

# 1 Свидетельство о соответствии ACSI версия 1.0

## 1.1 Общие сведения

Базовое свидетельство о соответствии соответствует определению таблицы 1.1.

Таблица 1.1 — Базовое свидетельство о соответствии

Сервисы		Клиент/ подписчик	Сервер/ издатель	Значение/ комментарий
Роли клиент-сервер				
B11	Сторона сервера (TWO-PARTY-APPLICATION-ASSOCIATION — Прикладной ассоциации двух абонентов)		Да	
B12	Сторона клиента (TWO-PARTY-APPLICATION-ASSOCIATION — Прикладной ассоциации двух абонентов)			
Поддержка SCSM				
B21	SCSM: Использован МЭК 61850-8-1		Да	
B22	SCSM: Использован МЭК 61850-9-1			
B23	SCSM: Использован МЭК 61850-9-2		Да	
B24	SCSM: другое			
Модель общих событий подстанции (GSE)				
B31	Сторона издателя		Да	
B32	Сторона подписчика			
Передача модели выборочных значений (SVC)				
B41	Сторона издателя		Да	Пр. Vinom3
B42	Сторона подписчика			

## 1.2 Свидетельство о соответствии моделей ACSI

Свидетельство о соответствии моделей ACSI определено в таблице 1.2.

Таблица 1.2 — Свидетельство о соответствии моделей ACSI

Сервисы		Клиент/ подписчик	Сервер/ издатель	Значение/ комментарий
Если поддерживается сторона сервера (B11)				
M1	Логическое устройство		Да	
M2	Логический узел		Да	
M3	Данные		Да	
M4	Набор данных		Да	
M5	Подстановка			
M6	Управление группой настроек			
Составление отчета				
M7	Контроль буферизованного отчета		Да	
M7-1	sequence-number		Да	
M7-2	report-time-stamp		Да	
M7-3	reason-for-inclusion		Да	
M7-4	data-set-name		Да	
M7-5	data-reference		Да	
M7-6	buffer-overflow		Да	
M7-7	enlryID		Да	
M7-8	BufTm		Да	
M7-9	IntgPd		Да	
M7-10	GI		Да	
M8	Контроль небуферизованного отчета		Да	
M8-1	sequence-number		Да	
M8-2	report-time-stamp		Да	
M8-3	reason-for-inclusion		Да	

M8-4	data-set-name		Да	
M8-5	data-reference		Да	
M8-6	BufTm		Да	
M8-7	IntgPd		Да	
M8-8	GI		Да	
Регистрация				
M9	Контроль журнала			
M9-1	IntgPd			
M10	Журнал			
M11	Управление			
Если поддерживается GSE (B31/B32)				
M12	GOOSE		Да	
M12-1	entryID			
M12-2	DataRefInc			
M13	GSSE			
Если поддерживается SVC (B41/B42)				
M14	Multicast SVC		Да	Пр. Binom3
M15	Unicast SVC			
M16	Время		Да	
M17	Передача файлов		Да	

### 1.3 Свидетельство о соответствии сервисов ACSI

Свидетельство о соответствии сервисов ACSI должно быть таким, как определено в таблице 1.3 (в зависимости от содержания таблицы 1.1).

Таблица 1.3 — Свидетельство о соответствии сервисов ACSI

Сервисы		AA: TP/МС	Клиент/ подписчик	Сервер/ издатель	Комментарии
Сервер (раздел 6)					
S1	ServerDirectory	TP		Да	
Прикладная ассоциация (раздел 7)					
S2	Associate			Да	
S3	Abort			Да	
S4	Release			Да	
Логическое устройство (раздел 8)					
S5	LogicalDeviceDirectory	TP		Да	
Логический узел (раздел 9)					
S6	LogicalNodeDirectory	TP		Да	
S7	GetAllDataValues	TP		Да	
Данные (раздел 10)					
S8	GetDataValues	TP		Да	
S9	SetDataValues	TP		Да	
S10	GetDataDirectory	TP		Да	
S11	GetDataDefinition	TP		Да	
Набор данных (раздел 11)					
S12	GetDataSetValues	TP		Да	
S13	SetDataSetValues	TP		Да	
S14	CreateDataSet	TP		Да	
S15	DeleteDataSet	TP		Да	
S16	GetDataSetDirectory	TP		Да	
Подстановка (раздел 12)					
S17	SetDataValues	TP		Да	
Управление группой настроек (раздел 13)					
S18	Select ActiveSG	TP		Да	
S19	SelectEditSG	TP		Да	
S20	SetSGValues	TP		Да	
S21	ConfirmEditSGValues	TP		Да	

