

This is a free page sample. Access the full version online.

EUROPEAN PRESTANDARD PRÉNORME EUROPÉENNE EUROPÄISCHE VORNORM

ENV 13154-1

October 2000

ICS 35.240.99; 97.120

English version

Data communication for HVAC application - Field net - Part 1: Objects

This European Prestandard (ENV) was approved by CEN on 18 September 2000 as a prospective standard for provisional application.

The period of validity of this ENV is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the ENV can be converted into a European Standard.

CEN members are required to announce the existence of this ENV in the same way as for an EN and to make the ENV available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the ENV) until the final decision about the possible conversion of the ENV into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPEEN DE NORMALISATION EUROPAISCHES KOMITEE FUR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

© 2000 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. ENV 13154-1:2000 E

Contents

1	SCOPE	6
2	NORMATIVE REFERENCE	7
2	TERMS AND DEFINITIONS	0
3	TERMS AND DEFINITIONS	8
4	GENERAL REQUIREMENTS	9
4.1	SYSTEM OVERVIEW	.9
4.2	ASPECTS OF APPLICATION.	
4.3	OBJECT MODEL	
4.4	OBJECT STRUCTURE	
4.5	INTERACTION MODEL	12
5	THE FIELD LEVEL OBJECTS	13
5.1	DEVICE OBJECT	13
5.	1.1 Mandatory Properties	14
5.	1.2 Optional Properties	15
5.	1.3 Engineerable Properties	16
5.2	ANALOGUE OBJECT	
	2.1 Mandatory Properties	
	2.2 Optional Properties	
	2.3 Engineerable Properties	
5.3	BINARY OBJECT	
	3.1 Mandatory Properties	
	3.2 Optional Properties	
5.4	3.3 Engineerable Properties	
	COUNTER OBJECT	
	 4.1 Mandatory Properties 4.2 Optional Properties 	
	4.2 Optional Properties	
5.5	LOOP OBJECT	
	5.1 Mandatory Properties	
-	5.2 Optional Properties	
	5.3 Engineerable Properties	
5.6	MULTISTATE OBJECT	
5.	6.1 Mandatory Properties	
5.	6.2 Optional Properties	
5.	6.3 Engineerable Properties	37
5.7	ALARM AND COV NOTIFICATION	
5.	7.1 Alarm Notification	38
	7.2 COV Notification	
5.	7.3 Unsolicited messaging to reduce network traffic	41
6	ANNEX A. GUIDELINES (INFORMATIVE)	42
6.1	EXAMPLES FOR THE INTENDED USE OF THIS PRESTANDARD AS MENTIONED IN THE INTRODUCTION	42
	1.1 API on superordinate system unit	
6.	1.2 Interface to communication-front-end	
6.	1.3 Building a field level gateway	
6.	1.4 Topology model	44
6.2	MAPPING GUIDELINES	
	2.1 Mapping objects	
	2.2 Mapping services	
6.3	POSSIBLE FUTURE EXTENSIONS	46
7	ANNEX B. DATATYPES (INFORMATIVE)	47

t.

