EUROCONTROL Specification for Surveillance Data Exchange

ASTERIX Part 29 Category 032 Miniplan Reports to a SDPS Appendix A: Reserved Expansion Field

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Abstract

This document specifies the contents of the Reserved Expansion Field for ASTERIX Category 032 messages used for the transmission of Miniplan Reports to an SDPS.

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DOCUMENT APPROVAL

This document has been approved by the ASTERIX Maintenance Group AMG.

For management approval of the complete set of ASTERIX documentation please refer to Part 1.

DOCUMENT CHANGE RECORD

The following table records the complete history of the successive editions of the present document.

EDITION	DATE	REASON FOR CHANGE	SECTIONS PAGES AFFECTED
1.0	August 2021	New Specification	All
1.1	June 2025	Document Characteristics Table updated Item SCT added REF Encoding Rule updated	Page ii 2.5 Page 8

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1. INTRODUCTION

1.1 Scope of this Document

This document describes the way to encode information in the Reserved Expansion Field of ASTERIX Cat 032 (Miniplan reports to an SDPS).

2. DESCRIPTION OF THE CONTENT OF RESERVED EXPANSION FIELD

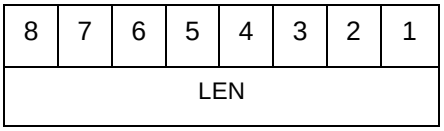
2.1 Length Indicator

Definition : This field indicates the total length in octets of the Reserved Expansion Field (including the REF length indicator itself)

Format : One-octet fixed length Data Item

Structure:

Octet no. 1



bits 8-1	(LEN)	Length of REF in octets, including the Length Indicator itself.

Encoding Rule :

This item shall be present in every REF.

2.2 Items indicator

Definition : This field indicates what are the items encoded in the REF
Format : Variable Length Data Item, comprising of a primary subfield of one octet, followed by one-octet extensions as necessary
Structure:

Octet no. 1

8	7	6	5	4	3	2	1
PEM	PEC	SCT	0	0	0	0	FX

bit 8 (PEM)
= 0 Pre-Emergency Mode 3/A is not present in the REF
= 1 Pre-Emergency Mode 3/A is present in the REF

bit 7 (PEC)
= 0 Pre-Emergency Callsign is not present in the REF
= 1 Pre-Emergency Callsign is present in the REF

bit 6 (SCT)
= 0 SUC Correlation Text is not present in the REF
= 1 SUC Correlation Text is present in the REF

bit 5/2 (Spare)
Spare bits set to 0

bit 1 (FX)
= 0 End of Item
= 1 Extension into next octet

Encoding Rule :
This item shall be present in every REF.

2.3 PEM – Pre-Emergency Mode 3/A

Definition: Mode 3/A code set before the switch to an Emergency Mode 3/A code (e.g. 7500, 7600 or 7700).

Format: Two-octet fixed length Data Item.

Structure:

	Octet no. 1							Octet no. 2								
16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
0	0	0	VA	A4	A2	A1	B4	B2	B1	C4	C2	C1	D4	D2	D1

bits-16/14	(Spare)	Spare bits set to zero
bit-13	(VA)	Validity = 0 No valid Mode 3/A available = 1 Valid Mode 3/A available
bit-12/1		Mode 3/A reply in octal representation

NOTES

1. This subfield is used only when the aircraft is transmitting an emergency Mode 3/A code.
2. If VA = 0, the content of bits 12/1 is meaningless.

Encoding Rule: This Item is optional.

2.4 PEC – Pre-Emergency Callsign

Definition: Callsign set before the switch to an Emergency Mode 3/A code (e.g. 7500, 7600 or 7700).

Format: Seven-octet fixed length Data Item.

Structure:

Octet no. 1

56	55	54	53	52	51	50	49
Character 1							

Octet no. 2 Octet no. 3

48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
Character 2								Character 3							

Octet no. 4 Octet no. 5

32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
Character 4								Character 5							

Octet no. 6 Octet no. 7

16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Character 6								Character 7							

NOTES

1. Each of the seven Octets contains one of the ASCII Character which are part of the ICAO Alphabet. The Callsign is always left adjusted. It contains up to seven upper-case alphanumeric characters, the remaining character positions (if any) are padded with space characters;
2. This subfield is used only when the aircraft is transmitting an emergency Mode 3/A code.

