APPLICATION PROGRAM INFORMATION

Dry Contact 4CH Sensor

M/S04.1

KNX/EIB-BUS

Document Version: 1.0, Date: __15. April.2015___

This document describes the M/S04.1-functions with the KNX-product- application:

Dry Contact 4CH Sensor (V1.1).vd5

This product can be used with the optional HDL temperature sensor TTS/APR 1.0, which is specified in its Technical Product Information V1.0, date03. April 2015

Compiled by (english name):_____Mr. He_____

HDL-Position:_____Technical Manager, KNX-Products_____

Location:___Gungzhou___Date:__15. April.2015_____ Signature:_____何海荣_____

Approved by (english name):___Dicky Du_____

HDL-Position:_____Technical Manager_____

Location:___Gungzhou___Date:__15. April.2015_____ Signature:_____

Document History			
Version	Date	Comments	Author (english name)
1.0	27.12.2014	First issue	Sally Li

A. General description
B. Function overview flowchart
C. Function description
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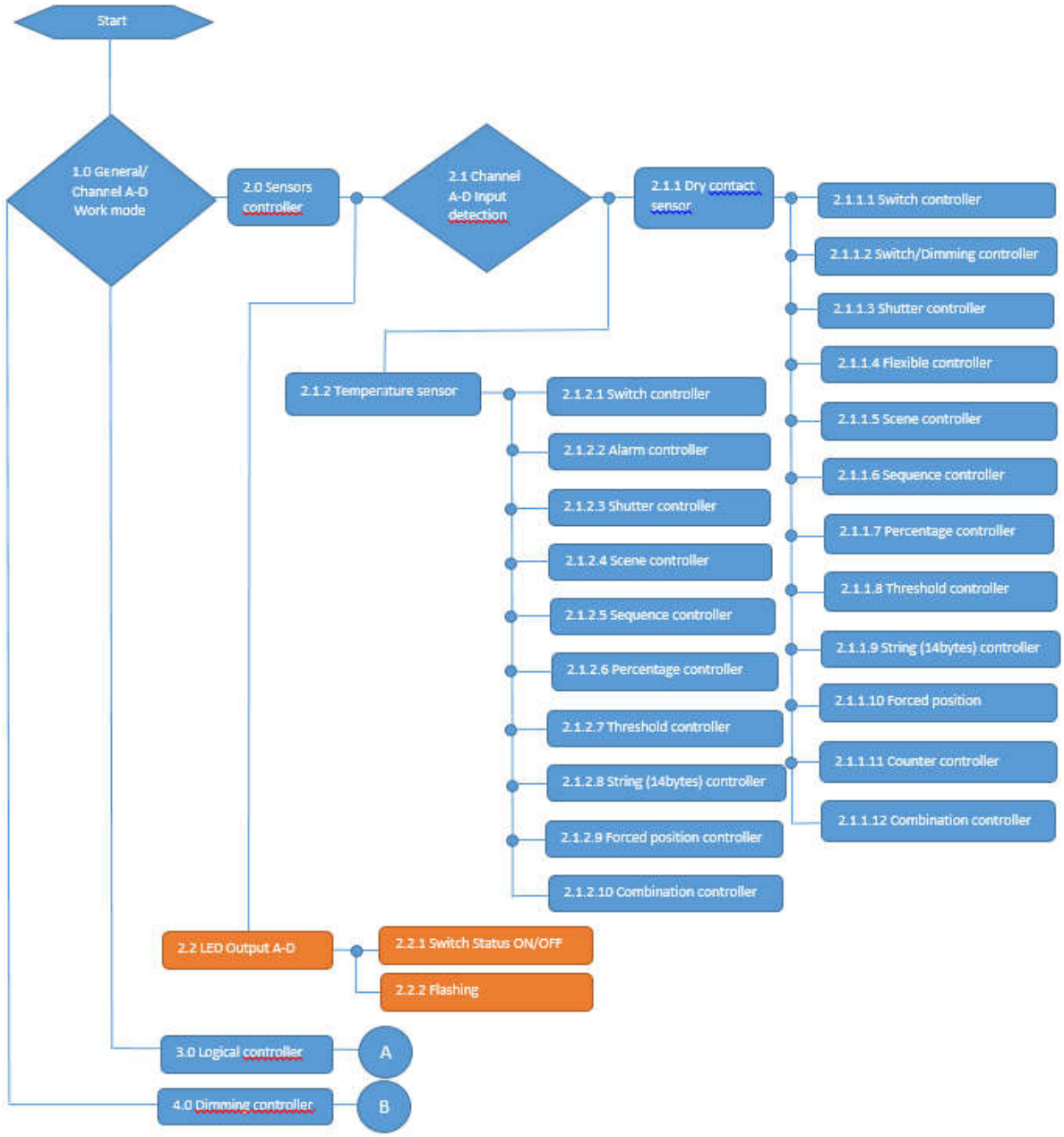
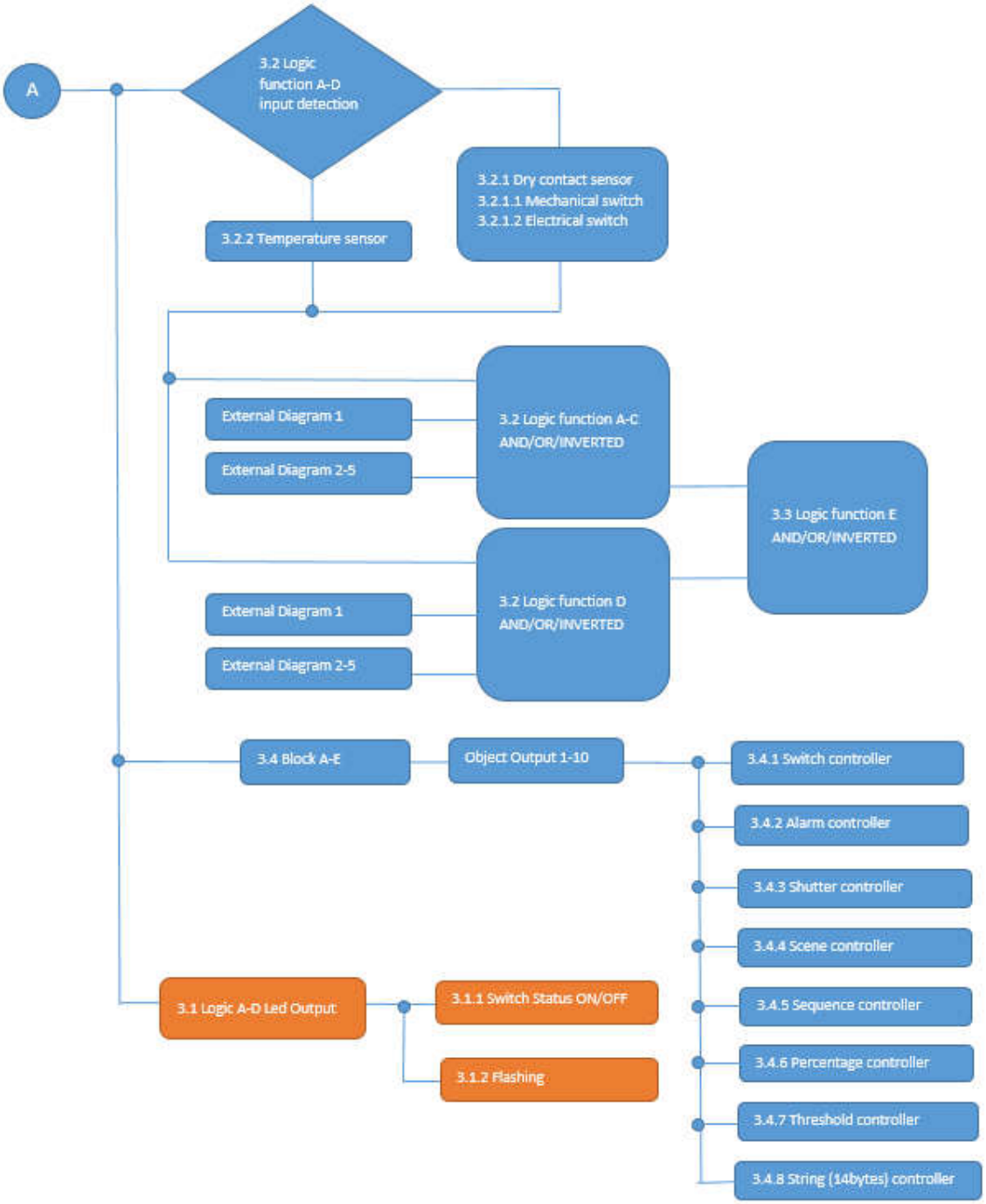
A.

The Dry Contact 4CH Sensor is used to operate building functions. Its design enables it to be mounted in a 60mm wiring box. This manual contains the programming of this device.

B.

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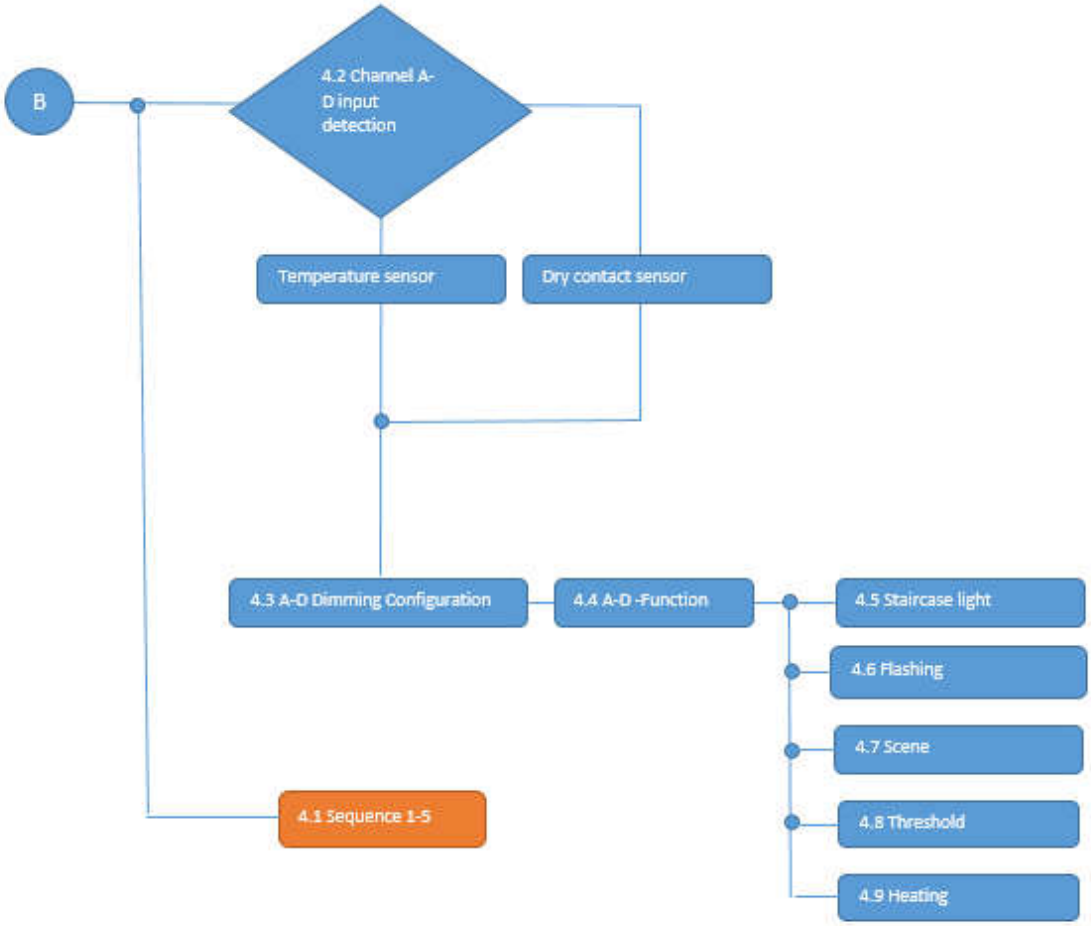
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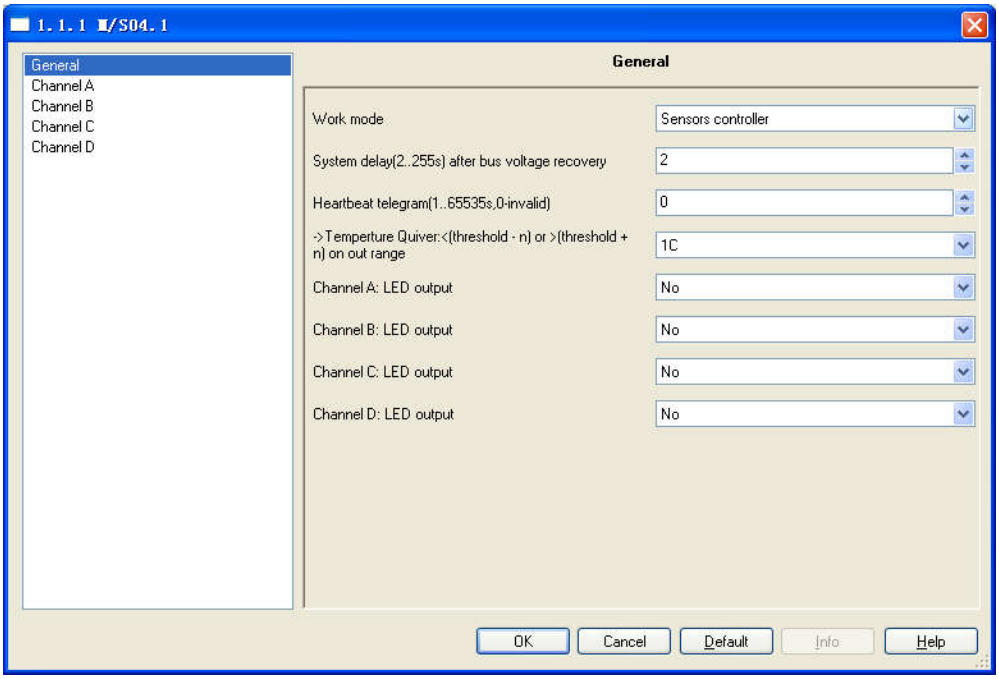
C.

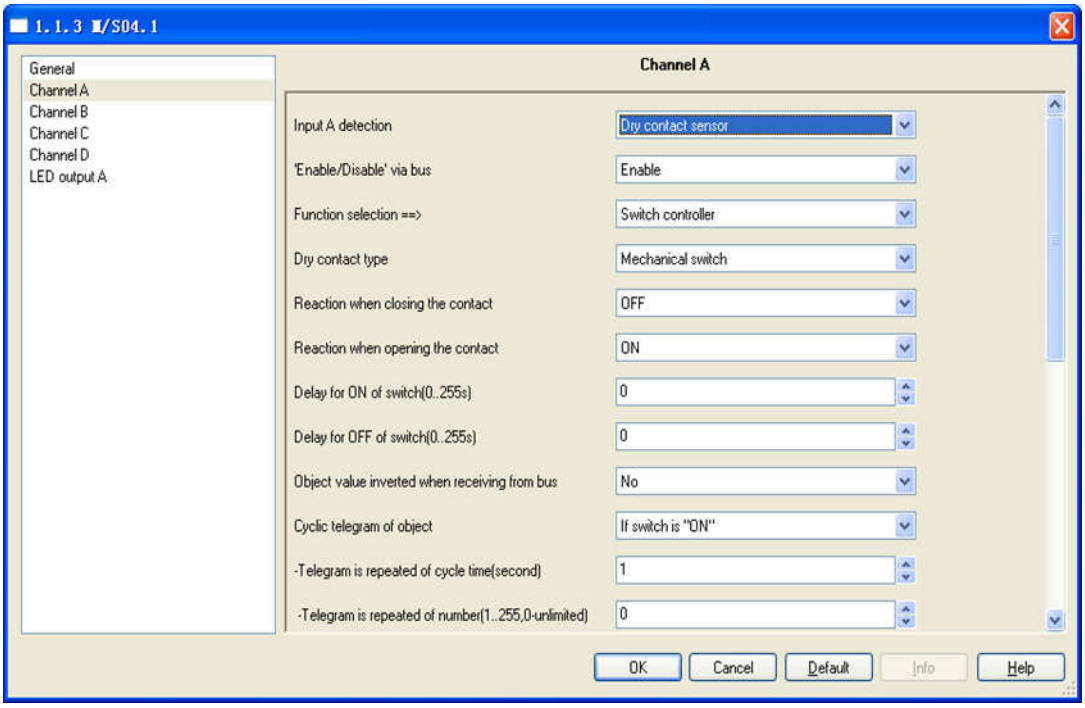
1.0_General/Channel A-D Work mode/ 2.0_Sensors controller



No.	ETS-Parameter	Range (default)	Description
1	Work mode	- (Sensors controller) - Logical controller - Dimming controller	*Set the work mode-sensors controller*
2	System delay (2-255s) after bus voltage recovery	(2)..255s	*Set the delay time for the device to work after power on, the range is 2-255s*
3	Heartbeat telegram (1..65535s,0-invalid)	(0)..65535s	*If the parameter is set to nonzero, the device will send a telegram data (alternately between 0 and 1) cyclically after time out; if it's set to 0, this function is invalid.*
4	Temperature Quiver: < (threshold – n) or >(threshold +n) on out range)	0C, (1C),..10C	*The effective range is larger than threshold1 and less than threshold2* *The setting range is larger than the (threshold1–n) and less than (threshold2+n).* *Suppose the temperature is in the effective range, when it changes within the setting range, the status will not change.* *Suppose the temperature is in the effective range, when it changes out of the setting range, the status will change.* *Suppose the temperature is not in the effective range, only when the temperature changes into the effective*

			range, the status will change.
5	Channel A: LED output Channel B: LED output Channel C: LED output Channel D: LED output	(NO), YES	*If select YES, it will appear a setting page of the "LED output A". That page is used to set the LED state parameter. Channel B,C,D outputs are same as Channel A.*

2.1_Channel A-D, Input detection

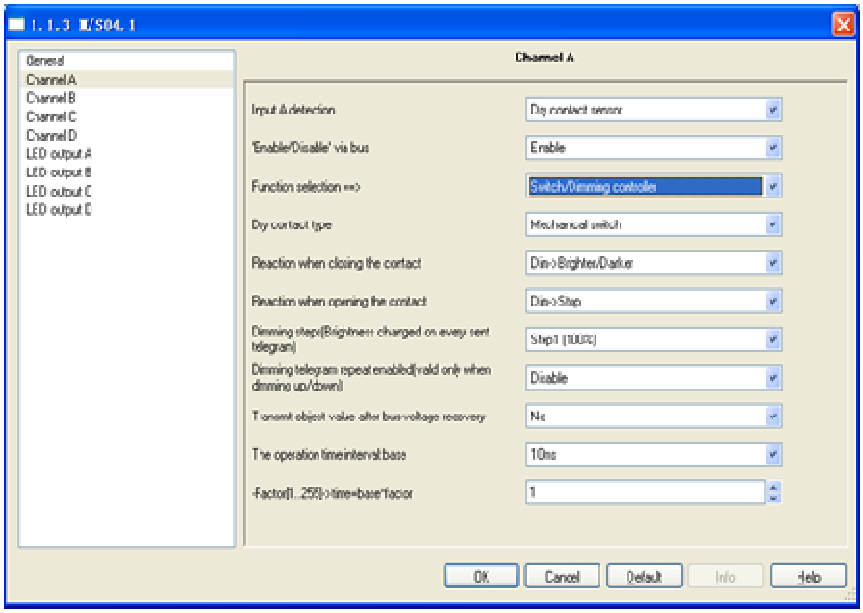


No.	ETS-Parameter	Range (default)	Description
6	Input A detection	-(No detection) -Dry contact sensor -Temperature sensor	*Function selection*
2.1.1_Dry contact sensor			
7	Enable/Disable via bus	(Disable), Enable	*If select 'Enable', you can enable/disable the channel A via bus*
8	Function selection==>	-(Switch controller) -Switch / Dimming controller -Shutter controller -Flexible controller -Scene controller -Sequence controller -Percentage controller -Threshold controller -String (14bytes) controller -Forced position controller -Counter controller -Combination controller	*Select the output control function you need.*
2.1.1.1_Switch controller			
9	Dry contact type	-(Mechanical switch) -Electronic switch	*Mechanical switch: it has two states, "OFF" and "ON". You can set commands to each*

			state.(act as a bi-stable button)Electronic Switch: act as a mono-stable button.
2.1.1.1.1_Mechanical switch			
10	Reaction when closing the contact	-Unchanged -(ON) -OFF -Toggle -Stop cyclic telegram	***Unchanged:*** *It will send the same value as the last time.* ***ON****: The value it will send is 1.* ***OFF****: The value it will send is 0.* ***Toggle****: It will invert the last time's value then send itout.* ***Stop cyclic telegram:*** *This is mainly used for the following cycle settings.*
11	Reaction when opening the contact	-Unchanged -ON -(OFF) -Toggle -Stop cyclic telegram	***Unchanged:*** *It will send the same value as the last time.* ***ON****: The value it will send is 1.* ***OFF****: The value it will send is 0.* ***Toggle****: It will invert the last time's value then send itout.* ***Stop cyclic telegram:*** *This is mainly used for the following cyclic settings.*
12	Delay for ON of switch(0..255s)	(0)..255	*Set the delay time for switch on*
13	Delay for OFF of switch(0..255s)	(0)..255	*Set the delay time for switchoff*
14	Object value inverted when receiving from bus	-(NO) -YES	***NO:*** *It will not invert the receiving value* ***YES:*** *It will invert the receiving value*
15	Cyclic telegram of object	-(NO) -if switch is "ON" -if switch is "OFF" -Always transmission	***NO:****There is not cyclic function.* ***If switch is ON:*** *It willsend out the telegram cyclically when the switch is on.* ***If switch is OFF:****It willsend out the telegram cyclically when the switch is off.* ***Always transmission:****No matter the switch is on or off, it will send out the telegram cyclically.*
16	Transmit object value after bus voltage recovery	NO,(YES)	*Whether transmit object value after bus voltage recovery.*
17	The operation time interval: base	-(10ms) -100ms -1sec -1min -1hour	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*
18	Factor[1..255]->time=base*factor	(1)...255	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*

2.1.1.1.2_Electronic switch			
19	The normally contact status is	Closed/(Open)	*Set the dry contact's normal status when have nooperation.* ***Closed:****The dry contact'snormal status is closed.* ***Open:****The dry contact'snormal status is open*
20	Reaction when short button operation	-Invalid -Unchanged -ON -OFF -(Toggle)	*Set the output control type when short press the button*
21	Reaction when long button operation	-(Invalid) -Unchanged -ON -OFF -Toggle	*Set the output control type when long press the button*
22	Long button time after	0.2s..(1s)..60s	*Set time for long-press, define the long press by end-user*
23	Delay for ON of switch(0..255s)	(0)..255	*Set the delay time for switch on*
24	Delay for OFF of switch(0..255s)	(0)..255	*Set the delay time for switch off*
25	Object value of short button inverted when receive from bus	-(NO) -YES	***NO:*** *It will not invert the receiving value* ***YES:*** *It will invert the receiving value*
26	Object value of long button inverted when receive from bus	-(NO) -YES	***NO:*** *It will not invert the receiving value* ***YES:*** *It will invert the receiving value*
27	The operation time interval: base	-(10ms) -100ms -1sec -1min -1hour	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*
28	Factor[1..255]->time=base*factor	(1)...255	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*

2.1.1.2_Switch/Dimming controller

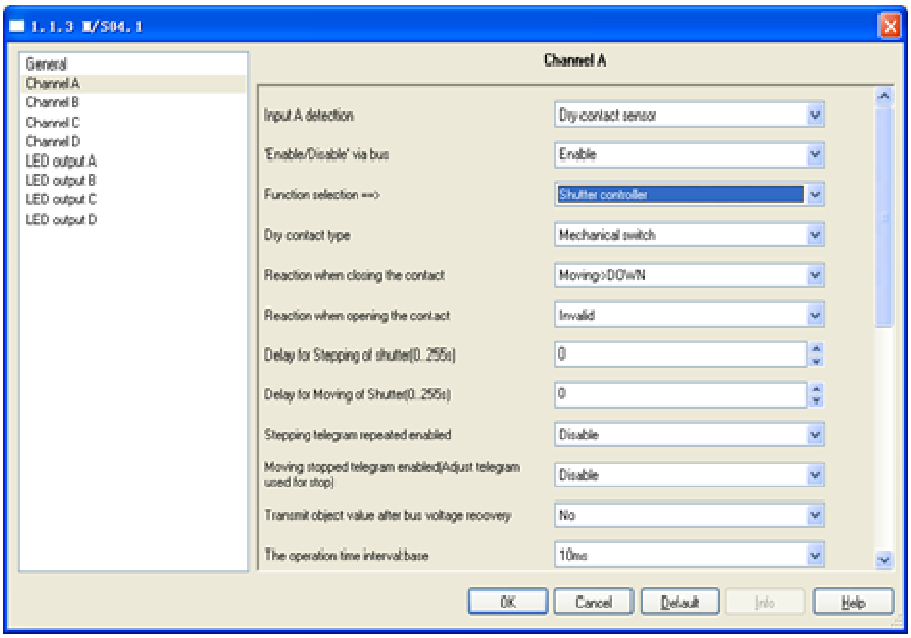


No.	ETS-Parameter	Range (default)	Description
29	Dry contact type	-(Mechanical switch) -Electronic switch	*Function selection*
2.1.1.2.1_Mechanical switch			
30	Reaction when closing the contact	-Invalid -Dim->Brighter -Dim->Darker -(Dim-> Brighter/Darker) -Dim-> Stop	***Invalid:****no action when closing the dry contact.* ***Dim->Brighter:*** *When closing the dry contact, it will increase the brightness.* ***Dim->Darker:*** *When closing the dry contact, it will decrease the brightness.* ***Dim-> Brighter/Darker:*** *When closing the dry contact, it will increase/decrease the brightness.* ***Dim->Stop:*** *when closing the dry contact, it will stop dimming.*
31	Reaction when opening the contact	-Invalid -Dim->Brighter -Dim->Darker -Dim-> Brighter/Darker -(Dim-> Stop)	***Invalid:****no action when opening the dry contact.* ***Dim->Brighter:*** *When opening the dry contact, it will increase the brightness.* ***Dim->Darker:*** *When opening the dry contact, it will decrease the brightness.* ***Dim-> Brighter/Darker:***

			When opening the dry contact, it will increase/decrease the brightness. ***Dim->Stop:****when opening the dry contact, it will stop dimming.*
32	Dimming steps (Brightness changed on every sent telegram)	-(Step1 (100%)) -Step2 (50%) -Step3 (25%) ..Step7 (1.56%)	*Set the dimming values when sends out the dimming telegram*
33	Dimming telegram repeat enabled (valid only when dimming up/down)	(Disable), Enable	*Whether repeat sendingdimming telegram.* ***Disable:*** *do not repeat sendingdimming telegram.* ***Enable:*** *when dimming up/down will repeat sending dimming telegram.*
34	Dimming telegram repeated time	0.2s..(0.4s)..60s	*The interval of sending dimming telegram*
35	Dimming telegram repeated number (1..255,0-unlimited)	(0)..255	*The repeat times of sending dimming telegram*
36	Transmit object value after bus voltage recovery	-(NO) -YES	*Whether transmit object value after bus voltage recovery.*
37	The operation time interval: base	(10ms)..1hour	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*
38	Factor[1..255]->time=base*factor	(1)...255	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*
2.1.1.2.2_Electronic switch			
39	The normally contact status is	Closed/(Open)	*Set the dry contact's normal status when have nooperation.* ***Closed:****The dry contact'snormal status is closed.* ***Open:****The dry contact'snormal status is open*
40	Reaction when short button operation	-Invalid -Unchanged -ON -OFF -(Toggle)	*Set the output control type when short press the button*
41	Reaction when long button operation	-Invalid -Dim->Brighter -Dim->Darker -(Dim-> Brighter/Darker)	*Set the output control type when long press the button*
42	Long button time after	0.2s..(1s)..60s	*Set time for long-press, define the long press by end-user*
43	Delay for ON of switch(0..255s)	(0)..255	*Set the delay time for switchon*

44	Delay for OFF of switch(0..255s)	(0)..255	*Set the delay time for switchoff*
45	Dimming steps (Brightness changed on every sent telegram)	-(Step1 (100%)) -Step2 (50%) -Step3 (25%) ..Step7 (1.56%)	*Set the dimming values when sends out the dimming telegram*
46	Dimming telegram repeated enable	(Disable), Enable	*Whether repeat sendingdimming telegram.* ***Disable:*** *do not repeat sendingdimming telegram.* ***Enable:*** *when dimming up/down will repeat sending dimming telegram.*
47	Dimming telegram repeated time	0.2s..(0.3s)..60s	*The interval of sending dimming telegram*
48	Dimming telegram repeated number (1..255,0-unlimited)	(0)..255	*The repeat times of sending dimming telegram*
49	The operation time interval: base	(10ms)..1hour	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*
50	Factor[1..255]->time=base*factor	(1)...255	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*

2.1.1.3_Shutter controller



No.	ETS-Parameter	Range (default)	Description
51	Dry contact type	-(Mechanical switch) -Electronic switch	*Function selection*
2.1.1.3.1_Mechanical switch			
52	Reaction when closing the	-Invalid	***Invalid:*** *no action when*

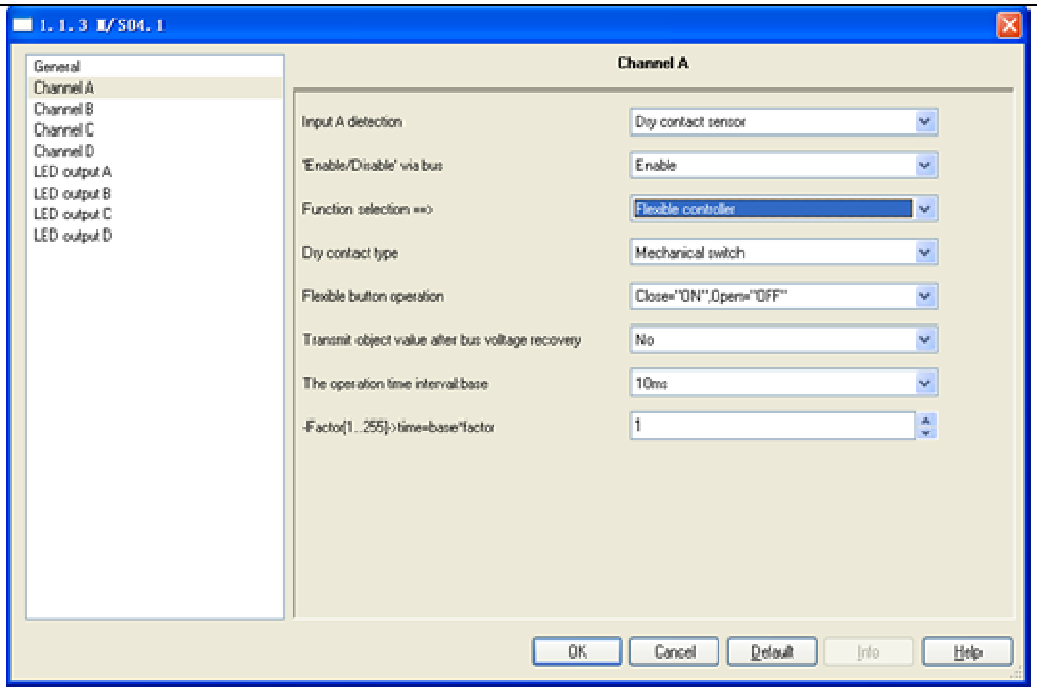
	contact	-Stepping->Increase -Stepping->Decrease -Stepping->Toggle -Stepping->Repeat telegram stopped -Moving->UP -(Moving->DOWN) -Moving->Toggle	*closing the dry contact.* ***Stepping->Increase:*** *When closing the dry contact, it will increase the angle of louver.* ***Stepping-> Decrease:****When closing the dry contact, it will decrease the angle of louver.* ***Stepping-> Toggle:*** *When closing the dry contact, it will increase/decrease the angle of louver.* ***Stepping->Repeat telegram stopped:*** *When closing the dry contact, it will stop repeat sending stepping telegram* ***Moving-> UP:*** *When closing the dry contact, it will send move up telegram* ***Moving-> Down:*** *When closing the dry contact, it will send move down telegram* ***Moving-> Toggle:*** *When closing the dry contact, it will send move up/down telegram*
53	Reaction when opening the contact	-(Invalid) -Stepping->Increase -Stepping->Decrease -Stepping->Toggle -Stepping->Repeat telegram stopped -Moving->UP -(Moving->DOWN) -Moving->Toggle	***Invalid:*** *no action when opening the dry contact.* ***Stepping->Increase:*** *When opening the dry contact, it will increase the angle of louver.* ***Stepping-> Decrease:****When opening the dry contact, it will decrease the angle of louver.* ***Stepping-> Toggle:*** *When opening the dry contact, it will increase/decrease the angle of louver.* ***Stepping->Repeat telegram stopped:*** *When opening the dry contact, it will stop repeat sending stepping telegram* ***Moving-> UP:*** *When opening the dry contact, it will send move up telegram* ***Moving-> Down:*** *When opening the dry contact, it will send move down telegram* ***Moving-> Toggle:*** *When opening the dry contact, it will send move up/down telegram*
54	Delay for Stepping of Shutter(0..255s)	(0)..255	*Set the delay time for adjusting the angle of louver*
55	Delay for Moving of	(0)..255	*Set the delay time for the*

	Shutter(0..255s)		*shutter moving*
56	Stepping telegram repeated enabled	-(Disable) -Enable	*Whether repeat sendingadjusting telegram.* ***Disable:** do not repeat sendingadjusting telegram.* ***Enable:** it will repeat sending the adjusting telegram.*
57	Stepping telegram repeated time	(0.2s)..60s	*The interval of sending adjusting telegram*
58	Stepping telegram repeated number (1…255, 0-unlimited)	(0)..255	*The repeat times of sending dimming telegram*
59	Moving stopped telegram enabled(Adjust telegram used for stop)	-(Disable) -Enable	*Enable/disable the function to auto stop the shutter after moving*
60	Moving stopped telegram delay time: base	100ms,(1sec)..1hour	*These two parameters are used to set thedelay time to stop the shutter after moving, the delay time = base*factor.*
61	Factor[1..255]->time=base*factor	(10)...255	*These two parameters are used to set delay time to stop the shutter after moving, the delay time = base*factor.*
62	Transmit object value after bus voltage recovery	-(NO) -YES	*Whether transmit object value after bus voltage recovery.* ***NO**: do not transmit object value after bus voltage recovery.* ***YES**: it will transmit object value after bus voltage recovery.*
63	The operation time interval: base	(10ms)..1hour	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*
64	Factor[1..255]->time=base*factor	(1)...255	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*
2.1.1.3.2_Electronic switch			
65	The normally contact status is	Closed/(Open)	*Set the dry contact normal status when has no operation.*
66	Reaction when short button operation	-Invalid -(Stepping->Increase/STOP) -Stepping->Decrease/STOP -Stepping->Toggle/STOP -Moving->UP -Moving->DOWN -Moving->Toggle	***Invalid:** no action when short press the button* ***Stepping->Increase/Stop:**when short press the button, it will increase/stop the angle of louver.* ***Stepping-> Decrease/Stop:**when short press the button, it willdecrease/stop the angle of louver.* ***Stepping-> Toggle/Stop:***

			when short press the button, it willtoggle/stop the angle of louver. ***Moving-> UP:*** *When short press the button, it will send move up telegram* ***Moving-> Down:*** *When short press the button, it will send move down telegram* ***Moving-> Toggle:*** *When short press the button, it will send move up/down telegram*
67	Reaction when long button operation	-Invalid -Stepping->Increase/STOP -Stepping->Decrease/STOP -Stepping->Toggle/STOP -Moving->UP -Moving->DOWN -(Moving->Toggle) -Press: Moving->UP, Release: Call short button -Press: Moving->DOWN, Release: Call short button -Press: Moving->Toggle, Release: Call short button	***Invalid:*** *no action when long press the button* ***Stepping->Increase/Stop:****when longpress the button, it will increase/stop the angle of louver.* ***Stepping-> Decrease/Stop:****when long press the button, it willdecrease/stop the angle of louver.* ***Stepping-> Toggle/Stop:*** *when longpress the button, it willtoggle/stop the angle of louver.* ***Moving-> UP:*** *When long press the button, it will send move up telegram* ***Moving-> Down:*** *When long press the button, the shutter will move down* ***Moving-> Toggle:*** *When long press the button, it will send move down telegram* ***Press: Moving->UP, Release: Call short button:*** *When long press the button, it will send move up telegram; when release, it will send the value of short button.* ***Press: Moving->DOWN, Release: Call short button:*** *When long press the button, it will it will send move down telegram; when release, it will send the value of short button.* ***Press: Moving->Toggle, Release: Call short button:*** *When long press the button, it will send move up/down telegram; when release, it will send the value of short button.*

68	Long button time after	0.2s..(1s)..60s	*Set time for long-press, define the long press by end-user*
69	Delay for Stepping of shutter(0..255s)	(0)..255	*Set the delay time for adjusting the angle of louver*
70	Delay for Moving of shutter(0..255s)	(0)..255	*Set the delay time for the shutter moving.*
71	Stepping telegram repeated enable	(Disable), Enable	*Whether repeat sendingadjusting telegram.* ***Disable:*** *do not repeat sendingadjusting telegram.* ***Enable:*** *it will repeat sending the adjusting telegram.*
72	Stepping telegram repeated time	0.2s..(0.3s)..60s	*The interval of sending adjusting telegram*
73	Stepping telegram repeated number (1..255,0-unlimited)	(0)..255	*The repeat times of sending adjusting telegram*
74	Moving stopped telegram enabled (Adjust telegram used for stop)	(Disable), Enable	*Enable/disable the function to auto stop the shutter after moving*
75	Moving stopped telegram delay time: base	100ms...1sec..1hour	*These two parameters are used to set thedelay time to stop the shutter after moving, the delay time = base*factor.*
76	Factor[1..255]->time=base*factor	1..(10)...255	*These two parameters are used to set thedelay time to stop the shutter after moving, the delay time = base*factor.*
77	The operation time interval: base	(10ms)..1hour	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*
78	Factor[1..255]->time=base*factor	(1)...255	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*

