Di seguito tutte le specifiche che riguardano la codifica della banda magnetica regolate dalle normative ISO 7810, 7811 e 7813

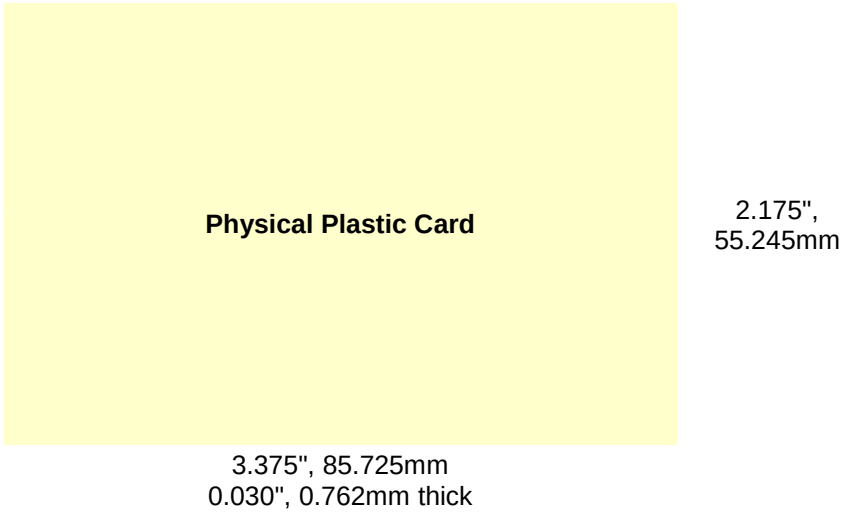
ISO Magnetic Stripe Card Standards

La maggior parte delle card magnetiche usate in the UK, Europe e USA seguono queste normative ISO.

ISO Number	Descrizione dello Standard
7810	Physical Characteristics of Credit Card Size Document
7811-1	Embossing
7811-2	Magnetic Stripe - Low Coercivity
7811-3	Location of Embossed Characters
7811-4	Location of Tracks 1 and 2
7811-5	Location of Track 3
7811-6	Magnetic Stripe - High Coercivity
7813	Financial Transaction Cards

La copia intera di questi standard si può scaricare da www.iso.org e www.ansi.org.

Dimensioni fisiche delle card:



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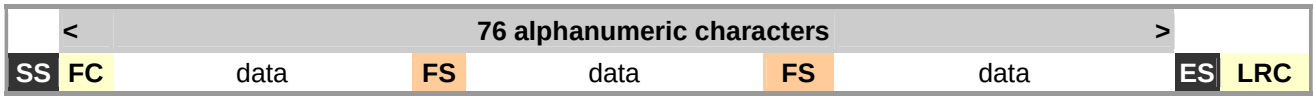
Caratteristiche delle Tracce:

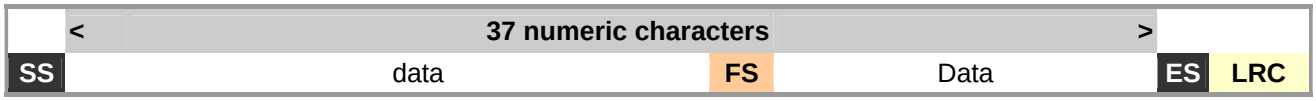
Position	Track Number	Recording Density (bits per inch)	Character Configuration (including parity bit)	Information Content (including control characters)
0.223" (5.664mm) from card edge				
0.110" (2.794mm)	Track 1	210BPI	7 bits per character	79 Alphanumeric characters
0.110" (2.794mm)	Track 2	75BPI	5 bits per character	40 Numeric characters
0.110" (2.794mm)	Track 3	210BPI	5 bits per character	107 Numeric characters

Track One:



	Description	Value
SS	Start Sentinel	05h
FC	Format Code	
FS	Field Seperator	3Eh
ES	End Sentinel	1Fh
LRC	Longitudinal Redunancy Check Character	

Track Two:



	Description	Value
SS	Start Sentinel	0Bh
FS	Field Seperator	0Dh
ES	End Sentinel	0Fh
LRC	Longitudinal Redunancy Check Character	

Track Three: (ISO 4909)

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SS	FC	data	FS	Data	ES	LRC

	Description	Value
SS	Start Sentinel	**0Bh**
FC	Format Code	2 digits
FS	Field Seperator	**0Dh**
ES	End Sentinel	**0Fh**
LRC	Longitudinal Redunancy Check Character	

Character Sets

Data stored on magnetic stripes does not use the standard ASCII character set as used on PCs. Below are the two ANSI/ISO character sets used on magnetic stripes.

ANSI/ISO ALPHA Data Format
(Track 1)

The ANSI/ISO ALPHA format is 7 bit, 6 data bits + 1 parity bit (odd). The data is read least significant bit first.
The character set contains 64 characters, 43 alphanumeric, 3 framing/field characters and 18 control/special characters.

Data bits							Character	Value	Function
b1	b2	b3	b4	b5	b6	b7		(Hex)	
0	0	0	0	0	0	1	space	00	Special
1	0	0	0	0	0	0	!	01	Special
0	1	0	0	0	0	0	"	02	Special
1	1	0	0	0	0	1	#	03	Special
0	0	1	0	0	0	0	$	04	Special
1	0	1	0	0	0	1	%	05	**Start Sentinel**
0	1	1	0	0	0	1	&	06	Special
1	1	1	0	0	0	0	'	07	Special
0	0	0	1	0	0	0	(	08	Special
1	0	0	1	0	0	1	)	09	Special
0	1	0	1	0	0	1	*	0A	Special
1	1	0	1	0	0	0	+	0B	Special
0	0	1	1	0	0	1	,	0C	Special
1	0	1	1	0	0	0	-	0D	Special
0	1	1	1	0	0	0	.	0E	Special
1	0	0	1	0	0	1	/	0F	Special
0	0	0	0	1	0	0	0	10	Data
1	0	0	0	1	0	1	1	11	Data

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0	1	0	0	1	0	1	2	12	Data
1	1	0	0	1	0	0	3	13	Data
0	0	1	0	1	0	1	4	14	Data
1	0	1	0	1	0	0	5	15	Data
0	1	1	0	1	0	0	6	16	Data
1	1	1	0	1	0	1	7	17	Data
0	0	0	1	1	0	1	8	18	Data
1	0	0	1	1	0	0	9	19	Data
0	1	0	1	1	0	0	:	1A	Special
1	1	0	1	1	0	1	;	1B	Special
0	0	1	1	1	0	0	<	1C	Special
1	0	1	1	1	0	1	=	1D	Special
0	1	1	1	1	0	1	>	1E	Special
1	1	1	1	1	0	0	?	1F	**End sentinel**
0	0	0	0	0	1	0	@	20	Special
1	0	0	0	0	1	1	A	21	Data
0	1	0	0	0	1	1	B	22	Data
1	1	0	0	0	1	0	C	23	Data
0	0	1	0	0	1	1	D	24	Data
1	0	1	0	0	1	0	E	25	Data
0	1	1	0	0	1	0	F	26	Data
1	1	1	0	0	1	1	G	27	Data
0	0	0	1	0	1	1	H	28	Data
1	0	0	1	0	1	0	I	29	Data
0	1	0	1	0	1	0	J	2A	Data
1	1	0	1	0	1	1	K	2B	Data
0	0	1	1	0	1	0	L	2C	Data
1	0	1	1	0	1	1	M	2D	Data
0	1	1	1	0	1	1	N	2E	Data
1	1	1	1	0	1	0	O	2F	Data
0	0	0	0	1	1	1	P	30	Data
1	0	0	0	1	1	0	Q	31	Data
0	1	0	0	1	1	0	R	32	Data
1	1	0	0	1	1	1	S	33	Data
0	0	1	0	1	1	0	T	34	Data
1	0	1	0	1	1	1	U	35	Data
0	1	1	0	1	1	1	V	36	Data
1	1	1	0	1	1	0	W	37	Data
0	0	0	1	1	1	0	X	38	Data

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1	0	0	1	1	1	1	Y	39	Data
0	1	0	1	1	1	1	Z	3A	Data
1	1	0	1	1	1	0	[	3B	Special
0	0	1	1	1	1	1	\	3C	Special
1	0	1	1	1	1	0	]	3D	Special
0	1	1	1	1	1	0	^	3E	**Field Separator**
1	1	1	1	1	1	1	_	3F	Special

ANSI/ISO BCD Data Format
(Tracks 2 and 3)

The ANSI/ISO BCD format is 5 bit, 4 data bits + 1 parity bit (odd). The data is read least significant bit first.
The character set contains 16 characters, 10 alphanumeric, 3 framing/field characters and 3 control/special characters.

Data bits					Character	Value	Function
b1	b2	b3	b4	b5		(Hex)	
0	0	0	0	1	0	00	Data
1	0	0	0	0	1	01	Data
0	1	0	0	0	2	02	Data
1	1	0	0	1	3	03	Data
0	0	1	0	0	4	04	Data
1	0	1	0	1	5	05	Data
0	1	1	0	1	6	06	Data
1	1	1	0	0	7	07	Data
0	0	0	1	0	8	08	Data
1	0	0	1	1	9	09	Data
0	1	0	1	1	:	0A	Control
1	1	0	1	0	;	0B	**Start Sentinel**
0	0	1	1	1	<	0C	Control
1	0	1	1	0	=	0D	**Field Separator**
0	1	1	1	0	>	0E	Control
1	1	1	1	1	?	0F	**End Sentinel**

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