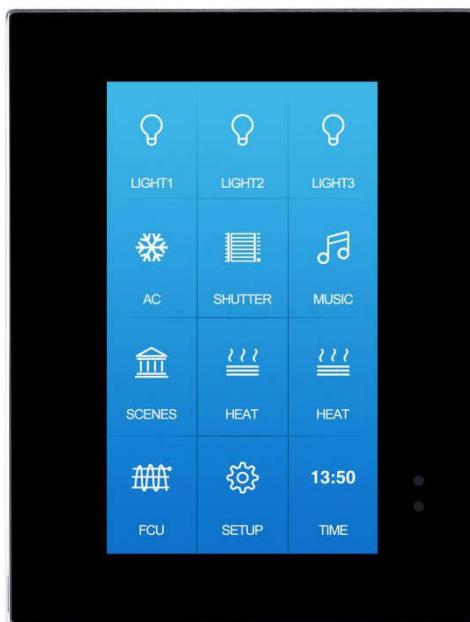




User Manual

MPTLC43 Controller(V1.0)

M/MPTLC43.1



www.hdlautomation.com

APPLICATION PROGRAM INFORMATION

HDL- MPTL43 controller(1.0)

Version: V1.0

KNX/EIB-BUS

Document Version: 1.1, Date: 26. dec.2017

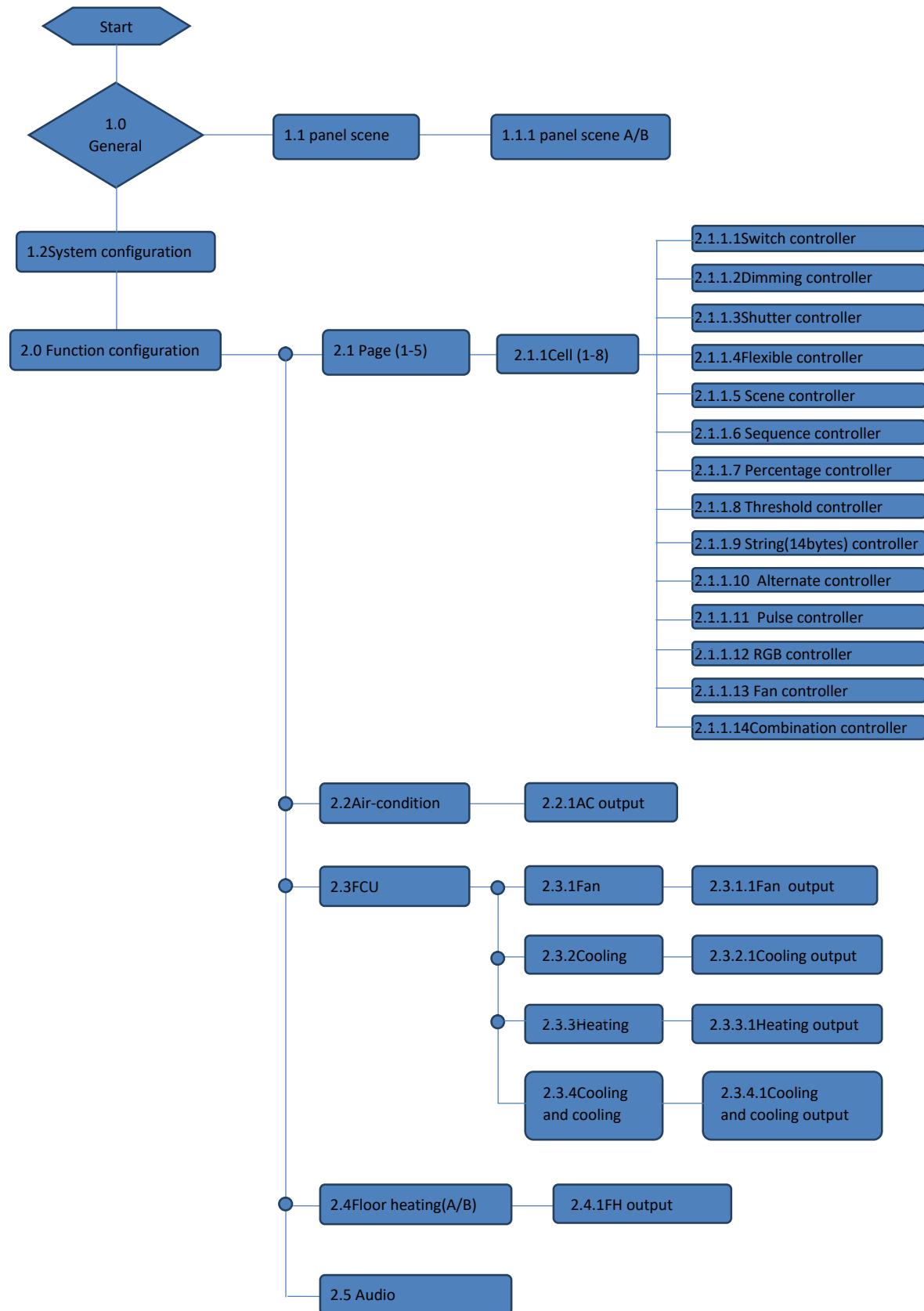
Document History			
Version	Date	Comments	Author (English name)
1.0	17.8.2015	First issue	
1.0	26.12.2017		

- A. General description
- B. Function overview flowchart
- C. Function description
- D. Communication objects

A.

HDL-M/MPTLC43.1 is a KNX multi-function touch LCD panel, The panel can control the lighting, AC, FCU, music, floor heating. This manual contains the programming of this device.

B.



C.

1.0_General

1.1.5 M/MPTLC43.1 > General

General	System operation after a delay(1..255s)	2
Panel scene	Read objects after bus recovery	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
System configuration	Heartbeat telegram	Send value "1/0" inverted cyclically
Function configuration	-Telegram is sent time interval(1..65535s)	5
Page 1	Active infrared function via EIB	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
-->Cell 1	Infrared default status	<input checked="" type="radio"/> Inactive <input type="radio"/> Active
-->Cell 2	Lock the screen via EIB	"0"-Lock,"1"-Unlock
-->Cell 3	Change brightness via EIB	<input type="radio"/> No <input checked="" type="radio"/> Yes
-->Cell 4	Enable slave clock	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
-->Cell 5	Temperature show mode	<input checked="" type="radio"/> Degrees Celsius <input type="radio"/> Degrees Fahrenheit
-->Cell 6	Internal temperature probe	-2.5C
-->Cell 7	Temperature correction value(-5C..+5C)	0
-->Cell 8	Local temperature report(In range)	<input type="radio"/> No <input checked="" type="radio"/> Yes
-->Cell 9	-Temperature>=Threshold1(-30C..+99C)	0
Group Objects		
Parameter		

No.	ETS-Parameter	Range (default)	Description
1	System delay(1..255) after recovery	1...255	Set the delay time can be operation after power on.
2	Read objects after bus recovery	-Enable -Disable	Enable/disable to read objects when power on again.
3	Heartbeat telegram	- (Disable) - Send value "0" cyclically - Send value "1" cyclically - Send value "1/0" cyclically	Defines which telegram should be sent to the bus. Disable: cannot send the heartbeat telegram Send value "0" cyclically: will send the telegram value "1" for heartbeat cyclically Send value "1" cyclically: will send the telegram value "1" for heartbeat cyclically Send value "1/0" inverted cyclically: will send the telegram value "1/0" for heartbeat inverted cyclically. If send the telegram value "1" at first, and then will send the telegram value "0"
4	-Telegram is send time interval(1..65535s)	1...(5)...65535	Set the interval time for sending the telegram to the bus.
5	Active infrared function via EIB	No this function.	
6	Infrared default status		
7	Lock the screen via EIB	-Disable - "1"-Lock,"0"-Unlock - "0"-Lock,"1"-Unlock	Set the function of the lock screen
8	Change brightness via EIB	-No -Yes	Whether change the brightness via EIB.

9	Enable slave clock	-Enable -Disable	
10	Temperature show mode	-Degrees Celsius -Degrees Fahrenheit	<i>Set the temperature mode.</i>
<i>Internal temperature probe</i>			
11	Temperature correction value (-5C..+5C)	- -5C..+5C	<i>Set the correction value of temperature, it Used to correct the mistake of testing temperature and real temperature.</i>
12	Local temperature report (In range)	-No -Yes	<i>Yes: it will report to the bus when the local temperature in the setting range. No: it doesn't report to the bus.</i>
13	-Temperature>=Threshold1(-30C...99C)	-30C...99C	
14	-Temperature<=Threshold1(-30C...99C)	-30C...99C	
15	- Temperature report mode	-Report when changed -Report cyclic	<i>Set the report mode when local temperature report to the bus.</i>
16	-> temperature report of check period(1...65535s)	- 1...65535	
17	Enable buttons triggered via EIB	-Enable -Disable	<i>Enable/Disable buttons triggered via EIB. '1"0"1/0': the button will triggered when the panel receive the setting telegram .</i>
18	--The button trigger condition	'1'-Trigger '0'-Trigger '1/0'-Trigger	
19	Panel scene	-Enable -Disable	<i>Enable/Disable panel scene function.</i>

1.1_Panel scene																		
1.1.5 M/MPTLC43.1 > Panel scene <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">General</td> <td style="width: 40%;">Scene A</td> <td style="width: 40%; text-align: right;"><input type="radio"/> Disable <input checked="" type="radio"/> Enable</td> </tr> <tr> <td>Panel scene</td> <td>Scene B</td> <td style="text-align: right;"><input type="radio"/> Disable <input checked="" type="radio"/> Enable</td> </tr> <tr> <td>--> Panel scene A</td> <td colspan="2"></td> </tr> <tr> <td>--> Panel scene B</td> <td colspan="2"></td> </tr> <tr> <td>System configuration</td> <td colspan="2"></td> </tr> </table>				General	Scene A	<input type="radio"/> Disable <input checked="" type="radio"/> Enable	Panel scene	Scene B	<input type="radio"/> Disable <input checked="" type="radio"/> Enable	--> Panel scene A			--> Panel scene B			System configuration		
General	Scene A	<input type="radio"/> Disable <input checked="" type="radio"/> Enable																
Panel scene	Scene B	<input type="radio"/> Disable <input checked="" type="radio"/> Enable																
--> Panel scene A																		
--> Panel scene B																		
System configuration																		
No.	ETS-Parameter	Range (default)	Description															
1	Scene A	-Enable	<i>Enable/Disable panel scene A/B function. As below, take scene A as an example</i>															
	Scene B	-Disable																
1.1_Panel Scene A																		

1.1.5 M/MPTLC43.1 > --> Panel scene A			
No.	ETS-Parameter	Range (default)	Description
1	Output assigned to (Scene1..64)	- invalid - Scene 01...Scene64	<i>Set the scene of output.</i>
2	1 bit object control	-Enable -(Disable)	<i>Enable/disable for 1 bit object control</i>
3	--1 bit object control	-(Invalid) -“1”-Trigger -“0”-Trigger -“0/1”-Trigger	<i>Set the telegram value for 1 bit object control</i> <i>-“1”-Trigger: if receives telegram value “1”, will trigger the object control</i> <i>- “0”-Trigger: if receives telegram value “0”, will trigger the object value</i> <i>-“0/1”-Trigger: if receives telegram value “0/1”, will trigger the object value</i>
4	--1 bit object save	-(Invalid) -“1”-Save -“0”-Save -“0/1”-Save	<i>Save the object.</i> <i>Set the telegram value for 1 bit object save</i> <i>-“1”-Trigger: if receives telegram value “1”, will trigger the object save</i> <i>- “0”-Trigger: if receives telegram value “0”, will trigger the object save</i> <i>-“0/1”-Trigger: if receives telegram value “0/1”, will trigger the object save</i>
5	Entry delay time (0...255s)	(0)...255s	<i>Set the delay time for entry the scene</i>
<i>Output object settings</i>			
6	Output object <1> type	-(Invalid) -1 bit value -1 byte value (0...100%)	<i>Set the value type for output object</i>

		-1 byte value (0...255) -2 byte value (Float) -2 byte value (0...65535) -3 byte value (RGB)	
7	--Output objects 1 value (1 bit)	-(0) -1 -1/0	Set the telegram value for output objects
8	--Output objects 1 value (1 byte)	(0)...100%	Set the percentage for output objects
9	--Output objects 1 value (1 byte)	(0)...255	Set the parameter for output objects
10	--Scaling (2byte value(Float))	-0.01 -0.1 (-1.0)	Set the parameter for scaling
11	--Output objects 1 value (2 byte)	(0)...255	Set the parameter for output objects
12	--Output objects 1 value (2 byte)	(0)...255	Set the parameter for output objects
13	--Output objects 1 value (3 byte:R)	0...(255)	Set the parameter for 3byte: R
14	--Output objects 1 value (3 byte:G)	0...(255)	Set the parameter for 3byte: G
15	--Output objects 1 value (3 byte:B)	0...(255)	Set the parameter for 3byte: B
<i>Output object 2-10 are same to objects 1.</i>			