2.1.1.4_Flexible controller

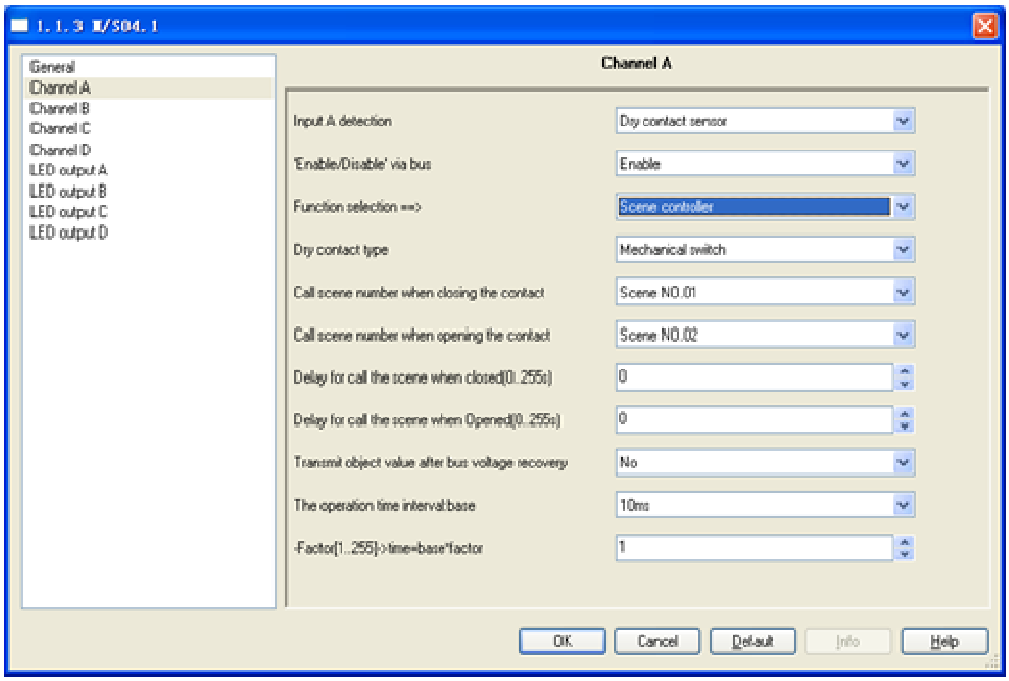


No.	ETS-Parameter	Range (default)	Description
79	Dry contact type	-(Mechanical switch) -Electronic switch	*Function selection*
2.1.1.4.1_Mechanical switch			
80	Flexible button operation	-Invalid -(Close="toggle") -Open="toggle" -Close="ON" -Open="ON" -Close="ON", Open="ON" -Close="OFF" -Open="OFF" -Close="OFF", Open="OFF" -Close="ON", Open="OFF -Close="OFF", Open="ON	***Invalid:*** *the dry contact is invalid.* ***Close="Toggle":*** *when closing, it will invert the last time's value then send itout* ***Open="Toggle":*** *when opening, it will invert the last time's value then send itout* ***Close="ON":*** *when closing, the value it will send is 1* ***Open="ON":*** *when opening, the value it will send is 1* ***Close="ON", Open="ON":*** *the value it will send is always 1* ***Close="OFF":****when closing, the value it will send is 0* ***Open="OFF":*** *when opening, the value it will send is 0* ***Close=" OFF", Open=" OFF":*** *the value it will send is always 0* ***Close=" ON", Open=" OFF":*** *when closing, the value it will send is 1; when opening, the value it will send is 0* ***Close=" OFF", Open=" ON":*** *when closing, the value it will send is 0; when opening, the value it will send is 1*
81	Transmit object value after bus	-(NO)	*Whether transmit object*

	voltage recovery	-YES	*value after bus voltage recovery.* ***NO**: do not transmit object value after bus voltage recovery.* ***YES**: will transmit object value after bus voltage recovery.*
82	The operation time interval: base	(10ms)..1hour	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*
83	Factor[1..255]->time=base*factor	(1)...255	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*
2.1.1.4.2_Electronic switch			
84	The normally contact status is	Closed/(Open)	*Set the dry contact's normal status when have no operation.* ***Close:** the contact's normal status is closed.* ***Open:** the contact's normal status is open.*
85	Flexible button operation	Invalid -(Press="toggle") Release="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"	***Invalid:** the dry contact is invalid.* ***Press="Toggle":** when press, it will invert the last time's value then send itout* ***Release="Toggle":** when release, it will invert the last time's value then send itout* ***Press ="ON":** when press, the value it will send is 1* ***Release ="ON":** when release, the value it will send is 1* ***Press="ON", Release ="ON":** the value it will send is always 1* ***Press="OFF":**when press, the value it will send is 0* ***Release="OFF":** when release, the value it will send is 0* ***Press=" OFF", Release=" OFF":** the value it will send is always 0* ***Press=" ON", Release=" OFF":** when press, the value it will send is 1; when release, the value it will send is 0* ***Press=" OFF", Release=" ON":** when press, the value it will send is 0; when release, the value it will send is 1*
86	The operation time interval:	(10ms)..1hour	*These two parameters are*

	base		*used to set the time interval of repeat operation, the time interval = base*factor.*
87	Factor[1..255]->time=base*factor	(1)...255	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*

2.1.1.5_Scene controller

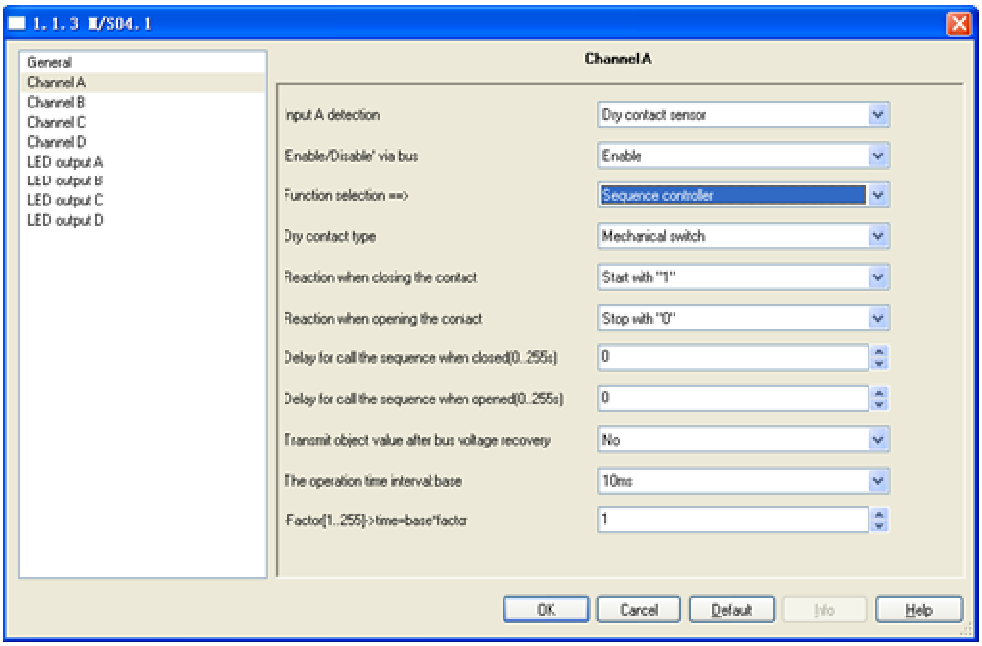


No.	ETS-Parameter	Range (default)	Description
88	Dry contact type	-(Mechanical switch) -Electronic switch	*Function selection*
2.1.1.5.1_Mechanical switch			
89	Call scene number when closing the contact	Invalid, (Scene NO.01)..Scene NO.64	*Call corresponding scene when closing*
90	Call scene number when opening the contact	Invalid..(Scene NO.02)..Scene NO.64	*Call corresponding scene whenopening*
91	Delay for call the scene when closed (0…255s)	(0)..255	*Set the delay time to call scene when closing*
92	Delay for call the scene when Opened (0…255s)	(0)..255	*Set the delay time to call scene when opening*
93	Transmit object value after bus	-(NO)	*Whether transmit object*

	voltage recovery	-YES	*value after bus voltage recovery.* ***NO**: do not transmit object value after bus voltage recovery.* ***YES**: will transmit object value after bus voltage recovery.*
94	The operation time interval: base	(10ms)..1hour	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*
95	Factor[1..255]->time=base*factor	(1)...255	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*
2.1.1.5.2_Electronic switch			
96	The normally contact status is	Closed/(Open)	*Set the dry contact's normal status when have no operation.* ***Close:** the contact's normal status is closed.* ***Open:** the contact's normal status is open.*
97	Call scene when short button operation	Scene NO.01..Scene NO.24	*Call corresponding scene whenshort press*
98	Reaction when long button operation	-(Scene dimming) -Scene saving -Dimming and saving	*Set long press's control function* ***Scene dimming:** will dim the scene when long press* ***Scene saving:** will save current value to the scene when long press* ***Dimming and saving:** will dim the scene and save the last dimming value to the scene when long press*
99	-Scene dimming	-(Dim-> Brighter) -Dim-> Darker -Dim-> Brighter/Darker	***Dim->Brighter:** will increase the scene's brightness when long press* ***Dim->Darker:** will decrease thescene's brightness when long press* ***Dim-> Brighter/Darker:** will increase/decrease the scene's brightness when long press*
100	Long button time after	0.2s..(1s)..60s	*Set time for long-press, define the long press by end-user*
101	Short button operation toggled	-(NO) -YES	*Enable/disable the toggle function for short press*
102	-Toggled scene of the short operation	Scene NO.01, (Scene NO.02)..Scene NO.24	*Call another scene when short press, toggle between two of them*
103	Delay for Call the scene(0..255s)	(0)..255	*Set the delay time to call scene*
104	The operation time interval:	(10ms)..1hour	*These two parameters are*

	base		*used to set the time interval of repeat operation, the time interval = base*factor.*
105	Factor[1..255]->time=base*factor	(1)...255	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*

2.1.1.6_Sequence controller

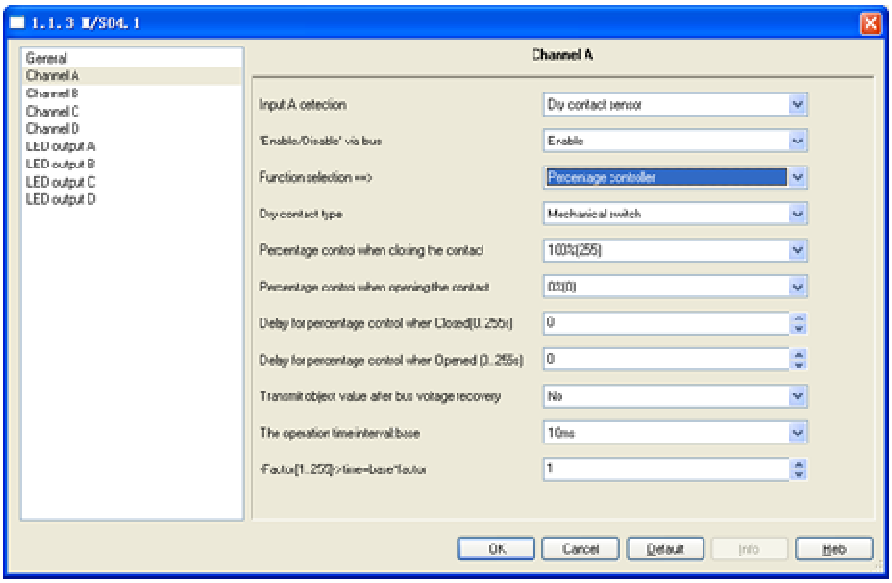


No.	ETS-Parameter	Range (default)	Description
106	Dry contact type	-(Mechanical switch) -Electronic switch	*Function selection*
2.1.1.6.1_Mechanical switch			
107	Reaction when closing the contact	-Invalid -Toggle -(Start with “1”) -Stop with “0”	*Set the function of the dry contact when closing it.* ***Invalid:** the dry contact is invalid.* ***Toggle:** It will invert the last time’s value then send itout when closing* ***Start with”1”** : The value it will send is 1 to start the sequence.* ***Stop with”0”** : The value it will send is 1 to stop the sequence.*
108	Reaction when opening the contact	-Invalid -Toggle -Start with “1” -(Stop with “0”)	*Set the function of the dry contact when opening it.* ***Invalid:** the dry contact is invalid.*

			Toggle: *It will invert the last time's value then send itout when opening* ***Start with"1"****: The value it will send is 1 to start the sequence.* ***Stop with"0"****: The value it will send is 0 to stop the sequence.*
109	Delay for call the sequence when closed(0..255s)	(0)..255	*Set the delay time to call the sequence after closing*
110	Delay for call the sequence when opened(0..255s)	(0)..255	*Set the delay time to call the sequence after opening*
111	Transmit object value after bus voltage recovery	-(NO) -YES	*Whether transmit object value after bus voltage recovery.* ***NO****: do not transmit object value after bus voltage recovery.* ***YES****: will transmit object value after bus voltage recovery.*
112	The operation time interval: base	(10ms)..1hour	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*
113	Factor[1..255]->time=base*factor	(1)...255	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*
2.1.1.6.2_Electronic switch			
114	The normally contact status is	Closed/(Open)	*Set the dry contact's normal status when have no operation.*
115	Reaction when short button operation	-Invalid -(Toggle) -Start with "1" -Stop with "0"	***Invalid:*** *the dry contact is invalid.* ***Toggle:*** *It will invert the last time's value then send itout when short press* ***Start with"1"****: The value it will send is 1 to start the sequence.* ***Stop with"0"****: The value it will send is 0 to stop the sequence.*
116	Reaction when long button operation	-(Invalid) -Toggle -Start with "1" -Stop with "0"	***Invalid:*** *the dry contact is invalid.* ***Toggle:*** *It will invert the last time's value then send itout when long press* ***Start with"1"****: The value it will send is 1 to start the sequence.* ***Stop with"0"****: The value it will send is 0 to stop the sequence.*

117	Long button time after	0.2s..(1s)..60s	*Set time for long-press, define the long press by end-user*
118	Delay for short operation(0..255s)	(0)..255	*Set the delay time to send out telegram for short press*
119	Delay for long operation(0..255s)	(0)..255	*Set the delay time to send out telegram for long press*
120	The operation time interval: base	(10ms)..1hour	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*
121	Factor[1..255]->time=base*factor	(1)...255	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*

2.1.1.7_Percentage controller

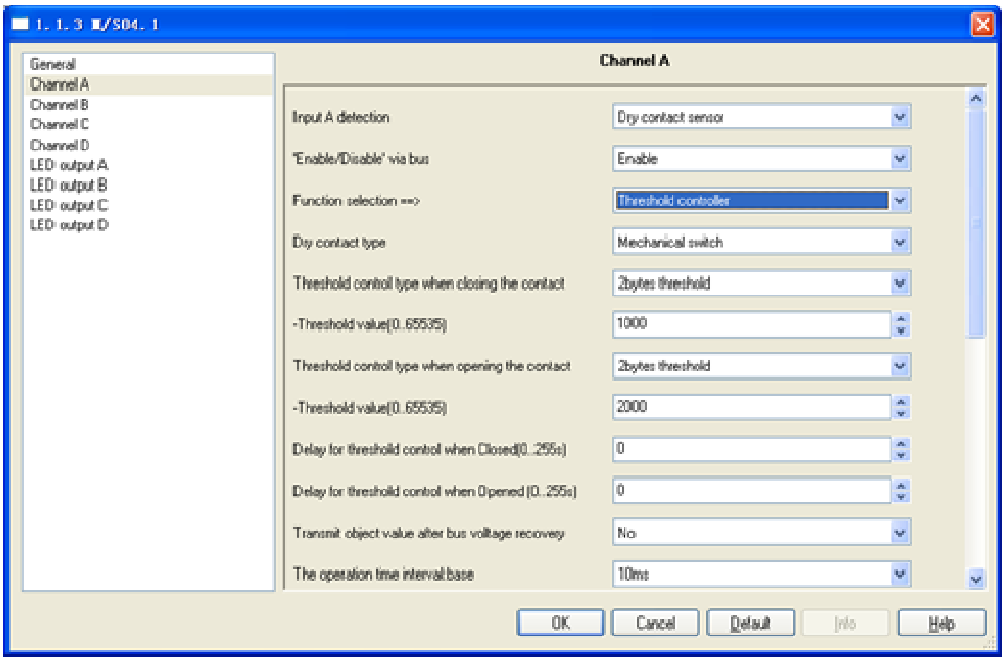


No.	ETS-Parameter	Range (default)	Description
122	Dry contact type	-(Mechanical switch) -Electronic switch	*Function selection*
2.1.1.7.1_Mechanical switch			
123	Percentage control when closing the contact	-Invalid -0%(0)..(100%(255))	*Set the percentage value when closing the dry contact* ***Invalid:*** *the dry contact is invalid.* ***0%(0)—100%(255) :*** *the specific percentage value*
124	Percentage control when opening the contact	-Invalid -(0%(0))..100%(255)	*Set the percentage value when closing the dry contact* ***Invalid:*** *the dry contact is invalid.* ***0%(0)—100%(255) :*** *the*

			specific percentage value
125	Delay for percentage control when Closed (0..255s)	(0)..255	*Set the delay time to send out telegram when closing*
126	Delay for percentage control when Opened (0..255s)	(0)..255	*Set the delay time to send out telegram when opening*
127	Transmit object value after bus voltage recovery	-(NO) -YES	*Whether transmit object value after bus voltage recovery.* ***NO**: do not transmit object value after bus voltage recovery.* ***YES**: will transmit object value after bus voltage recovery.*
128	The operation time interval: base	(10ms)..1hour	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*
129	Factor[1..255]->time=base*factor	(1)...255	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*
2.1.1.7.2_Electronic switch			
130	The normally contact status is	Closed/(Open)	*Set the dry contact's normal status when have no operation.* ***Close:** the contact's normal status is closed.* ***Open:** the contact's normal status is open.*
131	Reaction when short button operation	-Invalid -0%(0)..(100%(255))	***Invalid:** short press is invalid.* ***0%(0)—100%(255) :** the specific percentage value*
132	Reaction when long button operation	-Invalid -0%(0)..(100%(255))	***Invalid:** long press is invalid.* ***0%(0)—100%(255) :** the specific percentage value*
133	Long button time after	0.2s..(1s)..60s	*Set time for long-press, define the long press by end-user*
134	Short button operation toggled	-(NO) -YES	*Enable/disable the toggle function for short press*
135	Toggled brightness of the short operation	-(0%(0))..100%(255)	*Send another percentage value when short press, toggle between two of them*
136	Long button operation toggled	-(NO) -YES	*Enable/disable the toggle function for long press*
137	Toggled brightness of the long operation	-(0%(0))..100%(255)	*Send another percentage value when long press, toggle between two of them*
138	Delay for short operation (0..255s)	(0)..255	*Set the delay time to send out telegram for short press*
139	Delay for long operation (0..255s)	(0)..255	*Set the delay time to send out telegram for long press*
140	The operation time interval: base	(10ms)..1hour	*These two parameters are used to set the time interval of repeat operation, the time*

			*interval = base*factor.*
141	Factor[1..255]->time=base*factor	(1)...255	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*

2.1.1.8_Threshold controller

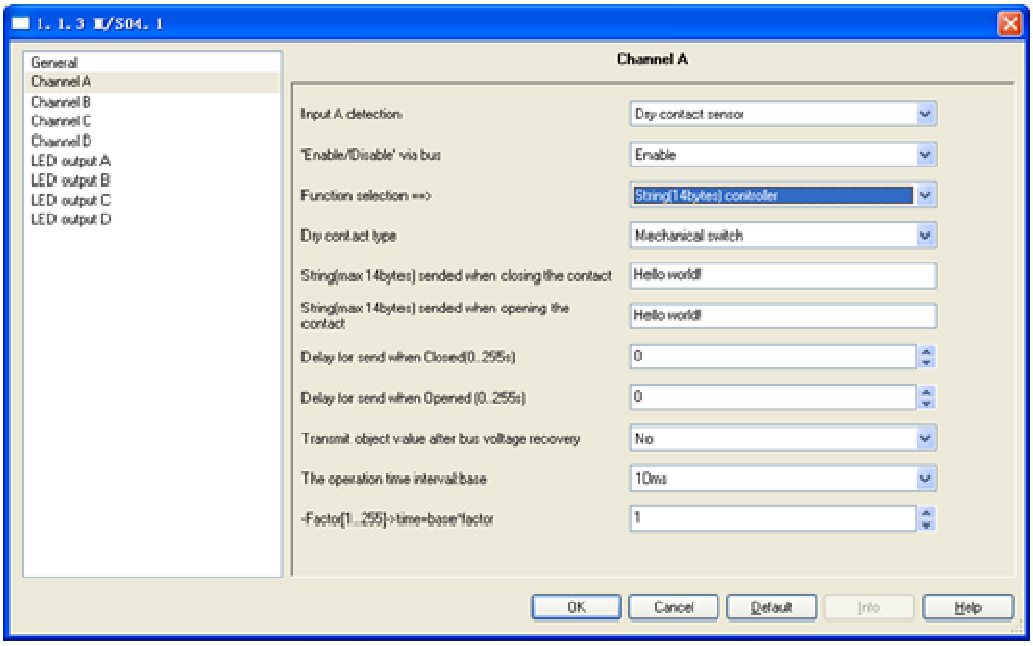


No.	ETS-Parameter	Range (default)	Description
142	Dry contact type	-(Mechanical switch) -Electronic switch	*Function selection*
2.1.1.8.1_Mechanical switch			
143	Threshold control type when closing the contact	-Invalid -(1byte threshold) -2bytes threshold	*Select the threshold type when closing*
144	Threshold value(0..255)	(0)..255	*Set the threshold value of 1byte*
145	Threshold value(0..65535)	(0)..65535	*Set the threshold value of 2byte*
146	Delay for threshold control when Closed (0..255s)	(0)..255	*Set the delay time to send the threshold value when closing*
147	Delay for threshold control when Opened (0..255s)	(0)..255	*Set the delay time to send the threshold value whenopening*
148	Transmit object value after bus voltage recovery	-(NO) -YES	*Whether transmit object value after bus voltage recovery.* ***NO**: do not transmit object value after bus voltage recovery.* ***YES**: will transmit object value after bus voltage recovery.*
149	The operation time interval:	(10ms)..1hour	*These two parameters are*

	base		*used to set the time interval of repeat operation, the time interval = base*factor.*
150	Factor[1..255]->time=base*factor	(1)...255	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*
2.1.1.8.2_Electronic switch			
151	The normally contact status is	Closed/(Open)	*Set the dry contact's normal status when have no operation.* ***Close:** the contact's normal status is closed.* ***Open:** the contact's normal status is open.*
152	Reaction when short button operation	-Invalid -(1byte threshold) -2bytes threshold	*Select the threshold type for short press*
153	Threshold value(0..255)	(0)..255	*Set the threshold value of 1byte*
154	Threshold value(0..65535)	(0)..65535	*Set the threshold value of 2byte*
155	Reaction when long button operation	-Invalid -(1byte threshold) -2bytes threshold	*Select the threshold type for long press*
156	Threshold value(0..255)	(0)..255	*Set the threshold value of 1byte*
157	Threshold value(0..65535)	(0)..65535	*Set the threshold value of 2byte*
158	Long button time after	0.2s..(1s)..60s	*Set time for long-press, define the long press by end-user*
159	Short button operation toggled	-(NO) -YES	*Enable/disable the toggle function for short press*
160	Toggled threshold(0..255) of the short operation	(0)..255	*Send another threshold value when short press, toggle between two of them*
161	Toggled threshold(0..255) of the short operation	(0)..65535	*Send another threshold value when short press, toggle between two of them*
162	Long button operation toggled	-(NO) -YES	*Enable/disable the toggle function for long press*
163	Toggled threshold(0..255) of the long operation	(0)..255	*Send another threshold value when long press, toggle between two of them*
164	Toggled threshold(0..65535) of the long operation	(0)..65535	*Send another threshold value when long press, toggle between two of them*
165	Delay for short operation (0..255s)	(0)..255	*Set the delay time to send the threshold value for short press*
166	Delay for long operation (0..255s)	(0)..255	*Set the delay time to send the threshold value for long press*
167	The operation time interval: base	(10ms)..1hour	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*

