

Application Descriptions

Common Functional Blocks

Technical Alarm

Summary

This document specifies the Functional Blocks 'Alarm Source' and 'Alarm Sink' that can be used to transmit fault information on the network.

This document describes a "light" Technical Alarm function for devices used in residential and small commercial buildings. The proposed solution for a simple alarm handling is derived from the complex alarm handling in large building automation systems.

These Functional Blocks are common for different application domains.

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Document updates

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		U ₈
1.1 Editorial	2002.08.26	- editorial, resolution of comments form Final Voting
1.2	2005.07.20	 Extension of InAlarm from copy of A-bit to become possible logical combination of A-bit, U-bit and L-bit (see 3.2.1) Editorial correction of description of DP InAlarm in 3.5.1.3.
1.3	2005.09.20	- Preparation of the Draft for Voting.
1.4	2006.02.14	 Removed former clause 5.1 "AL-Service A_ServiceInformation Indication_Write". This refers to the service that has been abandoned through Application Note 67. Publication of the Approved Standard
1.5	2008.08.09	 AN106 "Phasing out TP0" integrated. AN107 "Phasing out LT-R" integrated. AN108 "Phasing out LT-S" integrated. AN109 "Phasing out PL132" integrated. AN110 "Phasing out A-Mode" integrated.
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References

- [01] Chapter 3/2/2 "Communication Medium TP1"
 [02] Chapter 3/3/2 "Data Link Layer General"
 [03] Chapter 3/3/7 "Application Layer"
 [04] Chapter 3/7/1 "Interworking Model"

- [05] Chapter 3/7/2 "Datapoint Types"
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Contents

1	Introduction	4
	1.1 Scope	4
	1.2 Objectives	4
	1.3 Abbreviations	4
2	Functional overview	5
_	2.1 Alarm mechanism	
	2.1.1 Alarm generation	
	2.1.2 Alarm distribution	
	2.1.3 Alarm acknowledgement	
	2.2 Simple error vs. Alarm	
	2.3 'Extended Alarms' / Alarms causing an application stop	
3	Functional Block 'Alarm Source' (ALSrc)	
	3.1 Aims and objectives	
	3.2 Functional specification	
	3.2.1 Outputs	
	3.2.2 Inputs	
	3.2.3 Parameters & diagnostic values	
	3.3 Constraints	
	3.4 Functional Block diagram	
	3.5 Datapoints	12
	3.5.1 Detailed Specification of Data Points	14
	3.5.2 ALSrc Property Identifier list	27
4	Functional Block 'Alarm Sink' (ALSnk)	28
	4.1 Aims and objectives	
	4.2 Functional specification	28
	4.2.1 Inputs	28
	4.2.2 Outputs	28
	4.2.3 Property clients (of parameters and diagnostic values in ALSrc)	28
	4.3 Constraints	29
	4.4 Functional Block diagram	
	4.5 Datapoints	
	4.5.1 Detailed specification of Datapoints	
	4.5.2 ALSnk Property Identifier list	41
5	FB Technical Alarm vs. other alarm/supervising techniques	
	5.1 Fast Polling Mechanism on TP1	
	5.1.1 Polling mechanism	
	5.1.2 Usage in relation to FB "Alarm Source"	
	5.1.3 Advantages	
	5.1.4 Interworking Standard for Polling Information	43

1 Introduction

1.1 Scope

This document is part of the KNX Application Interworking Standards.

It contains the specifications of the Functional Blocks used for the 'Technical Alarm' function.

'Technical Alarm' is intended for visualization of exceptional states and events in a plant or in devices of a plant. It is not intended for security alarms or security functions, e.g. security functions of actuators.

Example with "wind alarm": visualization of the wind alarm on an 'alarm user interface' is in the scope of this specification, but the behavior/reactions of a shutter actuator is/are not in the scope.

The Technical Alarm function is a 'simple' alarming function on Device Level. More complex alarming functions could be defined, but these are not in the scope of this document.

1.2 Objectives

Alarm handling is a basic and important system function (e.g. in HVAC applications/plants): fault information from devices must be displayed and recorded on a Building Management Station (BMS) or other (complex) bus devices, e.g. devices with a "comfortable" UI. The purpose of the alarm function is to draw attention to disturbances in the building's technical plant or in a control and management system. The actual measures taken to eliminate the disturbance and its consequences (e.g. changing a V-belt or removing a locking mechanism set up after interference has caused a disconnection) are <u>not</u> part of the alarm function.

An important functionality within the 'Technical Alarm' is acknowledgment of the alarms (from an 'Alarm Client' to the Alarm Source): The device, where an alarm was generated, must know when an alarm on e.g. the BMS was recognized by an user (a person).

1.3 Abbreviations

Functional Blocks:

AbbreviationDescriptionALSrcAlarm SourceALSnkAlarm Sink

General

Abbreviation Description

BMS Building Management Station

UI User Interface

cs Company Specific

2 Functional overview

2.1 Alarm mechanism

2.1.1 Alarm generation

- An Alarm indicates to the operator that a serious fault condition occurred or still occurs in the system:
 - E.g. transient error event (e.g. software runtime-error, reset)
 - persistent error state (e.g. sensor fault, low battery)
- Alarm messages are provided for the system only on <u>device-level</u> (not on functional or Datapoint level)
 - All alarm conditions reported by all the Functional Blocks within the device are collected and evaluated in the device.
 - Only the alarm condition with highest priority (i.e. the worst problem) is provided by the device for the system by broadcast. Therefore multiple alarm conditions occurring in the device in parallel can not be reported completely to the system.
- Alarm messages contain information about:
 - application area where the alarm was produced (allows application dependent filtering)
 - error class: standardised error code to specify roughly the source of the alarm
 - alarm priority
 - additional manufacturer specific alarm information
- Alarms can be acknowledged by an operator. Alarms have therefore a corresponding 2 bit state machine (Alarm unacknowledged / In Alarm):

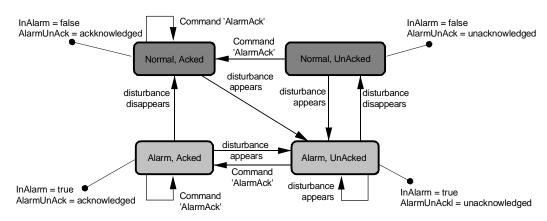


Figure 1 - Alarm State Machine

2.1.2 Alarm distribution

The distribution of Alarm messages is event-driven and is also based on the producer/consumer principle (broadcast or multicast addressing).

A specific alarm Datapoint 'EnableAlarm' allows to suppress alarm messages from a device if not needed (e.g. during installation).

If alarms are enabled, alarm-messages are created on event:

- change of Alarm Status
- change of Error class (if priority of new event is higher than priority of old event)

In order to improve reliability of alarm distribution, the Alarm message is repeated periodically (e.g. heartbeat every 30 minutes).

2.1.3 Alarm acknowledgement

Alarm acknowledgement can be done by an automated application process or by an operator by writing the corresponding Alarm Status Property. The alarm message contains the source Individual Address of the sender. Therefore the Alarm sink knows to which device the acknowledgement shall be sent. This acknowledgement causes a change of the Alarm Status and a new Alarm message is created (see above).

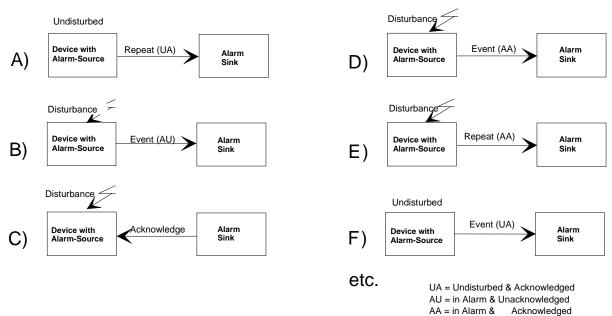


Figure 2 - Changes of alarm status & alarm messages

2.2 Simple error vs. Alarm

There is a difference between a simple error and an alarm.

- A simple error is a data object that shows an actual error state (e.g. on a display). If the error disappears also the error message will disappear. Simple errors can not be acknowledged and have no internal state machine.
- Alarms are caused by a fatal error-<u>event</u>. If the error disappears the alarm is kept until acknowledgement by a user.

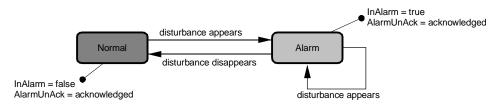


Figure 3 - State Machine 'Simple Error'

Although there's a difference between a simple error and an alarm, the same message format and data (point) type is used for transmission.

2.3 'Extended Alarms' / Alarms causing an application stop

In some cases, especially in HVAC applications, disappearing of a disturbance (transition from 'Alarm' to 'Normal') must be acknowledged. This acknowledge is called 'Alarm Reset'.

Therefore the alarm state machine in the Functional Block 'alarm source' supports the attribute *Locked/Unlocked*. *Locked* designates states where the control algorithms/application can be influenced by an alarm.

Example: a "fire-alarm" on a digital input is diagnosed, in this case ventilation must be stopped (not the entire application/user program, but the control algorithms are stopped!).

The application can be *Unlocked* with a "Trigger" command, the 'AlarmReset' (only from state *Normal/Acked*!). In the example, the application is restarted with 'AlarmReset' command (restarting is possible only after the 'fire alarm' disappeared on the digital input and was acknowledged!).

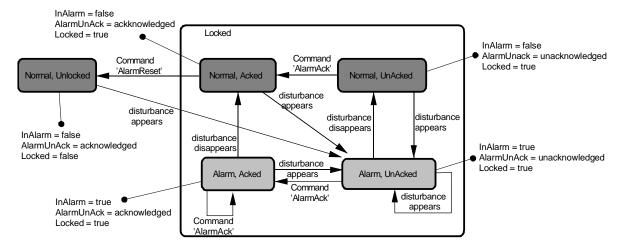


Figure 4 - State Machine 'Extended Alarms'

3 Functional Block 'Alarm Source' (ALSrc)

3.1 Aims and objectives

The alarm information is generated and distributed by the Functional Block "Alarm Source" (ALSrc) Consumers are devices containing the Functional Block "Alarm Sink" (ALSnk).

The basic alarm information is distributed in group communication mode with a reserved Group Address.

3.2 Functional specification

3.2.1 Outputs

AlarmInfo

This Datapoint contains the 'basic alarm information'. It is a mandatory Datapoint and is sent with a Standard Mode Group Object with a reserved Group Address.

The Property AlarmInfo contains fields for:

- log number
- Alarm Priority
- Application Area (HVAC, Lighting, Blinds Control, ...)
- Error Class (code, specified within application area)
- Attributes (giving indications about information available in additional properties)
- Alarm Status attributes (alarm state machine)

The Datapoint *AlarmInfo* contains a field "log number". This number is a local number in the originating device (Alarm Source).

Manufacturers may support additional (optional) 'Alarm Datapoints' with further alarm information belonging to the alarm events, e.g. timestamp, an alarm text etc. Such further alarm information are intended to be available as additional properties, readable with Property read/response services in client/server mode with Individual Addressing. The log number received with *AlarmInfo* then is used as array index within The Property to assign the additional information to the basic information it belongs to.

The used range of log numbers is manufacturer specific due to storage capacity of the ALSrc. It can be (e.g.) a 1-byte "free running counter", which is incremented by each new alarm event The log number must not be changed, if an alarm is sent only by heartbeat condition (repeated alarm).

AlarmText

This Datapoint is optional. It is intended for "clear text alarm information" in very simple alarming applications. It is available only as Group Object and uses the 14 byte data type for strings. Therefore it is also applicable in devices based on BCU1/2.

InAlarm

This Datapoint is onlyl available in Standard Mode.

It shall give a 1 bit information that may be a logical combination of the alarm state machine's current values of the alarm attributes A-bit (*Normal/InAlarm* information), U-bit (Alarm Unacknowledged information) and L-bit (Alarm Locked information). The logical combination itself may be application dependent.

The *InAlarm* information (result of above mentioned logical combination) is intended to be linked to a binary output on the bus, e.g. to a lamp connected to a binary output actuator.

The output may be further dependent on parameter setting, e.g. to use only the A-bit or the above mentioned logical combination.

InAlarm does not use a predefined Group Address. Therefore, links must be engineered with the ETS Tool. *InAlarm* is sent cyclically with same heartbeat as *AlarmInfo*.

3.2.2 Inputs

EnableAlarmInfo

Spontaneous sending of alarm messages of a device can be enabled or disabled. Default value of this input is company specific.

Remark: Even if disabled, local alarm handling in devices with local alarm UI (display of alarms, local acknowledgment) can be running!

EnableAlarmInfo as a process input allows to send only one telegram to start 'send alarm' in all devices. In LTE mode, this command is received with broadcast address. Standard Mode uses a Group Object with engineered Group Address.

If realised as a Property of an Interface Object, enabling also can be done for each device separately by writing to this Property in client/server (point to point) communication mode.

EnableAlarmText

Spontaneous sending of *AlarmText* must be enabled or disabled with this parameter. The default value of this input is company specific. *EnableAlarmText* as a process input allows to send only one telegram to start 'send alarm texts' in all devices. In LTE mode, this command is received with broadcast address. Standard Mode uses a Group Object with engineered Group Address.

AlarmAck

The alarm acknowledge message is generated by an (one) Alarm Sink (= device where the "acknowledge" is generated as a result of an user action) and transmitted 'point to point' to the alarm source either by a Group Address or by a Property. In LTE mode, the acknowledge is transmitted in client/server mode (with Individual Addressing). In Standard Mode, the acknowledge uses a Group Object with an engineered Group Address.

Alarm acknowledgement can also be done locally on the alarm source device.

AlarmReset

Unlocking an application is a "trigger" command. Only one value ("1") is allowed to be transmitted. Remark: AlarmReset restarts the (parts of the) application program, which was/were stopped by alarms. Example: in HVAC devices, VAC control algorithms can be stopped by alarms, but the local clock, alarm detection etc. are running during an 'application stop' caused by an alarm. AlarmReset restarts only the stopped VAC control algorithms.

An 'Alarm Reset' must be communicated point to point from the alarm sink device, where the reset action is done, to the alarm source device.

3.2.3 Parameters & diagnostic values

EnableAlarmAck

Receiving alarm acknowledgements from the bus can be enabled or disabled.

If disabled, local acknowledgment on the device although can be enabled as well as sending the alarm messages to alarm displaying devices via the network.

EnableAlarmReset

To allow unlocking (and restarting) of the device from the bus.

This parameter is necessary because there are legal restrictions about remote acknowledgment of alarms in HVAC systems in some (nordic) countries.

TimeStamp

A timestamp is additional information assigned to an alarm event. Timestamps are available as diagnostic values. The log number received with the basic alarm info is used as array index within The Property to assign a timestamp to the alarm event it belongs to. An attribute bit in the basic alarm info is used to indicate, if there's a timestamp available to a certain alarm event.

Time stamp uses the standard KNX date & time format (DPT_DateTime). If a time stamp is no more available in the Functional Block 'Alarm Source' (e.g. because of limited storage), all fields of date & time are marked 'not valid' by the corresponding attribute bits (for further information about date & time: see KNX specification of DPT_DateTime).

AlarmText Log

As additional information, a text can be assigned to a certain alarm event. It gives "clear text" information to the user, e.g. about the error cause of an alarm on a configurable digital alarm input.

Such Texts are available as diagnostic values in the Datapoint *AlarmText_Log*. The log number received with the basic alarm info is used as array index within The Property to assign a text to the alarm event it belongs to. An attribute bit in the basic alarm info is used to indicate, if there's a text available to a certain alarm event.

The Property *AlarmText_Log* supports a variable length string, string is 0-terminated. The String of a 'Logged Alarm Text' is 0-terminated, therefore the value field of the Datapoint type contains a variable number of characters, and the last character always is '00 h'.

When a text is not available in the alarm source, the answer to a read request is filled with one '00h' in the answers data field.

ErrorCode

Company specific error codes can be made available as diagnostic values with this Property. The log number received with the basic alarm info is used as array index within The Property to assign a specific text to the alarm event it belongs to.

A company specific error code in this Property is a 16 bit value. Interpretation of the values is company specific.

3.3 Constraints

- Alarm message distribution may not be reliable (no guaranteed delivery and reaction time). Therefore no safety-functions must be used depending on this alarm concept.
- Transmission of text in KNX Systems should generally be handled carefully because of limited bus load. Therefore 'Alarm Text' and 'AlarmText_Log' should be used very carefully.

3.4 Functional Block diagram

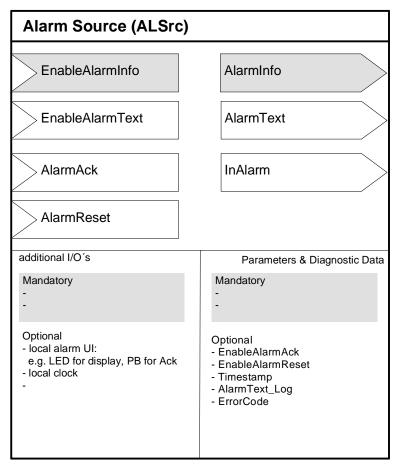


Figure 5 - Functional Block diagram 'Alarm Source' (ALSrc)

3.5 Datapoints

Datapoint	Description	Data Point Type	DPT Code
Outputs			
AlarmInfo	Basic Alarm Information: log number, alarm priority, application area, error class	DPT_AlarmInfo	219.001
AlarmText	Text; available only as Group Object!	DPT_String_8859_1	16.001
InAlarm	Binary Information: Normal/InAlarm	DPT_Alarm	1.005
Inputs			
EnableAlarmInfo	enable/disable spontaneous sending of AlarmInfo output	DPT_Enable	1.003
EnableAlarmText	enable/disable spontaneous sending of AlarmText output	DPT_Enable	1.003
AlarmAck	"Trigger" input Alarm Acknowledge; Standard Mode: Group Object LTE Mode: as Property of an IO, written with A_PropertyValue_Write service	DPT_AlarmAck	1.016
AlarmReset	"Trigger" input for unlocking an application; Standard Mode: Group Object LTE Mode: as Property of an IO, written with A_PropertyValue_Write service	DPT_Reset	1.015
Parameters			
EnableAlarmAck	Enable/disable reception of the acknowledges from the bus. If enabled, <i>AlarmAck</i> command from the bus is accepted.	DPT_Enable	1.003
EnableAlarmReset	Unlocking the device via the bus is enabled. If enabled, <i>AlarmReset</i> command from the bus is accepted. In some (nordic) countries, devices must not be Reset (AlarmReset) via the network due to legal restrictions	DPT_Enable	1.003
Diagnostic Data			
TimeStamp	Time Stamp, as additional alarm information	DPT_DateTime	19.001
AlarmText_Log	Text, as additional alarm information	DPT_VarString_8859_1	24.001
ErrorCode	Company specific Error Information	DPT_Value_2_Ucount	7.001

Table 1 - Runtime Interworking - Dependence on Configuration Modes

			STANDARD MODE		NDED DDE
		Basic FB	S-Mode	Standard Mode Interface	HEE
Inputs	EnableAlarmInfo	GO _b	GO	GO	М
	EnableAlarmText	GO _b 6)	GO ⁶⁾	GO ⁶⁾	M ⁶⁾
	AlarmAck 1)	(GO _b)	(GO)	(GO)	NA 1)
	AlarmReset 2)	(GO _b)	(GO)	(GO)	NA ²⁾
Outputs	AlarmInfo	GO _b	GO	GO	NA
	AlarmText	(GO _b)	(GO)	(GO)	NA
	InAlarm	GO _b	GO	GO	NA

Table 2 - Standard Properties of Interface Objects (or memory mapped DP)

		Support
Parameter	EnableAlarmAck 3)	0
	EnableAlarmReset 3)	O ⁵⁾
Diagnostic Data	TimeStamp 4)	(IO)
	AlarmText_Log 4)	(IO)
	ErrorCode	(IO)

¹⁾ *AlarmAck*: in Standard Mode with Group Object, in LTE-Mode with A_PropertyValue_Write on IO-Property ²⁾ *AlarmReset*: in Standard Mode with Group Object, in LTE-Mode with A_PropertyValue_Write on IO-Property