1.2 System configuration

1.1.5 M/MPTLC43.1 > System configuration

No.	ETS-Parameter	Range (default)	Description
Screen brightness setting			
1	Brightness	-Level(00%) ... -Level(100%)	Set the brightness of screen
2	Brightness adjust	-Brightness not change	Whether change the screen brightness

		-Darken after a certain time	<i>when standby.</i> <i>When select darken after a certain time, You should set the brightness level and time.</i>
3	--Auto darken brightness	-Level(00%) ... -Level(100%)	
4	--Time(3..255s)	-3..255s	
5	Screensaver enable	-Enable -Disable	<i>Whether use screensaver function.</i> <i>Enable: it will jump to screensaver page after 5 seconds no operation.</i>
6	--Screensaver after a delay(3..255s)	-3..255s	<i>Enable: it will Screensaver after the setting time no operation.</i>
7	Touch sound	-Enable -Disable	<i>When operation the panel whether need the sound.</i>
8	Sleep enable	-Enable -Disable	<i>Enable/Disable the sleep function.</i>
9	--Sleep after a delay(3..255s)	-3..255s	<i>Enable: it will sleep after the setting time no operation.</i>
Lock settings			
10	Unlock back to	-Homepage -Previous page	
11	Lock automatically	-Disable -Auto lock after a certain time	
12	--Lock after a delay(3..255s)	-3..255s	<i>Set the time for auto lock</i>
13	Unlock protected by password	-No -Yes	<i>Whether use the password after standby.</i>
Security protect			
14	Password (1)	-0...9	<i>Set the password.</i>
15	Password (2)		
16	Password (3)		
17	Password (4)		
18	Proximity sensor default active status	-Inactive -Active	<i>Set the status of proximity sensor.</i>
19	Proximity sensor sensitive	-1%...100%	<i>Set the proximity sensor sensitive. the bigger value the more sensitive.</i>
20	Recovery brightness	-Enable -Disable	<i>Whether recovery brightness when proximity the panel.</i>
21	Enable send to bus	-No -Yes	<i>whether send to bus when proximity the panel or darkness.</i>
22	Send to bus	-Invalid -Toggle -ON -OFF	<i>It will sent the statues to bus.</i>
23	-> send to bus after delay time	-Invalid -Toggle -ON -OFF	<i>It will send the status to the bus again after delay time</i>
24	->Delay time(1..255s)	-1..255s	

1.1.5 M/MPTLC43.1 > Function configuration

General	Page 1	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
Panel scene	Page 2	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
-->Panel scene A	Page 3	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
-->Panel scene B	Page 4	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
System configuration	Page 5	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
Function configuration	AC	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
	FCU	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
Page 1	Heating A	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
-->Cell 1	Heating B	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
-->Cell 2	Audio	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
-->Cell 4	Label display mode	Image
-->Cell 5	Display time	<input type="radio"/> No <input checked="" type="radio"/> Yes
-->Cell 6	Display temperature	Internal Temperature probe
-->Cell 7		

No.	ETS-Parameter	Range (default)	Description
1	Homepage number setting	-Only one page -Two pages	Select the number of home page Settings
2	Homepage 1 setting	-Home page 1	Set the home page corresponds to which function
3	Homepage 2 setting	-Home page 2 -Page 1...Page 5 -AC page -FCU page -Heating A page -Heating B page -Audio page	
4	Function page 1... Function page 10	-Home page 1 -Home page 2 -Page 1...Page 5 -AC page -FCU page -Heating A page -Heating B page -Audio page	Set the function page corresponds to which function
5	->page setting after bus recovery	-Invalid -Recover -Home page 1 -Home page 2 -Page 1...Page 5 -AC page -FCU page -Heating A page -Heating B page -Audio page	Set the page displayed after the bus response
6	Page 1...Page5	-Disable -Enable	Enable / Disable the page function. If enable, the panel will be displayed, otherwise it will not be displayed.
7	AC		
8	FCU		
9	Heating A		

10	Heating B		
11	Audio		
12	Label display mode	-Test -Image -Nome	Set the label display.
13	Display time	-No -Yes	Whether display the time on the home page.
14	Display temperature	-No -Internal temperature probe -External	Set the source of temperature.

2.1_Page 1-5

No.	ETS-Parameter	Range (default)	Description
1	Label	(14 character allowed)	This label will displayed on the home page .
2	Icon source	-Preset -User-define	Set the icon source.
3	--Icon	-Menu page 1 ... -Idle 2	Set the icon of each page. (preset)

4	Cell 1....Cell8	-Disable -Enable	<i>There are 8 cells on each page, here, you can set the function of the cell disable or enable.</i>
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The parameters are same of page 1 to 5, take page 1 as an example.

2.1.1 cell (all cell's function are same)

2.1.1.1 Switch controller

No.	ETS-Parameter	Range (default)	Description
1	Function	- (Switch controller) - Dimming controller - Shutter controller - Flexible controller - Scene controller - Sequence controller - Percentage controller - Threshold controller - String(14 bytes) controller - Alternate controller - Pulse controller - RGB controller - Fan controller - Combination controller	<i>Set the function of cell 1.</i>
2	Label	(14 character allowed)	<i>This label will displayed on the page 1.</i>
3	Icon source	- Preset - User-define	<i>Set the icon source.</i>
4	Long button time after	-0.2-5s	<i>How long time as a long button. Long press the button or short press the button can control the different objects. This parameter distinguish between</i>

			<i>longpress and short press</i>
5	Short press action	-Invalid -Toggle -ON -OFF	Set the function of short press action. When short press the cell, Toggle: It will invert the last time's value then send it out. ON: it will send telegram 1 to the bus, then control the object. OFF: it will send telegram 0 to the bus, then control the object.
6	Long press action	-Invalid -Toggle -ON -OFF	Set the function of long press action. When long press the cell, Toggle: It will invert the last time's value then send it out. ON: it will send telegram 1 to the bus, then control the object. OFF: it will send telegram 0 to the bus, then control the object.
7	-Show icon	-No -Yes	<i>Whether show icon of the cell.</i>
8	--Icon for 'On' status	-Menu page 1 ... -Idle 2	<i>Set the icon of the Cell. (preset)</i>
9	--Icon for 'Off'		
10	Delay for button	-No -Yes	<i>Whether delay control the object when press the button.</i>
11	--Delay for switch ON of short button(0...255s)	-0...255	<i>Set the delay time after control the button.</i>
12	--Delay for switch OFF of short button(0...255s)		
13	--Delay for switch ON of long button(0...255s)		
14	--Delay for switch OFF of long button(0...255s)		
15	Delay send another object	-Disable -Enable	<i>This cell can be set another object if you select enable.</i>
16	--Delay send for short button	-Disable -Enable	<i>Set the condition of delay send another object.</i>
17	--Delay send for long button	-Disable -Enable	
18	--Delay send when button object value	-ON -OFF -ON/OFF	
19	--Delay send value:	-ON -OFF -ON/OFF -The same as object	
20	--Send after a delay(0...255s)	-0...255	
21	Status	-Local status -External from bus -Mutually exclusive display	<i>The status of cell 1.</i>
2.1.1.2 Dimming controller			

1.1.5 M/MPTLC43.1 > --> Cell 2

General	Function	Dimming controller
Panel scene	Label	Cell 2
--> Panel scene A	Icon source	<input checked="" type="radio"/> Preset <input type="radio"/> User-define
--> Panel scene B	Long button time after	1s
System configuration	Short press action	Toggle
Function configuration	Long press action	Dimming up
Page 1	-Dimming step	Step3 (25%)
--> Cell 1	Show icon	<input type="radio"/> No <input checked="" type="radio"/> Yes
--> Cell 2	--Icon for 'On' status	Light ON
--> Cell 3	--Icon for 'Off' status	Light OFF
--> Cell 4	--Icon for dim up	Dimming Up
--> Cell 5	--Icon for dim down	Dimming Down
--> Cell 6	Delay for switch ON of short button (0..255s)	0
--> Cell 7	Delay for switch OFF of short button (0..255s)	0
--> Cell 8	Delay send another object	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Page 2	Status	Local status
--> Cell 1		

No.	ETS-Parameter	Range (default)	Description
1	Label	(14 character allowed)	<i>This label will displayed on the page 1.</i>
2	Icon source	-Preset -User-define	<i>Set the icon source.</i>
3	Long button time after	-0.2-5s	<i>How long time as a long button. Long press the button or short press the button can control the different objects. This parameter distinguish between long press and short press</i>
4	Short press action	-Invalid -Toggle -ON -OFF	Set the function of short press action. When short press the cell, Toggle: It will invert the last time's value then send it out. ON: it will send telegram 1 to the bus, then control the object. OFF: it will send telegram 0 to the bus, then control the object.
5	Long press action	-Invalid -Dimming toggle -Dimming up -Dimming down	Set the function of long press action. When long press the cell, Dimming toggle: It will invert the last time's value then send it out. Dimming up: it will dim up the object. Dimming down: it will dim down the object.
6	-Dimming step	- (Step1 (100%)) -Step2 (50%) -Step3 (25%)	<i>Set the step of dimming.</i>

		-Step4 (12.5%) -Step5 (6.25%) -Step6 (3.13%) -Step7 (1.56%)	
7	-Show icon	-No -Yes	<i>Whether show icon of the cell.</i>
8	--Icon for 'On' status	-Menu page 1 ... -Idle 2	<i>Set the icon of the Cell. (preset)</i>
9	--Icon for 'Off'		
10	--Icon for dim up	-Menu page 1 ... -Idle 2	<i>Set the dim up/down icon of the Cell when press it. (preset)</i>
11	--Icon for dim down		
12	Delay for switch ON of short button(0...255s)	-0...255	<i>Set the delay time after control the button.</i>
13	Delay for switch OFF of short button(0...255s)		
14	Delay send another object	-Disable -Enable	<i>This cell can be set another object if you select enable.</i>
15	--Delay send for short button	-Disable -Enable	<i>Set the condition of delay send another object.</i>
16	--Delay send when button object value	-ON -OFF -ON/OFF	
17	--Delay send value:	-ON -OFF -ON/OFF -The same as object	
18	--Send after a delay(0...255s)	-0...255	
19	Status	-Local status -External from bus -Mutually exclusive display	<i>The status of cell21.</i>

2.1.1.3 Dimming controller

1.1.5 M/MPTLC43.1 > -->Cell 2

System configuration	Function	Shutter controller
Function configuration	Label	Cell 2
Page 1	Icon source	<input checked="" type="radio"/> Preset <input type="radio"/> User-define
-->Cell 1	Long button time after	1s
-->Cell 2	Short press action	Stepping->Decrease/Stop
-->Cell 3	Long press action	Moving->DOWN
-->Cell 4	-Auto stop	<input checked="" type="radio"/> No <input type="radio"/> Yes
-->Cell 5	Show icon	<input type="radio"/> No <input checked="" type="radio"/> Yes
-->Cell 6	--Icon for 'Up'	Shutter Up
-->Cell 7	--Icon for 'Down'	Shutter Down
-->Cell 8	--Icon for 'Increase'	Shutter Increase
-->Cell 9	--Icon for 'Decrease'	Shutter Decrease
Page 2	--Icon for 'open'	Shutter Open
-->Cell 1	--Icon for 'close'	Shutter Close

No.	ETS-Parameter	Range (default)	Description
1	Label	(14 character allowed)	<i>This label will displayed on the page 1.</i>
2	Icon source	-Preset -User-define	<i>Set the icon source.</i>
3	Long button time after	-0.2-5s	<i>How long time as a long button. Long press the button or short press the button can control the different objects. This parameter distinguish between long press and short press</i>
4	Short press action	-Invalid -Stepping->Increase/Stop - Stepping->Decrease/Stop -Stepping->Toggle/Stop -Moving->UP -Moving->DOWN -Moving->Toggle	<p>Invalid: no action when short press</p> <p>Stepping->Increase/Stop:when short press the button, it will increase/stop adjusting the angle of shutter</p> <p>Stepping-> Decrease/Stop:when short press the button, it will decrease/ stop adjusting the angle of shutter</p> <p>Stepping-> Toggle/Stop: when short press the button, it will toggle/ stop adjusting the angle of shutter</p> <p>Moving-> UP: when short press the button, it will it will send move up telegram, the position will be up.</p> <p>Moving-> Down: when short press the button, it will it will send move up telegram, the position will be up.</p> <p>Moving-> Toggle: when short press the</p>