	Factor[1..255]->time=base*factor	(1)...255	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*

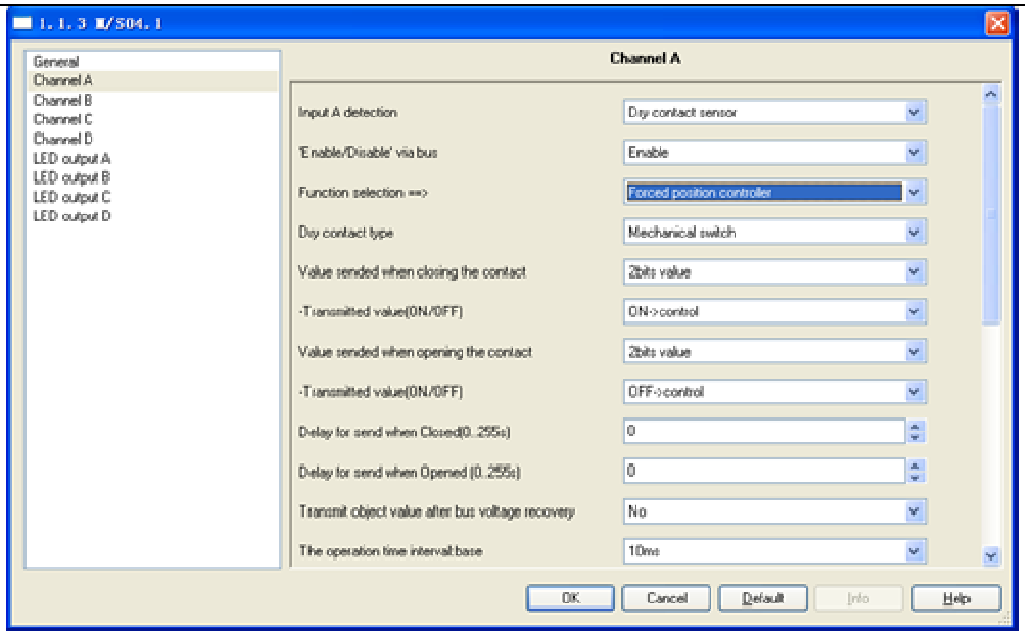
2.1.1.9_String(14bytes) controller



No.	ETS-Parameter	Range (default)	Description
168	Dry contact type	-(Mechanical switch) -Electronic switch	*Function selection*
2.1.1.9.1_Mechanical switch			
169	String(max 14bytes) sended when closing the contact	(Hello world!)	*Set the string to send when closing the dry contact. The stringMax. length is 14bytes*
170	String(max 14bytes) sended when opening the contact	(Hello world!)	*Set the string to send when opening the dry contact. The stringMax. length is 14bytes*
171	Delay for send when Closed (0..255s)	(0)..255	*Set the delay time to send string when closing*
172	Delay for send when Opened (0..255s)	(0)..255	*Set the delay time to send string when opening*
173	Transmit object value after bus voltage recovery	-(NO) -YES	*Whether transmit object value after bus voltage recovery.* ***NO**: do not transmit object value after bus voltage recovery.* ***YES**: will transmit object value after bus voltage recovery.*
174	The operation time interval: base	(10ms)..1hour	*These two parameters are used to set the time interval*

			*of repeat operation, the time interval = base*factor.*
175	Factor[1..255]->time=base*factor	(1)...255	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*
2.1.1.9.2_Electronic switch			
176	The normally contact status is	Closed/(Open)	*Set the dry contact's normal status when have no operation.* ***Close:*** *the contact's normal status is closed.* ***Open:*** *the contact's normal status is open.*
177	String(max 14bytes) sended when short button operation	(Hello world!)	*Set the string to send when short press the dry contact.*
178	String(max 14bytes) sended when long button operation	(Hello world!)	*Set the string to send when long press the dry contact*
179	Long button time after	0.2s..(1s)..60s	*Set time for long-press, define the long press by end-user*
180	Delay for short operation (0..255s)	(0)..255	*Set the delay time to send string for short press*
181	Delay for long operation (0..255s)	(0)..255	*Set the delay time to send string for long press*
182	The operation time interval: base	(10ms)..1hour	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*
183	Factor[1..255]->time=base*factor	(1)...255	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*

2.1.1.10_Forced position controller

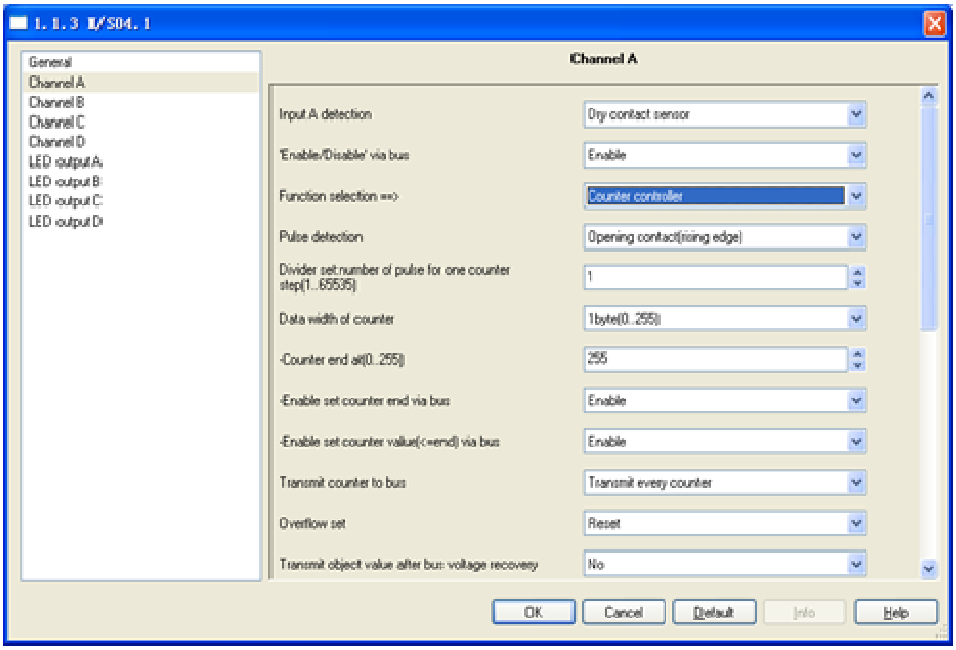


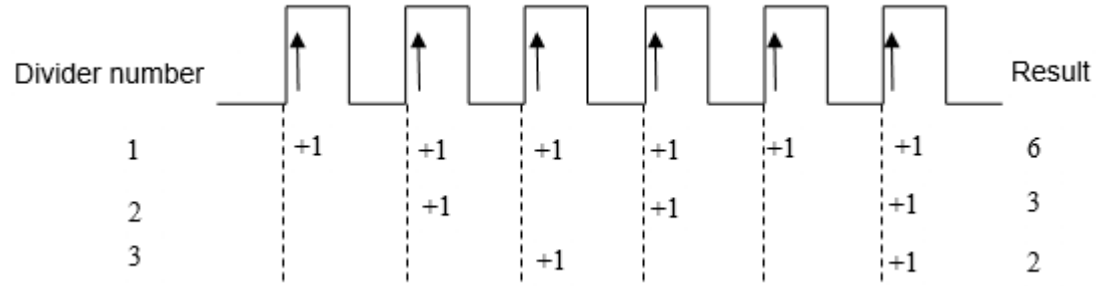
No.	ETS-Parameter	Range (default)	Description
184	Dry contact type	-(Mechanical switch) -Electronic switch	*Function selection*
2.1.1.10.1_Mechanical switch			
185	Value sended when closing the contact	-Invalid -(2bits value) -1byte value(0..255) -2bytes value(-32768..32767) -2bytes value(0..65536) -2bytes value(Float) -4bytes value(0..2147483647)	*Set the value typeto send when closing the dry contact.*
186	-Transmitted value (ON/OFF)	-(ON->control) -OFF->control -No control	*Set the control type of 2 bit when closing: ON, OFF, No Control*
187	-Transmitted value (0.255)	(0)..255	*Set the transmitted value of 1 byte when closing*
188	-Transmitted value(-32768..32767)	-32768..(0)..32767	*Set the transmitted value of 2 byte when closing*
189	-Transmitted value(0-65535)	(0)..65536	*Set the transmitted value of 2 byte when closing*
190	-Transmitted value	-100..(0)..100	*Set the transmitted value of 2 byte when closing*
191	-Transmitted value(0..2147483647)	(0)..2147483647	*Set the transmitted value of 4 byte when closing*
192	Value sended when opening the contact	-Invalid -(2bits value) -1byte value(0..255) -2bytes value(-32768..32767) -2bytes value(0..65536) -2bytes value(Float) -4bytes value(0..2147483647)	*Set the value type to send when opening the dry contact.*
193	-Transmitted value (ON/OFF)	-ON->control -(OFF->control) -No control	*Set the control type of 2 bit when closing: ON, OFF, No Control*
194	-Transmitted value (0.255)	(0)..255	*Set the transmitted value of 1*

			byte when closing
195	-Transmitted value(-32768..32767)	-32768..(0)..32767	*Set the transmitted value of 2 byte when closing*
196	-Transmitted value(0-65535)	(0)..65536	*Set the transmitted value of 2 byte when closing*
197	-Transmitted value	-100..(0)..100	*Set the transmitted value of 2 byte when closing*
198	-Transmitted value(0..2147483647)	(0)..2147483647	*Set the transmitted value of 4 byte when closing*
199	Delay for send when Closed (0..255s)	(0)..255	*Set the delay time to send the value when closing*
200	Delay for send when Opened (0..255s)	(0)..255	*Set the delay time to send the value when opening*
201	Transmit object value after bus voltage recovery	-(NO) -YES	*Whether transmit object value after bus voltage recovery.* ***NO**: do not transmit object value after bus voltage recovery.* ***YES**: will transmit object value after bus voltage recovery.*
202	The operation time interval: base	(10ms)..1hour	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*
203	Factor[1..255]->time=base*factor	(1)...255	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*
2.1.1.10.2_Electronic switch			
204	The normally contact status is	Closed/(Open)	*Set the dry contact's normal status when have no operation.* ***Close**: the contact's normal status is closed.* ***Open:** the contact's normal status is open.*
205	Value when short button operation	-Invalid -(2bits value) -1byte value(0..255) -2bytes value(-32768..32767) -2bytes value(0..65536) -2bytes value(Float) -4bytes value(0..2147483647)	*Set the value type to send when short press*
206	-Transmitted value (ON/OFF)	-(ON->control) -OFF->control -No control	*Set the control type of 2 bit when closing: ON, OFF, No Control*
207	-Transmitted value (0.255)	(0)..255	*Set the transmitted value of 1 byte when closing*
208	-Transmitted value(-32768..32767)	-32768..(0)..32767	*Set the transmitted value of 2 byte when closing*
209	-Transmitted value(0-65535)	(0)..65536	*Set the transmitted value of 2*

			byte when closing
210	-Transmitted value	-100..(0)..100	*Set the transmitted value of 2 byte when closing*
211	-Transmitted value(0..2147483647)	(0)..2147483647	*Set the transmitted value of 4 byte when closing*
212	Value when long button operation	-Invalid -(2bits value) -1byte value(0..255) -2bytes value(-32768..32767) -2bytes value(0..65536) -2bytes value(Float) -4bytes value(0..2147483647)	*Set the value type to send when short press*
213	Long button time after	0.2s..(1s)..60s	*Set time for long-press, define the long press by end-user*
214	Delay for short operation (0..255s)	(0)..255	*Set the delay time to send the value for short press*
215	Delay for long operation (0..255s)	(0)..255	*Set the delay time to send the value for long press*
216	The operation time interval: base	(10ms)..1hour	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*
217	Factor[1..255]->time=base*factor	(1)...255	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*

2.1.1.11_Counter controller

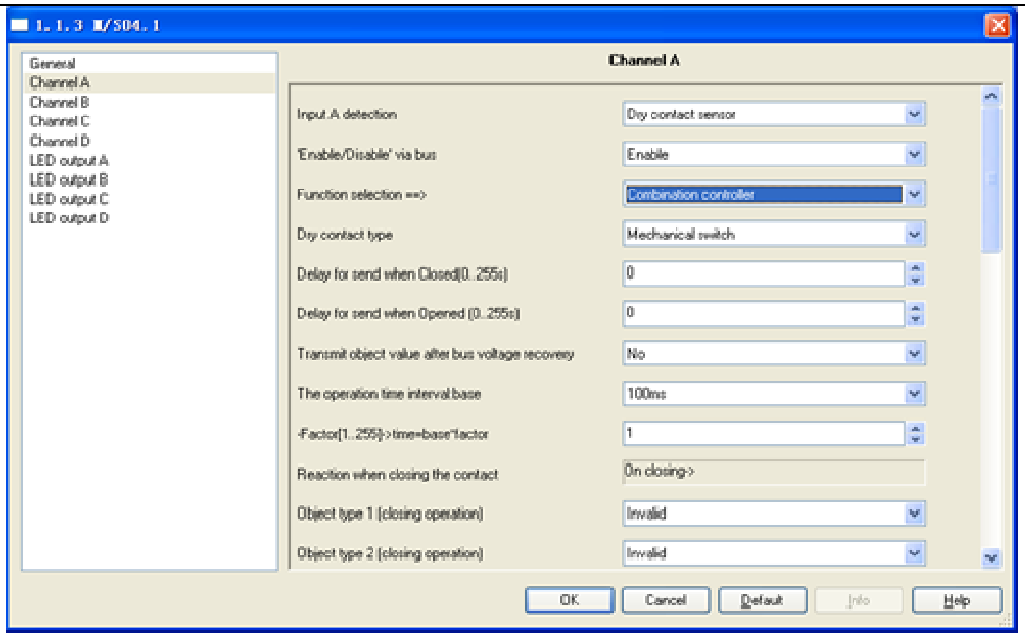




No.	ETS-Parameter	Range (default)	Description
218	Pulse detection	-(Closing contact (falling edge)) -Opening contact (rising edge) -Closing (falling edge) and Opening (rising edge)	***Closing contact (falling edge):*** *take as pulse when detecting the falling edge* ***Opening contact (rising edge):****take as pulse when detecting therising edge* ***Closing (falling edge) and Opening (rising edge):****take as pulse when detecting thefalling/rising edge*
219	Divider set: number of pulse for one counter step (1..65535)	(1)..65535	*Set the number of pulses for one counter*
220	Data width of counter	-(1byte value(0..255)) -2bytes value(0..65536) -4bytes value(0..2147483647)	*Set the data width for the counter*
221	-Counter end at (0..255)	0..(255)	*Set the end of the counter*
222	-Counter end at (0..65535)	0)..(65535)	*Set the end of the counter*
223	-Counter end at (0.. 2147483647)	0..(100000)..2147483647	*Set the end of the counter*
224	-Enable set counter end via bus	-(Disable) -Enable	*Whether set the end of the counter via bus.* *Enable: you can set the end of the counter via bus* *Disable: you can't set the end of the counter via bus*
225	-Enable set counter value (<=end) via bus	-(Disable) -Enable	*Whether set the starting counter via bus.* *Enable: you can set the starting counter via bus.* *Disable: you can't set the starting counter via bus.*
226	Transmit counter to bus	-Don't transmission -(Transmit every counter) -Transmit counter cyclically	***Don't transmission:*** *don't transmit any counter to bus.* ***Transmit every counter:*** *transmit every counter to bus* ***Transmit counter cyclically:*** *transmit the counter to bus cyclically*
227	-Counter value transmitted time: base	-(1sec) -1min -1hour	*These two parameters are used to set the time interval of transmission, the time interval = base*factor.*

228	Factor[1..255]->time=base*factor	(1)...255	*These two parameters are used to set the time interval of transmission, the time interval = base*factor.*
229	Counter Transmitted number (1..255, 0-unlimited)	(0)..255	*Set the number of the counter to transmit*
230	Overflow set	-(Reset) -Reset and Alarm -Stop -Stop and Alarm	***Reset**: will reset the counter when overflow.* ***ResetandAlarm**: will resetthe counter and alarm when overflow* ***Stop**: will stop the counter when overflow.* ***Stopand Alarm:**will stop the counter and alarm when overflow.*
231	Transmit object value after bus voltage recovery	-(NO) -YES	*Whether transmit object value after bus voltage recovery.* ***NO**: do not transmit object value after bus voltage recovery.* ***YES**: it will transmit object value after bus voltage recovery.*
232	The operation time interval: base	(10ms)..1hour	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*
233	Factor[1..255]->time=base*factor	(1)...255	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*

2.1.1.12_Combination controller



No.	ETS-Parameter	Range (default)	Description
234	Dry contact type	-(Mechanical switch) -Electronic switch	*Function selection*
2.1.1.12.1_Mechanical switch			
235	Delay for send when Closed (0..255s)	(0)..255	*Set the delay time to send telegram when closing*
236	Delay for send when Opened (0..255s)	(0)..255	*Set the delay time to send telegram whenopening*
237	Transmit object value after bus voltage recovery	-(NO) -YES	*Whether transmit object value after bus voltage recovery.* ***NO**: do not transmit object value after bus voltage recovery.* ***YES**: will transmit object value after bus voltage recovery.*
238	The operation time interval: base	10ms..(100ms)..1hour	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*
239	Factor[1..255]->time=base*factor	(1)...255	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*
240	Object type 1-10 (closing operation)	-(Invalid) -Switch controller -Shutter controller -Scene controller -Sequence controller -Percentage controller -Threshold controller -String (14bytes) controller	*it can send several control telegrams simultaneously when closing.* *Set the control objects' type here*
241	-Switch value	-Toggle -(ON) -OFF	***Toggle**: It will invert the last time's value then send itout.* ***ON**: The value it will send is 1.* ***OFF**: The value it will send is*

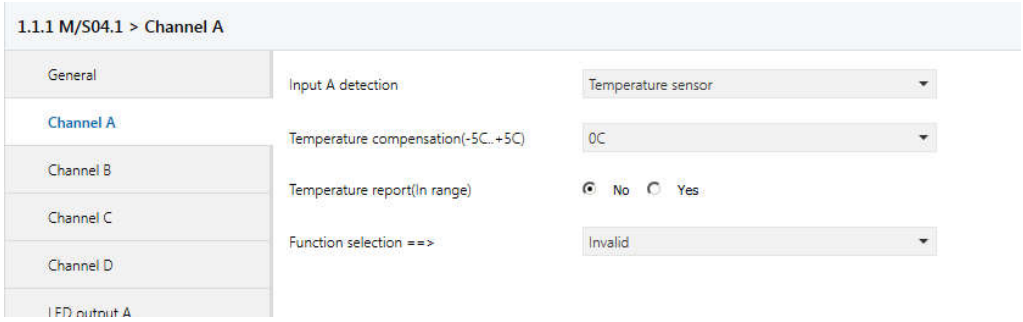
			0.
242	-Shutter value	-Toggle -(UP) -DOWN	***Toggle:** it will send move up/down telegram* ***UP:** it will send move up telegram* ***Down:** it will send move down telegram*
243	-Scene value	-(Scene NO.01)..Scene NO.64	*Set the output scene number*
244	-Scene toggled	-(NO) -YES	*Enable/disable the toggle function for scene control*
245	-Toggled scene NO. is	-Scene NO.01..(Scene NO.02)..Scene NO.64	*Set another output scene number, toggle between two of them to send out*
246	-Sequence value	-Toggle -(Start) -Stop	***Toggle:** It will invert the last time's value then send itout* ***Start with"1"**: The value it will send is 1 to start the sequence.* ***Stop with"0"**: The value it will send is 0 to stop the sequence.*
247	-Percentage value	0%(0)..(100%(255))	*Set the output percentage value*
248	-Brightness toggled	-(NO) -YES	*Enable/disable the toggle function for percentage control*
249	-Toggled brightness is	(0%(0))..100%(255)	*Set another output percentage value, toggle between two of them to send out*
250	-Threshold value type	-(1byte threshold) -2bytes threshold	*Set the threshold control type*
251	-Threshold (0..255) value	0..(255)	*Set the threshold value*
252	-Threshold(065535) value	0..(1000)..65535	*Set the threshold value*
253	-Threshold toggled	-(NO) -YES	*Enable/disable the toggle function for threshold control*
254	-Toggled threshold (0..255) is	0..(255)	*Set another output threshold value, toggle between two of them to send out*
255	-String (14bytes) value	(Hello world!)	*Set the output string content*
256	Object type 1-10 (opening operation)	-(Invalid) -Switch controller -Shutter controller -Scene controller -Sequence controller -Percentage controller -Threshold controller -String (14bytes) controller	*it can send several control telegrams simultaneously when opening.* *Set the control objects' type here*
257	-Switch value	-Toggle -(ON) -OFF	***Toggle**: It will invert the last time's value then send itout.* ***ON**: The value it will send is 1.* ***OFF**: The value it will send is 0.*
258	-Shutter value	-Toggle	***Toggle:** it will send move*

		-(UP) -DOWN	*up/down telegram* ***UP:** it will send move up telegram* ***Down:** it will send move down telegram*
259	-Scene value	-(Scene NO.01)..Scene NO.64	*Set the output scene number*
260	-Scene toggled	-(NO) -YES	*Enable/disable the toggle function for scene control*
261	-Toggled scene NO. is	-Scene NO.01..(Scene NO.02)..Scene NO.64	*Set another output scene number, toggle between two of them to send out*
262	-Sequence value	-Toggle -(Start) -Stop	***Toggle:** It will invert the last time's value then send itout* ***Start with"1":** The value it will send is 1 to start the sequence.* ***Stop with"0":** The value it will send is 0 to stop the sequence.*
263	-Percentage value	0%(0)..(100%(255))	*Set the output percentage value*
264	-Brightness toggled	-(NO) -YES	*Enable/disable the toggle function for percentage control*
265	-Toggled brightness is	(0%(0))..100%(255)	*Set another output percentage value, toggle between two of them to send out*
266	-Threshold value type	-(1byte threshold) -2bytes threshold	*Set the threshold control type*
267	-Threshold (0..255) value	0..(255)	*Set the threshold value*
268	-Threshold(065535) value	0..(1000)..65535	*Set the threshold value*
269	-Threshold toggled	-(NO) -YES	*Enable/disable the toggle function for threshold control*
270	-Toggled threshold (0..255) is	0..(255)	*Set another output threshold value, toggle between two of them to send out*
271	-String (14bytes) value	(Hello world!)	*Set the output string content*
2.1.1.12.2_Electronic switch			
272	The normally contact status is	Closed/(Open)	*Set the dry contact's normal status when have no operation.* ***Close:** the contact's normal status is closed.* ***Open:** the contact's normal status is open.*
273	Long button time after	0.2s..(1s)..60s	*Set time for long-press, define the long press by end-user*
274	Delay for short operation (0..255s)	(0)..255	*Set the delay time to send out telegram for short press*
275	Delay for long operation (0..255s)	(0)..255	*Set the delay time to send out telegram for long press*
276	The operation time interval: base	10ms..(100ms)..1hour	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*

277	Factor[1..255]->time=base*factor	(1)...255	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*
278	Object type 1-10 (short operation)	-(Invalid) -Switch controller -Shutter controller -Scene controller -Sequence controller -Percentage controller -Threshold controller -String (14bytes) controller	*it can send several control telegrams simultaneously when short press.* *Set the control objects' type here*
279	-Switch value	-Toggle -(ON) -OFF	***Toggle**: It will invert the last time's value then send itout.* ***ON**: The value it will send is 1.* ***OFF**: The value it will send is 0.*
280	-Shutter value	-Toggle -(UP) -DOWN	***Toggle:** it will send move up/down telegram* ***UP:** it will send move up telegram* ***Down:** it will send move down telegram*
291	-Scene value	-(Scene NO.01)..Scene NO.64	*Set the output scene number*
292	-Scene toggled	-(NO) -YES	*Enable/disable the toggle function for scene control*
293	-Toggled scene NO. is	-Scene NO.01..(Scene NO.02)..Scene NO.64	*Set another output scene number, toggle between two of them to send out*
294	-Sequence value	-Toggle -(Start) -Stop	***Toggle:** It will invert the last time's value then send itout* ***Start with"1"**: The value it will send is 1 to start the sequence.* ***Stop with"0"**: The value it will send is 0 to stop the sequence.*
295	-Percentage value	0%(0)..(100%(255))	*Set the output percentage value*
296	-Brightness toggled	-(NO) -YES	*Enable/disable the toggle function for percentage control*
297	-Toggled brightness is	(0%(0))..100%(255)	*Set another output percentage value, toggle between two of them to send out*
298	-Threshold value type	-(1byte threshold) -2bytes threshold	*Set the threshold control type*
299	-Threshold (0..255) value	0..(255)	*Set the threshold value*
300	-Threshold(065535) value	0..(1000)..65535	*Set the threshold value*
301	-Threshold toggled	-(NO) -YES	*Enable/disable the toggle function for threshold control*
302	-Toggled threshold (0..255) is	0..(255)	*Set another output threshold*

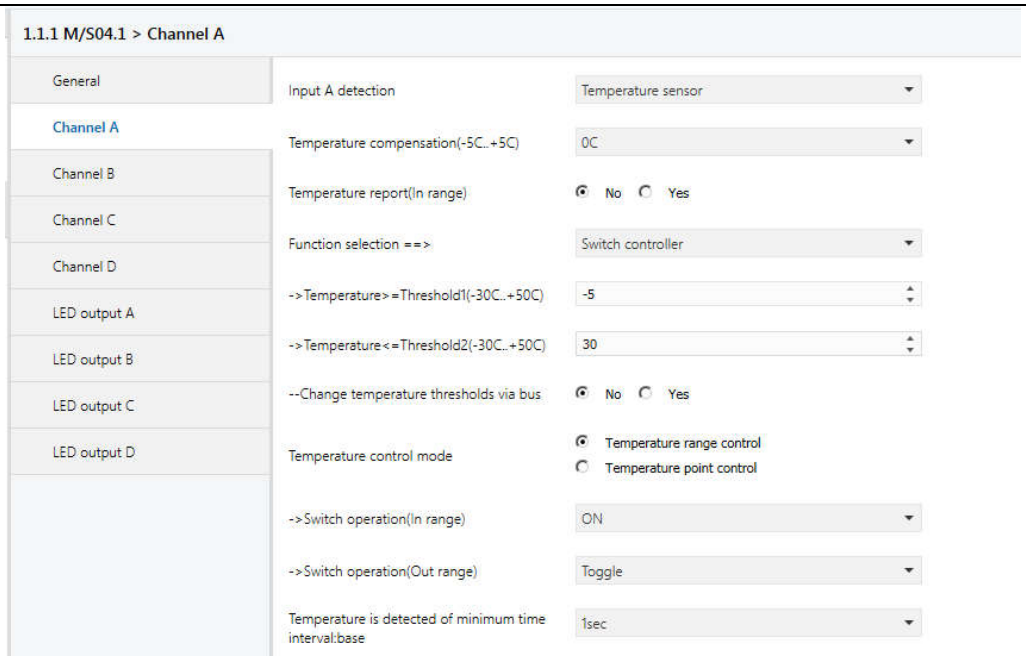
			value, toggle between two of them to send out
303	-String (14bytes) value	(Hello world!)	*Set the output string content*
304	Object type 1-10 (long operation)	-(Invalid) -Switch controller -Shutter controller -Scene controller -Sequence controller -Percentage controller -Threshold controller -String (14bytes) controller	*it can send several control telegrams simultaneously when long press.* *Set the control objects' type here*
305	-Switch value	-Toggle -(ON) -OFF	***Toggle**: It will invert the last time's value then send itout.* ***ON**: The value it will send is 1.* ***OFF**: The value it will send is 0.*
306	-Shutter value	-Toggle -(UP) -DOWN	***Toggle:** it will send move up/down telegram* ***UP:** it will send move up telegram* ***Down:** it will send move down telegram*
307	-Scene value	-(Scene NO.01)..Scene NO.64	*Set the output scene number*
308	-Scene toggled	-(NO) -YES	*Enable/disable the toggle function for scene control*
309	-Toggled scene NO. is	-Scene NO.01..(Scene NO.02)..Scene NO.64	*Set another output scene number, toggle between two of them to send out*
310	-Sequence value	-Toggle -(Start) -Stop	***Toggle:** It will invert the last time's value then send itout* ***Start with"1"**: The value it will send is 1 to start the sequence.* ***Stop with"0"**: The value it will send is 0 to stop the sequence.*
311	-Percentage value	0%(0)..(100%(255))	*Set the output percentage value*
312	-Brightness toggled	-(NO) -YES	*Enable/disable the toggle function for percentage control*
313	-Toggled brightness is	(0%(0))..100%(255)	*Set another output percentage value, toggle between two of them to send out*
314	-Threshold value type	-(1byte threshold) -2bytes threshold	*Set the threshold control type*
315	-Threshold (0..255) value	0..(255)	*Set the threshold value*
316	-Threshold(065535) value	0..(1000)..65535	*Set the threshold value*
317	-Threshold toggled	-(NO) -YES	*Enable/disable the toggle function for threshold control*
318	-Toggled threshold (0..255) is	0..(255)	*Set another output threshold value, toggle between two of them to send out*
319	-String (14bytes) value	(Hello world!)	*Set the output string content*

2.1.2_Channel A-D, Input A-D detection “Temperature sensor”



No.	ETS-Parameter	Range (default)	Description
320	Temperature compensation (-5C..+5C)	-5C..(0C)..+5C	*Used to adjust temperature to the correct value*
321	Temperature report (in range)	-(NO) -YES	*Enable/disable the temperature report function when it’s in the effective range*
322	Function selection	-(Invalid) -Switch controller -Alarm controller -Shutter controller -Scene controller -Sequence controller -Percentage controller -Threshold controller -String (14bytes) controller -Forced position controller -Combination controller	*Select the output type for temperature control*

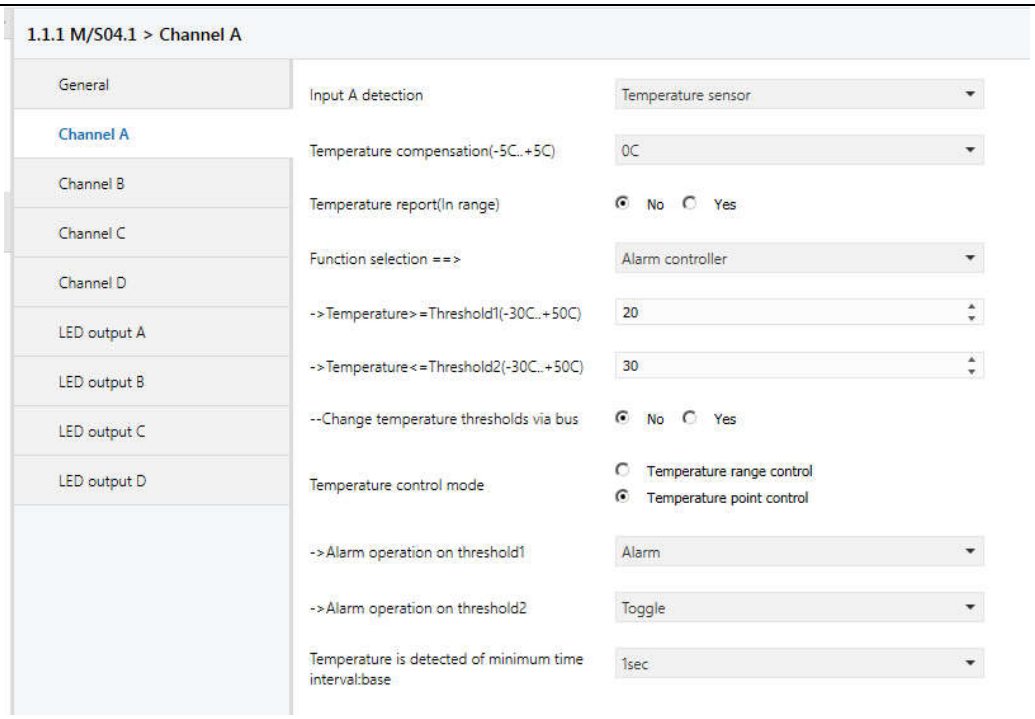
2.1.2.1_Switch controller



No.	ETS-Parameter	Range (default)	Description
323	Temperature>=Threshold1(-30C..+50C)	-30..(20)..50	*Set the threshold 1 value*
324	Temperature<=Threshold2(-30C..+50C)	-30..(30)..50	*Set the threshold 2 value*
325	Change temperature thresholds via bus	-(NO) -YES	*Enable/disable to change the temperature's threshold value via bus*
326	Temperature control mode	-(Temperature range control) -Temperature point control	***Temperature range control:*** *When the temperature in the range will send out the control telegram* ***Temperature point control:*** *When the temperature on the threshold value will send out the control telegram*
327	Switch operation (In range)	-Invalid -(ON) -OFF -Toggle	*Set the control type for switch when temperature in range* ***Invalid:*** *the switch operation is invalid* ***ON****: The value it will send is 1.* ***OFF****: The value it will send is 0.* ***Toggle****: It will invert the last time's value then send itout.*
328	Switch operation (Out range)	-Invalid -ON -(OFF) -Toggle	*Set the control type for switch when temperature out of range* ***Invalid:*** *the switch operation is invalid* ***ON****: The value it will send is 1.* ***OFF****: The value it will send is 0.* ***Toggle****: It will invert the last time's value then send itout.*

329	Switch operation on threshold1	-Invalid -(ON) -OFF -Toggle	*Set the control type for switch when temperature on the threshold1 value* ***Invalid:*** *the switch operation is invalid* ***ON****: The value it will send is 1.* ***OFF****: The value it will send is 0.* ***Toggle****: It will invert the last time's value then send itout.*
330	Switch operation on threshold2	-Invalid -ON -(OFF) -Toggle	*Set the control type for switch when temperature on the threshold2 value* ***Invalid:*** *the switch operation is invalid* ***ON****: The value it will send is 1.* ***OFF****: The value it will send is 0.* ***Toggle****: It will invert the last time's value then send itout.*
331	Temperature is detected of minimum time interval: base	-(1sec) -1min -1hour	*These two parameters are used to set the time interval of repeat detection, the time interval = base*factor.*
332	-Factor[1..255]->time=base*factor	1..(5)...255	*These two parameters are used to set the time interval of repeat detection, the time interval = base*factor.*
333	Forced control('1'-forced control, '0'-temperature control)	-(NO) -YES	*NO: Disable forced control function* *YES: Enable forced control function. When receives telegram 1, temperature control is invalid, will send out the control telegram according to the below 'forced control operation' setting; when receives telegram 0, temperature control is valid, forced control is invalid.*
334	-Forced control operation	-Toggle -(ON) -OFF	***Toggle****: It will invert the last time's value then send itout.* ***ON****: The value it will send is 1.* ***OFF****: The value it will send is 0.*

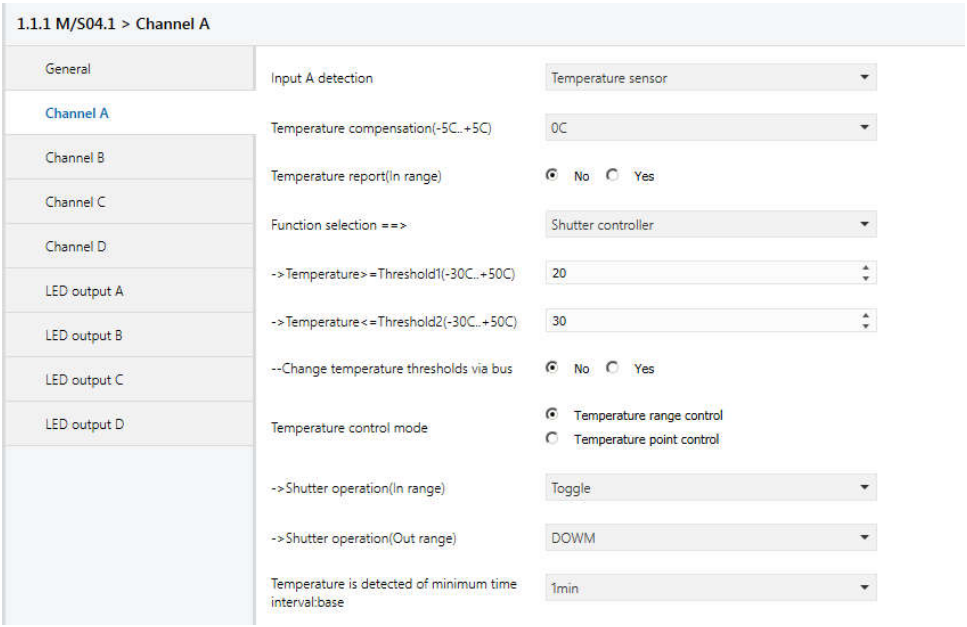
2.1.2.2_Alarm controller



No.	ETS-Parameter	Range (default)	Description
335	Temperature>=Threshold1(-30C..+50C)	-30..(20)..50	*Set the threshold 1 value*
336	Temperature<=Threshold2(-30C..+50C)	-30..(30)..50	*Set the threshold 2 value*
337	Change temperature thresholds via bus	-(NO) -YES	*Enable/disable to change the temperature's threshold value via bus*
338	Temperature control mode	-(Temperature range control) -Temperature point control	***Temperature range control:*** *When the temperature in the range will send out the control telegram* ***Temperature point control:*** *When the temperature on the threshold value will send out the control telegram*
339	Alarm operation (In range)	-Invalid -(Alarm) -No alarm -Toggle	*Set the control type for alarm when temperature in range* ***Invalid:*** *the alarm operation is invalid* ***Alarm****: The value it will send is 1.* ***No alarm:****The value it will send is 0.* ***Toggle****: It will invert the last time's value then send itout.*
340	Alarm operation (Out range)	-Invalid -Alarm -(No alarm) -Toggle	*Set the control type for alarm when temperature out of range* ***Invalid:*** *the alarm operation is invalid* ***Alarm****: The value it will send is 1.*

			No alarm:*The value it will send is 0.* ***Toggle****: It will invert the last time's value then send itout*
341	Alarm operation on threshold1	-Invalid -(Alarm) -No alarm -Toggle	*Set the control type for alarm when temperature on the threshold1 value* ***Invalid:*** *the alarm operation is invalid* ***Alarm****: The value it will send is 1.* ***No alarm:****The value it will send is 0.* ***Toggle****: It will invert the last time's value then send itout*
342	Alarm operation on threshold2	-Invalid -Alarm -(No alarm) -Toggle	*Set the control type for alarm when temperature on the threshold2 value* ***Invalid:*** *the alarm operation is invalid* ***Alarm****: The value it will send is 1.* ***No alarm:****The value it will send is 0.* ***Toggle****: It will invert the last time's value then send itout*
343	Temperature is detected of minimum time interval: base	-(1sec) -1min -1hour	*These two parameters are used to set the time interval of repeat detection, the time interval = base*factor.*
344	Factor[1..255]->time=base*factor	1..(5)...255	*These two parameters are used to set the time interval of repeat detection, the time interval = base*factor.*
345	Forced control('1'-forced control, '0'-temperature control)	-(NO) -YES	*NO: Disable forced control function* *YES: Enable forced control function. When receives telegram 1, temperature control is invalid, will send out the control telegram according to the below 'forced control operation' setting; when receives telegram 0, temperature control is valid, forced control is invalid.*
346	-Forced control operation	-Toggle -(Alarm) -No alarm	***Toggle****: It will invert the last time's value then send itout* ***Alarm****: The value it will send is 1.* ***No alarm:****The value it will send is 0.*

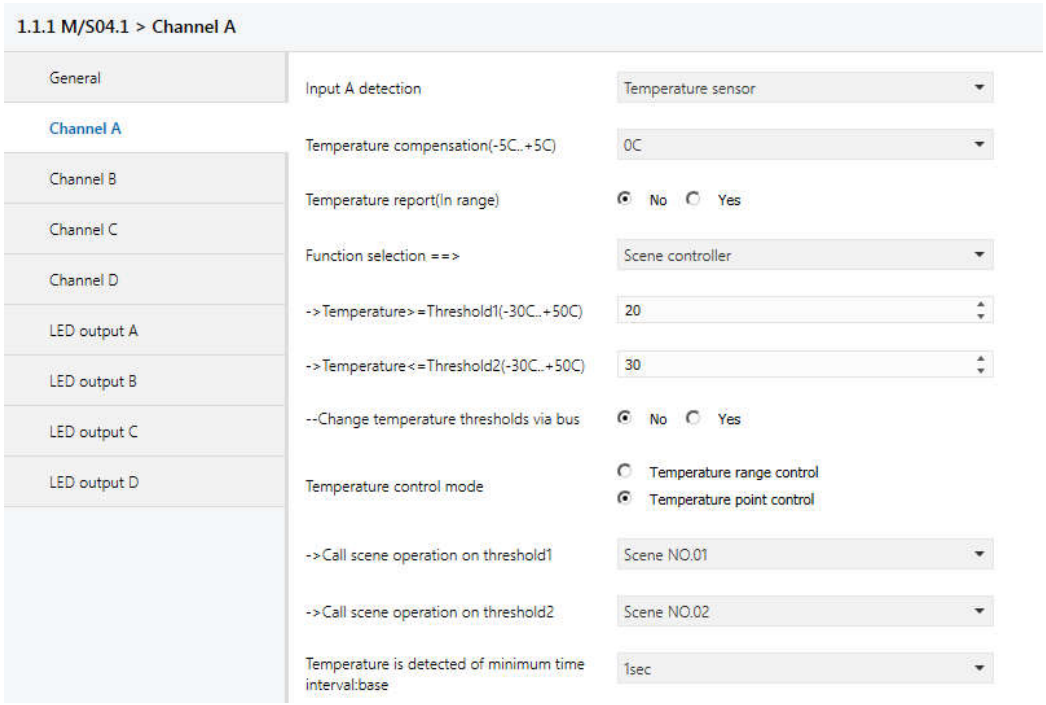
2.1.2.3_Shutter controller



No.	ETS-Parameter	Range (default)	Description
347	Temperature>=Threshold1(-30C..+50C)	-30..(20)..50	*Set the threshold 1 value*
348	Temperature<=Threshold2(-30C..+50C)	-30..(30)..50	*Set the threshold 2 value*
349	Change temperature thresholds via bus	-(NO) -YES	*Enable/disable to change the temperature's threshold value via bus*
350	Temperature control mode	-(Temperature range control) -Temperature point control	***Temperature range control:*** *When the temperature in the range will send out the control telegram* ***Temperature point control:*** *When the temperature on the threshold value will send out the control telegram*
351	Shutter operation (In range)	-Invalid -(UP) -DOWN -Toggle	*Set the control type for shutter when temperature in range* ***Invalid:*** *the shutter operation is invalid* ***UP****: it will send the up telegram.* ***DOWN****: it will send the down telegram.* ***Toggle****: It will invert the last time's value then send itout.*
352	Shutter operation (Out range)	-Invalid -UP -(DOWN) -Toggle	*Set the control type for shutter when temperature out of range* ***Invalid:*** *the shutter operation is invalid* ***UP****: it will send the up*

			telegram. ***DOWN**: it will send the down telegram.* ***Toggle**: It will invert the last time's value then send itout.*
353	Shutter operation on threshold1	-Invalid -(UP) -DOWN -Toggle	*Set the control type for shutter when temperature on the threshold1 value* ***Invalid:** the shutter operation is invalid* ***UP**: it will send the up telegram.* ***DOWN**: it will send the down telegram.* ***Toggle**: It will invert the last time's value then send itout.*
354	Shutter operation on threshold2	-Invalid -UP -(DOWN) -Toggle	*Set the control type for shutter when temperature on the threshold2 value* ***Invalid:** the shutter operation is invalid* ***UP**: it will send the up telegram.* ***DOWN**: it will send the down telegram.* ***Toggle**: It will invert the last time's value then send itout.*
355	Temperature is detected of minimum time interval: base	-(1sec) -1min -1hour	*These two parameters are used to set the time interval of repeat detection, the time interval = base*factor.*
356	Factor[1..255]->time=base*factor	1..(5)...255	*These two parameters are used to set the time interval of repeat detection, the time interval = base*factor.*
357	Forced control('1'-forced control, '0'-temperature control)	-(NO) -YES	*NO: Disable forced control function* *YES: Enable forced control function. When receives telegram 1, temperature control is invalid, will send out the control telegram according to the below 'forced control operation' setting; when receives telegram 0, temperature control is valid, forced control is invalid.*
358	-Forced control operation	-Toggle -(UP) -DOWN	***Toggle**: It will invert the last time's value then send itout.* ***UP**: it will send the up telegram.* ***DOWN**: it will send the down telegram.*

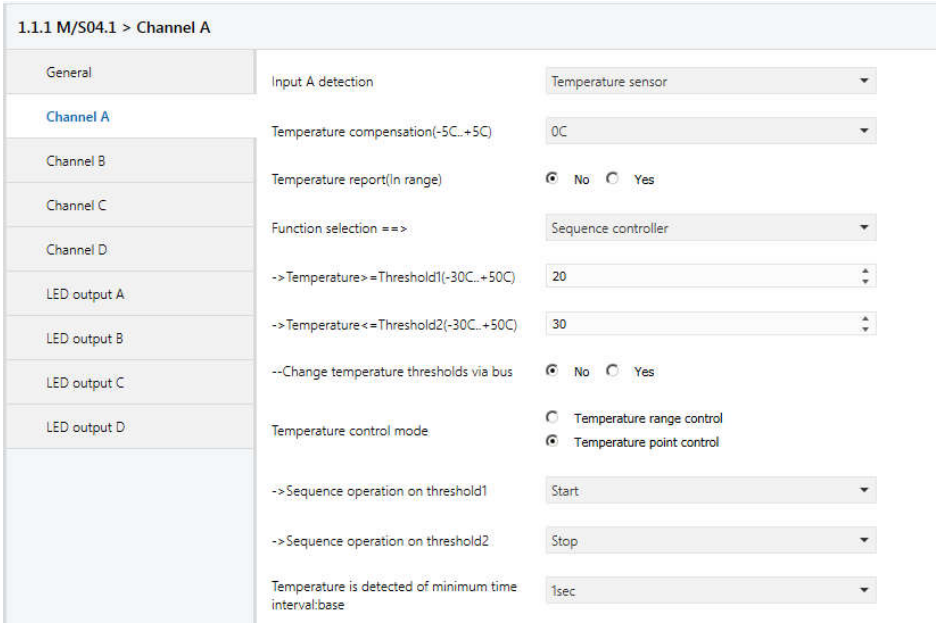
2.1.2.4_Scene controller



No.	ETS-Parameter	Range (default)	Description
359	Temperature>=Threshold1(-30C..+50C)	-30..(20)..50	*Set the threshold 1 value*
360	Temperature<=Threshold2(-30C..+50C)	-30..(30)..50	*Set the threshold 2 value*
361	Change temperature thresholds via bus	-(NO) -YES	*Enable/disable to change the temperature's threshold value via bus*
362	Temperature control mode	-(Temperature range control) -Temperature point control	***Temperature range control:*** *When the temperature in the range will send out the control telegram* ***Temperature point control:*** *When the temperature on the threshold value will send out the control telegram*
363	Call scene operation (In range)	-Invalid -(Scene NO.01)..Scene NO.64	*Set the output scene number when temperature in range*
364	Call scene operation (Out range)	-Invalid -Scene NO.01..(Scene NO.02)..Scene NO.64	*Set the output scene number when temperature out of range*
365	Call scene operation on threshold1	-Invalid -Scene NO.01..(Scene NO.02)..Scene NO.64	*Set the output scene number when temperature on the threshold1 value*
366	Call scene operation on threshold2	-Invalid -Scene NO.01..(Scene NO.02)..Scene NO.64	*Set the output scene number when temperature on the threshold2 value*
367	Temperature is detected of minimum time interval: base	-(1sec) -1min -1hour	*These two parameters are used to set the time interval of repeat detection, the time*

			*interval = base*factor.*
368	Factor[1..255]->time=base*factor	1..(5)...255	*These two parameters are used to set the time interval of repeat detection, the time interval = base*factor.*
369	Forced control('1'-forced control, '0'-temperature control)	-(NO) -YES	*NO: Disable forced control function* *YES: Enable forced control function. When receives telegram 1, temperature control is invalid, will send out the control telegram according to the below 'forced control operation' setting; when receives telegram 0, temperature control is valid, forced control is invalid.*
370	-Forced control operation	Scene NO.01..(Scene NO.03)..Scene NO.64	*Set the output scene number for forced control*

2.1.2.5_Sequence controller

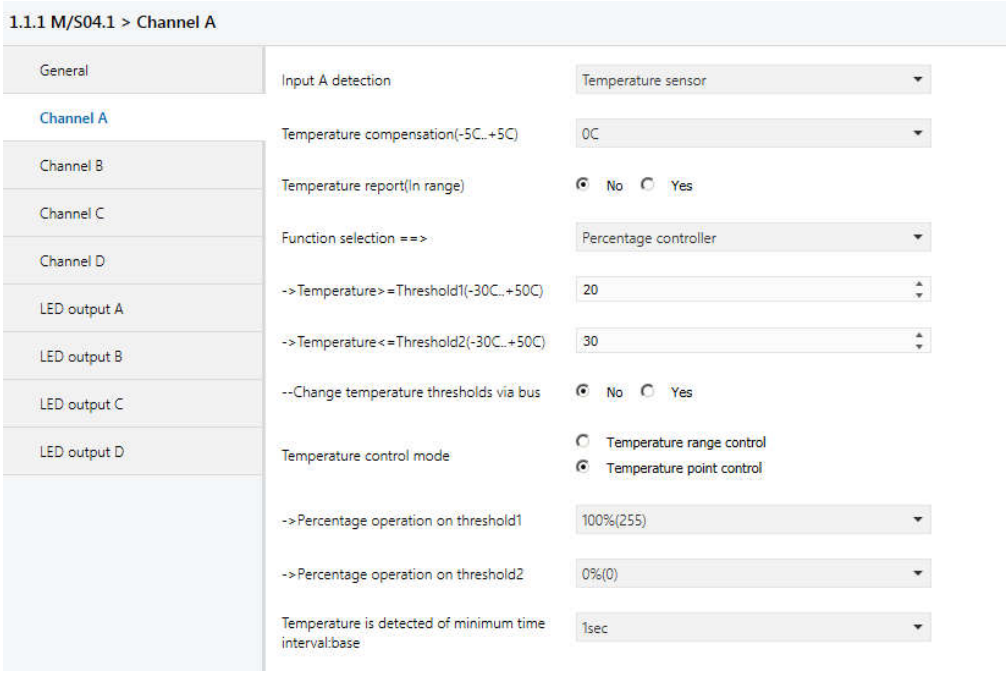


No.	ETS-Parameter	Range (default)	Description
371	Temperature>=Threshold1(-30C..+50C)	-30..(20)..50	*Set the threshold 1 value*
372	Temperature<=Threshold2(-30C..+50C)	-30..(30)..50	*Set the threshold 2 value*
373	Change temperature thresholds via bus	-(NO) -YES	*Enable/disable to change the temperature's threshold*

			value via bus
374	Temperature control mode	-(Temperature range control) -Temperature point control	***Temperature range control:*** *When the temperature in the range will send out the control telegram* ***Temperature point control:*** *When the temperature on the threshold value will send out the control telegram*
375	Sequence operation (In range)	-Invalid -(Start) -Stop -Toggle	*Set the control type of sequence when temperature in range* ***Start****: The value it will send is 1 to start the sequence.* ***Stop****: The value it will send is 0 to stop the sequence.* ***Toggle:*** *It will invert the last time's value then send itout when short press*
376	Sequence operation (Out range)	-Invalid -Start -(Stop) -Toggle	*Set the control type of sequence when temperature out of range* ***Start****: The value it will send is 1 to start the sequence.* ***Stop****: The value it will send is 0 to stop the sequence.* ***Toggle:*** *It will invert the last time's value then send itout when short press*
377	Sequence operation on threshold1	-Invalid -(Start) -Stop -Toggle	*Set the control type of sequence when temperature on the threshold1 value* ***Start****: The value it will send is 1 to start the sequence.* ***Stop****: The value it will send is 0 to stop the sequence.* ***Toggle:*** *It will invert the last time's value then send itout when short press*
378	Sequence operation on threshold2	-Invalid -Start -(Stop) -Toggle	*Set the control type of sequence when temperature on the threshold2 value* ***Start****: The value it will send is 1 to start the sequence.* ***Stop****: The value it will send is 0 to stop the sequence.* ***Toggle:*** *It will invert the last time's value then send itout when short press*
379	Temperature is detected of minimum time interval: base	-(1sec) -1min -1hour	*These two parameters are used to set the time interval of repeat detection, the time*

			*interval = base*factor.*
380	Factor[1..255]->time=base*factor	1..(5)...255	*These two parameters are used to set the time interval of repeat detection, the time interval = base*factor.*
381	Forced control('1'-forced control, '0'-temperature control)	-(NO) -YES	*NO: Disable forced control function* *YES: Enable forced control function. When receives telegram 1, temperature control is invalid, will send out the control telegram according to the below 'forced control operation' setting; when receives telegram 0, temperature control is valid, forced control is invalid.*
382	-Forced control operation	-Toggle -(Start) -Stop	***Toggle:** It will invert the last time's value then send itout when short press* ***Start**: The value it will send is 1 to start the sequence.* ***Stop**: The value it will send is 0 to stop the sequence.*

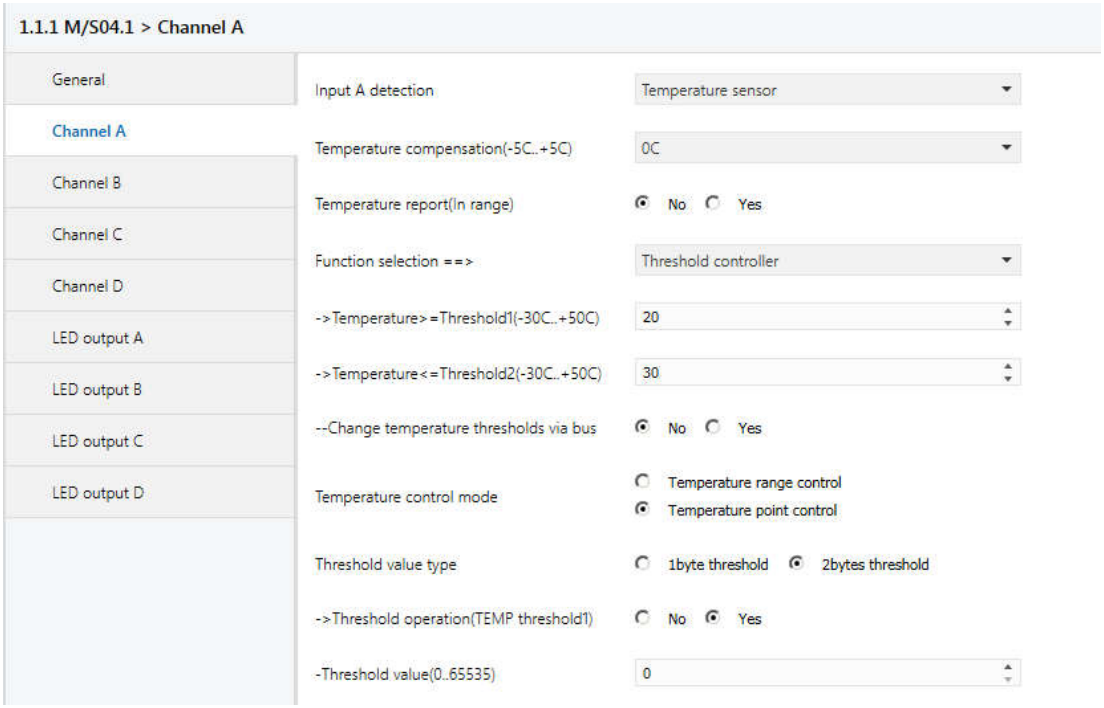
2.1.2.6_Percentage controller



No.	ETS-Parameter	Range (default)	Description

383	Temperature>=Threshold1(-30C..+50C)	-30..(20)..50	*Set the threshold 1 value*
384	Temperature<=Threshold2(-30C..+50C)	-30..(30)..50	*Set the threshold 2 value*
385	Change temperature thresholds via bus	-(NO) -YES	*Enable/disable to change the temperature's threshold value via bus*
386	Temperature control mode	-(Temperature range control) -Temperature point control	***Temperature range control:*** *When the temperature in the range will send out the control telegram* ***Temperature point control:*** *When the temperature on the threshold value will send out the control telegram*
387	Percentage operation (In range)	-Invalid -0%(0)..(100%(255))	*Set the output percentage value when temperature in range*
388	Percentage operation (Out range)	-Invalid -(0%(0))..100%(255)	*Set the output percentage value when temperature out of range*
389	Percentage operation on threshold1	-Invalid -0%(0)..(100%(255))	*Set the output percentage value when temperature on the threshold1 value*
390	Percentage operation on threshold2	-Invalid -(0%(0))..100%(255)	*Set the output percentage value when temperature on the threshold2 value*
391	Temperature is detected of minimum time interval: base	-(1sec) -1min -1hour	*These two parameters are used to set the time interval of repeat detection, the time interval = base*factor.*
392	Factor[1..255]->time=base*factor	1..(5)...255	*These two parameters are used to set the time interval of repeat detection, the time interval = base*factor.*
393	Forced control('1'-forced control, '0'-temperature control)	-(NO) -YES	*NO: Disable forced control function* *YES: Enable forced control function. When receives telegram 1, temperature control is invalid, will send out the control telegram according to the below 'forced control operation' setting; when receives telegram 0, temperature control is valid, forced control is invalid.*
394	-Forced control operation	0%(0)..(100%(255))	*Set the output percentage value for forced control*