S22	GetSGValues	TP		Да	
S23	GetSGCBValues	TP		Да	
Выдача отчетов (раздел 14)					
Блок управления буферизованным отчетом (BRCB)					
S24	Report	TP		Да	
S24-1	data-change (dchg)			Да	
S24-2	qchg-change (qchg)			Да	
S24-3	data-update (dupd)			Да	
S25	GetBRCBValues	TP		Да	
S26	SetBRCBValues	TP		Да	
Блок управления небуферизованным отчетом (URCB)					
S27	Report	TP		Да	
S27-1	data-change (dchg)			Да	
S27-2	qchg-change (qchg)	TP		Да	
S27-3	data-update{dupd}			Да	
S28	GetURCBValues			Да	
S29	SetURCBValues	TP		Да	
Регистрация (раздел 14)					
Блок управления журналом					
S30	GetLCBValues	TP			
S31	SetLCBValues	TP			
Log					
S32	QueryLogByTime	TP			
S33	QueryLogAfter	TP			
S34	GetLogStatusValues	TP			
Модель общего события на подстанции (GSE) (14.3.5.3.4)					
GOOSE-CONTROL-BLOCK					
S35	SendGOOSEMessage	MC		Да	
S36	GetGoReference	TP		Да	
S37	GetGOOSEElementNumber	TP		Да	
S38	GetGoCBValues	TP		Да	
S39	SetGoCBValues	TP		Да	
GSSE-CONTROL-BLOCK					
S40	SendGSSEMessage	MC			
S41	GetGsReference	TP			
S42	GetGSSEElementNumber	TP			
S43	GetGsCBValues	TP			
S44	SetGsCBValues	TP			
Передача модели выборочных значений (SVC) (раздел 16)					
Multicast SVC					
S45	SendMSVMessage	MC		Да	
S46	GetMSVCBValues	TP		Да	
S47	SetMSVCBValues	TP		Да	
Unicast SVC					
S48	SendUSVMessage	TP			
S49	GetUSVCBValues	TP		Да	
S50	SetUSVCBValues	TP		Да	
Управление (17.5.1)					
S51	Select			Да	
S52	SelectWithValue	TP		Да	
S53	Cancel	TP		Да	
S54	Operate	TP		Да	
S55	Command-Termination	TP		Да	
S56	TimeActivated-Operate	TP			
Передача файла (раздел 20)					
S57	GetFile	TP		Да	
S58	SetFile	TP		Да	

S59	Delete File	TP			
S60	GetFileAttributeValues	TP		Да	
Время (5.5)					
T1	Time resolution of internal clock			1 мкс	
T2	Time accuracy of internal clock			1 мкс	
T3	Supported Timestamp resolution			1 мкс	

## 2. MICS - Model Implementation Conformance Statement

### 2.1 Common data attribute types

Таблица 2.1 – Quality

Attribute Name	Attribute Type	Value/Value Range	M/O/C	Комментарии
Validity	CODED ENUM	good   invalid	M	
detailQual	PACKED LIST		O	
Overflow	BOOLEAN	FALSE	O	
outOfRange	BOOLEAN	FALSE	O	
badReference	BOOLEAN	FALSE	O	
oscillatory	BOOLEAN	FALSE	O	
failure	BOOLEAN	FALSE	O	
oldData	BOOLEAN	FALSE	O	
inconsistent	BOOLEAN	FALSE	O	
inaccurate	BOOLEAN	FALSE	O	
source	CODED ENUM	process	O	
test	BOOLEAN	FALSE	O	
operatorBlocked	BOOLEAN	FALSE	O	

Таблица 2.2 – Analog value

Attribute Name	Attribute Type	Value/Value Range	M/O/C	Комментарии
f	FLOAT32	floating point value	C	

Таблица 2.3 – Originator

Attribute Name	Attribute Type	Value/Value Range	M/O/C	Комментарии
orCat	ENUMERATED	not-supported   bay-control   station-control   remote-control   automatic-bay   automaticstation   automatic-remote   maintenance   process	M	
orIdent	OCTET STRING64		M	

Таблица 2.4 – Unit definition

Attribute Name	Attribute Type	Value/Value Range	M/O/C	Комментарии
SIUnit	ENUMERATED		M	
multiplier	ENUMERATED		O	

Таблица 2.5 – Vector

Attribute Name	Attribute Type	Value/Value Range	M/O/C	Комментарии
mag	AnalogValue		M	
ang	AnalogValue		O	