³⁾ Property of an Interface Object or memory mapped value

⁴⁾ if implemented, only as a Property of an Interface Object

⁵⁾ mandatory if 'AlarmReset' is implemented, otherwise not applicable

⁶⁾ mandatory if 'AlarmText' is implemented, otherwise not applicable

3.5.1 Detailed Specification of Data Points

3.5.1.1 Output: AlarmInfo

Standard Mode

DP Name	: Alaı	AlarmInfo Abbr.: Mandatory								
FB Name:	: Alaı	rm Sour	ce (A	LSrc)				Can be		
								internal		
Description										
			transı	mit the 'basio	c alarm inform	nation' f	rom an alarm	source to one	or	
several al		S.								
Datapoint										
DPT_Nam		PT_Alar)						
DPT Form	nat: U ₈	$_{8}U_{8}N_{8}N_{8}$					DPT_ID:			
Field				scription		Supp.	Range	Unit	Def.4)	
Log numb				number		O 5)	0 to 255	U ₈	00h	
Alarm Pric				DPT_Alarm		O ⁶⁾		enum.	03h ⁶⁾	
Applicatio				DPT_Alarm		M	0 to 255 ⁷⁾	enum.	00h	
Error Clas	SS		see	DPT_Alarm	Info	M	depends of	n enum.	00h	
							appl. area			
Attributes			see	DPT_Alarm	Info	M				
- Ack_Sup						M	{0,1}	Boolean	cs	
- TimeSta	mp_Sup)				M	{0,1}	Boolean	cs	
 AlarmTe 	xt_Sup					M	{0,1}	Boolean	cs	
- ErrorCode_Sup M {0,1} Boolean										
Alarm Status attributes M										
- InAlarm			Nor	mal / InAlarn	n	M	{0,1}	Boolean	false	
- AlarmUn	Ack		ack	nowledged /	unacknow.	0	{0,1}	Boolean	false	
- Locked				ked / unlocke		0	{0,1}	Boolean	false	
Access T	уре									
♦ Outpu	ıt									
this →	M D	3	1	this \rightarrow 1						
Sponta	aneous		COV:		Δ-Value:	1) 2) 3)	MinRep1	ime:	3 s	
			Cycli		Period:	30 min	•	1		
Reque	st			<u> </u>						
Commun	ication [*]	Туре								
♦ Group	Object	Datapoi	int					Mandatory:		
Default	t Group	Address	s: l	F3FAh						
♦ Interfa	ace Obje	ct Prop	erty D	Datapoint				Mandatory:		
Serv				_type:	1002 (ALSro	c)	PID:	51		
			art ir	•	1	,	Nr of eleme	nts: 1		
Dynamics	S		_							
Power		Save:		П						
Power		Value:		No initialisa	ation:	Г	Default value:			
	•			Saved valu			ctual value (n			
		Transr	nit on	bus (only fo			Read from bus			
			•1	(3)	2		nput):	()		

DP Name:	AlarmInfo	Abbr.:	Continued	

Exception Handling

After power up, the device will go through its diagnosis routines and recognize errors if there are (still) any. Therefore it's not necessary to save the alarm information during power down.

Special Features

- AlarmInfo is sent if alarm priority of new event is higher than the priority of the old alarm.
- AlarmInfo is sent if 'error code' code (application area and/or error class) changes, but only if new event has higher priority than old one.
- If one (or more) of the attribute bits of the alarm state machine (InAlarm, AlarmUnAck, Locked) change state
- 4) Default value is "no error"
- 5) if not supported, always send '00h'
- 6) if not supported, always send '03h'; (0 = highest priority, 03h = 'void' priority)
- typically, a device can send only "a few" values, depending on the application area(s) the device belongs to.

LTE-HEE-Mode

3.5.1.2 Output: AlarmText

Standard Mode

DI	P Name:	Alar	mTe	xt			Abbr.	:				Manda			
FE	3 Name:	Alar	m Sc	ource (A	LSrc)							Can b	e interna	al	
	escription														
	tended for "c					ion" in v	ery sim	ple a	larmir	ng ap	plications. S	String w	ith 14 ch	naract	ers,
	nused charac		filled	with '0	0h'.										
	atapoint Typ														
	PT_Name:			tring_A	SCII										
_	PT Format:		14]								DPT_II	D: 1	6.000	_	
Fi	eld	Des	cripti	on		Supp.	Rar						Unit	De	efault
	_						see	data	a type	4 "ch	aracter set'	,			CS
A	ccess Type														
•	Output	1 6	7												
	this \rightarrow M				this -				1 1)						
	Spontaneo	us				3)	Δ-Val		3)		MinRe	oTime:		3 s	
				Cycl	ic		Perio	<u>d:</u>	3)						
	Request														
	ommunicati											1.4	1 ,		
•	Group Ob											Man	datory:		
	Default Gro				F3FB										
♦	Interface (Objec	t Pro									Man	datory:		
	 Server 		-	Object			1002 (ALS	rc)		PID:		52 2)		
1				Start_	index:		1				Nr_of_elem	ents:	1		
D	ynamics	_	0 -												
	Power dow	/n:	Sav	~ -				_			(- 1				
	Power up:		Valu	ue:		initialisa		Н			fault value:				
			Т			ed valu	-				tual value (r				\boxtimes
Ę	roontion Ho	مناله مر		nsmit o	n bus (only for	output)			Re	ad from bus	s (only i	or input)	· .	
	cception Ha	naiir	ıg												
6.	pecial Featu	ıroo													
1)	<u>Δ-</u> Value' =		m 0)//	ont											
2)					is into	nded to	he ava	ilahla	only	as Gi	roup Object	· hut the	PID is	racar	hav
	for future u						DC ava	iiabit	Jilly	u3 0	oup Object	, but the	טו טו ז	10001	vou
3)							nly once	per	event	. it's r	not repeated	d with h	eartbeat	t	
															oint
	(AlarmInfo has a heartbeat!). The optional Datapoint AlarmText is sent after the mandatory Datapoint AlarmInfo.														

LTE-HEE-Mode

3.5.1.3 Output: InAlarm

Standard Mode

DP Name:	InAla	arm			Abbr.:	: Mandatory 🖂									
FB Name:	Alarr	n Soui	rce (AL	-Src)				C	Can be	interna	al				
Description															
Simple 1-bit a		nforma	ation. N	Iormal/InAlar	m, availab	le only a	s S-Mo	de Group C	Object	(Outpu	t).				
Datapoint Ty	ре														
DPT_Name:	DP	T_Ala	rm												
DPT Format:	B ₁							DPT_ID:		005					
Field	Desc	cription	1		Supp.	Range)		Unit		Def	fault			
						{true,	false}		Boo	lean	No a	alarm			
Access Type															
◆ Output															
this \rightarrow M				this \rightarrow 1	<u>L</u> LL	1.1		1							
Spontaneo	us		COV:	=	Δ-Value			MinRepT	ime:		3 s				
_			Cyclic		Period:	30 m	nin								
Request															
Communication Type															
♦ Group Ob									Mand	atory:					
Default Gr				·											
♦ Interface (Object				T				Mand	atory:					
Server			Object_	• •	1002 (AL	.Src)	PIE			57 2)					
		S	Start_in	idex:	1		Nr_	_of_elemer	its:	1					
Dynamics															
Power dov		Save:		<u> </u>			D (
Power up:		Value	:	No initialisa			_	ult value:							
	_	_	•,	Saved valu				al value (no				_			
Fuzzation Ha			mit on	bus (only for	r output):		Read	from bus (only fo	r input): <u>L</u>				
Exception Ha	inaiin	g													
Chariel Facts	1800														
Special Feature's		an of a	olorm o	state attribute	n In Norm										
Δ-value =									_						
I ESEIVEU F	reserved PID; The Property is intended to be available only as Group Object; but the PID is reserved for future use in an Interface Object														

LTE-HEE-Mode

3.5.1.4 Input: EnableAlarmInfo

Standard Mode

DP Name:	Ena	bleA	larmInfo		Abl	br.:					Mand	datory		
FB Name:	Alar	m Sc	ource (AL	_Src)							Can I	be inter	nal	
Description														
Enables sendi		aları	m messa	ages.										
Datapoint Ty														
DPT_Name:			nable											
DPT Format:	B ₁									T_ID		1.003		
Field		De	escription	า				Supp				Unit		Default
									{0,1}			Boolea	n	CS
Access Type														
◆ Input		7												
$N \rightarrow this$				1 → this				2)						2)
Spontaneo	us			•	lically:			2)			e-out:			2)
Request				Poll	ing:					Perio	od:			
Communicati		•												
♦ Group Ob											Ma	ndatory	:	\boxtimes
Default Gro														
♦ Interface (Objec	t Pro			1						Ma	ndatory	:	
 Server 			Object_	- , ,		2 (ALS	Src)		PID:			53		
_			Start_in	idex:	1				Nr_of_e	eleme	nts:	1		
Dynamics				1										
Power dow	/n:	Sav		□ 1)				_						_
Power up:		Valu	ne:	No initialis					efault va					Ц
				Saved val					ctual val					Ц
			nsmit on	bus (only fo	or outp	ut):		R	ead fron	n bus	(only	for inp	ut):	
Exception Ha	ndlir	ng												
0 : 15 1														
Special Featu						. 10	. 11	. 1 (-1 -		. 1 - (*) -	- 1	>
value mus				n power up						value	(non	volatile	stor	age)
				ediately afte						ondo:	d for a	onoblisa	ı/dic	abling
				oint will send led to an ex						enue	u ior e	enabiin	y/uisa	ınıng
uevices, W	HICH	ait (e.g.) auu	eu io an ex	isting a	וטו טווג	ming	piarit.						

LTE-HEE-Mode

FB:	ALSrc	LTI	E Serve	er Input Name:		Enal	oleAlarm	nInfo	0			Mandatory Optional	/ X
Desc	ription:											optiona.	<u> </u>
	•	ng of	alarm	messages.									
DPT:	Name		DPT_E	nable	DP	T ID	1.003		Data	atype fo	rmat	B ₁	
Field		•		Description	•					Sup.	Unit	•	Default
												ean	CS
Com	municatio	on:											
	ding Gro	up:			_								
Clas				Туре				De	efault				
Ge	eographic	al											
Ap	plication	Spe	cific										
Ur	nassigned	j	\boxtimes	Broadcast 🛚		figural							
DP	Address:			IO Type(ID): 1002 (ALSrc) Property ID:							53		
	-Service rite	(eve	ent):	Timeout:			2)	Mi	n				
	perty-Sei Iividual a			Read only]		Read/W	√rite)	\boxtimes			
Value	after Po	wer	up:	Default	Value						S	tored Valu	ue 🛚
Exce	ption Har	ndlin	ıg:							Sav	/e at P	ower dow	⁄n ¹) ⊠
	ial Featu												
				e when power up o					e the	e value	(non v	olatile sto	rage)
				. immediately after									
				Datapoint will send of					e is ir	itended	l for er	nabling/dis	sabling
de	evices, wh	nich a	are (e.g	i.) added to an exist	ting ar	nd run	ning plar	nt.					

3.5.1.5 Input: EnableAlarmText

Standard Mode

DP Name:	Enab	leAlarmText	t	Abbr.:				Ma	anda	atory		X ''
FB Name:	Alarn	n Source (Al	_Src)					Ca	an b	e interna	ıl	
Description												
Enable/disable	e spon	itaneous ser	nding of <i>Alarn</i>	nText (the C	roup	Objec	t Datap	oint w	ith 1	4 charac	cter	string
DPT).												
If enabled, ala	ırm tex	ts are sent s	spontaneous;	if disabled,	alar	m texts	are ne	ver se	nt.			
Datapoint Ty												
DPT_Name:		T_Enable										
DPT Format:	B ₁						DF	PT_ID:		1.003		
Field		Description	n			Supp.	Ran	ge		Unit		Default
							{0,1}	}		Boolear	1	CS
Access Type												
♦ Input												
$N \rightarrow this$			1 → this									
Spontaneo	ous		Cyclic	cally:	\boxtimes	3)		Time	-out	:		3)
Request			Pollin	ıg:				Perio	d:			
Communication Type												
♦ Group Ob	ject Da	atapoint							Ma	andatory:		\boxtimes
Default Gr	oup Ad	ddress:										
♦ Interface (Object	Property Da	atapoint						Ma	andatory:		
Server		Object_	_type:	1002 (ALS	Src)		PID:			54		
		Start in	ndex:	1			Nr_of_	elemei	nts:	1		
Dynamics												
Power dov	vn:	Save:	2)									
Power up:		Value:	No initialisa	tion:		De	efault va	alue:				
			Saved value	e: 🛛		Ac	tual va	lue (no	ot fo	r input):		
		Transmit on	bus (only for	output):						y for inpu	ıt):	
Exception Ha				, ,					<u>, , , , , , , , , , , , , , , , , , , </u>			
Special Featu	ıres											
1) mandatory	, if Ala	armText is in	nplemented									
			n power up c	ccurs. It's a	llowe	ed to sa	ave the	value	(nor	n volatile	sto	rage)
	before power down e.g. immediately after reception from the bus.											
The client side of this Datapoint will send cyclically, but this feature is intended for enabling/disabling												
devices, w	devices, which are (e.g.) added to an existing and running plant.											

LTE-HEE-Mode

FB:	ALSrc	LTE S	Serve	r Input Name:	EnableAl	armText				andatory otional	
Dosc	ription:				-				<u> </u>	Dilorial	
		spont	aneoi	us sending of <i>Alar</i>	mText (the	Group Ob	biect	Datapoir	nt with 1	4 charact	er string
DPT)		орони	anoot	do conding of 7 har	mroxi (ino	oroup or	ojoot	Datapon	ic with i	i onaraot	or ourning
,		m text	s are	sent spontaneous	; if disabled	, alarm te	exts a	are nevei	r sent.		
DPT:	Name	DF	PT_Er	nable	DPT ID	1.003		Datatype	format	B ₁	
Field				Description					Sup.	Unit	Default
										Boolean	CS
	nunicatio										
	ding Gro	up:									
Clas	SS			Type			Defa	ault			
	eographic										
Ap	plication	Specif	fic 🔲								
Ur	nassigned			Broadcast 🛛	Configura	ıble 🗌					
DP.	Address:			IO Type(ID):	1002 (AL	Src)	Pro	perty ID:		54	
	-Service	(even	<u> </u>	Timeout:		3)	Min				
	rite			Tillioodi.							
	perty-Ser lividual a) :	Read only [Read/V	Vrite				
Value	after Po	wer u	p:	Defaul	t Value 🗌					Stored Va	alue 🛚
Exce	ption Har	ndling	:					Save	at Pow	er down	2)
	ial Featu	res:									
²⁾ Va	alue must	be av	ailabl	at is implemented e when power up				e the va	lue (nor	n volatile s	torage)
				. immediately afte							
11				atapoint will send				e is inten	ded for	enabling/o	disabling
de	evices, wh	nich ar	e (e.g	 added to an exi 	sting and ru	nning pla	ant.				

3.5.1.6 Input: AlarmAck

Standard Mode

DP Name:	AlarmAc	k		Abbr.:				N	Manda	atory		
FB Name:	Alarm So	ource (Al	_Src)					(Can be	e internal		
Description		Ì										
In Standard Mo	ode, alar	m ackno	wledge is re	ceived with	ո this	s Data	ooint.					
Datapoint Typ	е											
DPT_Name:	DPT_A	ck										
DPT Format:	B ₁						DP	T_ID:	1.	.016		
Field	De	escription	1			Supp	Rang	ge		Unit	De	fault
alarm ack bit	Ala	arm ACK	trigger com	mand.		М	{1}			Boolean		
Access Type												
◆ Input												
$N \rightarrow \text{this}$ \square $1 \rightarrow \text{this}$ \square												
Spontaneou	us 🛛		Cyclic	ally:				Time	-out:			
Request			Pollin	g:				Perio	d:			
Communication	on Type											
♦ Group Obj	ect Data	point							Man	datory:	\boxtimes	
Default Gro	up Addre	ess:										
♦ Interface C	bject Pr	operty D	atapoint						Man	datory:		
 Server 		Object_	type:	1002 (ALS	Src)		PID:			55		
		Start_in	dex:	1			Nr_of_	eleme	nts:	1		
Dynamics												
Power down	n: Sav	e:										
Power up:	Valu	ıe:	No initialisa	tion:		De	efault va	alue:				
			Saved value				tual va					
		nsmit on	bus (only fo	r output):] Re	ead fror	n bus	(only	for input)	: 🗆	
Exception Hai	ndling											
Special Featu												
see 4.3 'Const	ee 4.3 'Constraints'											

LTE-HEE-Mode

Devices with LTE-HEE mode communication receive the AlarmAck as Property of an Interface Object, with A_PropertyValue_Write Service. The following description uses the same style as the one for 'parameters'.

FB:	ALSrc	Pro	perty N	Name (<u>Server</u>):	Α	larm <i>A</i>	Ack			landatory optional	′ □ ⊠	
Desc	ription:									<u></u>		
Devic	e with LT	E-H	EE com	munication mode	re	eceive	alarm a	cknowl	edge this	Datapoir	nt.	
DPT:	Name	DF	PT_Ack			DPT	ID 1.0	016	Datatyp	e format	B ₁	
Field			Descrip	tion			Sup.	Range)		Unit	Default
alarm	ack bit		Alarm A	ACK trigger comm	ar	nd.	М	{1}			Boolean	
Comi	munication	on:								_		-
DP	Address:	:		IO Type(ID):		1002	(ALSrc)	F	Property II	D:	55	
(in t	he serve	r)		Start-Index:		1		1	N° of elem	ents	1	
Pro	perty acc	cess	:	Read only			R	ead/ Wri	ite	☑ ¹⁾		
Exce	ption Hai	ndlir	ng: \	/alue after Power	up	o: St	ored Va	lue 🗌	Act Value	e 🔲 Do	efault Val	ue 🗌
Spec	ial Featu	res:										
	nis param ate machi		is a 'trig	ger input' for cha	ng	e fron	ı 'Unacl	nowled	dged' to 'A	cknowle	dged' in t	he alarm

3.5.1.7 Input: AlarmReset

Standard Mode

DP Name:	Alarm	Reset		Abbr.:				Manda	itory		
FB Name:	Alarm	Source (AL	Src)					Can be	e internal		
Description											
Alarm Reset is		ed with this	Datapoint								
Datapoint Typ	oe										
DPT_Name:		_Reset									
DPT Format:	B ₁						DPT_ID	: 1.	.015		
Field		Description				Supp.	Range		Unit	De	fault
alarm reset		Alarm Rese	et trigger com	mand.		М	{1}		Boolean		
Access Type											
♦ Input											
$N \rightarrow this$		1	\rightarrow this								
Spontaneo	us	\boxtimes	Cyclic	ally:			Time	e-out:			
Request			Polling	j :			Perio	od:			
Communicati	on Ty	ре									
♦ Group Obj	ect Da	tapoint						Mand	datory:	\boxtimes	
Default Gro	oup Ad	dress: -									
♦ Interface C	Object	Property Da	tapoint					Mand	datory:		
 Server 		Object_	type:	1002 (ALS	Src)	F	PID:		56		
		Start_in	dex:	1		١	lr_of_eleme	ents:	1		
Dynamics											
Power dow	n: S	Save:									
Power up:	\	/alue:	No initialisat	ion:		Def	ault value:				
			Saved value):		Act	ual value (n	ot for in	nput):		
			bus (only for	output):		Rea	ad from bus	(only f	or input):		
Exception Ha	ndling	<u> </u>									
Special Featu											
see 4.3 'Const	raints'										

LTE-HEE-Mode

Devices with LTE-HEE mode communication receive the AlarmReset as Property of an Interface Object, with A_PropertyValue_Write Service. The following description uses the same style as the one for 'parameters'.

