

ISO 14223-2:2010-08 (E)

Radiofrequency identification of animals - Advanced transponders - Part 2: Code and command structure

Contents		Page
Foreword		v
Introduction		vi
1	Scope	1
2	Normative references	1
3	Conformance	1
3.1	Transponder	1
3.2	Transceiver	1
4	Terms and definitions	2
5	Abbreviated terms	2
6	Transmission protocol	3
6.1	Basic elements	3
6.2	Unique identifier	3
6.3	Request format	4
6.4	Response format	5
6.5	Request flags	5
6.5.1	General	5
6.5.2	NOS flag	6
6.5.3	SEL flag and ADR flag	7
6.5.4	CRCT flag	7
6.6	Response flag and error code	7
6.7	Error handling	8
6.8	Block security status (BSS)	8
6.9	Start of frame pattern (SOF)	9
6.9.1	Transceiver request	9
6.9.2	Transponder response	9
6.10	Cyclic redundancy check (CRC)	9
6.11	Data storage format identifier (DSFID)	9
7	Memory organization	10
7.1	General	10
7.2	User data memory -- Page 0	10
7.3	User data memory -- Extended memory (W page 1)	10
8	Transponder states	11
8.1	General	11
8.2	RF-off state	11
8.3	ISO 11785 state	11
8.4	Wait state	11
8.5	Ready state	11
8.6	Quiet state	11
8.7	Selected state	11
8.8	State diagram	12
9	Anticollision	13

9.1	General	13
9.2	Request parameters	13
9.3	Request processing by the transponder	14
9.4	Explanation of anticollision sequences	16
9.4.1	General	16
9.4.2	Anticollision sequence with one slot	16
9.4.3	Anticollision sequence with 16 slots	16
9.4.4	Mixed population with transponders of type FDX-ADV and HDX-ADV	17
9.4.5	Advanced anticollision mode	17
10	Commands	19
10.1	Command classification	19
10.2	Command list	20
10.3	Mandatory commands	21
10.3.1	INVENTORY	21
10.3.2	READ UID	22
10.3.3	READ MULTIPLE BLOCKS	22
10.3.4	STAY QUIET	23
10.3.5	WRITE SINGLE BLOCK	23
10.3.6	LOCK BLOCK	23
10.4	Optional commands	24
10.4.1	READ SINGLE BLOCK	24
10.4.2	READ SINGLE BLOCK WITH SECURITY STATUS	24
10.4.3	READ MULTIPLE BLOCKS WITH SECURITY STATUS	25
10.4.4	WRITE MULTIPLE BLOCKS	25
10.4.5	GET SYSTEM INFORMATION	26
10.4.6	SELECT	27
10.4.7	RESET TO READY	28
10.4.8	WRITE SYSTEM DATA	28
10.4.9	LOCK SYSTEM DATA	29
10.4.10	READ EXTENDED MULTIPLE BLOCKS	29
10.4.11	WRITE EXTENDED MULTIPLE BLOCKS	30
10.4.12	LOCK EXTENDED BLOCK	31
10.4.13	Optional command execution in inventory mode	31
10.5	Custom commands	32
10.6	Proprietary commands	32
Annex A (informative) Description of a typical anticollision sequence with FDX and HDX transponders		33
Bibliography		34