Таблица 2.6 – CtlModels definition

Attribute Value	Comments
status-only	Controllable DPC. Supported by XCBR, XSWI
direct-with-normal-security	Not supported
sbo-with-normal-security	Controllable DPC. Supported by CSWI class nodes
direct-with-enhanced-security	Not supported
sbo-with-enhanced-security	Controllable DPC. Supported by CSWI class nodes

Таблица 2.7 – SboClasses

Attribute Value	Comments
operate-once	
operate-many	Not supported

## 2.2 Common data class specifications

Таблица 2.8 – Single point status (SPS)

Attribute Name	Attribute Type	FC	TrgOp	Value/Value Range	M/O/C	Comments
stVal	BOOLEAN	ST	dchg	TRUE   FALSE	M	
q	Quality	ST	qchg		M	
t	TimeStamp	ST			M	

Таблица 2.9 – Double point status (DPS)

Attribute Name	Attribute Type	FC	TrgOp	Value/Value Range	M/O/C	Comments
stVal	CODED ENUM	ST	dchg	intermediate-state   off   on   bad-state	M	
q	Quality	ST	qchg		M	
t	TimeStamp	ST			M	

Таблица 2.10 – Integer status (INS)

Attribute Name	Attribute Type	FC	TrgOp	Value/Value Range	M/O/C	Comments
stVal	INT32	ST	dchg		M	
q	Quality	ST	qchg		M	
t	TimeStamp	ST			M	

## 2.3 Common data class specifications for measurand information

Таблица 2.11 – Measured value (MV)

Attribute Name	Attribute Type	FC	TrgOp	Value/Value Range	M/O/C	Comments
mag	AnalogueValue	MX	dchg		M	
q	Quality	MX	qchg		M	
t	TimeStamp	MX			M	
db	INT32U	CF			O	

Таблица 2.12 – Complex measured value (CMV)

Attribute Name	Attribute Type	FC	TrgOp	Value/Value Range	M/O/C	Comments
cVal	Vector	MX	dchg		M	
q	Quality	MX	qchg		M	

t	TimeStamp	MX			M	
db	INT32U	CF			O	

Таблица 2.13 – WYE

Attribute Name	Attribute Type	FC	TrgOp	Value/Value Range	M/O/C	Comments
phsA	CMV				M	
phsB	CMV				M	
phsC	CMV				M	
net	CMV				O	

Таблица 2.14 – Delta (DEL)

Attribute Name	Attribute Type	FC	TrgOp	Value/Value Range	M/O/C	Comments
phsAB	CMV				M	
phsBC	CMV				M	
phsCA	CMV				M	
net	CMV				O	

Таблица 2.15 – Sequence (SEQ)

Attribute Name	Attribute Type	FC	TrgOp	Value/Value Range	M/O/C	Comments
c1	CMV				M	
c2	CMV				M	
c3	CMV				M	
seqT	CMV		MX	pos-neg-zero   dir-quad- zero	O	

Таблица 2.16 – Harmonic value for WYE (HWYE)

Attribute Name	Attribute Type	FC	TrgOp	Value/Value Range	M/O/C	Comments
phsAHar	Vector	MX			M	
phsBHar	Vector	MX			M	
phsCHar	Vector	MX			M	

## 2.4 Common data class specifications for controllable status information

Таблица 2.17 – Controllable single point (SPC)

Attribute Name	Attribute Type	FC	TrgOp	Value/Value Range	M/O/C	Comments
ctlVal	BOOLEAN	CO		off (FALSE)   on (TRUE)	C	
operTm	TimeStamp	CO			M	
origin	Originator	CO, CT			M	
ctlNum	INT8U	CO, CT			M	
stVal	BOOLEAN	ST			M	
q	Quality	ST			M	
t	TimeStamp	ST			M	
ctlModel	CtlModels	CF			M	

Таблица 2.18 – Controllable double point (DPC)

Attribute Name	Attribute Type	FC	TrgOp	Value/Value Range	M/O/C	Comments
ctlVal	BOOLEAN	CO		off (FALSE)   on (TRUE)	M	
operTm	TimeStamp	CO			M	
origin	Originator	CO,			M	

		CT				
ctlNum	INT8U	CO, CT			M	
stVal	CODED ENUM	ST			M	
q	Quality	ST			M	
t	TimeStamp	ST			M	
ctlModel	CtlModels	CF			M	

Таблица 2.19 – Controllable integer status (INC)

Attribute Name	Attribute Type	FC	TrgOp	Value/Value Range	M/O/C	Comments
ctlVal	INT32	CO		off (FALSE)   on (TRUE)	C	
operTm	TimeStamp	CO			M	
origin	Originator	CO, CT			M	
ctlNum	INT8U	CO, CT			M	
stVal	INT32		dchg		M	
q	Quality		qchg		M	
t	TimeStamp	ST			M	
ctlModel	CtlModels	CF			M	