FB:	ALSrc	Prope	rty I	Name (<u>Server</u>):	Ala	armReset	t			Mandat	tory		
										Optiona	al	\boxtimes	
Desc	ription:												
An al	arm client	can (tr	y to)	unlock the device	e's (HVAC co	ntr	ol) app	licat	ion writing a	"1" t	o this D	Datapoint.
DPT:	Name	DPT	Res	et]	DPT ID	1.0)15		Datatype	form	at B₁	
Field			Des	cription				Sup.		Range	U	nit	Default
alarm	reset		Alar	m Reset trigger co	omn	nand.		M		{1}	В	oolean	2)
Com	municatio	on:									Ū		
DP	Address:			IO Type(ID):	1	002 (ALS	(Src		Prop	erty ID:	5	6	
(in t	he serve	r)		Start-Index:	1				N° c	f elements	1		
Pro	perty acc	ess:		Read only			Re	ead/ Wr	rite	⊠ ¹⁾			
Exce	ption Har	ndling:	'	Value after Power	up:	Stored	Va	lue 🗌	Ac	t Value 🗌	Defa	ault Va	lue 🗌
	ial Featu	res:											
¹⁾ Tr	is parame	eter is a	a 'triç	gger input' for cha	nge	from lock	ked	to unle	ocke	ed state in th	e ala	rm stat	е
	achine.												
²⁾ Oı	nly value '	'1" (= F	Reset	t) can be sent with	n this	s Datapoi	nt						

3	5 1	R	Parameter:	Fnak	JeΔ	larm/	A ck
.7.	. I	٠0	гагашегег:	гли	HEAL	1211111/	ACK

FB:	ALSrc	Prope	rty l	Name (<u>Server</u>):	Ena	ableAlar	m <i>A</i>	ck	Manda Option	,		
Desc	ription:	-			-				<u> </u>			<u> </u>
Enab	les recep	tion of a	larn	n acknowledgeme	ent fr	om the b	us.					
If ena	abled, ala	rm ackn	owl	edges from the bu	us ar	e accept	ed.					
DPT:	Name	DPT	_En	able		OPT ID	1.0	003	Datatype forn	nat	B ₁	
Field			Des	cription				Sup.	Range	Unit		Default
									{0,1}	Boole	ean	enabled
Com	municati	on:							-			
DP	Address	:		IO Type(ID):	1	002 (ALS	Src)	Pr	operty ID:	10	1	
(in	the serve	er)		Start-Index:	1			N°	of elements	1		
Pro	perty ac	cess:		Read only			R	ead/Write				
Exce	ption Ha	ndling:	1	Value after Power	r up:	Stored	Va	lue 🛛 A	ct Value 🗌	Defa	ult Va	alue 🗌
Spec	ial Featu	res:										
					<u> </u>						•	

3.5.1.9 Parameter: EnableAlarmReset

FB:	ALSrc	Prop	erty	Name (<u>Server</u>):	E	nableAla	rmF	Reset			ndato ional		
Desc	ription:									•			
				unlock trigger from									
If ena	ıbled, unl	ock co	mma	nd from the bus is	ac	ccepted.							
DPT:	Name	!	DP	Γ_Enable		DPT ID	1.	003	Datatype f	orma	at	B ₁	
Field			Des	scription				Sup.	Range	J	Unit		Default
									{0,1}	E	Boole	ean	disabled
Com	municati	on:								-		•	
DP	Address	:		IO Type(ID):		1002 (AL	Src) P	roperty ID:		10	2	
(in t	the serve	er)		Start-Index:		1		N	l° of elemer	nts	1		
Pro	perty ac	cess:		Read only			R	ead/Writ	te 🖂				
Exce	ption Ha	ndling	:	Value after Power	up	: Store	d Va	ılue 🛛 .	Act Value [Defa	ult Va	alue 🗌
Spec	ial Featu	res:											
1) Ma	ndatory if	Datap	oint	<i>AlarmReset</i> is im	ple	mented,	othe	rwise no	t applicable	9			

3.5.1.10 Diagnostic Value: TimeStamp

FB: ALSrc	Property Name (<u>Server</u>): TimeSt	amp		N	Mandatory
D					Optional 🛚
Description:	Pala de colleta I (n. e. e. elección de col				
	hich is related to an alarm event.		Λlowerleafa'		
	x is the log number received with Da				
	DPT_DateTime DPT				3 octet structured
Field	Description	Sup.	Range	Unit	Default
Year		0	0 to 255	Year	CS
Month		0	1 to 12	Month	cs
Day of Month		0	1 to 31	Day of month	cs
Day of Week		O M ²⁾	0 to 7	Day of week	cs
Hour		IVI	0 to 23	Hour of day	cs
Minutes		M ²⁾	0 to 59	Minutes	cs
Seconds		0	0 to 59]	Seconds	CS (3)
Attributes			(0)		'
- F	normal / fault	NA	{0}		normal
- WD	Bank day / Working day	0	{0,1}		bank day
- NWD	WD field valid / not valid	M	{0,1}		no WD 3)
- NY	Year field valid / not valid	M	{0,1}		no year 3)
- ND	Month and Day of Month fields valid / not valid	M	{0,1}		no date 3)
- NDoW	Day of week field valid / not valid	M	{0,1}		no DoW 3)
- NT	Hour of day, Minutes and Seconds fields valid / not valid	M	{0,1}		no time 3)
- SUTI	Summertime	0	{0,1}		standard time
- CLQ	Clock quality bit (external synch.)	NA	{0}		without
Communication	on:				
DP Address:	IO Type(ID): 1002	(ALSrc)	Prope		03
(in the serve		,		elements 2	56 ¹⁾
Property acc	ess: Read only 🖂	Re	ead/Write		
Exception Har	dling: Value after Power up: St	ored Va	lue 🗌 Act	Value 🗌 Def	ault Value 🗌
Special Featur	es:				
1) Array Index	= 'log number' + 1; range of log num	ber 0 to	255, start in	ndex = 1 → last	index = 256.
	f log numbers may be limited, e.g. to				h a case the
	rray elements can is limited to the qu				
	is supported, minimum information				
if 'seconds'	is not supported, its field shall be fille	d with '0	' .		
	become valid after their related alarn			ly the fields bed	come valid which

if 'seconds' is not supported, its field shall be filled with '0'.

timestamps become valid after their related alarm event occurred; only the fields become valid, which are supported by the local clock (a clock without date can't support the date fields).

3.5.1.11 Diagnostic Value: AlarmText_Log

FB:	ALSrc	Pro	operty I	Name (<u>Server</u>):	AlarmT	Text_Lo	g			Mandatory
Desc	ription:							<u> </u>		
Alarm	text, whi	ch i	s related	d to an alarm ever	nt.					
Array	field inde	x is	the log	number received	with Dat	tapoint '	Alarn	nInfo'.		
DPT:	Name) I	DPT_Va	rString_8859_1		DPT	ID	24.001	Datatype	e format A[n] 2)
Field			Descrip	tion		Sup.	Ran	ge	Unit	Default
Alarn	n Info Tex	κt	String	with and 0-Termir	nator	M		datatype		all characters
							"ch	ar set"		'00h'
Comr	nunicatio	on:							-	-
DP .	Address:			IO Type(ID):	1002	(ALSrc)		Property I	D:	104
(in t	he serve	r)		Start-Index:	1			N° of elen	nents	256 ¹⁾
Pro	perty acc	ess	S:	Read only	\boxtimes	R	ead/V	Vrite		
Exce	otion Har	ndli	ng: \	/alue after Power	up: St	ored Va	lue [Act Valu	e 🛛 D	efault Value 🗌
	Special Features:									
				per' + 1; range of						
	The range of log numbers may be limited, e.g. to 10, this is company specific. In such a case the									
qu	antity of a	arra	y eleme	nts can is limited	to the qu	uantity o	f alar	m log numb	oers.	

3.5.1.12 Diagnostic Value: ErrorCode

FB:	HPM	Property	Name (<u>Server</u>):	ErrorCode			Mandatory Optional	у <u>П</u>	
	ription:						-		
Comp	any spec	ific 16 bit e	error code, interpre	tation is com	pany sp	ecific			
DPT:	Name	DPT_Va	lue_2_Ucount	DPT ID	7.001	Dat	atype format	U ₁₆	
Field			Description			Sup.	Range	Unit	Default
							full range		CS
Comr	nunicatio	n:				_	•		=
DP A	Address:		IO Type(ID):	1002 (ALS	Src)	Prope	rty ID:	105	
(in t	he serve	r)	Start-Index:	1		N° of	elements	256 ¹⁾	
Pro	perty acc	ess:	Read only	\boxtimes	Read/V	Vrite			
Exce	otion Har	ndling:	Value after Power	up: Stored	Value [Act \	/alue 🗵 🏻 D	efault Val	ue 🗌
	al Featu	es:							
Th	e range c	of log numl	nber' + 1; range of loers may be limited tents can is limited to	d, e.g. to 10,	this is co	mpany	specific. In s		

3.5.2 ALSrc Property Identifier list

Object Name: ALSrc Object Type: 1002

Property Identifier	Datapoint Name	Datapoint Type Name	Datapoint Type Code
р	rocess data (runtime interworking, zo	ne addressing and Individual Addre	essing)
51	AlarmInfo	DPT_AlarmInfo	219.001
52	AlarmText	DPT_String_8859_1	16.001
53	EnableAlarmInfo	DPT_Enable	1.003
54	EnableAlarmText	DPT_Enable	1.003
55	AlarmAck	DPT_AlarmAck	1.016
56	AlarmReset	DPT_Reset	1.015
57	InAlarm	DPT_Alarm	1.005
		Pata (Individual Addressing only)	
101	EnableAlarmAck	DPT_Enable	1.003
102	EnableAlarmReset	DPT_Enable	1.003
103	TimeStamp	DPT_DateTime	19.001
104	AlarmText_Log	DPT_VarString_8859_1	24.001
105	ErrorCode	DPT_Value_2_Ucount	7.001
			1

4 Functional Block 'Alarm Sink' (ALSnk)

4.1 Aims and objectives

The Functional Block 'Alarm Sink' (ALSnk) is the consumer of AlarmInfo and AlarmText.

All currently defined Inputs, Outputs, Parameters and Diagnostic Values of this Functional Block are Datapoint clients.

Typically, the Functional Block 'Alarm Sink' (ALSnk) is part of a management client or a device that is partly a management client (at least for alarm handling).

All other ALSnk functionality, e.g. acknowledgment of alarms, alarm resets, is typically management functionality implemented on a BMS.

4.2 Functional specification

4.2.1 Inputs

AlarmInfo

The Datapoint *AlarmInfo* receives alarm information from the bus, see also 3.2.1.

AlarmText

The Datapoint *AlarmText* receives alarm Texts from the bus, see also 3.2.1.