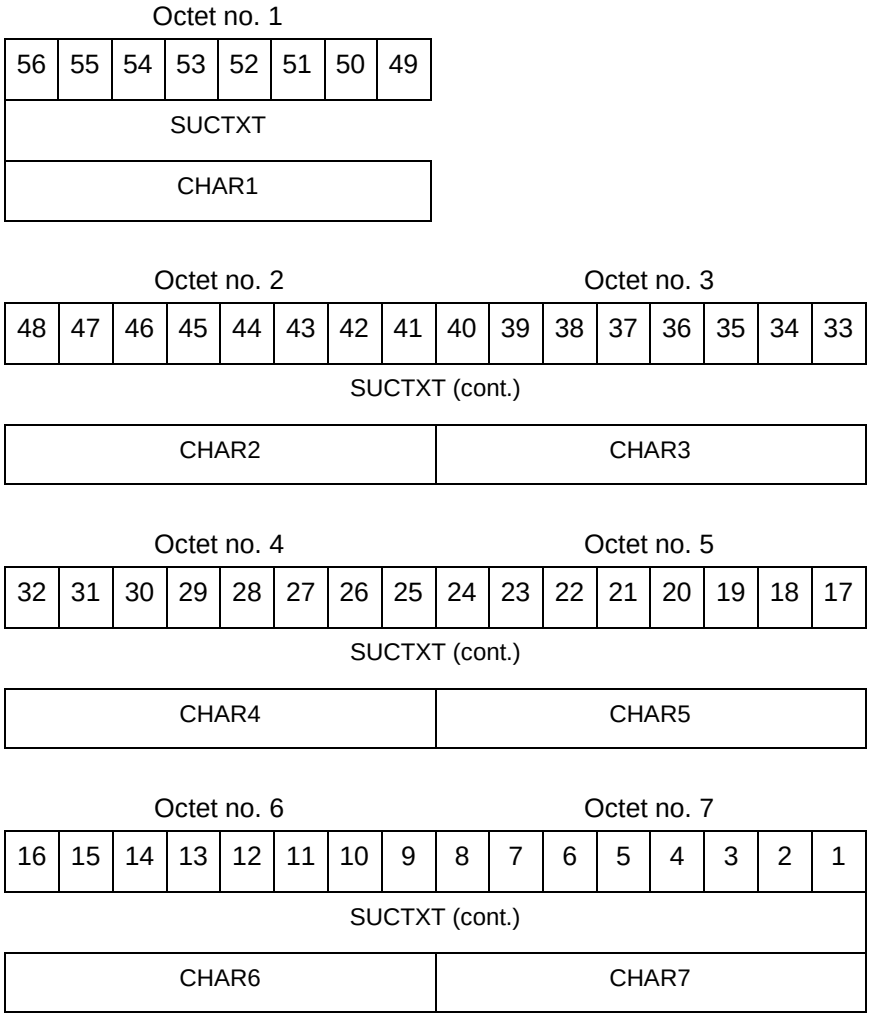
Encoding Rule: This Item is optional.

2.5 SCT – SUC Correlation Text

Definition: Text to be displayed to the controller in case of a Special Use Code (SUC).

Format: Seven-octet fixed length Data Item.

Structure:



bits-56/1 (SUCTXT) SUC correlation text consisting of 7 ASCII characters.

NOTE - The SUC correlation text is always left adjusted. It contains up to seven alphanumeric characters, the remaining character positions (if any) are padded with space characters.

NOTE - An SUC indication in CAT062 is provided by I062/080/SUC.

NOTE - The SUC correlation text can be mapped from I032/REF/SCT to I062/REF/MOI/SCT in the target report.

NOTE - An SSR code may be used as SUC globally or on a local basis.

Encoding Rule: This Item shall be present in message types ($21) and ($23), as defined in Table 1 in I032/035.

REF Encoding Rule: See Table 1 in I032/035.

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