Таблица 2.20 - Binary counter reading (BCR)

Attribute Name	Attribute Type	FC	TrgOp	Value/Value Range	M/O/C	Comments
actVal	INT32	ST			M	
q	Quality	ST			M	
t	TimeStamp	ST			M	
units	Unit	CF			O	
pulsQty	FLOAT32	CF			M	
d	VISIBLE STRING64	DC			O	

## 2.5 Common data class specifications for description information

Таблица 2.21 – Device name plate common data class specification (DPL)

Attribute Name	Attribute Type	FC	TrgOp	Value/Value Range	M/O/C	Comments
vendor	VISIBLE STRING255		DC		O	

Таблица 2.22 – Logical node name plate common data class specification (LPL)

Attribute Name	Attribute Type	FC	TrgOp	Value/Value Range	M/O/C	Comments
vendor	VISIBLE STRING255		DC		M	
swRev	VISIBLE STRING255		DC		M	
d	VISIBLE STRING255		DC		M	

## 2.6 Logical node classes

Таблица 2.23 – LN: Physical device information (LPHD)

Attribute Name	Attribute Type	Explanation	T	M/O	Comments
PhyNam	DPL	Physical device name plate		O	
PhyHealth	INS	Physical device health		O	
Proxy	SPS	Indicates if this LN is a proxy		O	

Таблица 2.24 – Common Logical Node

Attribute Name	Attribute Type	Explanation	T	M/O	Comments
Mod	INC	Mode		M	
Beh	INS	Behaviour		M	
Health	INS	Health		M	
NamPlt	LPL	Name plate		M	

Таблица 2.25 – LN: Logical node zero (LLNO)

Attribute Name	Attribute Type	Explanation	T	M/O	Comments
		LN shall inherit all Mandatory Data from Common Logical Node Class		M	

Таблица 2.26 – LN: Switch controller (CSWI)

Attribute Name	Attribute Type	Explanation	T	M/O	Comments
		LN shall inherit all Mandatory Data from Common Logical Node Class		M	
Pos	DPC	Switch, general		M	

Таблица 2.27 – LN: Generic process I/O (GGIO)

Attribute Name	Attribute Type	Explanation	T	M/O	Comments
		LN shall inherit all Mandatory Data from Common Logical Node Class		M	
Ind 1..16	SPS	General indication (binary input)		M	
Ind 1..8	DPS	General indication (binary input)		O	

Таблица 2.28 – LN: Metering(MMTR)

Attribute Name	Attribute Type	Explanation	T	M/O	Comments
		LN shall inherit all Mandatory Data from Common Logical Node Class		M	
SupWh	BCR	Real energy supply		M	
SupVArh	BCR	Reactive energy supply		M	
DmdWh	BCR	Real energy demand		M	
DmdVArh	BCR	Reactive energy demand		M	
SupWhL	BCR	Real energy supplyloss		O	
SupVArhL	BCR	Reactive energy supply loss		O	
DmdWhL	BCR	Real energy demand loss		O	
DmdVArhL	BCR	Reactive energy demand loss		O	



Таблица 2.29 – LN: Measurement (MMXU)

Attribute Name	Attribute Type	Explanation	T	M/O	Comments
		LN shall inherit all Mandatory Data from Common Logical Node Class		M	
TotW	MV	Total Active Power (Total P)		M	
TotVAr	MV	Total Reactive Power (Total Q)		M	
TotVA	MV	Total Apparent Power (Total S)		M	
TotPF	MV	Average Power factor (Total PF)		M	
TotPhV	MV	Average Phase to ground voltages (Total PhV)		M	
TotPPV	MV	Average Phase to phase voltages (Total PhV)		M	
TotA	MV	Average current (Total I)		M	
Hz	MV	Frequency		M	
PPV	DEL	Phase to phase voltages (VL1VL2, ...)		M	
PhV	WYE	Phase to ground voltages (VL1ER, ...)		M	
A	WYE	Phase currents (IL1, IL2, IL3)		M	
W	WYE	Phase active power (P)		M	
VAr	WYE	Phase reactive power (Q)		M	
VA	WYE	Phase apparent power (S)		M	
PF	WYE	Phase power factor		M	

Таблица 2.30 – LN: Circuit breaker XCBR

Attribute Name	Attribute Type	Explanation	T	M/O	Comments
		LN shall inherit all Mandatory Data from Common Logical Node Class		M	
Loc	SPS	Local operation (local means with-out substation automation communication, hardwired direct control)		O	
OpCnt	INS	Operation counter		O	
Pos	DPC	Switch position		M	
BlkOpn	SPC	Block opening		O	
BlkCls	SPC	Block closing		O	
CBOpCap	INS	Circuit breaker operating capability		O	

Таблица 2.31 – LN: Circuit switch XSWI

Attribute Name	Attribute Type	Explanation	T	M/O	Comments
	LN shall inherit all Mandatory Data from Common Logical Node Class			M	
Loc	SPS	Local operation		O	
OpCnt	INS	Operation counter		O	
Pos	DPC	Switch position		M	
BlkOpn	SPC	Block opening		O	
BlkCls	SPC	Block closing		O	
SwTyp	INS	Switch type		O	
SwOpCap	INS	Switch operating capability		O	

Таблица 2.32 – LN: Harmonics (MHA)

Attribute Name	Attribute Type	Explanation	T	M/O	Comments
	LN shall inherit all Mandatory Data from Common Logical Node Class			M	
HA	HWYE	Sequence of harmonics current		M	
HPhV	HWYE	Sequence of harmonics voltages		M	
HA	HWYE	Sequence of coefficients harmonics current		M	
HPhV	HWYE	Sequence of coefficients harmonics voltages		M	
Ang	HWYE	Sequence of angles between voltages and currents		O	
ThdA	WYE	Current THD		O	
ThdV	WYE	Voltage THD		O	
Hz	MV	Frequency		M	

Таблица 2.33 – LN: Sequence and imbalance (MSQI)

Attribute Name	Attribute Type	Explanation	T	M/O	Comments
	LN shall inherit all Mandatory Data from Common Logical Node Class			M	
SeqV	SEQ	Positive, negative and zero sequence voltage		M	
SeqA	SEQ	Positive, negative and zero sequence current		M	
ImbNgV	MV	Imbalance negative sequence voltage		O	
ImbZroV	MV	Imbalance zero sequence voltage		O	
ImbNgA	MV	Imbalance negative sequence current		O	
ImbZroA	MV	Imbalance zero sequence current		O	

### 3. PICS – Protocol Implementation Conformance Statement

Таблица 3.1 – A-Profile support

Profile	Profile description Type	Client/Subscriber	Server/Publisher	Comments
A1	Client/server		Yes	
A2	GOOSE/GSE Management		Yes	SendGOOSEMessage only
A3	GSSE			
A4	Time sync	Yes		SNTP (RFC 2030, RFC 4330)

Таблица 3.2 –T-Profile support

Profile	Profile description Type	Client/Subscriber	Server/Publisher	Comments
T1	TCP/IP		Yes	
T2	OSI T			
T3	GOOSE/GSE		Yes	
T4	GSSE T			
T5	Time sync	Yes		

Таблица 3.3 – MMS service supported conformance

MMS service supported CBB		
Base	M/O/C/I	Comments
Status	M	Supported
getNameList	C	Supported
identify	M	Supported
rename	O	Supported
read	C	Supported
write	C	Supported
getVariableAccessAttributes	C	Supported
defineNamedVariable	O	Supported
defineScatteredAccess	I	
getScatteredAccessAttributes	I	
deleteVariableAccess	O	Supported
defineNamedVariableList	O	Supported
getNamedVariableListAttributes	C	Supported
deleteNamedVariableList	C	Supported
defineNamedType	O	
getNamedTypeAttributes	I	
deleteNamedType	I	
input	I	
output	I	
takeControl	I	
relinquishControl	I	
defineSemaphore	I	
deleteSemaphore	I	
reportPoolSemaphoreStatus	I	
reportSemaphoreStatus	I	
initiateDownloadSequence	I	
downloadSegment	I	
terminateDownloadSequence	I	
initiateUploadSequence	I	
uploadSegment	I	
terminateUploadSequence	I	
requestDomainDownload	I	
requestDomainUpload	I	
loadDomainContent	I	Supported