4.2.2 Outputs

EnableAlarmInfo

An alarm client can enable or disable the spontaneous sending of alarm messages (Datapoint *AlarmInfo*) in the alarm sources. With this Datapoint, enabling to all devices in the network can be done with one single telegram.

EnableAlarmText

An alarm client can enable or disable the spontaneous sending of alarm texts (Datapoint *AlarmText*) in the alarm sources. With this Datapoint, enabling to all devices in the network can be done with one single telegram.

AlarmAck

Output for alarm acknowledges, see also 3.2.2.

AlarmReset

Output for alarm reset, see also 3.2.2.

4.2.3 Property clients (of parameters and diagnostic values in ALSrc)

The Property clients for *EnableAlarmAck*, *EnableAlarmReset*, *TimeStamp*, *AlarmText_Log* and *ErrorCode* are part of the Alarm Sink ALSnk, but The Property servers belong to the Alarm Source ALSrc. For further information, see descriptions of parameters and diagnostic values ('server side') in 3.2.3.

4.3 Constraints

- Use of Group Objects for alarm acknowledgment is only applicable if:
 - the alarm source (devices) can be identified as unique on the 'alarm client' (e.g. a BMS) (source Individual Address must be known on application level!)
 - on the 'alarm client', each unique and identifiable alarm source is mapped to an other acknowledge output.
 - the 'alarm client' has as much acknowledge outputs as it must be able to acknowledge different alarm source (devices). Acknowledges to different sources (devices) must have each its own Group Object with an own (engineered) Group Address. In this way, acknowledge can be done 'point to point' also in group communication mode.
- Use of Group Objects for alarm reset is only applicable under the same conditions as for alarm acknowledge, see above.

4.4 Functional Block diagram

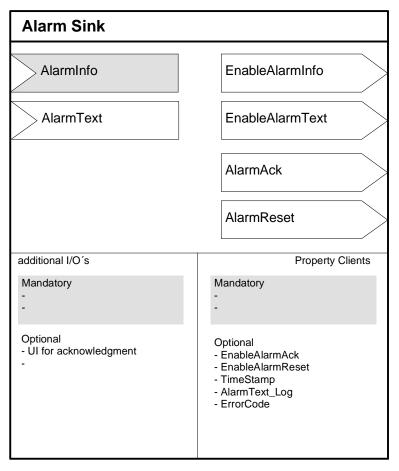


Figure 6 - Functional Block Diagram 'Alarm Sink' (ALSnk)

4.5 Datapoints

Data Point	Description	Data Point Type	DPT Code
Outputs			
EnableAlarmInfo	Enable/disable <i>AlarmInfo</i> outputs in (all) Devices with FB 'Alarm Source'	DPT_Enable	1.003

EnableAlarmText	Enable/disable <i>AlarmText</i> outputs in (all) Devices with FB 'Alarm Source'	DPT_Enable	1.003
AlarmAck	"Trigger output" for Alarm Acknowledge	DPT_AlarmAck	1.016
AlarmReset	"Trigger output" for unlocking an application	DPT_Reset	1.015
Inputs			
AlarmInfo	Time Stamp, Error Code, Priority,	DPT_AlarmInfo	219.001
AlarmText	AlarmText	DPT_String_8859_1	16.001
Property Clients			
EnableAlarmAck		DPT_Enable	1.003
EnableAlarmReset	see description of Property servers	DPT_Enable	1.003
TimeStamp		DPT_DateTime	19.001
AlarmText_Log		DPT_VarString_8859_1	24.001
ErrorCode		DPT_Value_2_Ucount	7.001

Table 3 - Runtime Interworking - Dependence on Configuration Modes

			STANDARD MODE		NDED DDE
		Basic FB	S-Mode	Standard Mode Interface	HEE
Inputs	AlarmInfo	GO _b	GO	GO	NA
	AlarmText	(GO)	(GO)	(GO)	NA
Outputs	EnableAlarmInfo	(GO _b)	(GO)	(GO)	0
	EnableAlarmText	(GO _b)	(GO)	(GO)	0
	AlarmAck 1)	(GO _b)	(GO)	(GO)	NA 1)
	AlarmReset 2)	(GO _b)	(GO)	(GO)	NA ²⁾

Table 4 - Standard Property Clients

		Support
Parameter	EnableAlarmAck 3)	0
	EnableAlarmReset 3)	0
Diagnostic Data	TimeStamp 4)	(IO)
	AlarmText_Log 4)	(IO)
	ErrorCode 4)	(IO)

¹⁾ *AlarmAck*: in Standard Mode with Group Object, in LTE-Mode with A_PropertyValue_Write on IO-Property ²⁾ *AlarmReset*: in Standard Mode with Group Object, in LTE-Mode with A_PropertyValue_Write on IO-Property

³⁾ Property of an Interface Object or memory mapped value

⁴⁾ if implemented, only as a Property of an Interface Object

4.5.1 Detailed specification of Datapoints

4.5.1.1 Input: AlarmInfo

Standard Mode

DF	Name:	Alarn	nInfo			Abbr.:					Mai	ndatory		
FB	Name:	Alarn	Alarm Sink (ALSnk) Can be internal											
De	Description													
Th	is Datapoint	is us	ed to receive	the 'b	oasic a	larm informa	ation' froi	m an a	alarr	n sour	се			
	tapoint Typ	е												
DF	PT_Name:	DP	T_AlarmInfo											
DF	T Format:	U ₈ l	$J_8N_8N_8B_8B_8$							T_ID:		219.001		
Fie	eld			D	escript	tion		١.		Range	9	Unit		Def. ¹⁾
Lo	g number			L	og nun	nber		0	2)	U ₈		U ₈		00h
Ala	arm Priority			S	ee DP	T_AlarmInfo		0	2)	N ₈		enum.		FFh
Ар	plication Are	ea		S	ee DP	T_AlarmInfo		N	M	N ₈		enum.		00h
Err	or Class					T_AlarmInfo				$N_{8,}$		enum.		00h
	ributes					T_AlarmInfo		N	M.					
	.ck_Sup				es / no					{0,1}		Boolear		no
	imeStamp_9			-	es / no					{0,1}		Boolear		no
	larmText_S				es / no				٥١	{0,1}		Boolear		no
	rrorCode_S			y	es / no			0		{0,1}		Boolear	1	no
	arm Status a	ttribu	tes			,			M					
	nAlarm					/ InAlarm		1		{0,1}		Boolear		false
	larmUnAck					ledged / una	cknow.	0		{0,1}		Boolear		false
	ocked			IC	скеа /	unlocked		0) <i>′</i>	{0,1}		Boolear)	false
	cess Type													
•	Input		14		•									
	$N \rightarrow this$			\rightarrow th						T	- 1		04	
	Spontaneou	JS			Cyclic					Time-			61 m	ın.
C •	Request	- T			Pollin	ig:				Perio	a:			
	ommunicatio		•								Mai	odoton (1
♦	Group Obj			2 L V F							IVIAI	ndatory:		7
	Default Gro	_		3FAh							N/a.	- d-4- v		1
♦		object	Property Dat			14000 (ALC	\	DID /F	<u> </u>			ndatory:		
	Object_type (server): 1002 (ALSrc) PID (Property server): 51											1). 51		
	Client			•				N				11		
D :			Start_index	•		1		Nr_of_	_ele	ments				
Dy	namics	n.	Start_index	•		1		Nr_of_	_ele	ments	•			
Dy	namics Power dow		Start_index Save:		,									1
Dy	namics		Start_index Save:	::	nitialisa	ation:		Defau	ılt va	alue:				
Dy	namics Power dow		Start_index Save: Value:	No ir	nitialisa ed valu	ation:		Defau Actual	ılt va	alue: lue (no	ot for	input):		
	Power down Power up:	-	Save: Value: Transmit on b	No ir	nitialisa ed valu	ation:		Defau Actual	ılt va	alue: lue (no	ot for			
	namics Power dow	-	Save: Value: Transmit on b	No ir	nitialisa ed valu	ation:		Defau Actual	ılt va	alue: lue (no	ot for	input):		
Ex	Power down Power up:	ndlin	Save: Value: Transmit on b	No ir	nitialisa ed valu	ation:		Defau Actual	ılt va	alue: lue (no	ot for	input):		
Ex	Power down Power up:	ndlin	Start_index Save: Value: Transmit on t	No ir Save	nitialisa ed valu only for	ation:		Defau Actual	ılt va	alue: lue (no	ot for	input):		
Ex Sp	Power down Power up: ception Hair ecial Feature	ndlin	Save: Value: Transmit on b	No ir Save	nitialisa ed valu only for ult"	e: r output):		Defau Actual Read	ılt va I val fron	alue: lue (no n bus (ot for (only	input): for inpu	ut):	

LTE-HEE-Mode

4.5.1.2 Input: AlarmText

Standard Mode

DP Name:	Alarr	nText		Abbr.:			Manda	tory	
FB Name:	Alarr	n Sink (ALSn	k)		•		Can be	internal	
Description									
intended for "o				ery simpl	le alarmin	g application	ons. String w	th 14 cha	aracters,
unused chara		illed with '00l	າ'.						
Datapoint Ty									
DPT_Name:		T_String_AS	CII						
DPT Format:	A[1	•				DF	PT_ID: 16	000.	
Field	Desc	ription		Supp.	Range			Unit	Default
					see data	type 4 "ch	aracter set"		CS
◆ Input									
$N \rightarrow this$] 1	\rightarrow this						
Spontaneo	ous		Cyclic	ally:			Time-out:		
Request			Polling	g:			Period:		
Communicat	ion Ty	/ре							
♦ Group Ob	ject D	atapoint					Mano	latory:	
Default Gr	oup A	ddress: F	3FBh						
♦ Interface	Object	Property Da	tapoint				Mand	latory:	
• Client		Object_typ	e (server):	1002 (A	LSrc)	PID (Prop	perty server):	52 1)	
		Start index	(:	1		Nr_of_ele	ements:	1	
Dynamics									
Power dov	vn:	Save:							
Power up:		Value:	No initialisat	tion:		Default va	alue:		
			Saved value	e: [Actual va	lue (not for in	iput):	
		Transmit on	bus (only for	output):			m bus (only fo		
Exception Ha	andlin	g	· ·	<u> </u>			, ,	<u> </u>	
Special Featu	ıres								
1) see Note 2	in de	escription of I	Property serv	er					