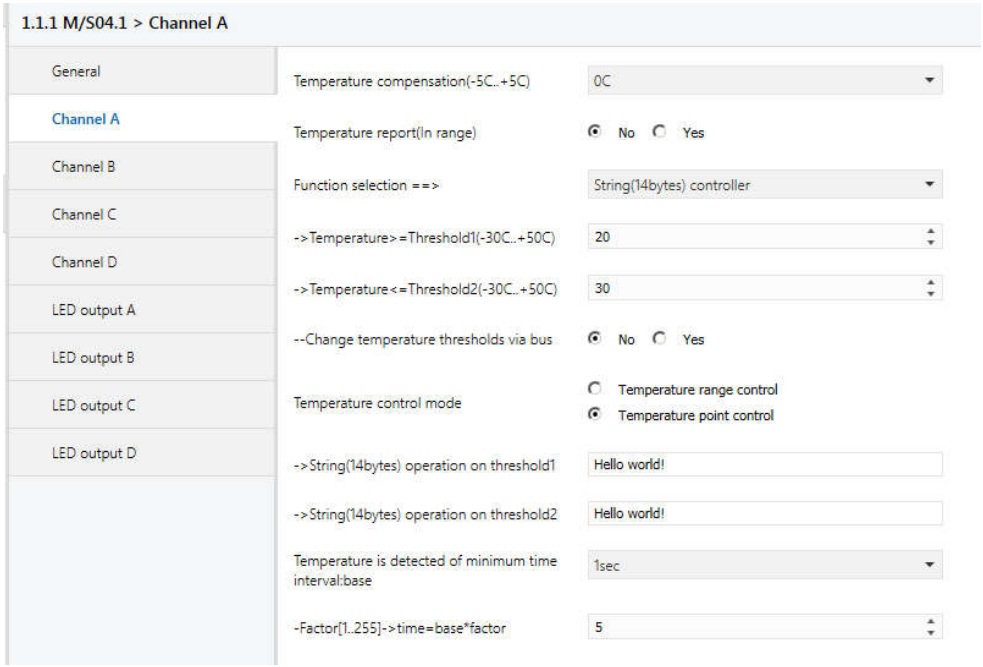
2.1.2.7_Threshold controller



No.	ETS-Parameter	Range (default)	Description
395	Temperature>=Threshold1(-30C..+50C)	-30..(20)..50	*Set the threshold 1 value*
396	Temperature<=Threshold2(-30C..+50C)	-30..(30)..50	*Set the threshold 2 value*
397	Change temperature thresholds via bus	-(NO) -YES	*Enable/disable to change the temperature's threshold value via bus*
398	Temperature control mode	-(Temperature range control) -Temperature point control	***Temperature range control:*** *When the temperature in the range will send out the control telegram* ***Temperature point control:*** *When the temperature on the threshold value will send out the control telegram*
399	Threshold value type	-(1byte threshold) -2bytes threshold	*Set the threshold control type*
400	Threshold operation (In range)	-NO -(YES)	*Enable/disable the threshold control function when the temperature in range*
401	Threshold value (0..255)	(0)..255	*Set the output threshold value*
402	Threshold value (0..65535)	(0)..65535	*Set the output threshold value*
403	Threshold value (Out range)	-NO -(YES)	*Enable/disable the threshold control function when the temperature out of range*
404	Threshold value (0..255)	(0)..255	*Set the output threshold value*
405	Threshold value (0..65535)	(0)..65535	*Set the output threshold*

			value
406	Threshold operation(TEMP threshold1)	-NO -(YES)	*Enable/disable the threshold control function when temperature on threshold 1 value*
407	Threshold value (0..255)	(0)..255	*Set the output threshold value*
408	Threshold value (0..65535)	(0)..65535	*Set the output threshold value*
409	Threshold operation(TEMP threshold2)	-NO -(YES)	*Enable/disable the threshold control function when temperature on threshold 2 value*
410	Threshold value (0..255)	(0)..255	*Set the output threshold value*
411	Threshold value (0..65535)	(0)..65535	*Set the output threshold value*
412	Temperature is detected of minimum time interval: base	-(1sec) -1min -1hour	*These two parameters are used to set the time interval of repeat detection, the time interval = base*factor.*
413	Factor[1..255]->time=base*factor	1..(5)...255	*These two parameters are used to set the time interval of repeat detection, the time interval = base*factor.*
414	Forced control('1'-forced control, '0'-temperature control)	-(NO) -YES	*NO: Disable forced control function* *YES: Enable forced control function. When receives telegram 1, temperature control is invalid, will send out the control telegram according to the below 'forced threshold value' setting; when receives telegram 0, temperature control is valid, forced control is invalid.*
415	-Forced threshold value (0..255)	(0)..255	*Set the output threshold value*
416	-Forced threshold value (0..65535)	(0)..65535	*Set the output threshold value*

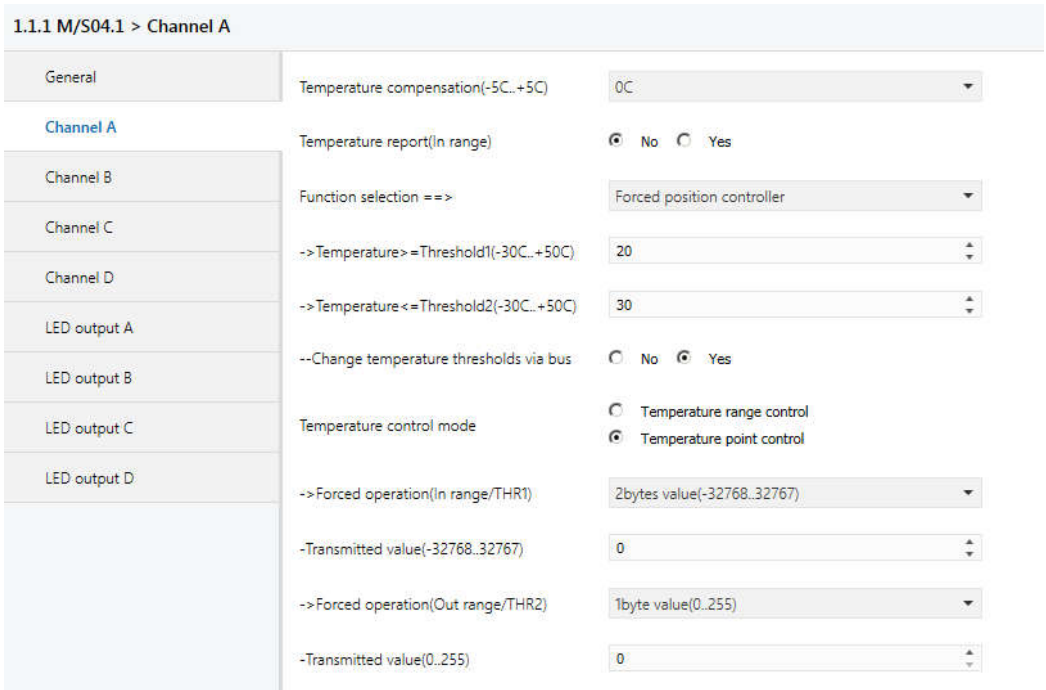
2.1.2.8_String(14bytes) controller



No.	ETS-Parameter	Range (default)	Description
417	Temperature>=Threshold1(-30C..+50C)	-30..(20)..50	*Set the threshold 1 value*
418	Temperature<=Threshold2(-30C..+50C)	-30..(30)..50	*Set the threshold 2 value*
419	Change temperature thresholds via bus	-(NO) -YES	*Enable/disable to change the temperature's threshold value via bus*
420	Temperature control mode	-(Temperature range control) -Temperature point control	***Temperature range control:*** *When the temperature in the range will send out the control telegram* ***Temperature point control:*** *When the temperature on the threshold value will send out the control telegram*
421	String (14bytes) operation (In range)	(Hello world!)	*Set the output string content when temperature in range*
422	String (14bytes) operation (Out range)	(Hello world!)	*Set the output string content when temperature out of range*
423	String (14bytes) operation on threshold1	(Hello world!)	*Set the output string content when temperature on the threshold1 value*
424	String (14bytes) operation on threshold2	(Hello world!)	*Set the output string content when temperature on the threshold2 value*
425	Temperature is detected of minimum time interval: base	-(1sec) -1min -1hour	*These two parameters are used to set the time interval of repeat detection, the time*

			*interval = base*factor.*
426	Factor[1..255]->time=base*factor	1..(5)...255	*These two parameters are used to set the time interval of repeat detection, the time interval = base*factor.*
427	Forced control('1'-forced control, '0'-temperature control)	-(NO) -YES	*NO: Disable forced control function* *YES: Enable forced control function. When receives telegram 1, temperature control is invalid, will send out the control telegram according to the below 'forced control operation' setting; when receives telegram 0, temperature control is valid, forced control is invalid.*
428	-Forced control operation	(Hello world!)	*Set the output string value for forced control*

2.1.2.9_Forced position controller

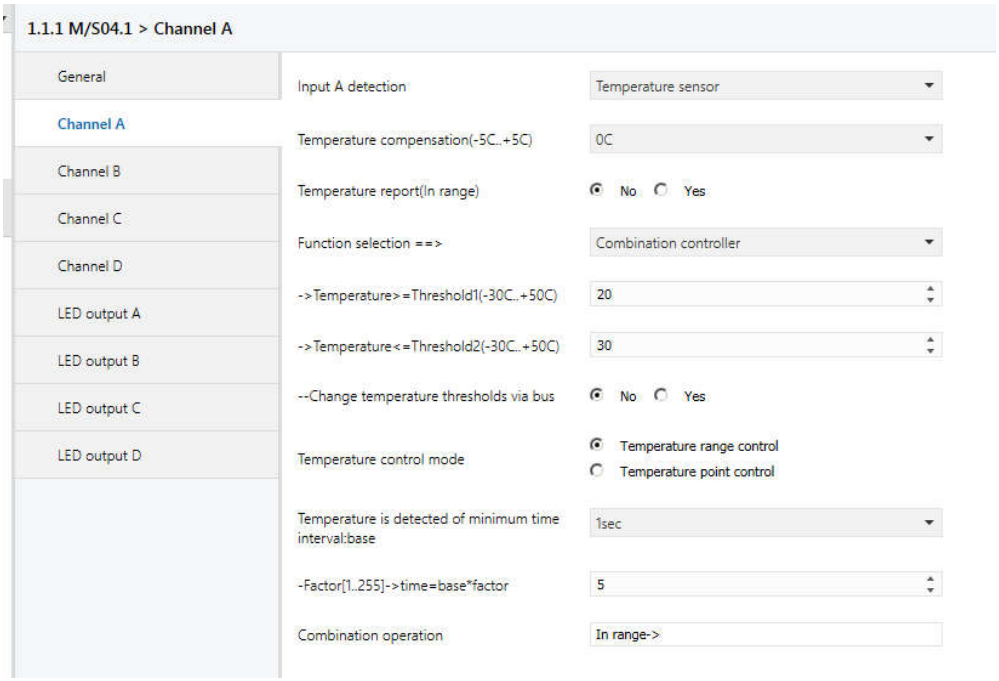


No.	ETS-Parameter	Range (default)	Description
429	Temperature>=Threshold1(-30C..+50C)	-30..(20)..50	*Set the threshold 1 value*
430	Temperature<=Threshold2(-30C..+50C)	-30..(30)..50	*Set the threshold 2 value*
431	Change temperature thresholds via bus	-(NO) -YES	*Enable/disable to change the temperature's threshold*

			value via bus
432	Temperature control mode	-(Temperature range control) -Temperature point control	***Temperature range control:*** *When the temperature in the range will send out the control telegram* ***Temperature point control:*** *When the temperature on the threshold value will send out the control telegram*
433	Forced operation (In range/THR1)	-Invalid -(2bits value) -1byte value(0..255) -2bytes value (-32768..32767) -2bytes value(0..65535) -2bytes value (Float) -4bytes value (02147483647)	*Set the forced control type when temperature in range or o n threshold 1*
434	-Transmitted value(ON/OFF)	-(ON->control) -OFF-control -No control	*Set the control type of 2 bit*
435	-Transmitted value(0..255)	(0)..255	*Set the transmitted value of 1 byte*
436	-Transmitted value(-32768..32767)	-32768..(0)..32767	*Set the transmitted value of 2 byte*
437	-Transmitted value(0..65535)	(0)..65535	*Set the transmitted value of 2 byte*
438	-Transmitted value	-100..(0)..100	*Set the transmitted value of 2 byte*
439	-Transmitted value(0..2147483647)	(0)..2147483647)	*Set the transmitted value of 4 byte*
440	Forced operation (Out range/THR2)	-Invalid -(2bits value) -1byte value(0..255) -2bytes value (-32768..32767) -2bytes value(0..65535) -2bytes value (Float) -4bytes value (0..2147483647)	*Set the forced control type when temperature out of range or on threshold 2*
441	-Transmitted value(ON/OFF)	-ON->control -(OFF-control) -No control	*Set the control type of 2 bit*
442	-Transmitted value(0..255)	(0)..255	*Set the transmitted value of 1 byte*
443	-Transmitted value(-32768..32767)	-32768..(0)..32767	*Set the transmitted value of 2 byte*
444	-Transmitted value(0..65535)	(0)..65535	*Set the transmitted value of 2 byte*
445	-Transmitted value	-100..(0)..100	*Set the transmitted value of 2 byte*
446	-Transmitted value(0..2147483647)	(0)..2147483647)	*Set the transmitted value of 4 byte*
447	Temperature is detected of minimum time interval: base	-(1sec) -1min -1hour	*These two parameters are used to set the time interval of repeat operation, the time interval = base*factor.*
448	Factor[1..255]-	1..(5)...255	*These two parameters are*

	>time=base*factor		*used to set the time interval of repeat operation, the time interval = base*factor.*

2.1.2.10_Combination controller

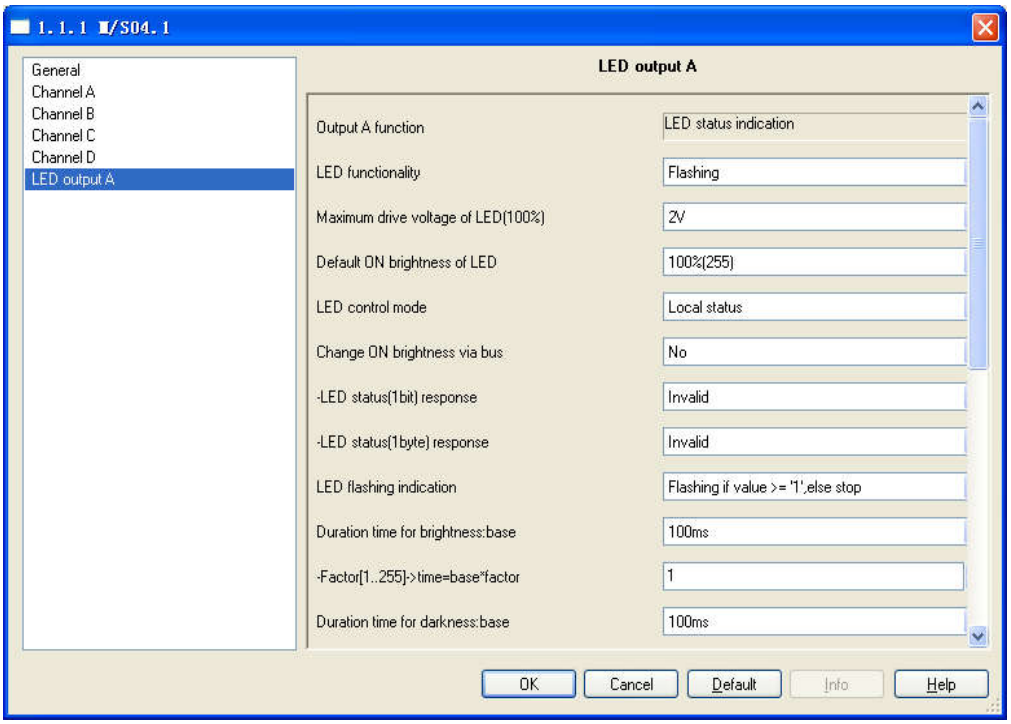


No.	ETS-Parameter	Range (default)	Description
449	Temperature>=Threshold1(-30C..+50C)	-30..(20)..50	*Set the threshold 1 value*
450	Temperature<=Threshold2(-30C..+50C)	-30..(30)..50	*Set the threshold 2 value*
451	Change temperature thresholds via bus	-(NO) -YES	*Enable/disable to change the temperature's threshold value via bus*
452	Temperature control mode	-(Temperature range control) -Temperature point control	***Temperature range control:*** *When the temperature in the range will send out the control telegram* ***Temperature point control:*** *When the temperature on the threshold value will send out the control telegram*
453	Temperature is detected of minimum time interval: base	-(1sec) -1min -1hour	*These two parameters are used to set the time interval of repeat detection, the time interval = base*factor.*
454	Factor[1..255]->time=base*factor	1..(5)...255	*These two parameters are used to set the time interval*

			*of repeat detection, the time interval = base*factor.*
455	Object type 1 (in range/temperature threshold1)	-(Invalid) -Switch controller -Alarm controller -Shutter controller -Scene controller -Sequence controller -Percentage controller -Threshold controller -String (14bytes) controller	*it can send several control telegrams simultaneously when temperature in range or on threshold 1 value.* *Set the control objects' type here*
456	-Switch value	-(ON) -OFF	***ON**: The value it will send is 1.* ***OFF**: The value it will send is 0.*
457	-Alarm value	-No alarm -(Alarm)	***No Alarm:** The value it will send is 0.* ***Alarm**: The value it will send is 1.*
458	-Shutter value	-(UP) -DOWN	***UP: i**t will send move up telegram* ***Down:** it will send move down telegram*
459	-Scene value	-(Scene NO.01)..Scene NO.64	*Set the output scene number*
460	-Sequence value	-(Start) -Stop	***Start** : The value it will send is 1 to start the sequence.* ***Stop**: The value it will send is 0 to stop the sequence.*
461	-Percentage value	0%(0)..(100%(255))	*Set the output percentage value*
462	-Threshold value type	-(1byte threshold) -2bytes threshold	*Set the threshold control type*
463	-Threshold (0..255) value	0..(255)	*Set the threshold value*
464	-Threshold(065535) value	0..(1000)..65535	*Set the threshold value*
465	-String (14bytes) value	(Hello world!)	*Set the output string content*
466	Object type 1-10 (Out range/temperature threshold2)	-(Invalid) -Switch controller -Alarm controller -Shutter controller -Scene controller -Sequence controller -Percentage controller -Threshold controller -String (14bytes) controller	*it can send several control telegrams simultaneously when temperature out of range or on threshold 2 value.* *Set the control objects' type here*
467	-Switch value	-ON -(OFF)	***ON**: The value it will send is 1.* ***OFF**: The value it will send is 0.*
468	-Alarm value	-(No alarm) -Alarm	***No Alarm:** The value it will send is 0.* ***Alarm**: The value it will send is 1.*
469	-Shutter value	-UP -(DOWN)	***UP: i**t will send move up telegram* ***Down:** it will send move down telegram*
470	-Scene value	-Scene NO.01..(Scene NO.02)..Scene NO.64	*Set the output scene number*

471	-Sequence value	-Start -(Stop)	***Start** : The value it will send is 1 to start the sequence.* ***Stop**: The value it will send is 0 to stop the sequence.*
472	-Percentage value	(0%(0))..100%(255)	*Set the output percentage value*
473	-Threshold value type	-(1byte threshold) -2bytes threshold	*Set the threshold control type*
474	-Threshold (0..255) value	(0)..255	*Set the threshold value*
475	-Threshold(065535) value	(0)..65535	*Set the threshold value*
476	-String (14bytes) value	(Hello world!)	*Set the output string content*

2.2_LED Output A-D

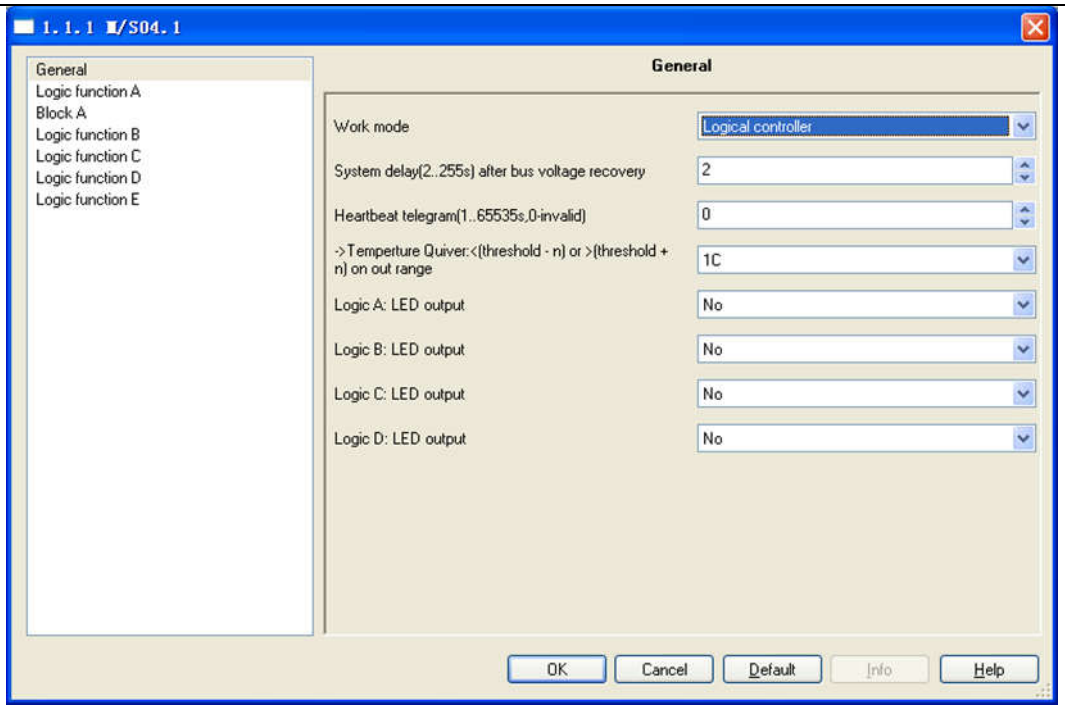


No.	ETS-Parameter	Range (default)	Description
477	LED functionality	-(Switch status ON/OFF) -Flashing	***Switch state ON/OFF:**the LEDshows the on/off states of object* ***Flashing:** theLED's state is flashing.*
478	Maximum drive voltage of LED(100%)	1V,(2V)..10V	*Set the maximum drive voltage of LED. The range is 1V to 10V.*
479	Default ON brightness of LED	10%..(100%255)	*Set the default brightness of LED when on.*
480	LED control mode	-(Local status) -Via bus (1bit-Operation and	*Set the control mode of LED.* ***Local status:** The LED is controlled by local*