			<i>button, it will send move up/down telegram, the position will be up/ down.</i>
5	Long press action	<ul style="list-style-type: none"> - (Invalid) - Stepping-> Increase/stop - Stepping-> Decrease/stop - Stepping-> Toggle/Stop - Moving-> Up - Moving-> Down - Moving-> Toggle - Press move-> UP, Release: stop - Press move-> Down, Release: stop - Press move-> Toggle, Release: stop 	<p>Invalid: no action when long press the button</p> <p>Stepping->Increase/Stop: when long press the button, it will increase/stop adjusting the angle of shutter</p> <p>Stepping-> Decrease/Stop: when long press the button, it will decrease/stop adjusting the angle of shutter</p> <p>Stepping-> Toggle/Stop: when long press the button, it will toggle/ stop adjusting the angle of shutter</p> <p>Moving-> UP: when long press the button, it will send move up telegram, the position will be up.</p> <p>Moving-> Down: when long press the button, it will send move down telegram, the position will be down.</p> <p>Moving-> Toggle: when long press the button, it will send move up/down telegram, the position will be up/ down.</p> <p>Press: Moving->UP, Release stop: when long press the button , it will send move up telegram, when release, it will send the telegram to stop</p> <p>Press: Moving->DOWN, Release stop: when long press the button, it will send move down telegram, when release, it will send the telegram to stop</p> <p>Press: Moving->Toggle, Release stop: when long press the button, it will send move down/up telegram, when release, it will send the telegram to stop</p>
6	-Auto stop	<ul style="list-style-type: none"> -No -Yes 	Whether or not auto stop.
7	--Stop after a delay(3..255s)	-3..255s	
8	Show icon	<ul style="list-style-type: none"> -No -Yes 	Whether show icon of the cell.
9	--Icon for 'UP'	<ul style="list-style-type: none"> -Menu page 1 ... -Idle 2 	Set the icon of the cell when press it. (preset)
10	--Icon for 'Down'		
11	--Icon for 'Increase'		
12	--Icon for 'Decrease'		
13	--Icon for 'open'		
14	--Icon for 'close'		
15	Status	<ul style="list-style-type: none"> -Local status -External from bus -Mutually exclusive display 	Set the cell's status.
2.1.1.4 Flexible controller			

1.1.5 M/MPTLC43.1 > --> Cell 2

System configuration	Function	Flexible controller
Function configuration	Label	Cell 2
Page 1	Icon source	<input checked="" type="radio"/> Preset <input type="radio"/> User-define
--> Cell 1	Action mode	<input type="radio"/> No Short & Long button <input checked="" type="radio"/> Short & Long button
--> Cell 2	Long button time after	1s
--> Cell 3	-Short press action	Toggle
--> Cell 4	-Long press action	Invalid
--> Cell 5	Show icon	<input type="radio"/> No <input checked="" type="radio"/> Yes
--> Cell 6	--Icon for 'On' status	Light ON
--> Cell 7	--Icon for 'Off' status	Light OFF
--> Cell 8	Status	Local status
Page 2		
--> Cell 1		

No.	ETS-Parameter	Range (default)	Description
1	Label	(14 character allowed)	<i>This label will displayed on the page 1.</i>
2	Icon source	-Preset -User-define	<i>Set the icon source.</i>
3	Action mode	-No short & Long button -Short & Long button	<i>Set the action mode.</i> <i>No short & Long button: there is not different when short or long press button.</i> <i>Short & Long button: short press button and long press button can be control different objects.</i>
4	-Long button time after	-0.2s-5s	<i>How long time as a long button.</i>
5	-Short press action	-Invalid -Toggle -ON -OFF	<i>The function of the button when short press it.</i>
6	-Long press action	-Incalid -Toggle -Press="ON" -Release="ON" - Press="ON",Release="ON" -Press="OFF" -Release="OFF" - Press="OFF",Release="OFF" - Press="ON",Release="OFF" - Press="OFF",Release="ON"	<i>The function of the button when long press action.</i>

7	Show icon	-No -Yes	Whether show icon of the cell.
8	--Icon for 'On' status	-Menu page 1	Set the icon of the cell when press it.
9	--Icon for 'Off' status	... -Idle 2	(preset)
10	Status	-Local status -External from bus -Mutually exclusive display	Set the cell's status.

2.1.1.5 Scene controller

1.1.5 M/MPTLC43.1 > --> Cell 1

No.	ETS-Parameter	Range (default)	Description
1	Label	(14 character allowed)	This label will displayed on the page 1.
2	Icon source	-Preset -User-define	Set the icon source.
3	Long button time after	-0.2-5s	How long time as a long button. Long press the button or short press the button can control the different objects. This parameter distinguish between long press and short press
4	Short press action	-Scene No.01 ... -Scene No.64	Set the function of button when short press it.
5	-Icon	-Menu page 1 ... -Idle 2	Set the icon of the cell when press it. (preset)
6	-Name	(8 character allowed)	Note of short press action.
7	Scene toggle enable	-Disable -Enable	Enable/Disable the scene toggle function.
8	-Toggled scene	-Scene No.01	The function of the button when press it.

		... -Scene No.64	
9	--Icon for scene	-Menu page 1 ... -Idle 2	Set the icon of scene.
10	--Name of the scene	(8 character allowed)	Note the scene.
11	Long press action	-Invalid -Scene dimming -Scene saving -Dimming and saving	Set the function of button when long press it.
12	-Dimming mode	-Brighter -Darker -Darker/Brighter	Set the dimming mode when the long press function is dimming.
13	Show icon	-No -Yes	
14	--Icon for 'Save'	-Menu page 1 ... -Idle 2	Set the icon of the cell when press it. (preset)
15	--Icon for 'Up'		
16	--Icon for 'Down'		
17	Status	-Local status -External from bus -Mutually exclusive display	Set the cell's status.

2.1.1.6 Sequence controller

1.1.5 M/MPTLC43.1 > -->Cell 2

General	Function	Sequence controller
Panel scene	Label	Cell 2
-->Panel scene A	Icon source	<input checked="" type="radio"/> Preset <input type="radio"/> User-define
-->Panel scene B	Long button time after	1s
System configuration	Short press action	Toggle(Start-'1',Stop-'0')
Function configuration	Long press action	Invalid
Page 1	Show icon	<input type="radio"/> No <input checked="" type="radio"/> Yes
-->Cell 1	--Icon for 'Start' status	Icon Start
-->Cell 2	--Icon for 'Stop' status	Icon Stop
-->Cell 3	Status	Local status
-->Cell 4		

No.	ETS-Parameter	Range (default)	Description
1	Label	(14 character allowed)	This label will displayed on the page 1.
2	Icon source	-Preset -User-define	Set the icon source.
3	Long button time after	-0.2-5s	How long time as a long button. Long press the button or short press the button can control the different objects. This parameter distinguish between long press and short press
4	Short press action	-Invalid -Toggle(Start-'1',Stop	Set the function of button when short press it.

		'0') -Start with '1' - Start with '0'	
5	Long press action	-Invalid -Toggle(Start-'1',Stop '0') -Start with '1' - Start with '0'	Set the function of button when long press it.
6	Show icon	-No -Yes	Whether or not show icon.
7	--Icon for 'Start' status	-Menu page 1 ... -Idle 2	Set the icon of the cell when press it. (preset)
8	--Icon for 'Stop' status	-Local status	Set the cell's status.
9	Status	-External from bus -Mutually exclusive display	

2.1.1.7 Percentage controller

1.1.5 M/MPTLC43.1 > -->Cell 2

General	Function	Percentage controller
Panel scene	Label	Cell 2
--> Panel scene A	Icon source	<input checked="" type="radio"/> Preset <input type="radio"/> User-define
--> Panel scene B	Long button time after	1s
System configuration	Short press action	100%(255)
Function configuration	Percentage toggled	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Page 1	Long press action	Value select
--> Cell 1	Delay on short button(0..255s)	0
--> Cell 2	Delay on long button(0..255s)	0
--> Cell 3	Show icon	<input checked="" type="radio"/> No <input type="radio"/> Yes
--> Cell 4	-Show status by text	<input type="radio"/> No <input checked="" type="radio"/> Yes
--> Cell 5	--Text for 'percentage'	Percentage value
--> Cell 6	Status	External from bus

No.	ETS-Parameter	Range (default)	Description
1	Label	(14 character allowed)	This label will displayed on the page 1.
2	Icon source	-Preset -User-define	Set the icon source.
3	Long button time after	-0.2-5s	How long time as a long button. Long press the button or short press the button can control the different objects. This parameter distinguish between long press and short press
4	Short press action	-0%(0)...100%(255)	Set the function of button when short press it.
5	Percentage toggled	-Disable	Enable/Disable the percentage toggled

		-Enable	<i>function.</i>
6	-Toggled percentage value	-0%(0)...100%(255)	<i>Set the value to send to the object when you control the cell</i>
7	Long press action	-Invalid -Fixed value -Value select	<i>Set the function of button when long press it.</i>
8	Delay on short button(0...255s)	-0...255s	<i>Set the delay time of press button.</i>
9	Delay on long button(0...255s)	-No	<i>Whether or not show icon.</i>
10	Show icon	-Yes	
11	-Show status by text	-No -Yes	<i>Set the text of the display status</i>
12	--Text for 'percentage'		
13	Status	-Local status -External from bus -Mutually exclusive display	<i>Set the cell's status.</i>

2.1.1.8 Threshold controller

1.1.5 M/MPTLC43.1 > -->Cell 2

General	Function	Threshold controller
Panel scene	Label	Cell 2
-->Panel scene A	Icon source	<input checked="" type="radio"/> Preset <input type="radio"/> User-define
-->Panel scene B	Long button time after	1s
System configuration	Threshold type	<input checked="" type="radio"/> 1byte threshold <input type="radio"/> 2bytes threshold
Function configuration	Short press action	100
Page 1	Threshold toggled	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
-->Cell 1	Long press action	Value select
-->Cell 2	Delay on short button(0..255s)	0
-->Cell 3	Delay on long button(0..255s)	0
-->Cell 4	Show icon	<input checked="" type="radio"/> No <input type="radio"/> Yes
-->Cell 5	-Show status by text	<input type="radio"/> No <input checked="" type="radio"/> Yes
-->Cell 6	--Text for 'threshold'	Threshold value
	Status	Local status

No.	ETS-Parameter	Range (default)	Description
1	Label	(14 character allowed)	<i>This label will displayed on the page 1.</i>
2	Icon source	-Preset -User-define	<i>Set the icon source.</i>
3	Long button time after	-0.2-5s	<i>How long time as a long button. Long press the button or short press the button can control the different objects. This parameter distinguish between long press and short press</i>
4	Threshold type	-1byte threshold -2bytes threshold	<i>Set the threshold type</i>
5	Short press action	-0...255	<i>Set the value of short press action</i>
6	Threshold toggled	-Disable -Enable	<i>Enable/Disable the threshold toggled function.</i>

7	Long press action	-Invalid -Fixed value -Value select	<i>Set the value of long press action</i>
8	Delay on short button(0...255s)	-0...255s	<i>Set the delay time of press button.</i>
9	Delay on long button(0...255s)		
10	Show icon	-No -Yes	<i>Whether or not show icon.</i>
11	-Show status by text	-No -Yes	<i>Set the text of the display status</i>
12	--Text for 'percentage'		
13	Status	-Local status -External from bus -Mutually exclusive display	<i>Set the cell's status.</i>

2.1.1.9 Threshold controller

1.1.5 M/MPTLC43.1 > -->Cell 2

General	Function	String(14bytes) controller
Panel scene	Label	Cell 2
-->Panel scene A	Icon source	<input checked="" type="radio"/> Preset <input type="radio"/> User-define
-->Panel scene B	Long button time after	1s
System configuration	Short press action	Hello!
Function configuration	Long press action	Hello!
Page 1	Delay on short button(0..255s)	0
-->Cell 1	Delay on long button(0..255s)	0
-->Cell 2	Show icon	<input checked="" type="radio"/> No <input type="radio"/> Yes
-->Cell 3	-Show status by text	<input type="radio"/> No <input checked="" type="radio"/> Yes
-->Cell 4	--Short button	Short
-->Cell 5	--Long button	Long
-->Cell 6	-Idle status	String
	Status	Local status

No.	ETS-Parameter	Range (default)	Description
1	Label	(14 character allowed)	<i>This label will displayed on the page 1.</i>
2	Icon source	-Preset -User-define	<i>Set the icon source.</i>
3	Long button time after	-0.2-5s	<i>How long time as a long button. Long press the button or short press the button can control the different objects. This parameter distinguish between long press and short press</i>
4	Short press action	-14 character allowed	<i>Set the string of press action</i>
5	Long press action		
6	Delay on short button(0...255s)	-0...255s	<i>Set the delay time of press button.</i>
7	Delay on long button(0...255s)		
8	Show icon	-No -Yes	<i>Whether or not show icon.</i>
9	-Show status by text	-No -Yes	<i>Set the text of the display status</i>

10	--short button	-14 character allowed	
11	--Long button		
12	--Idle button		
13	Status	-Local status -External from bus -Mutually exclusive display	Set the cell's status.

