,sq,tr], "c").
dz(0x00E8, [ca,cy,fr,it,ml], "e").
dz(0x00E9, [ca,cs,cy,da,es,fr,hr,is,it], "e").
dz(0x00EA, [cy,fr,pt], "e").
dz(0x00EB, [cy,fr,nl,sq], "e").
dz(0x00EC, [cy,it,ml], "i").
dz(0x00ED, [ca,cs,cy,da,es,hr,is,it], "i").
dz(0x00EE, [cy,fr,ro,tr], "i").
dz(0x00EF, [ca,cy,fr,it,ml], "i").
dz(0x00F0, [is], "th").
dz(0x00F1, [ca,es,hr,it], "n").
dz(0x00F2, [ca,cy,it,ml], "o").
dz(0x00F3, [ca,cs,cy,es,hr,hu,is,it,pl,pt], "o").
dz(0x00F4, [cy,fr,hr,pt], "o").
dz(0x00F5, [et,pt], "o").
dz(0x00F6, [cy,de,et,hu,is,tr], "oe").
dz(0x00F8, [da], "o").
dz(0x00F9, [cy,fr,it,ml], "u").
dz(0x00FA, [ca,cy,da,es,hr,hu,is,it], "u").
dz(0x00FB, [cy,fr,tr], "u").
dz(0x00FC, [ca,cy,de,es,et,hu,pt,tr], "ue").
dz(0x00FD, [cs,cy,hr], "y").
dz(0x00FE, [is], "th").
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```
dz(0x00FF, [fr,is], "y").
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dz(0x0101, [lv], "a").
dz(0x0102, [ro], "A").
dz(0x0103, [ro], "a").
dz(0x0104, [lt,pl], "A").
dz(0x0105, [lt,pl], "a").
dz(0x0106, [hr,pl,ro], "C").
dz(0x0107, [hr,pl,ro], "c").
dz(0x0108, [], "C").
dz(0x0109, [], "c").
dz(0x010A, [ml], "C").
dz(0x010B, [ml], "c").
dz(0x010C, [cs,et,hr,lt,ro,sl], "C").
dz(0x010D, [cs,et,hr,lt,ro,sl], "c").
dz(0x010E, [cs,hr], "D").
dz(0x010F, [cs,hr], "d").
dz(0x0110, [hr,ro], "D").
dz(0x0111, [hr,ro], "d").
dz(0x0112, [lv], "E").
dz(0x0113, [lv], "e").
dz(0x0114, [], "E").
dz(0x0115, [], "e").
dz(0x0116, [lt], "E").
dz(0x0117, [lt], "e").
dz(0x0118, [lt,pl], "E").
dz(0x0119, [lt,pl], "e").
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dz(0x011B, [cs], "e").
dz(0x011C, [], "G").
dz(0x011D, [], "g").
dz(0x011E, [tr], "G").
dz(0x011F, [tr], "g").
dz(0x0120, [ml], "G").
dz(0x0121, [ml], "g").
dz(0x0122, [lv], "G").
dz(0x0123, [lv], "g").
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dz(0x0125, [], "h").
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dz(0x0127, [ml], "h").
dz(0x0128, [], "I").
dz(0x0129, [], "i").
dz(0x012A, [lv], "I").
dz(0x012B, [lv], "i").
dz(0x012C, [], "I").
dz(0x012D, [], "i").
dz(0x012E, [lt], "I").
dz(0x012F, [lt], "i").
dz(0x0130, [tr], "I").
dz(0x0131, [tr], "i").
dz(0x0132, [nl], "IJ").
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dz(0x0138, [], "").
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dz(0x013B, [lv], "L").
dz(0x013C, [lv], "l").
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```
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dz(0x0145, [lv], "N").
dz(0x0146, [lv], "n").
dz(0x0147, [cs], "N").
dz(0x0148, [cs], "n").
dz(0x0149, [], "n").
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dz(0x014E, [], "O").
dz(0x014F, [], "o").
dz(0x0150, [hu], "O").
dz(0x0151, [hu], "o").
dz(0x0152, [fr], "Oe").
dz(0x0153, [fr], "oe").
dz(0x0154, [hr], "R").
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dz(0x0156, [cs,lv], "R").
dz(0x0157, [lv], "r").
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dz(0x0159, [cs], "r").
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dz(0x015B, [pl], "s").
dz(0x015C, [], "S").
dz(0x015D, [], "s").
dz(0x015E, [ro,tr], "S").
dz(0x015F, [ro,tr], "s").
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dz(0x0161, [cs,et,hr,lt,ro,sl], "s").
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dz(0x0163, [ro], "t").
dz(0x0164, [cs,hr], "T").
dz(0x0165, [cs,hr], "t").
dz(0x0166, [da], "T").
dz(0x0167, [da], "t").
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dz(0x016C, [], "U").
dz(0x016D, [], "u").
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dz(0x016F, [cs], "u").
dz(0x0170, [hu], "U").
dz(0x0171, [hu], "u").
dz(0x0172, [lt], "U").
dz(0x0173, [lt], "u").
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dz(0x0178, [cy,fr,is], "Y").
dz(0x0179, [pl], "Z").
dz(0x017A, [pl], "z").
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dz(0x01D5, [], "U").
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dz(0x01FB, [da], "a").
dz(0x01FC, [da], "AE").
dz(0x01FD, [da], "ae").
dz(0x01FE, [da], "O").
dz(0x01FF, [da], "o").
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dz(0x0202, [], "A").
dz(0x0203, [], "a").
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dz(0x0212, [], "R").
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dz(0x0214, [], "U").
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dz(0x0216, [], "U").
dz(0x0217, [], "u").
dz(0x0218, [s1], "S").
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dz(0x021A, [s1], "T").
dz(0x021B, [s1], "t").
dz(0x021C, [], "").
dz(0x021D, [], "").
dz(0x021E, [], "H").
dz(0x021F, [], "h").
dz(0x0220, [], "N").
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dz(0x0222, [], "").
dz(0x0223, [], "").
dz(0x0224, [], "Z").
dz(0x0225, [], "z").
dz(0x0226, [], "A").
dz(0x0227, [], "a").
dz(0x0228, [], "E").
dz(0x0229, [], "e").
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iso_sprache(da, "Dänisch").
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iso_sprache(en, "Englisch").
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iso_sprache(fi, "Finnisch").
iso_sprache(fr, "Französisch").
iso_sprache(hr, "Kroatisch").
iso_sprache(hu, "Ungarisch").
iso_sprache(is, "Isländisch").
iso_sprache(it, "Italienisch").
iso_sprache(lt, "Litauisch").
iso_sprache(lv, "Lettisch").
iso_sprache(ml, "Maltesisch").
iso_sprache(nl, "Niederländisch").
iso_sprache(pl, "Polnisch").
iso_sprache(pt, "Portugiesisch").
iso_sprache(ro, "Rumänisch").
iso_sprache(sl, "Slowenisch").
iso_sprache(sq, "Albanisch").
iso_sprache(tr, "Türkisch").
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