7.1	BASIC DATATYPES	47
7.1	.1 BITSTRING	
7.1		
7.1		
7.1	5	
7.1		
7.1		
7.1		
7.1		
7.1		
7.1	- 5	
7.1		
7.1		
7.2	APPLICATION DATATYPES	48
7.2	.1 Object ID_Number	48
7.2	.2 Object_Type	48
7.2.	· _ ·	
7.2		
7.2		
7.2		
7.2.		
7.2.		
7.2.	I I I I I I I I I I I I I I I I I I I	
7.2.		
7.2.	.11 Device_Status	61
8 A	ANNEX C. MAPPING TO EIB (INFORMATIVE)	CO
		67
0 7		
8.1		
		62
8.1	INTRODUCTION	62
8.1 8.2	INTRODUCTION REFERENCES OBJECT STRUCTURE	62 62 62
8.1 8.2 8.3 8.3.	INTRODUCTION REFERENCES OBJECT STRUCTURE	62 62 62 62
8.1 8.2 8.3 8.3. 8.3.	INTRODUCTION REFERENCES OBJECT STRUCTURE	
8.1 8.2 8.3 8.3. 8.3. 8.4	INTRODUCTION REFERENCES OBJECT STRUCTURE	
8.1 8.2 8.3 8.3 8.3 8.4 8.4	INTRODUCTION REFERENCES OBJECT STRUCTURE 1 Object Identifier 2 Property-Types OBJECTS AND PROPERTIES 1 Relationship between EIB Objects and FLN Object Types	
8.1 8.2 8.3 8.3 8.4 8.4 8.4. 8.4.	INTRODUCTION	
8.1 8.2 8.3 8.3 8.4 8.4 8.4 8.5	INTRODUCTION	62 62 62 62 63 63 64 64 64 65 65
8.1 8.2 8.3 8.3 8.4 8.4 8.4 8.5 8.5	INTRODUCTION REFERENCES OBJECT STRUCTURE 1 Object Identifier 2 Property-Types OBJECTS AND PROPERTIES 1 Relationship between EIB Objects and FLN Object Types 2 Relationship between EIB Object and FLN Object Properties 2 Relationship between EIB Object and FLN Object Properties 2 CONVERSION OF EIB-OBJECTS TO FLN-OBJECTS 1 Analogue Input/Output/Value Object	62 62 62 62 63 63 64 64 65 67 67 67
8.1 8.2 8.3 8.3 8.3 8.4 8.4 8.4 8.4 8.5 8.5 8.5	INTRODUCTION REFERENCES OBJECT STRUCTURE 1 Object Identifier 2 Property-Types OBJECTS AND PROPERTIES 1 Relationship between EIB Objects and FLN Object Types 2 Relationship between EIB Object and FLN Object Properties CONVERSION OF EIB-OBJECTS TO FLN-OBJECTS 1 Analogue Input/Output/Value Object 2 Binary Input/Output/Value	62 62 62 63 63 64 64 64 65 67 67 67
8.1 8.2 8.3 8.3 8.3 8.4 8.4 8.4 8.5 8.5 8.5 8.5 8.5	INTRODUCTION REFERENCES OBJECT STRUCTURE 1 Object Identifier 2 Property-Types OBJECTS AND PROPERTIES 1 Relationship between EIB Objects and FLN Object Types 2 Relationship between EIB Object and FLN Object Properties CONVERSION OF EIB-OBJECTS TO FLN-OBJECTS 1 Analogue Input/Output/Value Object 2 Binary Input/Output/Value 3 Counter Object	62 62 62 63 63 64 64 64 65 67 67 67 67 67 68
8.1 8.2 8.3 8.3 8.4 8.4 8.4 8.5 8.5 8.5 8.5 8.5 8.5	INTRODUCTION. REFERENCES. OBJECT STRUCTURE	62 62 62 63 63 64 64 64 65 67 67 67 67 68 68 68
8.1 8.2 8.3 8.3 8.4 8.4 8.4 8.5 8.5 8.5 8.5 8.5 8.5 8.5	INTRODUCTION. REFERENCES. OBJECT STRUCTURE	62 62 62 63 63 64 64 64 65 67 67 67 67 67 68 68 68 68 68 69
8.1 8.2 8.3 8.3 8.4 8.4 8.4 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5	INTRODUCTION. REFERENCES. OBJECT STRUCTURE	62 62 62 63 63 64 64 64 65 67 67 67 67 67 68 68 68 68 69 69
8.1 8.2 8.3 8.3 8.4 8.4 8.4 8.5 8.5 8.5 8.5 8.5 8.5 8.5	INTRODUCTION. REFERENCES. OBJECT STRUCTURE	62 62 62 63 63 64 64 64 65 67 67 67 67 67 68 68 68 68 69 69
8.1 8.2 8.3 8.3 8.3 8.4 8.4 8.4 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5	INTRODUCTION REFERENCES. OBJECT STRUCTURE .1 Object Identifier .2 Property-Types OBJECTS AND PROPERTIES .1 Relationship between EIB Objects and FLN Object Types .2 Relationship between EIB Object and FLN Object Properties .2 Relationship between EIB Object and FLN Object Properties .2 Relationship between EIB Object and FLN Object Properties .2 Relationship between EIB Object and FLN Object Properties .2 Relationship between EIB Object and FLN Object Properties .2 Relationship between EIB Object and FLN Object Properties .2 Relationship between EIB Object and FLN-OBJECTS .1 Analogue Input/Output/Value Object .2 Binary Input/Output/Value .3 Counter Object .4 Device Object .5 Multistate Object .6 Loop Object .7 Alarm and COV Notification	62 62 62 63 63 64 64 64 65 67 67 67 67 67 67 67 67 67 67 67 67 70 70
8.1 8.2 8.3 8.3 8.3 8.4 8.4 8.4 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5	INTRODUCTION. REFERENCES. OBJECT STRUCTURE	62 62 62 63 63 64 64 64 65 67 67 67 67 67 67 67 67 67 67 67 67 70 70
8.1 8.2 8.3 8.3 8.4 8.4 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5	INTRODUCTION REFERENCES. OBJECT STRUCTURE .1 Object Identifier .2 Property-Types. OBJECTS AND PROPERTIES .1 Relationship between EIB Objects and FLN Object Types. .2 Relationship between EIB Object and FLN Object Types. .2 Relationship between EIB Object and FLN Object Properties. .2 Relationship between EIB Object and FLN Object Properties. .2 Relationship between EIB Object. .1 Analogue Input/Output/Value Object. .2 Binary Input/Output/Value .3 Counter Object. .4 Device Object	62 62 62 63 63 64 64 64 65 67 67 67 67 67 67 67 67 67 67 67 70 70 70 70
8.1 8.2 8.3 8.3 8.4 8.4 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5	INTRODUCTION REFERENCES. OBJECT STRUCTURE .1 Object Identifier .2 Property-Types OBJECTS AND PROPERTIES .1 Relationship between EIB Objects and FLN Object Types .2 Relationship between EIB Object and FLN Object Properties .2 Relationship between EIB Object and FLN Object Properties .2 Relationship between EIB Object and FLN Object Properties .2 Relationship between EIB Object and FLN Object Properties .2 Relationship between EIB Object and FLN Object Properties .2 Relationship between EIB Object and FLN Object Properties .2 Relationship between EIB Object and FLN-OBJECTS .1 Analogue Input/Output/Value Object .2 Binary Input/Output/Value .3 Counter Object .4 Device Object .5 Multistate Object .6 Loop Object .7 Alarm and COV Notification	62 62 62 63 63 64 64 64 65 67 67 67 67 67 67 67 67 67 67 67 70 70 70 70
8.1 8.2 8.3 8.3 8.3 8.4 8.4 8.4 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5 9 A	INTRODUCTION	62 62 62 63 64 64 64 65 67 67 67 67 67 67 67 67 67 67 70 70 70 71
8.1 8.2 8.3 8.3 8.3 8.4 8.4 8.4 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5 9 A 10 A 11	INTRODUCTION	
8.1 8.2 8.3 8.3 8.4 8.4 8.4 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5 9 A 10 A 11 A	INTRODUCTION	
8.1 8.2 8.3 8.3 8.4 8.4 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5	INTRODUCTION	