2.1.1.10 Alternate controller

1.1.5 M/MPTLC43.1 > --> Cell 2

General	Function	Alternate controller
Panel scene	Label	Cell 2
--> Panel scene A	Icon source	<input checked="" type="radio"/> Preset <input type="radio"/> User-define
--> Panel scene B	Long button time after	1s
System configuration	Alternate<1>	1 bit value
Function configuration	-Short button value(1 bit)	1
Page 1	-Long button value(1 bit)	0
-->Cell 1	Icon	Light OFF
-->Cell 2	Name	Alt 1
-->Cell 3	Alternate<2>	1 bit value
-->Cell 4	-Short button value(1 bit)	1
-->Cell 5	-Long button value(1 bit)	0
-->Cell 6	Icon	Light ON
	Name	Alt 2

No.	ETS-Parameter	Range (default)	Description
1	Label	(14 character allowed)	This label will displayed on the page 1.
2	Icon source	-Preset -User-define	Set the icon source.
3	Long button time after	-0.2-5s	How long time as a long button. Long press the button or short press the button can control the different objects. This parameter distinguish between long press and short press
4	Alternate<1> ... Alternate<4>	-Invalid -1 bit value -1 byte value -2 byte value	Set the type of alternate. Alternate<1> to Alternate<4>will alternate control when press this button
5	Alternate on short button	-Enable -Disable	Set the string of press action
6	Alternate on long button		
7	Short press action	-Invalid -Switch FWD -Switch RWD	The older of 1 to 4 alternate.
8	Long press action		
9	Show icon	-No -Yes	Whether or not show icon.

10	Status	-Local status -External from bus -Mutually exclusive display	Set the cell's status.
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2.1.1.11 Pulse controller

1.1.5 M/MPTLC43.1 > --> Cell 2

General	in	Pulse controller
Panel scene	Cell 2	
--> Panel scene A		<input checked="" type="radio"/> Preset <input type="radio"/> User-define
--> Panel scene B		1s
System configuration		<input checked="" type="radio"/> Positive pulse <input type="radio"/> Negative pulse
Function configuration		<input type="radio"/> No <input checked="" type="radio"/> Yes
Page 1		0
-->Cell 1		0
-->Cell 2		5
-->Cell 3		5
-->Cell 4		<input type="radio"/> Send continuously <input checked="" type="radio"/> Numbers
-->Cell 5		1
-->Cell 6		2

No.	ETS-Parameter	Range (default)	Description
1	Label	(14 character allowed)	This label will displayed on the page 1.
2	Icon source	-Preset -User-define	Set the icon source.
3	Long button time after	-0.2-5s	How long time as a long button. Long press the button or short press the button can control the different objects. This parameter distinguish between long press and short press
4	Positive/Negative pulse:	-Positive pulse -Negative pulse	Set the parameter for pulse controller
5	-Output to bus after bus recovery	-No -Yes	Whether or not output to bus after recovery.
6	--Output to bus after a delay (0...255s)	(0)...255	Set the delay time for output to bus
7	Minimum hold time after bus recovery (0...255s)	(0)...255	Set the minimum hold time when power on
<i>Pulse 1 setting</i>			
8	--Open status duration time (1...255s)	1...(5)...255	Set the duration time for opening status
9	--Close status duration time (1...255s)	1...(5)...255	Set the duration time for closing status
10	--Pulses number set	-(Number)	Set the parameter for pulses number

		-Send continuously	<i>Number: If you set one time, will send pulse for one time Send continuously: will always send pulse</i>
11	--Pulses number (1...65535)	(1)...65535	<i>Set the number for sending pulse</i>
<i>Pulse 2 setting, same as pulse 1.</i>			
12	Short press action	-Invalid	<i>Set the function of press the button.</i>
13	Long press action	-Pulse 1 -Pulse 2 -Toggle -Stop	
14	Show icon	-No -Yes	<i>Whether or not show icon.</i>
15	--Icon for pulse 1	-Menu page 1	<i>Set the icon of the cell when press it. (preset)</i>
16	--Icon for pulse 2	... -Idle 2	
17	Status	-Local status -External from bus -Mutually exclusive display	<i>Set the cell's status.</i>

2.1.1.12 RGB controller

1.1.5 M/MPTLC43.1 > -->Cell 2

General	Function	RGB controller
Panel scene	Label	Cell 2
-->Panel scene A	Icon source	<input checked="" type="radio"/> Preset <input type="radio"/> User-define
-->Panel scene B	Long button time after	1s
System configuration	Short press action	1 bit
Function configuration	-1 bit value	Toggle
Page 1	Long press action	Invalid
-->Cell 1	Show icon	<input type="radio"/> No <input checked="" type="radio"/> Yes
-->Cell 2	--Icon for 'On'	Light ON
	--Icon for 'Off'	Light OFF
-->Cell 3	Status	
-->Cell 4		
-->Cell 5		
-->Cell 6		

No.	ETS-Parameter	Range (default)	Description
1	Label	(14 character allowed)	<i>This label will displayed on the page 1.</i>
2	Icon source	-Preset -User-define	<i>Set the icon source.</i>
3	Long button time after	-0.2-5s	<i>How long time as a long button. Long press the button or short press the button can control the different objects. This parameter distinguish between long press and short press</i>
4	Short press action	-Invalid	<i>Set the function of press the button.</i>

5	Long press action	-1 bit -4 bit (Relative dimming)(only long press action) -1 byte(Absolute dimming) -3 byte (fix RGB) -RGB select	
6	Show icon	-No -Yes	Whether or not show icon.
7	-Icon for 'on'	-Menu page 1 ... Idle 2	Set the icon of the cell when press it. (preset)
8	-Icon for 'off'		
9	-Icon for dimming up		
10	-Icon for dimming down		
11	-Icon for percentage		
12	-Icon for fixing value		
13	Status	-Local status -External from bus -Mutually exclusive display	Set the cell's status.

2.1.1.13 RGB controller

1.1.5 M/MPTLC43.1 > --> Cell 2

General	Function	Fan controller
Panel scene	Label	Cell 2
--> Panel scene A	Icon source	<input checked="" type="radio"/> Preset <input type="radio"/> User-define
--> Panel scene B	Long button time after	1s
System configuration	Total number of fan speed	3
Function configuration	=Speed 1=	
Page 1	Object 1 value set	ON
--> Cell 1	Object 2 value set	OFF
--> Cell 2	Object 3 value set	OFF
--> Cell 3	Icon for speed 1	Fan Speed Low
--> Cell 4	Text for speed 1	No.1
--> Cell 5	=Speed 2=	
--> Cell 6	Object 1 value set	OFF
--> Cell 7	Object 2 value set	ON
--> Cell 8	Object 3 value set	OFF
--> Cell 9	Icon for speed 2	Fan Speed Medi
--> Cell 10	Text for speed 2	No.2

No.	ETS-Parameter	Range (default)	Description
1	Label	(14 character allowed)	This label will displayed on the page 1.
2	Icon source	-Preset -User-define	Set the icon source.
3	Long button time after	-0.2-5s	How long time as a long button. Long press the button or short press the button can control the different objects. This parameter distinguish between

			<i>longpress and short press</i>
4	Total number of fan speed	-2 -3 -4	<i>Set the total number of fan speed, if you select 4 that will has 4 speed the following.</i>
=Speed1=			
5	Object 1 value set	-Invalid -ON -OFF	<i>Set the state of object 1 to 4 when speed1.</i>
6	Object 2 value set		
7	Object 3 value set		
8	Object 4 value set		
=Speed2=,=Speed3=,=Speed4=, =Turn off fan= , these parameters are same to speed 1. Speed 1 to 4 and turn off are controlled in order when press the button.			
	Delay to send ON after OFF(0...255s)	-0...255	<i>Set the delay time when change the object statues.</i>
9	Short press action	-Invalid -Switch fan speed -Turn off fan	<i>Set the function of short press the button.</i>
10	--Switch speed direction	-FWD -RWD	<i>Set the older of the speed when press the button.</i>
11	--Speed 1	-Disable -Enable	<i>Enable/Disable the speed function.</i>
12	--Speed 2		
13	--Speed 3		
14	--Speed 4		
15	--Turn off fan		
16	Long press action	-Invalid -Switch fan speed -Turn off fan	<i>Set the function of long press the button.</i>
17	Show icon	-No -Yes	<i>Whether show the icon.</i>
18	Status	-Local status -External from bus -Mutually exclusive display	<i>Set the cell's status.</i>
2.1.1.14 Combination controller			

1.1.5 M/MPTLC43.1 > -->Cell 4

General	Function	Combination controller
Panel scene	Label	Cell 4
-->Panel scene A	Icon source	<input checked="" type="radio"/> Preset <input type="radio"/> User-define
-->Panel scene B	Long button time after	1s
System configuration	Button object type 1	Invalid
Function configuration	Button object type 2	Invalid
Page 1	Button object type 3	Invalid
-->Cell 1	Button object type 4	Invalid
-->Cell 2	Short press action	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
-->Cell 3	Show icon	<input checked="" type="radio"/> No <input type="radio"/> Yes
-->Cell 4	-Show status by text	<input type="radio"/> No <input checked="" type="radio"/> Yes
-->Cell 5	--Short button	Combine
-->Cell 6	--Idle status	IDLE
-->Cell 7	Status	Local status

No.	ETS-Parameter	Range (default)	Description
1	Label	(14 character allowed)	<i>This label will displayed on the page 1.</i>
2	Icon source	-Preset -User-define	<i>Set the icon source.</i>
3	Long button time after	-0.2-5s	<i>How long time as a long button. Long press the button or short press the button can control the different objects. This parameter distinguish between long press and short press</i>
4	Button object type 1	-Invalid -Switch controller -Shutter controller -Scene controller -Sequence controller -Percentage controller -Threshold controller -String(14bytes) controller	<i>Set the function of the button.</i>
5	Button object type 2		
6	Button object type 3		
7	Button object type 4		
8	Short press action	-Disable -Enable	<i>Enable/Disable of short press action.</i>
9	Show icon	-No -Yes	<i>Whether show the icon.</i>
10	--Short button	-Menu page 1 ... Idle 2	<i>Set the icon of the cell when press it. (preset)</i>
11	--Idle status		
12	Status	-Local status -External from bus -Mutually exclusive display	<i>Set the cell's status.</i>

2.2_Air-condition

1.1.5 M/MPTLC43.1 > Air-condition

-->Cell 2	Label	AC
-->Cell 3	Set for comfort temperature[MIN](0..99C)	0C
-->Cell 4	Set for comfort temperature[MAX](0..99C)	32C
-->Cell 5	Actual temperature(Celsius degree)	<input checked="" type="radio"/> Local sensor <input type="radio"/> Via EIB
-->Cell 6	=>Fan speed:	
-->Cell 7	->Fan speed control type	<input type="radio"/> 1bit object <input checked="" type="radio"/> 1byte object
-->Cell 8	-->Low speed value	85
Air-condition	-->Medium speed value	170
->AC Output	-->Hight speed value	254
FCU	Automatic speed	<input type="radio"/> Inactive <input checked="" type="radio"/> Active
->Cool output	Low speed	<input type="radio"/> Inactive <input checked="" type="radio"/> Active
Floor Heating A	Medium speed	<input type="radio"/> Inactive <input checked="" type="radio"/> Active
->FH Output	Hight speed	<input type="radio"/> Inactive <input checked="" type="radio"/> Active
Floor Heating B	=>Wind swing:	
->FH Output	Wind swing	<input type="radio"/> Inactive <input checked="" type="radio"/> Active
Audio	=>Air condition mode:	
	->Control mode type	<input checked="" type="radio"/> 1bit object <input type="radio"/> 1byte object
	Automatic heating/cooling	<input type="radio"/> Inactive <input checked="" type="radio"/> Active
	Only cooling	<input type="radio"/> Inactive <input checked="" type="radio"/> Active

No.	ETS-Parameter	Range (default)	Description	
1	Label	(14 character allowed)	This label will displayed on the page 1.	
2	Set for comfort temperature(MIN)(0..99C)	-0C..99C	Set the range of comfort temperature.	
3	Set for comfort temperature(MAX)(0..99C)			
4	Actual temperature (Celsius degree)	-Local sensor -Via EIB	Set the source of actual temperature.	
=> Fan speed:				
5	-> Fan speed control type	-1bit object -1byte object	Set the fan speed control type.	
6	--> Low speed value	-0...255	Set the value of speed.	
7	-->Medium speed value			
8	--> Hight speed value			
9	Automatic speed	-Inactive -Active	Set the speed is active or not.	
10	Low speed			
11	Medium speed			
12	Hight speed			
=>Wind swing				
13	Wind swing	-Inactive -Active	Set the wind swing is active or not.	
=>Air condition mode				
14	->control mode type	-1bit object	Set the air condition control type.	

		-1byte object	
15	Automatic heating/cooling	-Inactive -Active	<i>Set the function of air condition, you can't find the function in the panel when you select inactive.</i>
16	Only cooling		
17	Only heating		
18	Only dehumidification		
19	Only fan		
<i>==> Air condition status:</i>			
20	The status operation after power on	-Unchange -Recovery	<i>Set the air condition status after power on.</i>
21	--Delay for status recovery(2...255s)	-2...255s	<i>This parameter is for power on status is recovery.</i>
22	The status operation after AC switch ON	-Unchange -Recovery	<i>Set the AC switch status. When the status is on you can operation AC settings via panel.</i>
23	--Delay for status recovery(2...255s)	-2...255s	
<i>=>Fixed button function:</i>			
24	Fixed button function	-Disable -Enable	<i>Set the fixed button function after power on.</i>
25	->Fan speed: left button	-Auto -Low speed -Medium speed -Hight speed -Switching speed -Invalid	<i>Set the fan speed of the fixed button</i>
26	->Fan speed: right button		
27	->Mode: left button	-Auto -Cooling -Heating -Dehumidification -Fan -Switching control mode -Invalid	<i>Set the fan mode of the fixed button</i>
28	->Mode: right button		
<i>=>Output control:</i>			
29	Output control the relay actuator	-Disable -Enable	<i>Whether use Output control funcgion.</i>
<i>->AC output</i>			

1.1.5 M/MPTLC43.1 > ->AC Output

-->Cell 2	Setpoint:	
-->Cell 3	Temperature hysteresis(0.1C)	50
-->Cell 4	Stop heating/cooling	<input type="radio"/> Yes <input checked="" type="radio"/> No
-->Cell 5	Fan:	
-->Cell 6	Fan output control type	<input type="radio"/> changeover <input checked="" type="radio"/> step
-->Cell 7	Starting characteristic of fan	Switch on at speed 2
-->Cell 8	Duration time at starting speed(2..255s)	2
Air-condition	Changeover delay between fan speeds(s)	0.5
-->AC Output	Duration on fan speed(2..255s)	2
FCU	Auto fan speed1:if temperature deviation <=	2C
-->Cool output	Auto fan speed2:else if temperature deviation <=	4C
Floor Heating A	Auto fan speed3:else	Speed 3
-->FH Output	Fan speed when over setpoint temperature(for automatic fan speed)	<input type="radio"/> On speed 1 <input checked="" type="radio"/> OFF
Floor Heating B	Heat valve:	<input checked="" type="radio"/> Two-step(ON/OFF) control <input type="radio"/> PWM control
-->FH Output	Cool valve:	<input checked="" type="radio"/> Two-step(ON/OFF) control <input type="radio"/> PWM control

No.	ETS-Parameter	Range (default)	Description
<i>Setpoint:</i>			
1	Temperature hysteresis(0.1C)	-1...200	<i>Set the temperature hysteresis</i>
2	Stop heating/cooling	-Yes -No	<i>Disable/Enable Stop heating/cooling.</i>
<i>Fan:</i>			
3	Fan output control type	-changevoer -Step	<i>Set the fan output control type.</i>
4	Starting characteristic of fan	-Switch on at speed 1 -Switch on at speed 2 -Switch on at speed 3	<i>Set the starting characteristic of fan</i>
5	Duration time at starting speed(2..255s)	-2..255	<i>Set the starting speed of fan</i>
6	Changeover delay between fan speeds(s)	-0.5-10	<i>Set the Changeover delay between of fan speed</i>
7	Duration on fan speed(2...255s)	-2..255	<i>Set the fan speed duration time.</i>
8	Auto fan speed1: if temperature deviation <=	-0.5-30C	<i>Set the auto fan mode temperature to determine the value</i>
9	Auto fan speed2:else if temperature deviation <=	-0.5-30C	
10	Auto fan speed3:else	-	
11	Fan speed when over setpoint temperature (for automatic fan speed)	-On speed 1 -OFF	<i>Set the fan state parameters.</i> <i>On speed 1: The fan state is set to speed 1.</i> <i>OFF: The fan is turned off.</i>
<i>Heat valve:</i>			
12	Control type	-Two-step (ON/OFF)control -PWM control	<i>Set the control type.</i>

<i>Cool valve:</i>			
13	Control type	-Two-step (ON/OFF)control -PWM control	Set the control type.

2.3_FCU

1.1.5 M/MPTLC43.1 > FCU

-->Cell 2	Label	FCU
-->Cell 3	FCU functions selection	Cooling
-->Cell 4	Set for comfort temperature[MIN](0..99C)	16C
-->Cell 5	Set for comfort temperature[MAX](0..99C)	35C
-->Cell 6	Actual temperature(Celsius degree)	<input checked="" type="radio"/> Local sensor <input type="radio"/> Via EIB
-->Cell 7	->HVAC control mode type	<input checked="" type="radio"/> 1bit Command <input type="radio"/> 1byte mode
-->Cell 8	->HVAC mode type	<input checked="" type="radio"/> 1bit Command <input type="radio"/> 1byte mode
Air-condition	Fan speed	3-Fan speed
->AC Output	->Fan control type	<input checked="" type="radio"/> 1bit object <input type="radio"/> 1byte object
	->Fan status type	<input checked="" type="radio"/> 1bit object <input type="radio"/> 1byte object
FCU	The status operation after power on	<input type="radio"/> Unchange <input checked="" type="radio"/> Recovery
->Cool output	--Delay for status recovery(2..255s)	5
Floor Heating A	HVAC fixed button function	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
->FH Output	->HVAC mode:left button	Comfort mode
Floor Heating B	->HVAC mode:right button	Switching HVAC modes
->FH Output	->Fan speed:left button	1-Fan speed
Audio	->Fan speed:right button	2-Fan speed

No.	ETS-Parameter	Range (default)	Description
1	Label	(14 character allowed)	<i>This label will displayed on the page 1.</i>
	FCU function selection	-Fan -Heating -Cooling -Heating and Cooling	<i>Set the function of FCU.</i>
<i>FCU function is heating and cooling</i>			
2	Set for comfort temperature(MIN)(0..99C)	-0C..99C	<i>Set the range of comfort temperature.</i>
3	Set for comfort temperature(MAX)(0..99C)		
4	Actual temperature (Celsius degree)	-Local sensor -Via EIB	<i>Set the source of actual temperature.</i>
5	-Temperature correction value(-5C...+5C)	--5C...+5C	<i>Set the correction value.</i>
6	HVAC-System	-2-pipe system -4-pipe system	<i>Select the HVAC system.</i>
7	->HVAC control mode type	-1bit Command -1byte mode	<i>Set the HVAC mode type.</i>
8	->HVAC mode type		
9	Fan speed	-1-Fan speed -2-Fan speed -3-Fan speed	<i>Set the fan speed</i>

10	-> Fan control type	-1bit object -1byte object	<i>Set the fan speed control type.</i>
11	-->Speed1 value	-0...255	<i>Set the value of speed.</i>
12	--> Speed2 value		
13	--> Speed3 value		
14	->Fan status type	-1bit object -1byte object	<i>Set the fan status type.</i>
15	The status operation after power on	-Unchange -Recovery	<i>Set FCU status after power on.</i>
16	--Delay for status recovery(2...255s)	-2...255s	<i>This parameter is for power on status is recovery.</i>
17	HVAC fixed button function	-Disable -Enable	<i>Disable/Enable HVAC fixed button function</i>
18	->HVAC mode: left button	-Comfort mode -Standby mode -Night mode -Protection mode -Switching HVAC modes -Invalid	<i>Set the mode of left and right button.</i>
19	->HVAC mode: right button		
20	->Fan speed: left button	-Auto -1-Fan speed -2-Fan speed -3-Fan speed -Stop -Switching speed -Invalid	<i>Set the fan speed of left and right button.</i>
21	->Fan speed: right button		
22	->HVAC control mode: left button	-Cooling -Fan -Switching HVAC control modes -Invalid	<i>Set the HVAC control mode of left and right button.</i>
23	->HVAC control mode: right button		
<i>=>Output control:</i>			
24	Output control the relay actuator	-Disable -Enable	<i>Disable/Enable output function.</i>
<i>=>Information zone:</i>			
25	Display temperature of HVAC mode	-No -Yes	<i>Whether or not display temperature of HVAC mode</i>
26	Display alarm information	-No -Yes	<i>Whether or not alarm information</i>
<i>Heat and Cool output</i>			

1.1.5 M/MPTLC43.1 > ->Heat and Cool output

-->Cell 7	Setpoint:	
	Temperature hysteresis(0.1C)	40
-->Cell 8	Stop heating/cooling	<input type="radio"/> Yes <input checked="" type="radio"/> No
Page 5	[Heat]	
-->Cell 1	[+]Reduced temperature on standby mode(0..10C)	2
-->Cell 2	[+]Reduced temperature on night mode (0..10C)	4
-->Cell 3	Operation on protection mode	<input type="radio"/> Normal working <input checked="" type="radio"/> Stop working
-->Cell 4	HVAC mode at power on	Last mode
-->Cell 5	[+]Increased temperature on standby mode(0.10C)	2
-->Cell 6	[+]Increased temperature on night mode (0..10C)	4
-->Cell 7	Operation on protection mode	<input type="radio"/> Normal working <input checked="" type="radio"/> Stop working
-->Cell 8	HVAC mode at power on	Last mode
Air-condition	Fan:	
->AC Output	->Fan output control type	<input checked="" type="radio"/> changeover <input type="radio"/> step
FCU	Starting characteristic of fan	Switch on at speed 1
	Duration time at starting speed(2..255s)	2
->Heat and Cool output	Changeover delay between fan speeds(s)	0.5
Floor Heating A	Duration on fan speed(2..255s)	2
->FH Output	Auto fan speed1;if temperature deviation <=	2C
Floor Heating B	Auto fan speed2:else if temperature deviation <=	4C

No.	ETS-Parameter	Range (default)	Description
<i>Setpoint:</i>			
1	Temperature hysteresis(0.1C)	-1...200	<i>Set the temperature hysteresis</i>
2	Stop heating/cooling	-Yes -No	<i>Disable/Enable Stop heating/cooling.</i>
<i>Heat</i>			
3	Reduced temperature on standby mode(0..10C)	-0...10	<i>Modify the heating mode relative to set the temperature reduction degree</i>
4	Reduced temperature on night mode(0..10C)	-0...10	
5	Operation on protection mode	-Normal working -Stop working	<i>Set the mode of operation protection mode</i>
6	HVAC mode at power on	-Last mode -Comfort mode -Standby mode -Night mode -Protection mode	<i>Set the HVAC mode after power on.</i>
<i>Cool , this function's parameters are same to the heat's.</i>			
<i>Fan:</i>			
7	Fan output control type	-changevoer -Step	<i>Set the fan output control type.</i>
8	Starting characteristic of fan	-Switch on at speed 1 -Switch on at speed 2 -Switch on at speed 3	<i>Set the starting characteristic of fan</i>
9	Duration time at starting speed(2..255s)	-2..255	<i>Set the starting speed of fan</i>

10	Changeover delay between fan speeds(s)	-0.5-10	<i>Set the Changeover delay between of fan speed</i>
11	Duration on fan speed(2...255s)	-2..255	<i>Set the fan speed duration time.</i>
12	Auto fan speed1: if temperature deviation <=	-0.5-30C	<i>Set the auto fan mode temperature to determine the value</i>
13	Auto fan speed2:else if temperature deviation <=	-0.5-30C	
14	Auto fan speed3:else	- /	
15	Fan speed when over setpoint temperature (for automatic fan speed)	-On speed 1 -OFF	<i>Set the fan state parameters.</i> <i>On speed 1: The fan state is set to speed 1.</i> <i>OFF: The fan is turned off.</i>
<i>Heat valve:</i>			
16	Control type	-Two-step (ON/OFF)control -PWM control	<i>Set the control type.</i>
17	Enable purge	-No -Yes	<i>Whether use purge funcgion.</i>
<i>Cool valve:</i>			
18	Control type	-Two-step (ON/OFF)control -PWM control	<i>Set the control type.</i>
19	Enable purge	-No -Yes	<i>Whether use purge funcgion.</i>
Now, take the heat and cool output as an example, others refernce this one.			

2.4_Floor heating

1.1.5 M/MPTLC43.1 > Floor Heating A

Page 5	Label	Heating
-->Cell 1	Set for comfort temperature[MIN](0..99C)	10C
-->Cell 2	Set for comfort temperature[MAX](0..99C)	40C
-->Cell 3	Actual temperature(Celsius degree)	<input checked="" type="radio"/> Local sensor <input type="radio"/> Via EIB
-->Cell 4	Display the temperature of the outdoor(Celsius degree)	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
-->Cell 5	--Temperature correction value of the outdoor(-5C...+5C)	0C
-->Cell 6	--Temperature monitoring time interval of the outdoor(s)	200
-->Cell 7	The status operation after power on	Read status
-->Cell 8	--Delay for status read(2..255s)	5
=>Enable mode:		
Air-condition	Normal mode	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
->AC Output	Day mode	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
FCU	Night mode	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
->Heat and Cool output	Away mode	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
Floor Heating A	Timer mode	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
=>Fixed button function:		
->FH Output	Floor heating fixed button function	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
Floor Heating B	->Mode:left button	Normal-mode
->FH Output	->Mode:right button	Switching mode
=>Output control:		
Audio	Output control the relay actuator	<input type="radio"/> Disable <input checked="" type="radio"/> Enable

No.	ETS-Parameter	Range (default)	Description
1	Label	(14 character allowed)	<i>This label will displayed on the page 1.</i>
2	Set for comfort temperature(MIN)(0..99C)	-0C..99C	<i>Set the range of comfort temperature.</i>
3	Set for comfort temperature(MAX)(0..99C)		
4	Actual temperature (Celsius degree)	-Local sensor -Via EIB	<i>Set the source of actual temperature.</i>
5	Display the temperature of the outdoor(Celsius degree)	-Display -Enable	<i>Disable /Enable display the temperature of the outdoor on the floor heating page.</i>
6	--Temperature correction value(-5C...+5C)	--5C...+5C	<i>Set the correction value.</i>
7	--Temperature monitoring time interval of the outdoor(s)	-5...255s	<i>Set the time interval of the outdoor temperature monitoring.</i>
8	The status operation after power on	-Unchange -Recovery -Read status	<i>Set the status after power on.</i>
9	--Delay for status read(2..255s)	-2..255s	
=>Enable mode			
10	Normal mode	<input type="radio"/> -Disable <input checked="" type="radio"/> -Enable	<i>Disable/enable the mode.</i>
11	Day mode		
12	Night mode		
13	Away mode		
14	Time mode		
=> Fixed button function:			
15	Floor heating fixed button	-Disable	<i>Disable/enable the fixed button function.</i>

	function	-Enable	
16	->mode: left button	-Normal-Mode -Day-mode -Night-mode -Away-mode -Timer-mode -Switching mode -Invalid	The function of left and right fixed button.
17	->mode: right button		
=>Output control:			
18	Output control the relay actuator	-Disable -Enable	Disable/Enable output function.
=>Information zone:			
19	Display alarm information	-No -Yes	Whether or not alarm information

FH output

1.1.5 M/MPTLC43.1 > ->FH Output

Page 5	Heating or cooling mode	<input type="radio"/> Heating <input checked="" type="radio"/> Cooling
-->Cell 1	Temperature hysteresis(0.1C)	40
-->Cell 2	Stop heating	<input checked="" type="radio"/> Yes <input type="radio"/> No
-->Cell 3	Enable safety protect	<input type="radio"/> No <input checked="" type="radio"/> Yes
-->Cell 4	->Temperature source	<input type="radio"/> Local sensor <input checked="" type="radio"/> Via EIB
-->Cell 5	->Active protection(0..99C)	35C
-->Cell 6	->Active operation	OFF
-->Cell 7	->Cancel protection(0..99C)	25C
-->Cell 8	->Cancel operation	ON
Air-condition	Control type	<input checked="" type="radio"/> Two-step(ON/OFF) control <input type="radio"/> PWM control
->AC Output	Enable purge	<input type="radio"/> No <input checked="" type="radio"/> Yes
FCU	->Time of purge(1..255min)	5
->Heat and Cool output		
Floor Heating A		
->FH Output		

No.	ETS-Parameter	Range (default)	Description
1	Heating or cooling mode	-Heating -Cooling	Select the FH output function.
2	Temperature hysteresis(0.1C)	-1..200	Set the temperature hysteresis
3	Stop heating	-No -Yes	Whether or not stop heating. If you select yes, It according the temperature then decide stop heating or not. If you select No, it will always working.
4	Enable safety protect	-No -Yes	Whether to open security protection.
5	->Temperature source	-Local sensor -Via EIB	Set the temperature source.
6	->Active protection(0...99C)	-0...99	Set the protection temperature threshold
7	->Active operation	-Unchange	and operation

		-OFF -ON	
8	->Cancel protection(0...99C)	-0...99	
9	->Cancel operation	-Unchange -OFF -ON	<i>Set the threshold and operation to cancel the protection temperature</i>
10	Control type	-Two-step(ON/OFF) control -PWM control	<i>Set the control type.</i>
11	Enable purge	-No -Yes	<i>Whether use purge funcgion.</i>
12	->Time of purge(1..255min)	-1...255	<i>Set the time of purge.</i>

2.5_Floor heating

1.1.5 M/MPTLC43.1 > Audio

-->Cell 5	Label	Audio
-->Cell 6	The status operation after power on	<input type="radio"/> Recovery <input checked="" type="radio"/> Read status
-->Cell 7	Play operation	<input type="radio"/> Play/Stop <input checked="" type="radio"/> Resume/Pause
-->Cell 8	Select list mode	<input type="radio"/> Invalid <input checked="" type="radio"/> Step by step
Page 5	Select source mode	Step by step
-->Cell 1	Adjust volume operation mode	<input type="radio"/> Step by step <input checked="" type="radio"/> Absolute
-->Cell 2	--Volume minimum value	0%(0)
-->Cell 3	--Volume maximum value	100%
-->Cell 4	--Increment value	10%
-->Cell 5	Bass:	
-->Cell 6	Adjust bass operation mode	<input type="radio"/> Step by step <input checked="" type="radio"/> Absolute
-->Cell 7	--Bass value minimum	0%(0)
-->Cell 8	--Bass value maximum	100%
-->Cell 9	--Increment value	10%
Air-condition	Treble:	
-->AC Output	Adjust treble operation mode	<input type="radio"/> Step by step <input checked="" type="radio"/> Absolute
FCU	--Treble value minimum	0%(0)
-->Heat and Cool output	--Treble value maximum	100%
-->FH Output	--Increment value	10%
Audio	Display 14byte object receive (ASCII)	<input type="radio"/> No <input checked="" type="radio"/> Yes

No.	ETS-Parameter	Range (default)	Description
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1	Label	(14 character allowed)	<i>This label will displayed on the page 1.</i>
2	The status operation after power on	-Recovery -Read status	<i>Set the status after power on.</i>
3	Play operation	-Play/Stop -Resume/Pause	<i>Disable/enable the mode.</i>
4	Select list mode	-Invalid Step by step	<i>Set the select list mode.</i>
5	Select source mode	-Invalid -Step by step -Absolute	<i>Select source mode.</i>
6	-Source absolute 1 enable	-Disable -Enable	<i>Disable/Enable the source absolute 1.</i>
7	->Source absolute 1 name	(14 character allowed)	<i>Named the source absolute 1.</i>
8	->Source absolute 1 value	-0...255	<i>Set the source absolute 1 value.</i>
9	<i>The setting of source absolute 2 is same to Source absolute 1.</i>		
10	Adjust volume operation mode	-Step by step -Absolute	<i>Set the mode of adjust volume</i>
11	-Volume minimum value	-0%(0)...100%(255)	<i>These parameters are for absolute mode.</i>
12	-Volume maximum value		
13	-Increment value		
<i>Bass:</i>			
14	Adjust volume operation mode	-Step by step -Absolute	<i>Set the mode of adjust volume.</i>
15	--Base value minimum	-0%(0)...100%(255)	<i>Set the parameter of base value.</i>
16	--Bass value maximum		
17	--Increment value		
<i>Treble</i>			
18	--Treble value minimum	-0%(0)...100%(255)	<i>Set the parameter of treble value.</i>
19	--Treble value maximum		
20	--Increment value		
21	Display 14byte object receive (ASCII)	-No -Yes	<i>Whether display 14byte object receive.</i>

XX

D.Communication Objects

D.0 General

Objects "General"					
NO.	Object name	Function	Flags	Data type	
1	General	Heartbeat telegram	1 bit C - - T U	Lc	
2	General	Lock screen	1 bit C - W T U	Lc	
3	General	Infrared active/inactive	1 bit C - W T U	Lc	
4	General	Change brightness	1 byte C - W T U	Lc	
1	General	Heartbeat telegram	C T U	DPT 1.003 1bit	
This communication object is always active and valid. Invert the value send telegram to bus in next frame. e.g. last telegram value is "1", the next telegram value is "0"					
2	General	Lock screen	C W T U	DPT 1.003	

				1bit
3	General	Infrared active/inactive	C W T U	DPT 1.003 1bit
4	General	Change brightness	C W T U	DPT 5.001 1byte

This communication objects are used to set the panel system parameters.

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
7	General	Trigger page 1 cell 1	New group addr... 1/0/14		1 bit	C	-	W	T	U	Low	
8	General	Trigger page 1 cell 2	New group addr... 1/0/15		1 bit	C	-	W	T	U	Low	
9	General	Trigger page 1 cell 3	New group addr... 1/0/16		1 bit	C	-	W	T	U	Low	
10	General	Trigger page 1 cell 4			1 bit	C	-	W	T	U	Low	
11	General	Trigger page 1 cell 5			1 bit	C	-	W	T	U	Low	
12	General	Trigger page 1 cell 6			1 bit	C	-	W	T	U	Low	
13	General	Trigger page 1 cell 7			1 bit	C	-	W	T	U	Low	
14	General	Trigger page 1 cell 8			1 bit	C	-	W	T	U	Low	
15	General	Trigger page 2 cell 1			1 bit	C	-	W	T	U	Low	
16	General	Trigger page 2 cell 2			1 bit	C	-	W	T	U	Low	
17	General	Trigger page 2 cell 3			1 bit	C	-	W	T	U	Low	
18	General	Trigger page 2 cell 4			1 bit	C	-	W	T	U	Low	
19	General	Trigger page 2 cell 5			1 bit	C	-	W	T	U	Low	
20	General	Trigger page 2 cell 6			1 bit	C	-	W	T	U	Low	
21	General	Trigger page 2 cell 7			1 bit	C	-	W	T	U	Low	
22	General	Trigger page 2 cell 8			1 bit	C	-	W	T	U	Low	
23	General	Trigger page 3 cell 1			1 bit	C	-	W	T	U	Low	
24	General	Trigger page 3 cell 2			1 bit	C	-	W	T	U	Low	
25	General	Trigger page 3 cell 3			1 bit	C	-	W	T	U	Low	
26	General	Trigger page 3 cell 4			1 bit	C	-	W	T	U	Low	
27	General	Trigger page 3 cell 5			1 bit	C	-	W	T	U	Low	
28	General	Trigger page 3 cell 6			1 bit	C	-	W	T	U	Low	
29	General	Trigger page 3 cell 7			1 bit	C	-	W	T	U	Low	
30	General	Trigger page 3 cell 8			1 bit	C	-	W	T	U	Low	
31	General	Trigger page 4 cell 1			1 bit	C	-	W	T	U	Low	
32	General	Trigger page 4 cell 2			1 bit	C	-	W	T	U	Low	
33	General	Trigger page 4 cell 3			1 bit	C	-	W	T	U	Low	
34	General	Trigger page 4 cell 4			1 bit	C	-	W	T	U	Low	
35	General	Trigger page 4 cell 5			1 bit	C	-	W	T	U	Low	
36	General	Trigger page 4 cell 6			1 bit	C	-	W	T	U	Low	
37	General	Trigger page 4 cell 7			1 bit	C	-	W	T	U	Low	
38	General	Trigger page 4 cell 8			1 bit	C	-	W	T	U	Low	
39	General	Trigger page 5 cell 1			1 bit	C	-	W	T	U	Low	
40	General	Trigger page 5 cell 2			1 bit	C	-	W	T	U	Low	
41	General	Trigger page 5 cell 3			1 bit	C	-	W	T	U	Low	
42	General	Trigger page 5 cell 4			1 bit	C	-	W	T	U	Low	
43	General	Trigger page 5 cell 5			1 bit	C	-	W	T	U	Low	
44	General	Trigger page 5 cell 6			1 bit	C	-	W	T	U	Low	
45	General	Trigger page 5 cell 7			1 bit	C	-	W	T	U	Low	
46	General	Trigger page 5 cell 8			1 bit	C	-	W	T	U	Low	
7~46	General	Trigger page 1 cell 1 ... Trigger page 5 cell 8	C W T U	DPT 1.008 1bit								

This communication objects are used to set the panel system parameters.

47	Slave clock	Network datetime	8 bytes	C - W T U
48	Slave clock	Network date	3 bytes	C - W T U
49	Slave clock	Network time	3 bytes	C - W T U
47	General	Network datetime	C W T U	DPT 19.001 8 bytes
48	General	Network date	C W T U	DPT 11.001 8 bytes
49	General	Network time	C W T U	DPT 10.001 8 bytes

This communication objects are used to set the panel time.

51	Local temperature	Temperature report		2 bytes	C R - T U
51	Local temperature	Temperature report	C R T U	DPT 9.001 2 bytes	

D.1 PanelScene

Objects "Panel Scene"											
Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type
61	Panel scene A	Call scene (1byte)			1 byte	C	-	W	T	U	
62	Panel scene A	Call scene (1bit)			1 bit	C	-	W	T	U	
63	Panel scene A	Save scene (1bit)			1 bit	C	-	W	T	U	
64	Panel scene A	Object 1 value(1byte...			1 byte	C	-	W	T	U	
65	Panel scene A	Object 2 value(1bit)			1 bit	C	-	W	T	U	
66	Panel scene A	Object 3 value(1byte...			1 byte	C	-	W	T	U	
67	Panel scene A	Object 4 value(1byte...			1 byte	C	-	W	T	U	
68	Panel scene A	Object 5 value(2byte...			2 bytes	C	-	W	T	U	
69	Panel scene A	Object 6 value(0..655...			2 bytes	C	-	W	T	U	
70	Panel scene A	Object 7 value(3byte...			3 bytes	C	-	W	T	U	
71	Panel scene A	Object 8 value(1byte...			1 byte	C	-	W	T	U	
72	Panel scene A	Object 9 value(1byte...			1 byte	C	-	W	T	U	
73	Panel scene A	Object 10 value(3byt...			3 bytes	C	-	W	T	U	
NO.	Object name	Function	Flags	Data type							
61	Panel scene A	Call scene(1byte)	C W T U	DPT 18.001 1byte							
62	Panel scene A	Call scene(1bit)	C W T U	DPT 1.001 1 bit							
<i>This communication object is used to call scene, the data type is different.</i>											
63	Panel scene A	Save scene(1bit)	C W T U	DPT 1.007 1 bit							
<i>This communication object saves scene. If you set a scene and dim it, then you save it, when you call this scene the brightness is your save last time.</i>											
64	Panel scene A	Object 1~10 value 1bit value	C W T U	DPT1.001 1 bit							
...		1byte value(0..100%)		DPT5.001 1 byte							
73		1byte value(0..255)		DPT5.004 1 byte							
		2byte value(Float)		DPT9.001 2byte							
		2byte value(0..65535)		DPT7.001 2byte							
		3byte value(RGB)		DPT232.600 3byte							
<i>This communication object is the object value about scene A. The object has 5 types data types.</i>											

81 ... 93	Panel scene B	Same to scene A
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D2 Page 1~5

Objects" page 1 cell 1" (101~105)																																																																														
1. Switch controller																																																																														
<table border="1"> <thead> <tr> <th></th> <th>Number</th> <th>Name</th> <th>Object Function</th> <th>Description</th> <th>Group Address</th> <th>Length</th> <th>C</th> <th>R</th> <th>W</th> <th>T</th> <th>U</th> <th>Data Type</th> <th>Prio</th> </tr> </thead> <tbody> <tr> <td>■</td> <td>101</td> <td>Page 1 cell 1 short</td> <td>Switching</td> <td></td> <td></td> <td>1 bit</td> <td>C -</td> <td>W</td> <td>T</td> <td>U</td> <td></td> <td>Low</td> </tr> <tr> <td>■</td> <td>102</td> <td>Page 1 cell 1 long</td> <td>Switching</td> <td></td> <td></td> <td>1 bit</td> <td>C -</td> <td>W</td> <td>T</td> <td>U</td> <td></td> <td>Low</td> </tr> <tr> <td>■</td> <td>103</td> <td>Page 1 cell 1 delay send</td> <td>Switching</td> <td></td> <td></td> <td>1 bit</td> <td>C -</td> <td>W</td> <td>T</td> <td>U</td> <td></td> <td>Low</td> </tr> <tr> <td>■</td> <td>105</td> <td>Page 1 cell 1 status</td> <td>Status</td> <td></td> <td></td> <td>1 bit</td> <td>C -</td> <td>W</td> <td>T</td> <td>U</td> <td></td> <td>Low</td> </tr> </tbody> </table>														Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Prio	■	101	Page 1 cell 1 short	Switching			1 bit	C -	W	T	U		Low	■	102	Page 1 cell 1 long	Switching			1 bit	C -	W	T	U		Low	■	103	Page 1 cell 1 delay send	Switching			1 bit	C -	W	T	U		Low	■	105	Page 1 cell 1 status	Status			1 bit	C -	W	T	U		Low
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102	Page 1 cell 1	Move for shutter	C W T U	DPT 1.008																																																																										

				1bit
105	Page 1 cell 1 status	Status	C W T U	DPT 1.001 1bit

This communication object is used to shutter controller.

4. Flexible controller

Number	Name	Object Function	Desc	Group Address	Length	C	R	W	T	U	Data Type	Priority
101	Page 1 cell 1 short	Flexible			1 bit	C	-	W	T	U		Low
102	Page 1 cell 1 long	Flexible			1 bit	C	-	W	T	U		Low
105	Page 1 cell 1 status	Status			1 bit	C	-	W	T	U		Low

101	Page 1 cell 1 (short)	Flexible	CWT U	DPT 1.001 1bit
102	Page 1 cell 1 long			
105	Page 1 cell 1 status	Status	C W T U	DPT 1.001 1bit

5. Scene controller

Number	Name	Object Function	Desc	Group Address	Length	C	R	W	T	U	Data Type	Priority
101	Page 1 cell 1 short	Call scene			1 byte	C	-	W	T	U		Low
102	Page 1 cell 1 long	Scene dimming			4 bit	C	-	W	T	U		Low
105	Page 1 cell 1 status	Status			1 bit	C	-	W	T	U		Low

101	Page 1 cell 1 (short)	Call scene	C W T U	DPT 18.001 1byte
102	Page 1 cell 1 long	Scene dimming	C W T U	DPT 3.007 4bit
105	Page 1 cell 1 status	Status	C W T U	DPT 1.001 1bit

This communication object is used to scene controller.

6. Sequence controller

Number	Name	Object Function	Desc	Group Address	Length	C	R	W	T	U	Data Type	Priority
101	Page 1 cell 1 short	Sequence			1 bit	C	-	W	T	U		Low
102	Page 1 cell 1 long	Sequence			1 bit	C	-	W	T	U		Low
105	Page 1 cell 1 status	Status			1 bit	C	-	W	T	U		Low

101	Page 1 cell 1 short	sequence	C W T U	DPT 1.010 1bit
102	Page 1 cell 1 long	sequence	C W T U	DPT 1.010 1bit
105	Page 1 cell 1 status	Status	C W T U	DPT 1.001 1bit

This communication object is used to sequence controller.

7. Percentage controller

Number	Name	Object Function	Desc	Group Address	Length	C	R	W	T	U	Data Type	Priority
101	Page 1 cell 1	Percentage			1 byte	C	-	W	T	U		Low
105	Page 1 cell 1 status	Status			1 bit	C	-	W	T	U		Low

101	Page 1 cell 1 short	Percentage	C W T U	DPT 5.010 1byte
105	Page 1 cell 1 status	Status	C W T U	DPT 1.001 1bit

This communication object is used to percentage controller.

8. Threshold controller

Number	Name	Object Function	Desc	Group Address	Length	C	R	W	T	U	Data Type	Priority
101	Page 1 cell 1	Threshold(2bytes)			2 bytes	C -	W T U				Low	
105	Page 1 cell 1 status	Status			1 bit	C -	W T U				Low	
101	Page 1 cell 1 short	Percentage		C W T U								
105	Page 1 cell 1 status	Status		C W T U								

This communication object is used to percentage controller.

9. String(14bytes) controller

Number	Name	Object Function	Desc	Group Address	Length	C	R	W	T	U	Data Type	Priority
101	Page 1 cell 1	String(14bytes) value			14 bytes	C -	W T U				Low	
105	Page 1 cell 1 status	Status			1 bit	C -	W T U				Low	
101	Page 1 cell 1	String(14byte) value		C W T U								
105	Page 1 cell 1 status	Status		C W T U								

This communication object is used to string controller.

10. Alternate controller

Number	Name	Object Function	Desc	Group Address	Length	C	R	W	T	U	Data Type	Priority
101	Page 1 cell 1	Alternate <1>(1 bit)			1 bit	C -	W T U				Low	
102	Page 1 cell 1	Alternate <2>(1 bit)			1 bit	C -	W T U				Low	
103	Page 1 cell 1	Alternate <3>(1 byte)			1 byte	C -	W T U				Low	
104	Page 1 cell 1	Alternate <4>(2 byte)			2 bytes	C -	W T U				Low	
105	Page 1 cell 1 status	Status			1 bit	C -	W T U				Low	
101	Page 1 cell 1	Alternate<1>(1bit)		C W T U								
102	Page 1 cell 1	Alternate<2>(1bit)		C W T U								
103	Page 1 cell 1	Alternate<3>(1byte)		C W T U								
104	Page 1 cell 1	Alternate<4>(2byte)		C W T U								
105	Page 1 cell 1 status	Status		C W T U								

This communication object is used to alternate controller.

11. Pulse controller

Number	Name	Object Function	Desc	Group Address	Length	C	R	W	T	U	Data Type	Priority
101	Page 1 cell 1	Pulse			1 bit	C -	W T U				Low	
105	Page 1 cell 1 status	Status			1 bit	C -	W T U				Low	
101	Page 1 cell 1	Pulse		C W T U								
105	Page 1 cell 1 status	Status		C W T U								

This communication object is used to pulse controller.

12. RGB controller

Number	Name	Object Function	Desc	Group Address	Length	C	R	W	T	U	Data Type	Priority
101	Page 1 cell 1	Switching			1 bit	C -	W T U				Low	
102	Page 1 cell 1	Absolute dimming			1 byte	C -	W T U				Low	
103	Page 1 cell 1	Relative dimming			4 bit	C -	W T U				Low	
104	Page 1 cell 1	RGB color			3 bytes	C -	W T U				Low	
105	Page 1 cell 1	Status			1 bit	C -	W T U				Low	
101	Page 1 cell 1	Switching		C W T U						DPT 1.001		
102	Page 1 cell 1	Absolute dimming		C W T U						DPT 5.001		
103	Page 1 cell 1	Relative dimming		C W T U						DPT 3.007		
104	Page 1 cell 1	RGB color		C W T U						DPT 232.600		
105	Page 1 cell 1 status	Status		C W T U						DPT 1.001		
<i>This communication object is used to RGB controller.</i>												

13. Fan controller

101	Page 1 cell 1	Fan object 1			1 bit	C -	W T U					
102	Page 1 cell 1	Fan object 2			1 bit	C -	W T U					
103	Page 1 cell 1	Fan object 3			1 bit	C -	W T U					
104	Page 1 cell 1	Fan object 4			1 bit	C -	W T U					
105	Page 1 cell 1	Status			1 bit	C -	W T U					
101	Page 1 cell 1	Fan object 1		C W T U						DPT 1.001		
102	Page 1 cell 1	Fan object 2		C W T U						DPT 1.001		
103	Page 1 cell 1	Fan object 3		C W T U						DPT 1.001		
104	Page 1 cell 1	Fan object 4		C W T U						DPT 1.001		
105	Page 1 cell 1	Status		C W T U						DPT 1.001		
<i>This communication object is used to Fan controller.</i>												

14. Combination controller

Number	Name	Object Function	Desc	Group Address	Length	C	R	W	T	U	Data Type	Priority
101	Page 1 cell 1	COMB OBJ1 switching			1 bit	C -	W T U				Low	
102	Page 1 cell 1	COMB OBJ2 shutter			1 bit	C -	W T U				Low	
103	Page 1 cell 1	COMB OBJ3 sequence			1 bit	C -	W T U				Low	
104	Page 1 cell 1	COMB OBJ4 scene			1 byte	C -	W T U				Low	
105	Page 1 cell 1	Status			1 bit	C -	W T U				Low	
101 ... 104	Page 1	COMB OBJ(1/2/3/4) Switch controller Shutter controller Scene controller Sequence controller Percentage controller Threshold controller String	C W T U									

		(14bytes)controller		
105	Page 1 cell 1 status	Status	C W T U	DPT 1.001 1bit
<i>This communication object is used to combination controller. each button object type can be set different.</i>				
<i>The setting page 2 to 5 are same to page 1.</i>				

D3 Air-condition

Objects "AC"												
Number	Name	Object Function	Desc	Group Address	Length	C	R	W	T	U	Data Type	Priority
390	Air-condition	Switch ON/OFF			1 bit	C	-	W	T	U		Low
391	Air-condition Temperature	Actual temperature fro...			2 bytes	C	-	W	T	U		Low
392	Air-condition Temperature	Setpoint temperature			2 bytes	C	-	W	T	U		Low
393	Air-condition Fan	ON CMD for automatic			1 bit	C	-	W	T	U		Low
394	Air-condition Fan	Fan speed with % value			1 byte	C	-	W	T	U		Low
397	Air-condition Wind	Wind swing('1'-swing,'0'...			1 bit	C	-	W	T	U		Low
398	Air-condition Mode	ON CMD for automatic			1 bit	C	-	W	T	U		Low
399	Air-condition Mode	ON CMD for cooling			1 bit	C	-	W	T	U		Low
400	Air-condition Mode	ON CMD for heating			1 bit	C	-	W	T	U		Low
401	Air-condition Mode	ON CMD for dehumidifi...			1 bit	C	-	W	T	U		Low
402	Air-condition Mode	ON CMD for fan			1 bit	C	-	W	T	U		Low
403	Air-condition Output	Relay-Heating			1 bit	C	-	W	T	-		Low
404	Air-condition Output	Relay-Cooling			1 bit	C	-	W	T	-		Low
405	Air-condition Output	Relay-Fan low speed			1 bit	C	-	W	T	-		Low
406	Air-condition Output	Relay-Fan medium speed			1 bit	C	-	W	T	-		Low
407	Air-condition Output	Relay-Fan hight speed			1 bit	C	-	W	T	-		Low
NO.	Object name	Function	Flags	Data type								
390	Air condition	Switch ON/OFF	C W T U	DPT 1.001 1bit								
ON/Off the AC controller.												
391-392	Air-condition Temperature	Actual temperature from EIB Setpoint temperature	C W T U	DPT 9001 2byte								
<i>This communication object is used to temperature, which from EIB or setpoint.</i>												
393-396	Air-condition Fan	ON CMD for automatic	C W T U	DPT 1.001 1 bit								
		ON CMD for low (medium, high) speed										
		Fan speed with % value		DPT 5.001 1 byte								
397	Air-condition Wind	Wind swing('1'-swing, '0'-stop)	C W T U	DPT 1.001 1 bit								
<i>This communication object is for air-condition wind.</i>												

398 - 402	Air-condition mode	ON CMD for automatic	C W T U	DPT1.001 1 bit
		ON CMD for low speed		DPT1.001 1 bit
		ON CMD for medium speed		
		ON CMD for high speed		
<i>This communication object is for air-condition mode.</i>				
403 - 407	Air-condition output	Relay-Heating Relay-Cooling Relay-Fan low speed Relay-Fan medium speed Relay-Fan high speed	C W T	DPT1.001 1 bit
<i>This communication object is for air-condition output.</i>				

D4 FCU

Objects "HVAC"												
Number	Name	Object Function	Desc	Group Address	Length	C	R	W	T	U	Data Type	Priority
301	HVAC Actual temperature	Actual temperature			2 bytes	C	-	W	T	U		Low
302	HVAC Actual temperature	Actual temp. error signal			1 bit	C	-	W	T	U		Low
303	HVAC Actual temperature	Frost/heat alarm error signal			1 bit	C	-	W	T	U		Low
304	HVAC Setpoint	Base setpoint temperature			2 bytes	C	-	W	T	U		Low
305	HVAC Setpoint	Instantaneous setpoint temp.			2 bytes	C	-	W	T	U		Low
307	HVAC control mode	Automatic heating/cooling mode			1 bit	C	-	W	T	U		Low
308	HVAC control mode	Activation of heating mode			1 bit	C	-	W	T	U		Low
309	HVAC control mode	Activation of cooling mode			1 bit	C	-	W	T	U		Low
310	HVAC control mode	Activation of fan only			1 bit	C	-	W	T	U		Low
312	HVAC mode	ON CMD for comfort mode			1 bit	C	-	W	T	U		Low
313	HVAC mode	ON CMD for standby mode			1 bit	C	-	W	T	U		Low
314	HVAC mode	ON CMD for night mode			1 bit	C	-	W	T	U		Low
315	HVAC mode	ON CMD for building protection			1 bit	C	-	W	T	U		Low
316	HVAC Fan	Fan speed automatic			1 bit	C	-	W	T	U		Low
317	HVAC Fan	Fan speed with % value			1 byte	C	-	W	T	U		Low
321	HVAC Fan	Status fan speed 1			1 bit	C	-	W	T	U		Low
322	HVAC Fan	Status fan speed 2			1 bit	C	-	W	T	U		Low
323	HVAC Fan	Status fan speed 3			1 bit	C	-	W	T	U		Low
325	HVAC Fan	Status fan speed automatic			1 bit	C	-	W	T	U		Low
326	HVAC Valve Heating	Trigger valve purge			1 bit	C	-	W	T	-		Low
327	HVAC Valve Heating	Status valve purge			1 bit	C	-	W	T	U		Low
328	HVAC Valve Cooling	Trigger valve purge			1 bit	C	-	W	T	-		Low
329	HVAC Valve Cooling	Status valve purge			1 bit	C	-	W	T	U		Low
330	HVAC Output	Relay-Heating			1 bit	C	-	W	T	-		Low
331	HVAC Output	Relay-Cooling			1 bit	C	-	W	T	-		Low
332	HVAC Output	Relay-Fan speed1			1 bit	C	-	W	T	-		Low
333	HVAC Output	Relay-Fan speed2			1 bit	C	-	W	T	-		Low
334	HVAC Output	Relay-Fan speed3			1 bit	C	-	W	T	-		Low
NO.	Object name	Function	Flags	Data type								
301-303	HVAC Actual temperature	Actual temperature	C W T U	DPT 9.001 2byte								

		Actual temp. error signal Frost/heat alarm error signal		DPT 1.005 1bit DPT 1.005 1bit
<i>This communication object is used to HVAC actual temperature.</i>				
304-305	HVAC setpoint	Base setpoint temperature Instantaneous setpoint temp.	C W T U	DPT 1.001 1 bit
<i>This communication object is for air-condition wind.</i>				
306 - 310	HVAC control mode	HVAC control mode (byte) Activation of heating mode Activation of cooling mode Activation of fan only HVAC control mode (byte) Automatic heating/cooling mode Activation of heating mode Activation of cooling mode Activation of fan only	C W T U	DPT20.105 1 byte DPT1.001 1 bit
<i>This communication object is for HVAC control mode.</i>				
311 - 315	HVAC mode	HVAC mode (byte) ON CMD for comfort mode ON CMD for standby mode ON CMD for night mode ON CMD for building protection	C W T U	DPT20.102 1 byte DPT1.001 1 bit
<i>This communication object is for HVAC mode.</i>				
316 - 325	HVAC Fan	Fan speed automatic Fan speed with % value Fan speed 1 Fan speed 2 Status fan speed 1 Status fan speed 2 Status fan speed Status fan speed automatic	C W T U	DPT1.001 1 bit DPT5.001 1 byte DPT1.001 1 bit DPT5.010 1 bit
<i>This communication object is for HVAC fan.</i>				
326-329	HVAC valve heating	Trigger valve purge Status valve purge	C W T U	DPT1.017 1 bit
	HVAC valve cooling	Trigger valve purge Status valve purge	C W T U	DPT1.003 1 bit
<i>This communication object is for HVAC heating/cooling.</i>				
330-334	HVAC output	Relay-Heating Relay-Cooling Relay-Fan speed1 Relay-Fan speed2	C W T U	DPT1.001 1 bit

		Relay-Fan speed3		
<i>This communication object is for HVAC output.</i>				

D5 Floor Heating

Objects "Floor heating"													
Number	Name	Object Function	Desc	Group	Address	Length	C	R	W	T	U	Data Type	Priority
336	Floor Heating 0	Pipe pressure protection				1 bit	C	-	W	T	U	Low	
338	Floor Heating 0	Actual temp. error signal				1 bit	C	-	W	T	U	Low	
339	Floor Heating 0	Outdoor temperature				2 bytes	C	-	W	T	U	Low	
340	Floor Heating 0	Normal-mode setpoint Temp.				2 bytes	C	-	W	T	U	Low	
341	Floor Heating 0	Day-mode setpoint Temp.				2 bytes	C	-	W	T	U	Low	
342	Floor Heating 0	Night-mode setpoint Temp.				2 bytes	C	-	W	T	U	Low	
343	Floor Heating 0	Away-mode setpoint Temp.				2 bytes	C	-	W	T	U	Low	
344	Floor Heating 0	Preset 1 Temp. for timer mode				2 bytes	C	-	W	T	U	Low	
345	Floor Heating 0	Time of day for preset1				3 bytes	C	-	W	T	U	Low	
346	Floor Heating 0	Start/Stop heating for preset1				1 bit	C	-	W	T	U	Low	
347	Floor Heating 0	Preset 2 Temp. for timer mode				2 bytes	C	-	W	T	U	Low	
348	Floor Heating 0	Time of day for preset 2				3 bytes	C	-	W	T	U	Low	
349	Floor Heating 0	Start/Stop heating for preset2				1 bit	C	-	W	T	U	Low	
350	Floor Heating 0	Preset 3 Temp. for timer mode				2 bytes	C	-	W	T	U	Low	
351	Floor Heating 0	Time of day for preset 3				3 bytes	C	-	W	T	U	Low	
352	Floor Heating 0	Start/Stop heating for preset3				1 bit	C	-	W	T	U	Low	
353	Floor Heating 0	Floor heating(1-ON,0-OFF)				1 bit	C	-	W	T	U	Low	
354	Floor Heating 0	ON CMD for Normal-mode				1 bit	C	-	W	T	U	Low	
355	Floor Heating 0	ON CMD for Day-mode				1 bit	C	-	W	T	U	Low	
356	Floor Heating 0	ON CMD for Night-mode				1 bit	C	-	W	T	U	Low	
357	Floor Heating 0	ON CMD for Away-mode				1 bit	C	-	W	T	U	Low	
358	Floor Heating 0	ON CMD for Timer-mode				1 bit	C	-	W	T	U	Low	
359	Floor Heating 0	Trigger valve purge				1 bit	C	-	W	T	-	Low	
360	Floor Heating 0	Status valve purge				1 bit	C	-	W	T	U	Low	
361	Floor Heating 0 Output	Safety protect temperature				2 bytes	C	-	W	T	U	Low	
362	Floor Heating 0 Output	Relay-Heating				1 bit	C	-	W	T	U	Low	

NO.	Object name	Function	Flags	Data type

336- 360	Floor heating	Pipe pressure protection	C	W	T	U							
		Actual temperature											
		Actual temp. error signal											
		Outdoor temperature											
		Normal-mode setpoint Temp.											
		Day-mode setpoint Temp.											
		Night-mode setpoint Temp.											
		Away-mode setpoint Temp.											
		Preset 1 Temp. for timer mode								DPT 1.001	1bit		
		Time of day for preset 1								DPT 9.001	2byte		
		Start/Stop heating for preset1								DPT 1.005	1bit		
		Preset 2 Temp. for timer mode								DPT 10.001	3byte		
		Time of day for preset 2											
		Start/Stop heating for preset2											
		Preset 3 Temp. for timer mode											
		Time of day for preset 3											
		Start/Stop heating for preset3											
		Floor heating(1-ON,0-OFF)											
		ON CMD for Normal-mode											
		ON CMD for Day-mode											
		ON CMD for Night-mode											
		ON CMD for Away-mode											
		ON CMD for Timer-mode											
		Trigger valve purge											
		Status valve purge											
<i>This communication object is used to HVAC actual temperature.</i>													
361- 362	Floor heating output	Safety protect temperature	C	W	T	U				DPT 9.001			
										2 byte			
		Relay-Heating PWM(1bit) PWM valve(1byte)								DPT 1.001	1bit		
<i>This communication object is for floor heating.</i>													
<i>The setting of Floor heating B is same to floor heating A. the NO. is from 363 to 389</i>													

D6 Audio controller

Objects "Audio controller"													
Number	Name	Object Function	Desc	Group	Address	Length	C	R	W	T	U	Data Type	Priority
409	Audio controller	Start play				1 bit	C	-	W	T	U		Low
410	Audio controller	Pause play				1 bit	C	-	W	T	U		Low
411	Audio controller	Select song				1 bit	C	-	W	T	U		Low
412	Audio controller	adjust volume				1 byte	C	-	W	T	U		Low
413	Audio controller	Audio mute				1 bit	C	-	W	T	U		Low
414	Audio controller	Select list				1 bit	C	-	W	T	U		Low
415	Audio controller	Select source				1 byte	C	-	W	T	U		Low
416	Audio controller	adjust bass				1 byte	C	-	W	T	U		Low
417	Audio controller	adjust treble				1 byte	C	-	W	T	U		Low
418	Audio controller	display play(first low)				14 bytes	C	-	W	T	U		Low
419	Audio controller	display play(second low)				14 bytes	C	-	W	T	U		Low
420	Audio controller	display play(three low)				14 bytes	C	-	W	T	U		Low

NO.	Object name	Function	Flags	Data type
409-420	Audio controller	Start play Pause play Select song adjust volume Audio mute Select list Select source Select source adjust bass adjust bass adjust treble adjust treble	C W T U	DPT 1.010 1bit DPT 1.003 1bit DPT 1.007 1bit DPT 5.001 1byte
		display play(first low) display play(second low) display play(three low)	C W T U	DPT 16.000 14byte
<i>This communication object is used to Audio controller.</i>				

附件：

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