storeDomainContent	I	Supported
deleteDomain	I	
getDomainAttributes	C	Supported
createProgramInvocation	I	
deleteProgramInvocation	I	
start	I	
stop	I	
resume	I	
reset	I	
kill	I	
getProgramInvocationAttributes	I	
obtainFile	C	Supported
defineEventCondition	I	
deleteEventCondition	I	
getEventConditionAttributes	I	
reportEventConditionStatus	I	
alterEventConditionMonitoring	I	
triggerEvent	I	
defineEventAction	I	
deleteEventAction	I	
alterEventEnrollment	I	
reportEventEnrollmentStatus	I	
getEventEnrollmentAttributes	I	
acknowledgeEventNotification	I	
getAlarmSummary	I	
getAlarmEnrollmentSummary	I	
readJournal	C	
writeJournal	O	
initializeJournal	C	
reportJournalStatus	I	
createJournal	I	
deleteJournal	I	
fileOpen	C	Supported
fileRead	C	Supported
fileClose	C	Supported
fileRename	I	
fileDelete	C	
fileDirectory	C	Supported
unsolicitedStatus	I	
informationReport	C	Supported
eventNotification	I	
attachToEventCondition	I	
attachToSemaphore	I	
conclude	M	Supported
cancel	M	Supported
getDataExchangeAttributes	C	
exchangeData	C	
defineAccessControlList	C	
getAccessControlListAttributes	C	
reportAccessControlledObjects	C	
deleteAccessControlList	C	
alterAccessControl	C	
reconfigureProgramInvocation	C	

Таблица 3.4 – GOOSE conformance statement

<b>GOOSE service supported CBB</b>	<b>Subscriber</b>	<b>Publisher</b>	<b>Comments</b>
GOOSE Services		C	
SendGOOSEMessage		M	Supported
GetGoReference		C	Supported
GetGOOSEElementNumber		C	Supported
GetGoCBValues		O	Supported
SetGoCBValues		O	Supported
GSENotSupported		C	
GOOSE Control Block (GoCB)		O	

#### 4. PIXIT – Protocol Implementation Extra Information for Testing

Таблица 4.1 – Association model

<b>Item</b>	<b>Value/Comments</b>
Maximum simultaneous client associations	4, Configurable
TCP Keepalive	120 s
Authentication	Not supported
Association parameters	
TSEL	0001, Configurable value
SSEL	0001, Configurable value
PSEL	00000001, Configurable value
AP-Title	Not required, ignored if present
AE-Qualifier	Not required, ignored if present
Maximum MMS PDU size	120000, Configurable
Typical startup time after a power supply interrupt	5 s

Таблица 4.2 – Server model

<b>Item</b>	<b>Value/Comments</b>
Quality bits for analog values (MX)	
Validity	Good   Invalid
OutofRange	Not supported
Failure	Not supported
Inconsistent	Not supported
Source	Process
Other quality bits and values	Not supported
Quality bits for status values (ST)	
Validity	Good   Invalid
BadReference	Not supported
Failure	Not supported
Inconsistent	Not supported
Inaccurate	Not supported
Source	Process
Other quality bits and values	Not supported
Maximum number of data values in Get/SetDataValues requests	Limited only by the MMS PDU size

Таблица 4.3 – Setting group model

<b>Item</b>	<b>Value/Comments</b>
Number of setting groups	Not supported

Таблица 4.4 – Dataset members

Data Set name	Value/Comments
Predefined Datasets in ICD file	Measurand data: BINOM3/LLN0\$mTI BINOM3/LLN0\$aTI BINOM3/LLN0\$eTI BINOM3/LLN0\$hTI BINOM3/LLN0\$sysTI  Status data: BINOM3/LLN0\$tsIND BINOM3/LLN0\$tsPOS
Maximum number of data elements in one Dataset	40
Maximum number of persistent Datasets	20

Таблица 4.5 – Predefined Dataset members

Data Set name	Value/Comments
BINOM3/LLN0\$mTI	BINOM3/LLN0\$mTI MMXU\$MX\$A\$phsA
	BINOM3/LLN0\$mTI MMXU\$MX\$A\$phsB
	BINOM3/LLN0\$mTI MMXU\$MX\$A\$phsC
	BINOM3/LLN0\$mTI MMXU\$MX\$TotA
	BINOM3/LLN0\$mTI MMXU\$MX\$PhV\$phsA
	BINOM3/LLN0\$mTI MMXU\$MX\$PhV\$phsB
	BINOM3/LLN0\$mTI MMXU\$MX\$PhV\$phsC
	BINOM3/LLN0\$mTI MMXU\$MX\$TotPhV
	BINOM3/LLN0\$mTI MMXU\$MX\$W\$phsA
	BINOM3/LLN0\$mTI MMXU\$MX\$W\$phsB
	BINOM3/LLN0\$mTI MMXU\$MX\$W\$phsC
	BINOM3/LLN0\$mTI MMXU\$MX\$TotW
	BINOM3/LLN0\$mTI MMXU\$MX\$VAr\$phsA
	BINOM3/LLN0\$mTI MMXU\$MX\$VAr\$phsB
	BINOM3/LLN0\$mTI MMXU\$MX\$VAr\$phsC
	BINOM3/LLN0\$mTI MMXU\$MX\$TotVAr
	BINOM3/LLN0\$mTI MMXU\$MX\$VA\$phsA
	BINOM3/LLN0\$mTI MMXU\$MX\$VA\$phsB
	BINOM3/LLN0\$mTI MMXU\$MX\$VA\$phsC
	BINOM3/LLN0\$mTI MMXU\$MX\$TotVA
	BINOM3/LLN0\$mTI MMXU\$MX\$PF\$phsA
	BINOM3/LLN0\$mTI MMXU\$MX\$PF\$phsB
	BINOM3/LLN0\$mTI MMXU\$MX\$PF\$phsC
	BINOM3/LLN0\$mTI MMXU\$MX\$TotPF
	BINOM3/LLN0\$mTI MMXU\$MX\$PPV\$phsA
	BINOM3/LLN0\$mTI MMXU\$MX\$PPV\$phsB
	BINOM3/LLN0\$mTI MMXU\$MX\$PPV\$phsC
	BINOM3/LLN0\$mTI MMXU\$MX\$TotPPV
	BINOM3/LLN0\$mTI MMXU\$MX\$Hz
	BINOM3/LLN0\$eTI
BINOM3/LLN0\$eTI MMTR1\$ST\$DmdWh	
BINOM3/LLN0\$eTI MMTR1\$ST\$SupVArh	
BINOM3/LLN0\$eTI MMTR1\$ST\$SupWh	
BINOM3/LLN0\$tsInd	BINOM3/LLN0\$ tsIND GGIO1\$ST\$Ind1
	BINOM3/LLN0\$ tsIND GGIO1\$ST\$Ind2
	BINOM3/LLN0\$ tsIND GGIO1\$ST\$Ind3
	BINOM3/LLN0\$ tsIND GGIO1\$ST\$Ind4
	BINOM3/LLN0\$ tsIND GGIO1\$ST\$Ind5
	BINOM3/LLN0\$ tsIND GGIO1\$ST\$Ind6
	BINOM3/LLN0\$ tsIND GGIO1\$ST\$Ind7

	BINOM3/LLN0\$ tsIND GGIO1\$ST\$Ind8 BINOM3/LLN0\$ tsIND GGIO1\$ST\$Ind9 BINOM3/LLN0\$ tsIND GGIO1\$ST\$Ind10 BINOM3/LLN0\$ tsIND GGIO1\$ST\$Ind11 BINOM3/LLN0\$ tsIND GGIO1\$ST\$Ind12 BINOM3/LLN0\$ tsIND GGIO1\$ST\$Ind13 BINOM3/LLN0\$ tsIND GGIO1\$ST\$Ind14 BINOM3/LLN0\$ tsIND GGIO1\$ST\$Ind15 BINOM3/LLN0\$ tsIND GGIO1\$ST\$Ind16
BINOM3/LLN0\$sysTI	BINOM3/LLN0\$sysTI MSQI\$MX\$SeqA BINOM3/LLN0\$sysTI MSQI\$MX\$SeqV
BINOM3/LLN0\$hTI	BINOM3/LLN0\$hTI MHA11\$MX\$HA\$phsAHar BINOM3/LLN0\$hTI MHA11\$MX\$HA\$phsBHar BINOM3/LLN0\$hTI MHA11\$MX\$HA\$phsCHar BINOM3/LLN0\$hTI MHA11\$MX\$HPhV\$phsAHar BINOM3/LLN0\$hTI MHA11\$MX\$HPhV\$phsBHar BINOM3/LLN0\$hTI MHA11\$MX\$HPhV\$phsCHar BINOM3/LLN0\$hTI MHA11\$MX\$HW\$phsAHar BINOM3/LLN0\$hTI MHA11\$MX\$HW\$phsBHar BINOM3/LLN0\$hTI MHA11\$MX\$HW\$phsCHar BINOM3/LLN0\$hTI MHA11\$MX\$HVAr\$phsAHar BINOM3/LLN0\$hTI MHA11\$MX\$HVAr\$phsBHar BINOM3/LLN0\$hTI MHA11\$MX\$HVAr\$phsCHar BINOM3/LLN0\$hTI MHA11\$MX\$HVA\$phsAHar BINOM3/LLN0\$hTI MHA11\$MX\$HVA\$phsBHar BINOM3/LLN0\$hTI MHA11\$MX\$HVA\$phsCHar
BINOM3/LLN0\$aTI	BINOM3/LLN0\$aTI QVDV1\$MX\$PhVDevPs\$phsA BINOM3/LLN0\$aTI QVDV1\$MX\$PhVDevPs\$phsB BINOM3/LLN0\$aTI QVDV1\$MX\$PhVDevPs\$phsC BINOM3/LLN0\$aTI QVDV1\$MX\$PhVDevNg\$phsA BINOM3/LLN0\$aTI QVDV1\$MX\$PhVDevNg\$phsB BINOM3/LLN0\$aTI QVDV1\$MX\$PhVDevNg\$phsC BINOM3/LLN0\$aTI QVDV1\$MX\$PPVDevPs\$phsAB BINOM3/LLN0\$aTI QVDV1\$MX\$PPVDevPs\$phsBC BINOM3/LLN0\$aTI QVDV1\$MX\$PPVDevPs\$phsCA BINOM3/LLN0\$aTI QVDV1\$MX\$PPVDevNg\$phsAB BINOM3/LLN0\$aTI QVDV1\$MX\$PPVDevNg\$phsBC BINOM3/LLN0\$aTI QVDV1\$MX\$PPVDevNg\$phsCA BINOM3/LLN0\$aTI QVDV1\$MX\$PhVHCff\$phsA BINOM3/LLN0\$aTI QVDV1\$MX\$PhVHCff\$phsB BINOM3/LLN0\$aTI QVDV1\$MX\$PhVHCff\$phsC BINOM3/LLN0\$aTI QVDV1\$MX\$DQ0Imbff\$c1 BINOM3/LLN0\$aTI QVDV1\$MX\$DQ0Imbff\$c2 BINOM3/LLN0\$aTI QVDV1\$MX\$DQ0Imbff\$c3 BINOM3/LLN0\$aTI QVEV1\$MX\$VDipNum BINOM3/LLN0\$aTI QVEV1\$MX\$VDipTms BINOM3/LLN0\$aTI QVEV1\$MX\$VDipVal BINOM3/LLN0\$aTI QVEV1\$MX\$VSwellNum BINOM3/LLN0\$aTI QVEV1\$MX\$VSwellTms BINOM3/LLN0\$aTI QVEV1\$MX\$VSwellCff BINOM3/LLN0\$aTI QVEV1\$MX\$VIntrNum BINOM3/LLN0\$aTI QVEV1\$MX\$VIntrTms BINOM3/LLN0\$aTI QVEV1\$MX\$VIntrVal BINOM3/LLN0\$aTI QVEV1\$ST\$DipStr BINOM3/LLN0\$aTI QVEV1\$ST\$SwellStr BINOM3/LLN0\$aTI QVEV1\$ST\$IntrStr

Таблица 4.6 – Reporting model

Item	Value/Comments
Predefined RCBs in ICD file	Number of RCB instances = 1 (non-indexed RCBs)
Support of trigger conditions	
Integrity	Supported
Data change	Supported
Data update	Supported
Quality change	Supported
General interrogation	Supported
Support of optional fields	
Sequence number	Supported, default = FALSE
Report time-stamp	Supported, default = FALSE
Reason for inclusion	Supported, default = FALSE
Dataset name	Supported, default = FALSE
Data reference	Supported, default = FALSE
Buffer overflow	Supported, default = FALSE
EntryID	Supported, default = FALSE
Conf-rev	Supported, default = FALSE
Segmentation	Not supported
Sending of segmented reports	Not supported
EntryID	Supported
Buffer size	Not supported

Таблица 4.7 – Control model

Item	Value/Comments
Control models supported	
Status only	Supported
Direct with normal security	Supported
Direct with enhanced security	Not supported
SBO with normal security	Not supported
SBO with enhanced security	Supported
Time activated operate (operTm)	Not supported
Test mode	Not supported
Check conditions	Supported
Operate many	Not supported
Pulse configuration	Not supported
Service error types:	Supported
instance-not-available	Supported
access-violation	Not supported
parameter-value-inappropriate	Not supported
instance-locked-by-another-client	Not supported
failed-due-to-server-constraint	Not supported
generic-error	Not supported

Таблица.4.8 – GOOSE Publisher model

Maximum number of supported GOOSE data sets	8 (dynamic), configurable
Maximum data change detection delay	8 ms @ 60Hz/10 ms @ 50Hz
Initial retransmission interval	Configurable, from 4ms to 60 sec
Maximum retransmission interval	Configurable, from 4ms to 60 sec
Publisher retransmission strategy	Double previous retransmission interval
Declared message timeAllowedToLive time	Twice the message retransmission interval



Таблица 4.9 – Time and time synchronization model

<b>Item</b>	<b>Value/Comments</b>
Time synchronization sources	SNTP, NMEA+1PPS
Number of SNTP servers supported	1
SNTP polling interval	Configurable
Allowable SNTP server response time	2 sec.
Number of SNTP connection retries for each server	1
Failed SNTP server reconnection time	The same SNTP polling interval