Page 4 ENV 13154-1:2000

Foreword

This European Prestandard has been prepared by Technical Committee CEN/TC 247 "Controls for mechanical building services", the secretariat of which is held by SNV.

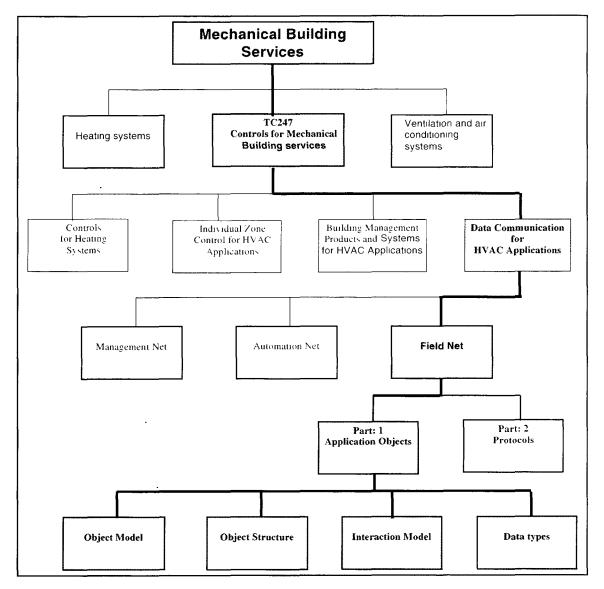


Figure 1: Structure of the standards prepared by CEN TC 247

The shaded boxes indicate the contents and hierarchy of this prestandard. The plain areas show the positioning of this prestandard with respect to other relevant mechanical building services standards.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this European Prestandard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.



This is a free preview. Purchase the entire publication at the link below:

Product Page

S Looking for additional Standards? Visit Intertek Inform Infostore

> Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation