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AMENDMENT 1
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Cards and security devices for personal identification — Contactless proximity objects —

Part 3: Initialization and anticollision

AMENDMENT 1: Dynamic power level management

Cartes et dispositifs de sécurité pour l'identification personnelle — Objets sans contact de proximité —

Partie 3: Initialisation et anticollision

AMENDEMENT 1: Gestion dynamique de niveau de puissance

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This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 17, *Cards and security devices for personal identification*.

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Cards and security devices for personal identification — Contactless proximity objects —

Part 3: Initialization and anticollision

AMENDMENT 1: Dynamic power level management

Page 3, Clause 4

Add the following symbols:

"H_{LP} minimum requested field strength"

"$H_{step,\,max}$ PCD maximum field strength step increase or step decrease"

"PLI_{ATQ} Power Level Indication in Answer to Request"

"t_{PL} guard time for PCD power level change"

Page 17, 6.5.2.1, Table 4

Replace Table 4 with the following table:

"

Table 4 — Coding of ATQA

MSB LSB

b16	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1
Each bit RFU		PLI_{ATQ}		Proprietary coding				UID size		RFU	Bit frame anticollision				

"

Page 18, 6.5.2.3

Add the following subclause after 6.5.2.2:

"

6.5.2.3 Coding of PLI_{ATQ}

The PICC may use PLI_{ATQ} to give a received power level indication to the PCD and PLI_{ATQ} shall be coded as specified in Table 7.

A PICC that codes:

— PLI_{ATQ} = (00)b does not provide any received power level indication;

— PLI_{ATQ} = (01)b indicates the received field strength is less than (H_{LP} + $H_{step,\ max}$) (see ISO/IEC 14443-2:2020/Amd 1);

— PLI_{ATQ} = (10)b does not provide any received power level indication and sets the value of the guard time t_{PL} to 5 ms;

— PLI_{ATQ} = (11)b indicates the received field strength is at least (H_{LP} + $H_{step,\ max}$); when receiving PLI_{ATQ} = (11)b, the PCD may decrease its field strength by one step only.

Table 7 — Coding of PLI_{ATQ}

PLI_{ATQ}	Power level indication	t_{PL}
(00)b	No indication for received field strength	Current t_{PL}
(01)b	Field strength is less than (H_{LP} + $H_{step,\ max}$)	Current t_{PL}
(10)b	No indication for received field strength	5 ms
(11)b	Field strength is at least (H_{LP} + $H_{step,\ max}$)	Current t_{PL}

After receiving the power level indication from the PICC, the PCD may change its magnetic field strength in accordance with the power level indication before sending the next command.

Such PCD:

— should not change its magnetic field strength when several PICCs are activated;

— may produce magnetic field strength steps which shall not exceed $H_{step,\ max}$ as defined in ISO/IEC 14443-2:2020/Amd 1:2021, 6.3;

— shall produce a stable magnetic field strength for at least t_{PL} between any consecutive two magnetic field strength steps and before sending start of communication or SOF;

— shall respect the most recent t_{PL} value indicated by the PICC, or the default t_{PL} value as long as no such indication was received.

After state transition from POWER-OFF state to IDLE state, the default value of the guard time t_{PL} is 300 µs and applies until another t_{PL} value is set by PLI_{ATQ}."

Renumber subsequent tables.

Page 37, 7.9.4, Figure 26

Replace Figure 26 with the following figure:

"

1st byte	2nd byte		3rd byte			4th byte (optional) Extended ATQB		
Bit_Rate_capability (8 bits)	Max_Frame_Size (4 bits)	Protocol_Type (4 bits)	FWI (4 bits)	ADC (2 bits)	FO (2 bits)	SFGI (4 bits)	PLI_{ATQ} (2 bits)	Each bit RFU (2 bits)

Figure 26 — Protocol Info format

"

Page 39, 7.9.4.7

Replace the first paragraph with the following text: