# **ANSI/ASHRAE Standard**

# Building Automation and Control Networks

## **BACnet MS/TP**

Supported version TOP Design Studio V1.4.9.35 or higher



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4. Cable table

We want to thank our customers who use the Touch Operation Panel.

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**3.** TOP communication setting

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Describes how to set the TOP communication.

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Describe the cable specifications required for connection.

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Refer to this section to check the data addresses which can communicate with an external device.



### 1. System configuration

The system configuration of TOP and "BACnet MS/TP" is as follows.

Series	СРИ	Link I/F	Communication method	System setting	Cable		
		RS-232C *Note 1)					
	BACnet MS/TP Device		BACnet MS/TP Device		RS-422	3. TOP communication	4. Cable table
		RS-485	setting				

\*Note 1) For RS-232C configuration, only 1:1 connection is possible.

#### ■ Connectable configuration

1:1 connection



#### • 1:N connection



#### • N : N connection





### 2. External device selection

■ Select a TOP model and a port, and then select an external device.

						-
PLC select [CO	M1]					
Filter : [All]		$\sim$		Search :		
				۲	Model 🔿 Vendor	r
Vendor		Model				
BACnet	^	BACne	t			
LS MECAPION						
HIGEN MOTOR Co., Ltd.						
EMOTIONTEK						
RKC Instrument Inc.						
HANYOUNG NUX						
SAMWONTECH						
SICK AG.						
FUJI Electric Co., Ltd.						
SANGJI Precision Co., Lt	d.					
DEVA						
OPTICON						
TOHNICHI						
GIDDIDOS & LEWIS MODOD	ontrol	1				
elect Device			Dack		Canc	cel
elect Device PLC Setting[ BACn	et ]		DOCK		Canc	cel
elect Device PLC Setting[ BACnd Alias Name :	et ] PLC1		Dack		Canc	cel
elect Device PLC Setting[ BACno Alias Name : Interface :	et ] PLC1 Serial	v	Ddck		Canc	cel
elect Device PLC Setting[ BACno Alias Name : Interface : Protocol : String Stud Mode :	et ] PLC1 Serial BACnet MS/TP	v v	DddA		Comm Manual	
elect Device PLC Setting[ BACne Alias Name : Interface : Protocol : String Save Mode :	et] PLC1 Serial BACnet MS/TP First HL HL	Change	Dduk		Comm Manual	
elect Device PLC Setting[ BACm Alias Name : Interface : Protocol : String Save Mode : Use Redundance Operate Condition : A	et ] PLC1 Serial BACnet MS/TP First HL HL	V V Change	Daux	(	Comm Manual	
elect Device PLC Setting[ BACn Alias Name : Interface : Protocol : String Save Mode : Use Redundance Operate Condition : Anange Condition :	et ] PLC1 Serial BACnet MS/TP First HL HL Y ID ~ TimeOut	Change	nd)	(	Comm Manual	
elect Device PLC Setting[ BACn Alias Name : Interface : Protocol : String Save Mode : Use Redundance Operate Conditon : Change Condition :	et ] PLC1 Serial BACnet MS/TP First HL HL V ID V TimeOut Condition	Change	nd)		Comm Manual	
elect Device PLC Setting[ BACn. Alias Name : Interface : Protocol : String Save Mode : Use Redundance Operate Conditon : Change Condition : Primary Option	et ] PLC1 Serial BACnet MS/TP First HL HL y TimeOut Condition	Change 5 \$ (Seco	nd)		Comm Manual	
elect Device PLC Setting[ BACn Alias Name : Interface : Protocol : String Save Mode : Use Redundance Operate Condition : Change Condition : Primary Option • MS/TP Device Paramet	et ] PLC1 Serial BACnet MS/TP First HL HL Y Y TimeOut Condition ters	Change	nd)		Comm Manual	