LTE-HEE-Mode

4.5.1.3 Output: EnableAlarmInfo

Standard Mode

DP Name: EnableAlarmInfo Abbr.: Mandator	у
FB Name: Alarm Sink (ALSnk) Can be in	ternal
Description	
Enables sending of alarm messages.	
Datapoint Type	
DPT_Name: DPT_Enable	
DPT Format: B ₁ DPT_ID: 1.003	
Field Description Supp. Range Un	
[{0,1}] Box	olean cs
◆ Output	
this \rightarrow M \square this \rightarrow 1 \square	
Spontaneous	
Cyclic Period: 24 h	
Request	
Communication Type	
◆ Group Object Datapoint Mandate	ory: 🔲
Default Group Address:	
◆ Interface Object Property Datapoint Mandato	ory:
• Client Object_type (server): 1002 (ALSrc) PID (Property server): 5	53
Start_index: 1 Nr_of_elements: 1	
Dynamics	
Power down: Save:	
Power up: Value: No initialisation: Default value:	
Saved value: Actual value (not for input	ut):
Transmit on bus (only for output):	input):
Exception Handling	
Special Features	

LTE-HEE-Mode

FB:	ALSnk	I TE CI	ient Output Name:	EnableAla	rminfo		Mon	dotory		
гь.	ALSIIK	LIECI	ent Output Name.	LilabieAla	111111110			datory		
							Optio	onai		
Desc	ription:									
Enabl	e/disable /	AlarmInfo	Outputs in (all) Devi	ces with FB	'Alarm	Source	,			
DPT:	Name	DPT_Er	nable	DPT ID	1.003	Da	itatype fo	ormat	B ₁	
Field			Description		Sup.	Range	e Un	it	COV	Default
						{0,1}	Boo	olean		CS
Comr	nunicatio	n:								
Bine	ding Grou	p:								
Clas	SS		Туре				Default			
Ge	eographica									
Ap	plication S	Specific _								
Ur	nassigned	\boxtimes	Broadcast ⊠	Configura	ble 🗌					
DP .	Address:		IO Type(ID):	1002 (ALS	rc)	Prope	erty ID:		53	
(in t	he server									
	-Services	(event):	COV 🗌	MinRepTime	e:	S	ec	Hearth	peat: 24	1 h min
W	rite	\boxtimes	Output per default	communicat	ting	Bindi	ng Group	o Wilde	card allov	ved 🗌
			\boxtimes							
			Tx Prio:	High 🗌		No	rmal 🛚		Low	
			Transm after Powe	er up: Stored	l Value	□ A	ct Value		Default Va	alue 🗌
Exce	ption Hand	dling:						Save	at Power	down
Spec	ial Feature	es:								

4.5.1.4 Output: EnableAlarmText

Standard Mode

DP Name:	Enabl	leAlarmText		Abbr.:				Manda	atory			
FB Name:	Alarm	Sink (ALSn	k)					Can be	e internal			
Description												
Enables sendi		alarm messa	ges.									
Datapoint Typ												
DPT_Name:		Γ_Enable										
DPT Format:	B ₁						DPT_ID	: 1	.003			
Field		Description	1		S	Supp.	Range		Unit	De	faul	t
							{0,1}		Boolean		cs	
♦ Output												
this \rightarrow M			his \rightarrow 1									
Spontaneo	us	COV:		Δ-Value:			MinRep ⁻	Time:				
		Cyclic	: 🛛	Period:	24 h							
Request												
Communicati	on Ty	pe										
♦ Group Obj								Man	datory:			
Default Gro	up Ad	ldress: -										
♦ Interface C	Object	Property Da	tapoint					Man	datory:			
 Client 		Object_type	e (server):	1002 (ALS	Src)	PID	(Property s	server)	: 54			
		Start_index	(:	1		Nr_c	of_element	s:	1			
Dynamics												
Power dow	n: S	Save:										
Power up:	/	√alue:	No initialisa	tion:		Defa	ault value:					
			Saved value	e: 🔲		Actu	ıal value (n	ot for i	nput):	\boxtimes		
			bus (only for	output):	\square	Rea	d from bus	(only f	or input):			
Exception Ha	ndling	l										
Special Featu	res											
	103											_

LTE-HEE-Mode

FB:	ALSnk	LTE CI	ent Output Name:	EnableAla	rmText	i	Mandatory Optional	/ □ ⊠	
Desc	ription:	<u> </u>					Ориона		
	•	la vas la fa	Cauraa	,					
			Outputs in (all) Devi				1-		
DPT:	Name	DPT_Er	nable	DPT ID	1.003	Da	tatype format	B ₁	
Field			Description		Sup.	Range	e Unit	COV	Default
						{0,1}	Boolean		cs
Comr	nunicatio	า:							
Bind	ding Grou	p:							
Clas	SS		Туре				Default		
Ge	ographica								
Ap	plication S	pecific							
Ur	assigned		Broadcast 🛚	Broadcast Configurable					
DP /	Address:		IO Type(ID):	1002 (ALS	rc)	Prope	erty ID:	54	
(in t	he server))		,	ŕ	·	•		
LTE	-Services	(event):	COV 🗌	MinRepTime	ə:	S	ec Heart	beat: 24	4 h min
Wı	rite	\boxtimes	Output per default	communicat	ing	Bindi	ng Group Wild	card allov	wed 🗌
			Tx Prio:	High 🗌		No	rmal 🛛	Low	<i>'</i> 🗌
			Transm after Powe	er up: Stored	Value	□ A	ct Value 🛚	Default V	alue 🗌
Exce	otion Hand	dling:				Save	e at Power dov	vn 🗌	
						•			
Speci	ial Feature	es:							

4.5.1.5 Output: AlarmAck

Standard Mode

DP Name:	AlarmAck		Abbr.:				Manda	atory		
FB Name:	Alarm Sink (ALSı	nk)					Can be	e internal		
Description										
In Standard Mo	ode, alarm acknov	vledge is sen	t with this D	atapoi	nt.					
Datapoint Typ	e									
DPT_Name:	DPT_Ack									
DPT Format:	B ₁					DPT_ID	: 1	.016		
Field	Description			S	Supp.	Range		Unit	De	fault
alarm ack bit	Alarm AC	K trigger com	mand.		M	{1}		Boolean		
♦ Output										
this \rightarrow M		:his → 1								
Spontaneou			Δ-Value:			MinRep	Time:			
	Cyclic		Period:							
Request										
Communication	on Type									
	ect Datapoint						Man	datory:	Ш	
Default Gro	up Address:									
♦ Interface O	bject Property Da							datory:		
 Client 	Object_typ	e (server):	1002 (ALS	rc)	PID	(Property s	server)	: 55		
	Start_inde	x:	1		Nr_c	of_element	s:	1		
Dynamics										
Power down	n: Save:									
Power up:	Value:	No initialisa	tion: 🛛			ault value:				
		Saved value			Actu	ıal value (n	ot for i	nput):		
		bus (only for	output):		Rea	d from bus	(only f	or input):		
Exception Har	ndling									
Special Featur										
see 4.3 'Constr	aints'									

LTE-HEE-Mode

Devices with LTE-HEE mode communication sent the AlarmAck as Property of an Interface Object, with A_PropertyValue_Write Service. The following description uses the same style as the one for 'Property clients'.

FB:	ALSnk	Propert	y Name (<u>Client</u>):	AlarmAck		N	landator	y 🔲	
			-			C	ptional		
	ription:	•				_			
Alarm	Acknowled	dge is sei	nt with this, further	description:	see Data	point descri	otion in A	ALSrc, 3.5	1.6
DPT:	Name	DPT_Ac	K	DPT ID	1.016	Datatyp	e format	B ₁	
Field			Description				Sup.	Unit	Default
alarm	ack bit		Alarm ACK trigger	command.			М	Boolean	
Comr	nunicatior):							
DP	Address:		IO Type(ID):	1002 (AL	_Src)	Property II	D:	55	
(in t	he server)		Start-Index:	1		N° of elem	ents	1	
	perty acce		Read only		Read/W	/rite ∑] 1)		
Upd	late / pollir	ig 1)	On request	\boxtimes		Periodicall	y 🗌		
Exce	ption Hand	lling:				-		<u>-</u>	
Speci	ial Feature	s:							
1) Th	is Property	client is	a 'trigger' for chang	ge from 'Una	acknowled	ged' to 'Ack	nowledg	ed' in The	Property
se	rver.								

4.5.1.6 Output: AlarmReset

Standard Mode

DP	Name:	Aları	mRese	et									Manda	tory		
FB	Name:	Aları	m Sink	(ALSn	k)							(Can be	internal		
De	scription															
Ala	ırm Reset is	sent	with t	his Data	apoint.											
Da	tapoint Typ	е														
DP	T_Name:	DF	T_Re	set												
	T Format:	B ₁										DPT_ID:	1.	015		
Fie			_	cription						Sι	ıpp.	Range		Unit	D€	efault
ala	rm reset		Alar	m Rese	et trigge	r cor	nma	nd.			М	{1} ¹⁾		Boolean	<u> </u>	
♦	Output															
	this \rightarrow M				$nis \rightarrow 1$											
	Spontaneo	us		COV:				Value:				MinRepT	ime:			
	Cyclic Period:															
	Request															
Co	mmunicati	on T	ype													
♦	Group Obj												Mand	latory:		
	Default Gro	up A	ddress	s:												
•	Interface C	Objec	t Prop	erty Da	tapoint								Mano	latory:		
	 Client 		Obje	ect_type	e (serve	er):	100)2 (AL	Src)		PID	(Property s	erver):	56		
			Star	rt_index	(:		1				Nr_c	of_elements	s:	1		
Dy	namics															
	Power dow	n:	Save:													
	Power up:		Value):	No initi	alisa	tion:				Defa	ault value:				
					Saved]		Actu	ial value (no	ot for in	nput):		
				mit on	bus (on	ly for	outp	out):			Rea	d from bus	(only fo	or input):		
Ex	ception Ha	ndlin	g													
	ecial Featu															
see	see 4.3 'Constraints'															
1)	Only value	"1" (= Res	et) can	be sen	t witl	h this	S Data	poin	ıt						

LTE-HEE-Mode

Devices with LTE-HEE mode communication send the AlarmReset as Property of an Interface Object, with A_PropertyValue_Write Service. The following description uses the same style as the one for 'Property clients'.

FB:	ALSnk	Propert	y Name (<u>Client</u>):		AlarmR	eset			Manda Option	,	
Desci	ription:	-			_						
Alarm	Reset is s	ent with t	his Datapoint. Furt	her	r description	on: see D	atapoi	nt descr	iption i	n ALSı	rc,3.5.1.7.
DPT:	Name	DPT_R	eset		DPT ID	1.015	Da	tatype fo	ormat	B ₁	
Field			Description					Sup.	Unit		Default
alarm	reset		Alarm Reset trigge	er c	ommand.			М	Boole	an	2)
Comr	nunication	1 :									
DP /	Address:		IO Type(ID):	1002 (AL	1002 (ALSrc) Property ID:				56		
(in t	he server)		Start-Index:	Start-Index: 1 N° of elemen			ts	1			
Pro	perty acce	ss:	Read only			Read/W	'rite	⊠ ¹⁾			
Upd	ate / pollir	ig 1)	On request	\boxtimes			Perio	dically			
Excep	otion Hand	lling:	- -				-		•	=	
Speci	al Feature	s:									
¹⁾ Th	is Property	client is	a 'trigger' for chan	ge f	from <i>locke</i>	ed to unlo	cked s	tate of the	ne alar	m stat	e machine
	The Proper										
²⁾ O	nly value "1	" (= Res	et) can be sent wit	th t	his Datap	oint					

4.5.1.7 Parameter: EnableAlarmAck

FB:	ALSnk	Proper	ty Name (<u>Client</u>):	E	nableAlar	m <i>A</i>	Ack		Mand Option	-		
Desci	ription:	•										
Datap	oint desc	ription in A	ALSrc, 3.5.1.8									
DPT:	Name	DPT_Er	nable		DPT ID	1.	.003	Data	type for	mat	B ₁	
Field			Description						Sup.	Unit		Default
										Boo	lean	enabled
Comr	nunicatio	n:						-				-
DP A	Address:		IO Type(ID):		1002 (ALS	Src		_	ty ID:		101	
(in t	he serve	r)	Start-Index:		1		N°	of e	lements	;	1	
Pro	perty acc	ess:	Read only			R	ead/Write)	\boxtimes			
Upd	ate /-pol	ing	On request	\boxtimes			Pe	eriodi	cally			
Exce	otion Har	ndling:	•				•					
Speci	al Featu	es:										
							•	•				

4.5.1.8 Parameter: EnableAlarmReset

FB: ALSnk Property			y Name (<u>Client</u>):	EnableAlarmReset						atory 🗌 nal 🗵	
Description:								•			
Datap	Datapoint description in ALSrc, 3.5.1.9										
DPT:	Name	DPT_En	able		DPT ID	1.003	Da	tatype for	mat	B ₁	
Field			Description					Sup.	Unit		Default
									Bo	olean	disabled
Comr	nunication):						-	=		-
DP .	Address:		IO Type(ID):		1002 (AL	Src)	Prope	erty ID:		102	
(in t	he server)		Start-Index:		1		N° of	elements	3	1	
Pro	perty acce	ss:	Read only			Read/W	'rite	\boxtimes			
Upd	late <i>I</i> -pollir	ng	On request	\boxtimes			Perio	dically			
Exce	otion Hand	lling:	•				•				
Speci	ial Feature	s:			_	-		-			
		•			•		•			•	

4.5.1.9 Diagnostic Value: TimeStamp

FB:	ALSnk	Propert	y Name (<u>Client</u>):	Ti	meStamp)			Mand Option	•	_	\exists
Description:												
Datapoint description in ALSrc, 3.5.1.10.												
DPT:	Name	DPT_Da	teTime		DPT ID	19.001		Data	type for	mat	see D	PT Descr.
Field			Description						Sup.	Unit		Default
			see 'server' descrip	otic	n, 3.5.1.1	0						
Comn	nunication	n:										
DP /	Address:		IO Type(ID):	D Type(ID): 1002 (ALSrc) Propert				ty ID:		103		
(in t	he server)		Start-Index:	Start-Index: 1 N° of el			lements	;	256 ¹⁾			
Prop	perty acce	ss:	Read only	\boxtimes		Read / W	rite					
Upd	ate /-pollir	ng	On request	\boxtimes			Pε	eriodi	cally			
Excep	otion Hand	lling:										
Speci	Special Features:											
1) Arr	ay Index =	ʻlog num	ber' + 1; range of l	og	number 0	to 255, s	tart	inde	x = 1 →	last	index :	= 256

4.5.1.10	Diagnostic	Value:	AlarmText_	_Log

FB: ALSnk Propert		Propert	y Name (<u>Client</u>):	AlarmTex	t_Log		Mand	atory			
							Option	nal		\boxtimes	
Desc	ription:	-		-							
Datap	Datapoint description in ALSrc,3.5.1.11.										
DPT:	Name	2)		DPT ID	2)	Data	type for	mat	2)		
Field			Description				Sup.	Unit		Default	
			see 'server' descrip	ption, 3.5.1.	11.						
Comr	nunicatio	า:				-				-	
DP	Address:		IO Type(ID):	1002 (Al	1002 (ALSrc) Property				104		
(in t	he server)		Start-Index: 1 N° of ele			ements	;	256 ¹			
Pro	perty acce	ess:	Read only	\boxtimes	Read/Wr	ite					
Upd	late <i>I</i> -pollii	ng	On request	\boxtimes		Periodi	cally				
Exce	otion Hand	dling:	•								
Speci	ial Feature	es:									
1) Ar	ray Index =	·log num	ber' + 1; range of I	og number	0 to 255, sta	art inde	x = 1 →	last	index	= 256	
2) se	e 'server' c	lescription	ո, 3.5.1.11.								

4.5.1.11 Diagnostic Value: ErrorCode

FB:	ALSnk	Propert	y Name (<u>Client</u>):	ErrorCode			Manda Option				
Desci	Description:										
Datap	Datapoint description in ALSrc,3.5.1.12.										
DPT:	Name	DPT_Val	lue_2_Ucount	DPT ID	7.001	Dataty	pe for	mat	U ₁₆		
Field			Description			S	Sup.	Unit		Default	
			see 'server' descri	ption, 3.5.1.1	2.						
Comr	nunication	1:				<u>-</u>				_	
DP A	Address:		IO Type(ID):	1002 (ALS	Src)	Property	· ID:		105		
(in t	he server)		Start-Index:	1		N° of ele	ements	,	256 ¹)	
Pro	perty acce	ss:	Read only	\boxtimes	Read/Wri	ite					
Upd	ate /pollin	ıg	On request	\boxtimes		Periodica	ally				
Exce	otion Hand	lling:	•					•			
Speci	al Feature	s:						·			
1) Arı	ray Index =	ʻlog num	ber' + 1; range of l	log number 0	to 255, sta	art index	= 1 →	last	index	= 256	

4.5.2 ALSnk Property Identifier list

Object Name: ALSnk Object Type: 1003

Currently, the Alarm Sink Functional Block has no own Properties. ALSnk is not Property Server of any Properties.

Property Identifier	Datapoint Name	Datapoint Type Name	Datapoint Type Code
pı	ocess data (runtime interworking, zone	e addressing and individual Addres	ising)
	Parameters and Diagnostic Dat	a (Individual Addressing only)	

5 FB Technical Alarm vs. other alarm/supervising techniques

5.1 Fast Polling Mechanism on TP1

5.1.1 Polling mechanism

Using the Polling Mechanism it is possible to get data from up to 15 devices in one single Frame on the KNX TP1 Medium. The Polling Master initiates the transmission of the Frame; the addressing of the devices is done by the "poll_group_address". Each addressed Polling Slave insert its Polling Data (one character) in a specified time slot.

For a detailed description see [01] clause 2.2.6 "L_Poll_Data-Frame" and clause 2.4.2 "L_Poll_Data Service and Protocol" and [02] clause 2.4 "L_Poll_Data Service and Protocol".

5.1.2 Usage in relation to FB "Alarm Source"

The data provided by the Polling Slaves can be used by the Polling Master for Alarm Generation. This alarm may be considered as "Wired Or" over the affected devices. Figure 7 shows a meaningful combination of the Polling Master in combination with the FB "Alarm Source" in a device.

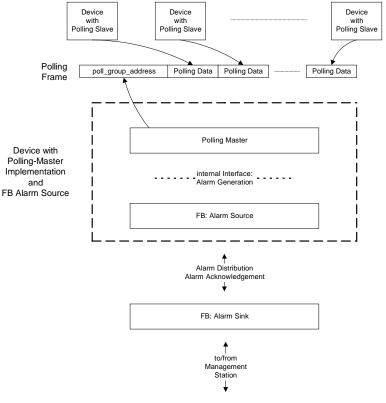


Figure 7

The Polling Master holds information about the supervised devices in the Polling Master Interface Object . The interpretation of The Property "Poll Status" identifies the devices that cause an alarm condition: the Individual Addresses of the devices is available in The Property "Slave Addresses".

Via an internal interface the Polling Master may map its information to the Datapoints of FB Alarm Source AlarmInfo and AlarmText. Thus the information becomes available on the whole network.

5.1.3 Advantages

The implementation of a Polling Slave does not consume many resources, because most of the needs are covered by the system implementation of BCU 2. The advantage of this combination is, that the state of devices without an implementation of the FB "Alarm Source" can be used in the context of Technical Alarm.

At time the Polling Mechanism is not often used by manufacturers, because no Polling Master is available.

5.1.4 Interworking Standard for Polling Information

Please also refer to [04].

The general format for polling data for interworking of applications is 0EErrrrr (8 bit). The bits r are application specific and are not yet defined. They shall be set to 0.

For devices supporting "Technical Alarm" and "Fast polling mechanism", the following applies.

If a device (polling slave) has a Technical Alarm, it should send the data 010rrrrr. The receiver (polling master) shall only interpret EE=10 as Technical Alarm (independent of the value of rrrrr). EE<>10 shall be interpreted as 'No technical alarm'.