elect Device PLC Setting[ BACn Alias Name : Interface : Protocol : String Save Mode : Use Redundanc Use Redundanc Derate Condition : Primary Option • MS/TP Device Paramet Nmax_info_frames	et ] PLC1 Serial BACnet MS/TP First HL HL V UD Condition iters 3 C C C C C C C C C C C C C	Change	nd)		Comm Manual	
elect Device PLC Setting[ BACn Alias Name : Interface : Protocol : String Save Mode : Use Redundanc Operate Condition : Primary Option • MS/IP Device Paramet Nmax_info_frames Nmax_master	et ] PLC1 Serial BACnet MS/TP First HL HL y D Condition ters 3 127 (C)	Change	nd)		Comm Manual	
elect Device PLC Setting[ BACn Alias Name : Interface : Protocol : String Save Mode : Use Redundanc Operate Condition : Primary Option • MS/TP Device Paramet Nmax_Info_frames Nmax_master Nretry_token	et ] PLC1 Serial BACnet MS/TP First HL HL V DD TimeOut Condition 127 1 Time (Condition)	Change	nd)		Comm Manual	
elect Device  PLC Setting[ BACn Alias Name : Interface : Protocol : String Save Mode : Use Redundance Operate Condition : Primary Option  • MS/TP Device Paramet Nmax_info_frames Nmax_master Nretry_token Tno_token	et ] PLC1 Serial BACnet MS/TP First HL HL V D Condition ters 3 127 1 500 500 500 500 1 P	Change	nd)		Comm Manual	
elect Device PLC Setting[ BACh Alias Name : Interface : Protocol : String Save Mode : Use Redundanc Operate Condition : Change Condition : Primary Option • MS/TP Device Paramet Nmax_master Nmax_master Nretry_token Tno_token Treply_timeout	et ] PLC1 Serial BACnet MS/TP First HL HL V DD V TimeOut Condition 127 500 500 300 120 130 13	Change	nd)		Comm Manual	
elect Device PLC Setting[ BACn Alias Name : Interface : Protocol : String Save Mode : Use Redundance Operate Condition : Change Condition : Primary Option • MS/TP Device Paramet Nmax_info_frames Nmax_master Nretry_token Tno_token Treply_timeout Tusage_timeout	et ] PLC1 Serial BACnet MS/IP First HL HL V V TimeOut Condition 127 1 500 100 100 100		nd)		Comm Manual	
elect Device PLC Setting[ BACn Alias Name : Interface : Protocol : String Save Mode : Use Redundanc Use Redundanc Use Redundanc Primary Option • MS/TP Device Paramet Nmax_info_frames Nmax_master Nretry_token Trop_token Treply_timeout Tusage_timeout • Device Addressing	et ]         PLC1           Serial         BACnet MS/TP           BACnet MS/TP         First HL HL           D         ~           TimeOut         Condition           1         ©           500         ©           500         ©           100         ©		nd)		Comm Manual	
elect Device  PLC Setting[ BACn- Alias Name : Interface : Protocol : String Save Mode : Use Redundance Use Redundance Use Redundance Primary Option  • MS/TP Device Paramet Nmax_info_frames Nmax_master Nretry_token Trop_token Trop_token Trusage_timeout • Device Addressing Network	at ]         PLC1           Serial         BACnet MS/IP           BACnet MS/IP         First HL HL           V         ImeOut           Condition         ImeOut           1         ImeOut           500         ImeOut           100         ImeOut           100         ImeOut		nd)		Comm Manual	

Settings			Contents			
ТОР	Model	Check the display and process of T	Check the display and process of TOP to select the touch model.			
External device	Vendor	Select the vendor of the external d	evice to be connected to TOP.			
		Select "BACnet".				
	PLC	Select the external device to be connected to the TOP.				
		Model	Interface	Protocol		
		BACnet	Serial	BACnet MS/TP		
		Please check the system configuration connect is a model whose system of the system of	ation in Chapter 1 to see if th can be configured.	ne external device you want to		



### 3. TOP communication setting

The communication can be set in TOP Design Studio or TOP system menu.

#### 3.1 Communication setting in TOP Design Studio

#### (1) Communication interface setting

- $\blacksquare [Project] \rightarrow [Property] \rightarrow [TOP Setting] \rightarrow [HMI Setup] \rightarrow [Use HMI Setup Check] \rightarrow [Edit] \rightarrow [Serial]$ 
  - Set the TOP communication interface in TOP Design Studio.

Project Option  Change HMI[H]  Add PLC [Δ]  Time Option Module Setting  Option Module Setting  FieldBus (0)  Field	Change PLC(C) Dek 2 Sync. Screen Option ion Screen Change 11 Setup Option ting 0 0 0 0 0 0 0 0 0 0 0 0 0	tte PLC[D] Unit Convert HmiSetup Global Lock & Touch	Project Style Splash PLC Buffer Sync. Initialization Edit
Control Panel	essage=0 orMessage=1 essage=1		
😵 System 🛛 🔤	Devices	Service	Option
PLC Security	Date/Time	Serial Port: Signal Level	COM1 • 422(4) • RS-485(2)
Ethernet	номі	Baud Rate: Data Bit: Stop Bit:	115200 ▼ 8 ▼ 1 ▼
Diagnostic	Ping	Parity Bit: Flow: Auto Search	None   Off  Loopback Test
Manager			Apply Cancel

Items	ТОР	External device	Remarks
Signal Level	RS-232C	RS-232C	
	RS-422/485	RS-422/485	
Baud Rate	115	200	
Data Bit	8		
Stop Bit			
Parity Bit	No	ne.	

Items	Description
Signal Level	Select the serial communication method between the TOP and an external device. (COM3 supports only RS-485.)
Baud Rate	Select the serial communication speed between the TOP and an external device.
Data Bit	Select the serial communication data bit between the TOP and an external device.
Stop Bit	Select the serial communication stop bit between the TOP and an external device.
Parity Bit	Select the serial communication parity bit check method between the TOP and an external device.



#### (2) Communication option setting

- [Project] → [Project properties] → [PLC settings > COM1 > PLC1: BACnet]
  - Set the options of the BACnet MS/TP communication driver in TOP Design Studio.

Project Option			×
Change HMI[H] E Add PL	C [A] TTT Change PLC[C] X Delete PLC[D]		
<ul> <li>TOP Setting</li> <li>TOP Setting</li> <li>SYS : RD 1520X</li> <li>Option Module Setting</li> <li>REID (0)</li> <li>REID (0)</li> <li>COM2 (0)</li> <li>COM2 (0)</li> <li>COM2 (0)</li> <li>COM2 (0)</li> <li>COM2 (0)</li> <li>USEDevice (0)</li> </ul>	PLC Setting[ BACnet ]         Alias Name : PLC1         Interface : Serial         Protocol : BACnet MS/TP         String Save Mode : First HL HL         Change         Operate Condition :         Imer Protocol :         Imer Protocol :         Alias Name :         Imer Protocol :         Imer Protocol :         Alias Name :         Imer Protocol :		oort Address mm Manual
		Apply	Close

\* The above settings are examples recommended by the company.

Items	Settings	Remarks
Interface	Select "Serial".	Refer to "2. External
Protocol	Select the communication protocol between the TOP and an external device.	device selection".

#### • MS/TP Device Parameters

Items	Settings	Remarks
N max_info_frames	Set the number of data communication before TOP delivers the token.	
N max_master	Enter the largest master node address.	
N retry_token	Set the number of token transfer retries.	
Tno_token	Set the time it takes to judge it as token loss.	
Treplry_timeout	Set the amount of time to wait for a response to a data request.	
Tusage_timeout	Set the minimum amount of time when a node must spend a token.	

#### Device Addressing

Items	Settings	Remarks
Network	Select the connection configuration of TOP and the external device.	
When Network is Loc	cal	
Slave MAC ID	Enter the node number of the slave.	
TOP MAC ID	Set the node number of TOP.	
When Network is Rep	mote	
Router Address	Enter the node number of a router.	
Dst Network Number	Enter the number of the network where the slave is located.	
Slave Address	Enter the address information of the slave.	
TOP MAC ID	Set the node number of TOP.	
Src Network Number	Enter the number of the network where TOP is located.	
TOP Address	Enter the address information of TOP.	



#### 3.2. Communication setting in TOP

\* This is a setting method when "Use HMI Setup" in the setting items in "3.1 TOP Design Studio" is not checked.

■ Touch the top of the TOP screen and drag it down. Touch "EXIT" in the pop-up window to go to the main screen.



#### (1) Communication interface setting

■ [Control Panel] → [Serial]

	Cor	ntrol Panel	×				
	🔯 System 🔤 Devi	Serial ×					
Run VNC Viewer Screen shot	PLC Security Date PLC Security Date Ethernet Serial H Diagnostic File Hanager P	Serial Port: COM1 - Signal Level O RS-232C O RS-422(4) • RS-485(2) Baud Rate: 115200 Data Bit: 8 Stop Bit: 1 Parity Bit: None Flow: Off Auto Search Loopback Test					
	[System]		se l				
Toprx – Topr	¢0800S	A 202	1-08-31 03:36:31 PM				
tems	ТОР	External device	Remarks				
ignal Level	RS-232C	RS-232C					
	RS-422/485	RS-422/485					
Baud Rate		115200					
Data Bit		8					
Stop Bit		1					
Parity Bit		None.					
tems	Description						
Signal Level	Select the serial communication method between the TOP and an external device. (COM3 supports only RS-485.)						
- Baud Rate	Select the serial communication speed between the TOP and an external device.						
Data Bit	Select the serial communication data bit b	between the TOP and an external device.					
Stop Bit	Select the serial communication stop bit b	etween the TOP and an external device.					
Parity Bit	Select the serial communication parity hit	check method between the TOP and an exte	Select the serial communication parity bit check method between the TOP and an external device				



#### (2) Communication option setting

■ [Control Panel] → [PLC]

	虎		PLC	×
		Driver(COM1)	PLC1(BACnet) -	
Bun	System	Interface	Serial 🔹	
		Protocol	BACnet MS/TP 🔹	
	PLC Sec	MS/TP Device Nmax_infc Nmax_mast	Parameters 3	
Viewer		Nretry to		
		The toker	500	
	Ethernet Se	Treply ti	300	
Sereen		Tusage ti	100	
shot	Diagnostic F Ma	Device Addre	Essing Local V	
	[System]	TOP MAC I		
TOPRX - TOPRXO	1800S		٨	2021-08-31 03:37:17 F
tems	Settings			Remarks
Interface	Select "Serial".			Refer to "2. External
Protocol	Select the commun	ication protocol betwe	een the TOP and an external device.	device selection".
MS/TP Device Parame	eters			
tems	Settings			Remarks
N max_info_frames	Set the number of a	data communication b	efore TOP delivers the token.	
N max_master	Enter the largest ma	aster node address.		
N retry_token	Set the number of t	token transfer retries.		
Tno_token	Set the time it takes	s to judge it as token	loss.	
Treplry_timeout	Set the amount of t	time to wait for a resp	onse to a data request.	
Tusage_timeout	Set the minimum a	mount of time when a	node must spend a token.	
Device Addressing				
tems	Settings			Remarks
Network	Select the connection	on configuration of TC	OP and the external device.	
When Network is Lo	ocal			-
Slave MAC ID	Enter the node num	ber of the slave.		

TOP MAC ID Set the node number of TOP.	When Network is Per	noto
	TOP MAC ID	Set the node number of TOP.

	mote	
Router Address	Enter the node number of a router.	
Dst Network Number	Enter the number of the network where the slave is located.	
Slave Address	Enter the address information of the slave.	
TOP MAC ID	Set the node number of TOP.	
Src Network Number	Enter the number of the network where TOP is located.	
TOP Address	Enter the address information of TOP.	



#### **3.3 Communication diagnostics**

■ Check the interface setting status between the TOP and an external device.

- Touch the top of the TOP screen and drag it down. Touch "EXIT" in the pop-up window to go to the main screen.
- Check that the settings of the connected ports in [Control Panel]  $\rightarrow$  [Serial] are the same as the settings of the external device.

Diagnosis of whether the port communication is normal or not

- Touch "Communication diagnostics" in [Control Panel]  $\rightarrow$  [PLC].

- Check whether communication is connected or not.

Communication	Communication setting normal
diagnostics succeeded	
Error message	Communication setting abnormal
	- Check the cable. TOP and external device settings. (Refer to Communication diagnostics sheet.)

■ Communication diagnostics sheet

- If there is a problem with the communication connection with an external terminal, please check the settings in the sheet below.

Items	Contents		Check		Remarks
System	How to connect the sys	stem	OK	NG	1 Custom configuration
configuration	Cable		OK	NG	1. System configuration
ТОР	Version		OK	NG	
	Communication port		OK	NG	
	Communication driver a	and protocol	OK	NG	
	Other detailed settings		OK	NG	
	Relative prefix	Project setting	OK	NG	
		Communication diagnostics	ОК	NG	2. External device selection 3. Communication setting
Serial Parameter		Transmission Speed	ОК	NG	
		Data Bit	OK	NG	
		Stop Bit	OK	NG	
		Parity Bit	OK	NG	
External device	CPU		OK	NG	
	Communication port		OK	NG	
	Protocol		OK	NG	
	Setup Prefix		OK	NG	
	Other detailed settings		OK	NG	
	Serial Parameter	Transmission Speed	ОК	NG	
		Data Bit	OK	NG	
		Stop Bit	OK	NG	
		Parity Bit	OK	NG	
	Check address range		ОК	NG	<u>5. Supported addresses</u> (For details, please refer to the PLC vendor's manual.)



### 4. Cable table

This chapter introduces a cable diagram for normal communication between the TOP and the corresponding device. (The cable diagrams in this section may differ from the external device vendor's recommendations.)

#### ■ RS-232C (1:1 connection)

COM1 ,	/ COM2				BACnet MS/TP Device
Pin	Signal	Pin	Cable connection	Signal	
arrangement <sup>*Note 1)</sup>	name	number		name	
15	CD	1			
$\left( \circ \circ \right)$	RD	2		SD	
	SD	3		RD	
6 9	DTR	4		DTR	
Based on	SG	5		SG	
communication	DSR	6		DSR	
cable connector	RTS	7		RTS	
front,	CTS	8		CTS	
D-SUB 9 Pin male (male, convex)		9			

\*Note 1) The pin arrangement is as seen from the connecting side of the cable connection connector.

#### ■ **RS-422** (1:1 connection)

COM1	/ COM2				BACnet MS/TP Device
Pin	Signal	Pin	Cable connection	Signal	
arrangement <sup>*Note 1)</sup>	name	number		name	
1 5	RDA(+)	1		SDA(+)	
$\left( \circ \circ \right)$		2	•	SDB(-)	
		3	•	RDA(+)	
6 9	RDB(-)	4	└─── <b>┥</b> │ <del>१</del> ────	RDB(-)	
Based on	SG	5		SG	
communication	SDA(+)	6	•		
cable connector		7			
front,		8			
(male, convex)	SDB(-)	9			

\*Note 1) The pin arrangement is as seen from the connecting side of the cable connection connector.

#### ■ **RS-485** (1:1 connection)

COM1 ,	/ COM2				BACnet MS/TP Device
Pin	Signal	Pin	Cable connection	Signal	
arrangement <sup>*Note 1)</sup>	name	number		name	
1 5	RDA(+)	1	•	+	
$(\circ \circ)$		2		-	
		3			
6 9	RDB(-)	4	<b>├                                    </b>		
Based on	SG	5			
communication	SDA(+)	6	<b>↓</b>		
cable connector		7			
front,		8			
D-SUB 9 Pin male (male, convex)	SDB(-)	9			

\*Note 1) The pin arrangement is as seen from the connecting side of the cable connection connector.



#### ■ **RS-485** (1:1 connection)

COM3				BACnet MS/TP Device
Din arrangement	Signal	Cable connection	Signal	
Pin arrangement	name		name	
	+		SDA(+)	
0	-		SDB(-)	
DO SG	SG	•	RDA(+)	
)@]  -		•	RDB(-)	
			SG	
0				

#### ■ RS-422 (1:N connection)

TOP	Cable connection and signal	Device	Cable connection and signal	Device
Signal name	direction	Signal name	direction	Signal name
RDA(+)		SDA(+)		SDA(+)
RDB(-)		SDB(-)		SDB(-)
SDA(+)		RDA(+)		RDA(+)
SDB(-)		RDB(-)		RDB(-)
SG		SG		SG

#### **RS-485** (1 : N / N : N connection)

TOP	Cable connection and signal	Device	Cable connection and signal	Device
Signal name	direction	Signal name	direction	Signal name
RDA(+)	•	+		+
RDB(-)	•	-		-
SDA(+)	-•			
SDB(-)				
SG				



### 5. Supported addresses

Describes how to register data of BACnet devices in TOP Design Studio.

#### **※** Precautions when registering the address

- 1. You cannot use "`" in the name of the address.
- 2. The description field of the address shows [Object type, Instance number, Property].

#### How to use Import Address

Step 1. Execute "Import Address" among PLC setting items in TOP Design Studio.

Project Option		×
Change HMI[ <u>H</u> ] E Add	PLC [A] TIL Change PLC[C] Delete PLC[D]	
<ul> <li>TOP Setting</li> <li>SYS : RD1010S</li> <li>Option Module Setting</li> <li>FieldBus (0)</li> <li>FieldBus (0)</li> <li>FieldBus (0)</li> <li>FieldBus (0)</li> <li>FieldBus (0)</li> <li>FieldBus (0)</li> <li>Ethernet (0)</li> <li>USBDevice (0)</li> </ul>	PLC Setting[ BACnet ]         Alas Name:         Interface:         String Save Mode:         Protocol:         Derate Condition:         AND         Operate Condition:         Interface:         Conge Condition:         Interface:         Conge Condition:         Interface:         Conge Condition:         Interface:         Operate Condition:         Primary Option         • MS/IP Device Parameters         Nmax_info_frames         Imax_info_frames         Imax_info_fra	Import Address Comm Manual
		Apply Close

**Step 2.**After registering the data of the other party's device, start drawing.

(The picture below is an example of registering the current value of the Analog Output object whose instance number is 1 with the name "Sensor\_01".)

		GIELK AUUIC	33		
		Ch			
		Check Add	Iress[C] Delete En	ror Data[T]	
arch					
Keyword :	Dat	a Type: ALL		✓ Sea	arch[S]
alect (lincolect[1]			AddIAL	DeleteIDI	EditfEl
iect / ofiselect[c]	Import address edit		Add[A]	Delete[D]	contes
g Name			n		
	Address name :				
	Instance number :	AL	-		
	Property :	Oh in alt day tilles			
	rioperty .	ObjectIdentifier ObjectName	^		
		PresentValue			
		Description DeviceType			
		StatusFlags EventState			
		Reliability OutOfService			
		UpdateInterval Units			
		MinPresValue MaxPresValue			
		Resolution			
	Address Information :	AI.00000.PresentVa	alue		
		ОК	Cancel		



#### ■Object and property supported in TOP Design Studio

# Character String data type supports up to 80 characters. Character String data type supports ANSI X3.4 encoding method.

OBJECT TYPE	PROPERTY	Remarks
	ObjectIdentifier	
	ObjectName	
	ObjectType	
	PresentValue	
	Description	
	DeviceType	
	StatusFlags	
	EventState	
	Reliablity	
	OutOfService	
	UpdateInterval	
	Units	
Analog Input	MinPresValue	
	MaxPresValue	
	Resolution	
	COVIncrement	
	TimeDelay	
	NotificationClass	
	HighLimit	
	LowLimit	
	Deadband	
	LimitEnable	
	EventEnable	
	AckedTransition	
	NotifyType	
	EventTimeStamps	
	ProfileName	
	ObjectIdentifier	
	ObjectName	
	ObjectType	
	PresentValue	
	Description	
	DeviceType	
	StatusFlags	
	EventState	
	Reliablity	
	OutOfService	
Analog Output		
(AO)	Units	
	MinPresValue	
	MaxPresValue	
	Resolution	
	PriorityArray	
	NotificationClass	
	LOWLINIL	1

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OBJECT TYPE	PROPERTY	Remarks
	Deadband	
	LimitEnable	
	EventEnable	
	AckedTransition	
	NotifyType	
	EventTimeStamps	
	ProfileName	
	ObjectIdentifier	
	ObjectName	
	ObjectType	
	PresentValue	
	Description	
	StatusFlags	
	EventState	
	Reliablity	
	PriorityArray	
(AV)		
	Notification Class	
	LowLimit	
	AckedTransition	
	NotifyType	
	EventTimeStamps	
	ProfileName	
	ObjectIdentifier	
	ObjectName	
	ObjectType	
	PresentValue	
	Description	
	DeviceType	
	StatusFlags	
	EventState	
	Reliablity	
	OutOfService	
Binary Input	Polarity	
(BI)	InactiveText	
	ActiveText	
	ChangeOfStateTime	
	ChangeOfStateCount	
	TimeOfStateCountReset	
	ElapsedActiveTime	
	TimeOfActiveTimeReset	
	TimeDelay	
	NotificationClass	
	AlarmValue	
	EventEnable	

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OBJECT TYPE	PROPERTY	Remarks
	AckedTransition	
	NotifyType	
	EventTimeStamps	
	ProfileName	
	ObjectIdentifier	
	ObjectName	
	ObjectType	
	PresentValue	
	Description	
	DeviceType	
	StatusFlags	
	EventState	
	Reliablity	
	OutOfService	
	Polarity	
	InactiveText	
	ActiveText	
	ChangeOfStateTime	
Binary Output	ChangeOfStateCount	
(BO)	TimeOfStateCountReset	
	ElapsedActiveTime	
	TimeOfActiveTimeReset	
	MinimumOffTime	
	MinimumOnTime	
	PriorityArray	
	RelinquishDefault	
	TimeDelay	
	NotificationClass	
	FeedbackValue	
	EventEnable	
	AckedTransition	
	NotifyType	
	EventTimeStamps	
	ProfileName	
	ObjectIdentifier	
	ObjectName	
	ObjectType	
	PresentValue	
	Description	
	StatusFlags	
	EventState	
	Reliablity	
Binary Value	OutOfService	
(BV)	InactiveText	
(BV)	ActiveText	
	ChangeOfStateTime	
	ChangeOfStateCount	
	TimeOfStateCountReset	
	ElapsedActiveTime	
	TimeOfActiveTimeReset	
	MinimumOffTime	
	MinimumOnTime	
	PriorityArray	





OBJECT TYPE	PROPERTY	Remarks
Object The	RelinquishDefault	
	TimeDelay	
	NotificationClass	
	AlarmValue	
	EventEnable	
	AckedTransition	
	NotifyType	
	EventTimeStamps	
	ProfileName	
	Object/dentifier	
	ObjectName	
Calendar	ObjectType	
(CD)	Present/alue	
	Datalict	
	Object/dentifier	
	ObjectName	
Command	ObjectTurp	
Command	Drecent/alua	
	Allwhitessuccessful	
	Objectidentiller	
	Objectivame	
	Object Type	
	Systemstatus	
	VendoriName	
	ModelName	
	FirmwareRevision	
	ApplicationSoftwareVersion	
Divice	Protocolversion	
(DV)	ProtocolRevision	
	MaxAPDUlengthAccepted	
	SegmentationSupported	
	Apdulimeout	
	NumberOfAPDUretries	
	DataBaseRevision	
	MaxSegmentsAccepted	
	DaylightSavingsStatus	
	ApduSegmentTimeout	
	BackupFailureTimeout	
	ObjectIdentifier	
	ObjectName	
	Object lype	
	Description	
	EventType	
Event Enrollment	NotifyType	
(ER)	EventParameter	
	ObjectPropertyReference	
	EventState	
	EventEnable	
	AckedTransitions	
	NotificationClass	
	Recipient	

TOP 대한민국대표 터치패널 Touch Operation Panel



OBJECT TYPE	PROPERTY	Remarks
	ProcessIdentifier	
	Priority	
	IssueConfirmedNotification	
	Object/dentifier	
	ObjectName	
	ObjectType	
File	FileType	
(FI)	FileSize	
	Archive	
	ReadOnly	
	Object/dentifier	
	ObjectName	
Group	ObjectType	
(GR)	Description	
	ListOfGounMembers	
	ObjectIdentifier	
	ObjectName	
Loop	ObjectType	
(LP)	Present//alue	
	Description	
	Object/dentifier	
	ObjectName	
	ObjectType	
	PresentValue	
Life Safety Point	TrackingValue	
(LSP)	EventState	
(201)	Beliability	
	OutOfService	
	Mode	
	Silenced	
	Object/dentifier	
	ObjectName	
	ObjectType	
	PresentValue	
Life Safety Zone	TrackingValue	
(LSZ)	EventState	
	Reliability	
	OutOfService	
	Mode	
	Silenced	
	Object/dentifier	
	ObjectName	
	ObjectType	
	Drecent/alue	
Multi State Input (MI)		
	OutOfService	
	Reliability	
	NumberofStates	
	TimeDelay	
	NotifyClass	
	NotifyType	
	ProfileName	

TOP 대한민국대표 터치패널 Touch Operation Panel Remarks



	ObjectName	
	ObjectType	
	PresentValue	
	EventState	
Multi State Output	OutOfService	
(MO)	Reliability	
	NumberofStates	
	TimeDelay	
	NotifyClass	
	NotifyType	
	ProfileName	
	ObjectIdentifier	
	ObjectName	
	ObjectType	
	PresentValue	
	EventState	
Multi State Value	OutOfService	
(MV)	Reliability	
	NumberofStates	
	TimeDelay	
	NotifyClass	
	NotifyType	
	ProfileName	
	ObjectIdentifier	
Notification Class	ObjectName	
(NC)	ObjectType	
	NotifyClass	
	ObjectIdentifier	
	ObjectName	
	ObjectType	
	Description	
	ProgramState	
Program	ProgramChange	
(PG)	ReasonForHalt	
	DescriptionOfHalt	
	ProgramLocation	-
	InstanceOf	
	StatusFlags	
	Reliability	
	OutOfService	
	ObjectIdentifier	
Schedule	ObjectName	
(SC)	ObjectType	
	PriorityForWriting	
	ObjectIdentifier	
Trend Log (TL)	ObjectName	
	ObjectType	
	StopWhenFull	
	ButterSize	
		<u> </u>

PROPERTY

ObjectIdentifier

OBJECT TYPE