		1byte-Brightness)	*status.* ***Via bus:*** *the LED is controlled by the telegram via bus.*
481	Change ON brightness via bus	(NO), YES	*Enable/disable the function that change on brightness via bus.* ***NO:*** *youcan't change on brightness via bus.* ***YES:*** *you can change on brightness via bus.*
482	LED status (1 bit) response	-(Invalid) -1 bit always response -1 bit only changed	*Set the1 bit response type of LED status.* ***1 bit always response:*** *it will always report its status to the system.* ***1 bit only changed:*** *it will only report its status to the system when status changes.*
483	LED status (1 byte) response	-(Invalid) -1 byte always response -1 byte only changed	*Set the1 byte response type of LED status.* ***1 byte always response:*** *it will always report its status to the system.* ***1 byte only changed:*** *it will only report its status to the system when status changes.*
484	LED status after bus voltage	(unchanged), ON, OFF	*Set to LED state after bus voltage recovery.*
2.2.1_Switch status ON/OFF			
485	LED indication	-(ON if value>='1', else OFF) -ON if value is '0', else OFF -Always ON -Always OFF	***ON if value>='1', else OFF:*** *if the value>="1", LED state is ON, else LED state is OFF.* ***ON if value is'0', else OFF:*** *if the value is 0, LED state is ON, else LED state is OFF.* ***Always ON:*** *LED state is always on.* ***Always OFF:*** *LED state is always OFF.*
486	LED automatically darker after a delay (Valid only LED status is ON)	(NO), YES	*Enable/disable the LED automatically darker function when has no operation*
487	LED automatically darker brightness	0%,(1%)..100%255	*Set the brightness value when darken.*
488	LED automatically darker delay time: base	100ms, (1sec), 1min 1hour	*These two parameters are used to set the delay time for auto darken, the delay time = base*factor.*
489	Factor[1..255]->time=base*factor	1..(5)..255	*These two parameters are used to set the delay time for auto darken, the delay time = base*factor.*
2.2.2_Flashing			
490	LED flashing indication	-(Flashing if value>='1', else stop) -Flashing if value is '0', else stop -Always flashing	***Flashing if value>='1', else OFF:*** *if the value>='1', LED state is flashing; else LED state is static.* ***Flashing if value is '0', else OFF:*** *if the value is 0, LED state is flashing; else LED state is static.* ***Always flashing:*** *LED state is always flashing.*
491	Duration time for brightness: base	-10ms -(100ms) -1sec	*These two parameters are used to set the fade time to on the LED, the fade time=base*factor.*

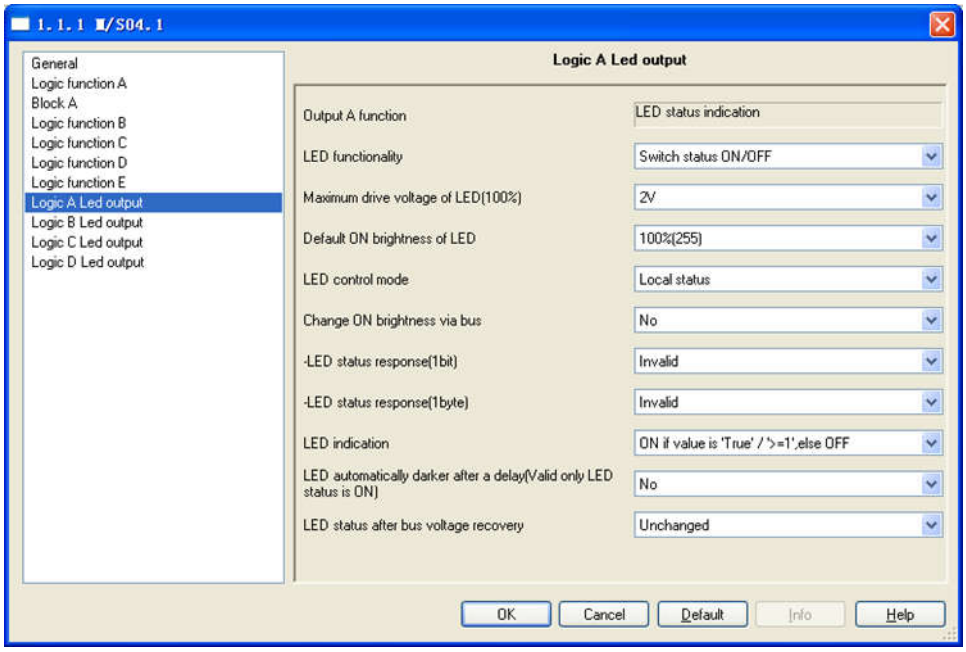
		-1min -1hour	
492	Factor[1..255]->time=base*factor	(1)..255	*These two parameters are used to set the fade time to on the LED, the fade time=base*factor.The LED will reach the setting on brightness after the fade time.*
493	Duration time for darkness: base	-10ms -(100ms) -1sec -1min -1hour	*These two parameters are used to set the fade time to off the LED, the fade time=base*factor.*
494	Factor[1..255]->time=base*factor	(1)..255	*These two parameters are used to set the fade time to off the LED, the fade time=base*factor.The LED will off after the fade time.*
495	Flashing time limit	(NO), YES	*These two parameters are used to set the valid time of flashing, after this time, the LED will stop flashing*
496	Flashing time limit: base	-(1sec) -1min -1hour	*These two parameters are used to set the valid time for LED flashing, the valid time=base*factor.*
497	Factor[1..255]->time=base*factor	1..(5)..255	*These two parameters are used to set the valid time for LED flashing, the valid time=base*factor.*
	LED status after stop	(unchanged), ON, OFF	*Set the LED status after stop flashing*

XXXX



No.	ETS-Parameter	Range (default)	Description
498	Work mode	- (Sensors controller) - **Logical controller** - Dimming controller	*Set the work mode: Logical controller*
499	System delay (2-255s) after bus voltage recovery	(2)..255s	*Set the delay time for the device to work after power on, the range is 2-255s*
500	Heartbeat telegram (1..65535s,0-invalid)	(0)..65535s	*If the parameter is set to nonzero, the device will send a telegram data (alternately between 0 and 1) cyclically after time out; if it's set to 0, this function is invalid.*
501	Temperature Quiver: < (threshold – n) or >(threshold +n) on out range)	0C, (1C),..10C	*The effective range is larger than threshold1 and less than threshold2* *The setting range is larger than the (threshold1–n) and less than (threshold2+n).* *Suppose the temperature is in the effective range, when it changes within the setting range, the status will not change.* *Suppose the temperature is in the effective range, when it changes out of the setting range, the status will change.* *Suppose the temperature is not in the effective range, only when the temperature changes into the effective range, the status will change.*
502	Logic A: LED output Logic B: LED output Logic C: LED output Logic D: LED output	(NO), YES	***NO:****LED output is invalid.* ***YES:*** *it will appear a setting page of the "LED output A". That page is used to set the LED state parameter. Channel B,C,D outputs are same as Channel A.*

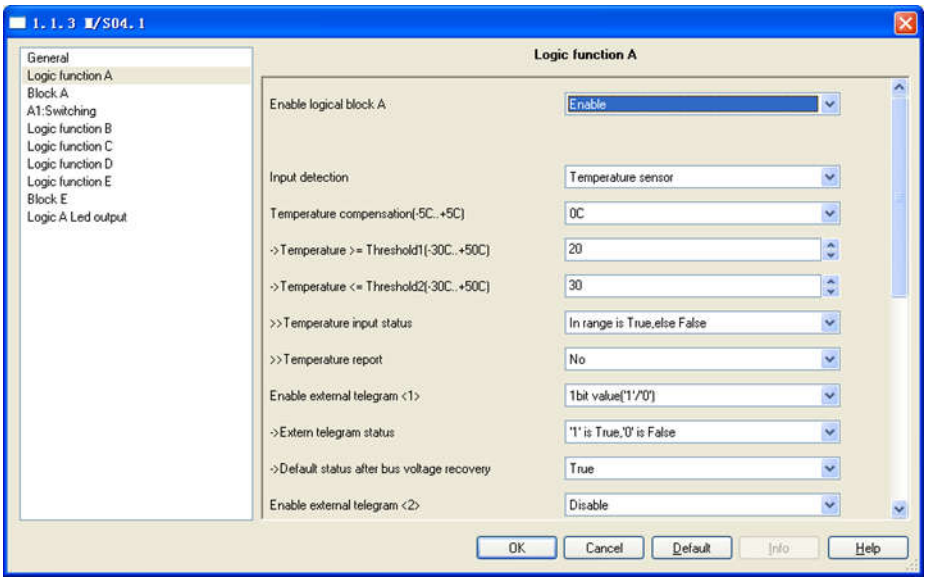
3.1_Logic A-D Led output



No.	ETS-Parameter	Range (default)	Description
503	LED functionality	-(Switch status ON/OFF) -Flashing	***Switch state ON/OFF:****the LEDshows the on/off states of object* ***Flashing:*** *theLED's state is flashing.*
504	Maximum drive voltage of LED(100%)	1V,(2V)..10V	*Set the maximum drive voltage of LED. The range is 1V to 10V.*
505	Default ON brightness of LED	10%..100%(255)	*Set the default brightness of LED when on.*
506	LED control mode	-(Local status) -Via bus (1bit-Operation and 1byte-Brightness)	*Set the control mode of LED.* ***Local status:*** *The LED is controlled by local status.* ***Via bus:*** *the LED is controlled by the telegram via bus.*
507	Change ON brightness via bus	(NO), YES	*Enable/disable the function that change on brightness via bus.* ***NO:*** *youcan't change on brightness via bus.* ***YES:*** *you can change on brightness via bus.*
508	LED status (1 bit) response	-(Invalid) -1 bit always response -1 bit only changed	*Set the1 bit response type of LED status.* ***1 bit always response:*** *it will always report its status to the system.* ***1 bit only changed:*** *it will only report its status to the system when status changes.*
509	LED status (1 byte) response	-(Invalid) -1 byte always response -1 byte only changed	*Set the1 byte response type of LED status.* ***1 byte always response:*** *it will always report its status to the system.* ***1 byte only changed:*** *it will only report its status to the system when status changes.*
510	LED status after bus voltage recovery	-(unchanged) -ON -OFF	*Set to LED state after bus voltage recovery.*
3.1.1_Switch status ON/OFF			
511	LED indication	-(ON if value>='1', else OFF) -ON if value is '0', else	***ON if value>='1', else OFF:*** *if the value>="1", LED state is ON, else LED state is OFF.*

		OFF -Always ON -Always OFF	***ON if value is'0', else OFF:*** *if the value is 0, LED state is ON, else LED state is OFF.* ***Always ON:*** *LED state is always on.* ***Always OFF:*** *LED state is always OFF.*
512	LED automatically darker after a delay (Valid only LED status is ON)	(NO), YES	*Enable/disable the LED automatically darker function when has no operation*
513	-LED automatically darker brightness	0%,(1%)..100%255	*Set the brightness value when darken.*
514	-LED automatically darker delay time: base	100ms, (1sec), 1min 1hour	*These two parameters are used to set the delay time for auto darken, the delay time = base*factor.*
515	-Factor[1..255]->time=base*factor	1..(5)..255	*These two parameters are used to set the delay time for auto darken, the delay time = base*factor.*
3.1.2_Flashing			
516	LED flashing indication	-(Flashing if value>='1', else stop) -Flashing if value is '0', else stop -Always flashing	***Flashing if value>='1', else OFF:*** *if the value>='1', LED state is flashing; else LED state is static.* ***Flashing if value is '0', else OFF:*** *if the value is 0, LED state is flashing; else LED state is static.* ***Always flashing:*** *LED state is always flashing.*
517	Duration time for brightness: base	-10ms -(100ms) -1sec -1min -1hour	*These two parameters are used to set the fade time to on the LED, the fade time=base*factor.*
518	Factor[1..255]->time=base*factor	(1)..255	*These two parameters are used to set the fade time to on the LED, the fade time=base*factor.The LED will reach the setting on brightness after the fade time.*
519	Duration time for darkness: base	-10ms -(100ms) -1sec -1min -1hour	*These two parameters are used to set the fade time to off the LED, the fade time=base*factor.*
520	Factor[1..255]->time=base*factor	(1)..255	*These two parameters are used to set the fade time to off the LED, the fade time=base*factor.The LED will off after the fade time.*
521	Flashing time limit	(NO), YES	*These two parameters are used to set the valid time of flashing, after this time, the LED will stop flashing*
522	Flashing time limit: base	-10ms -(100ms) -1sec -1min -1hour	*These two parameters are used to set the valid time for LED flashing, the valid time=base*factor.*
523	Factor[1..255]->time=base*factor	1..(5)..255	*These two parameters are used to set the valid time for LED flashing, the valid time=base*factor.*
524	LED status after stop	-unchanged -ON -(OFF)	*Set the LED status after stop flashing*

3.2_Logic function A-D



No.	ETS-Parameter	Range (default)	Description
525	Enable logical block A-D	-(Disable) -Enable	***Disable:*** *the logical block A is invalid.* ***Enable:*** *Enable logic block A's function.*
526	Input detection A-D	-(No detection) -Dry contact sensor -Temperature sensor	***Disable:****disable the input detection* ***Dry contact sensor:****set dry contact sensor as the input detection.* ***Temperature sensor:****set the temperature sensor as input detection.*
3.2.1_Dry contact sensor			
527	Dry contact type	-(Mechanical switch) -Electronic switch	*Function selection*
3.2.1.1_Mechanical switch			
528	Status when closing the contact	-Invalid -(True) -False -Toggle	*Set the logic status when closing the contact* ***Invalid:*** *it's invalid* ***True:*** *set the logic status to be true* ***False:*** *set the logic status to be false* ***Toggle:*** *it will invert the last time's status then send it out*
529	Status when opening the contact	-Invalid -True -(False) -Toggle	*Set the logic status when opening the contact* ***Invalid:*** *it's invalid* ***True:*** *set the logic status to be true* ***False:*** *set the logic status to be false* ***Toggle:*** *it will invert the last time's status then send it out*
530	Dry contact status report	-(No) -Yes	***No:*** *will not report contact's status to the bus* ***Yes:*** *will report contact's status to the bus*
531	Dry status report mode	-(Report when changed) -Report cyclic	***Report when changed:*** *it will report the contact status to the bus only when it's changed*

			Report cyclic: *it will report the contact status to the bus cyclically*
532	Dry status report of minimum time interval: base	(1sec..1hour)	*This parameter isused to set the time base of status report when changed.*
533	Dry status report cycle: base	(1sec..1hour)	*This parameter isused to set the time base of status report cyclically.*
534	Factor[1..255]->time=base*factor	(1)..255	*This parameter isused to set the time factor, the time interval=base*factor*
535	Enable external telegram <1>..<5>	-(Disable) -1bit value('1'/'0') -1byte threshold (0..255) -2bytes threshold (0..65535) -2bytes float threshold (0..3000) -4bytes threshold (0..2147483647)	*Set the external telegram's type here.*
536	Extern telegram status	-('1' is True, '0' is False) -'0' is True, '1' is False	***'1' is True, '0' is False:*** *when receives 1, the input status is true; when receives 0, the input status is false* ***'0' is True, '1' is False:*** *when receives 0, the input status is true; when receives 1, the input status is false*
537	Default status after bus voltage recovery	-(True) -False	*Set the default status of external telegram after voltage recovery.*
538	1byte threshold(0..255)	0..(100)..255	*Set the threshold value of 1 byte*
539	Quiver:<(threshold-n) or >(threshold+n) on false	0..(1)..255	*Set the quiver value for threshold, when it receives the value <threshold-n or >threshold+n, the input status is false*
540	Extern telegram status	-(True if REV value>=Threshold, else False) -True if REV value<=Threshold, else False	***True if REV value >= threshold, else False:*** *when external telegram value >= threshold, the input status is true, else is false.* ***True if REV value <= threshold, else False:*** *when external telegram value <= threshold, the input status is true, else is false.*
541	Default status after bus voltage recovery	-(True) -False	*Set the default status as true or false after voltage recovery.*
542	2byte threshold(0..65535)	0..(1000)..65535	*Set the threshold value of 2bytes*
543	Quiver:<(threshold-n) or >(threshold+n) on false	0..(1)..255	*Set the quiver value for threshold, when it receives the value <threshold-n or >threshold+n, the input status is false*
544	Extern telegram status	-(True if REV value>=Threshold, else False) -True if REV value<=Threshold, else False	***True if REV value >= threshold, else False:*** *when external telegram value >= threshold, the input status is true, else is false.* ***True if REV value <= threshold, else False:*** *when external telegram value <= threshold, the input status is true, else is false.*
545	Default status after bus voltage recovery	-(True) -False	*Set the default status as true or false after voltage recovery.*
546	2bytes float threshold(0..3000)	0..(100)..3000	*Set the threshold value of 2bytes float*

547	Quiver:<(threshold-n) or >(threshold+n) on false	0..(1)..255	*Set the quiver value for threshold, when it receives the value <threshold-n or >threshold+n, the input status is false*
548	Extern telegram status	-(True if REV value>=Threshold, else False) -True if REV value<=Threshold, else False	***True if REV value >= threshold, else False:*** *when external telegram value >= threshold, the input status is true, else is false.* ***True if REV value <= threshold, else False:*** *when external telegram value <= threshold, the input status is true, else is false.*
549	Default status after bus voltage recovery	-(True) -False	*Set the default status as true or false after voltage recovery.*
550	4bytes threshold (0..2147483647)	0..(1000000)..2147483647	*Set the threshold value of 4bytes*
551	Quiver:<(threshold-n) or >(threshold+n) on false	0..(1)..255	*Set the quiver value for threshold, when it receives the value <threshold-n or >threshold+n, the input status is false*
552	Extern telegram status	-(True if REV value>=Threshold, else False) -True if REV value<=Threshold, else False	***True if REV value >= threshold, else False:*** *when external telegram value >= threshold, the input status is true, else is false.* ***True if REV value <= threshold, else False:*** *when external telegram value <= threshold, the input status is true, else is false.*
553	Default status after bus voltage recovery	-(True) -False	*Set the default status as true or false after voltage recovery.*
3.2.1.2_Electronic switch			
554	The normally contact status is	-closed -(open)	*Close: the contact's normal status is closed.* *Open: the contact's normal status is open*
555	Status when short button operation	-Invalid -(True) -False -Toggle	*Set the logic status when short press* ***Invalid:*** *it's invalid* ***True:*** *set the logic status to be true* ***False:*** *set the logic status to be false* ***Toggle:*** *it will invert the last time's status then send it out*
556	Status when long button operation	-Invalid -True -(False) -Toggle	*Set the logic status when long press* ***Invalid:*** *it's invalid* ***True:*** *set the logic status to be true* ***False:*** *set the logic status to be false* ***Toggle:*** *it will invert the last time's status then send it out*
557	Long button time after	0.2s..(1s)..60s	*Set time for long-press, define the long press by end-user*
558	The status after bus voltage recovery	-False -(True)	*Set the logic status after bus voltage recovery.*
559	Dry contact status report	-No -(Yes)	***No:*** *will not report contact's status to the bus* ***Yes:*** *will report contact's status to the bus*
560	Dry status report cycle mode	-Report when changed -(Report cyclic)	***Report when changed:*** *it will report the contact status to the bus only when it's changed* ***Report cyclic:*** *it will report the contact status to the bus cyclically*

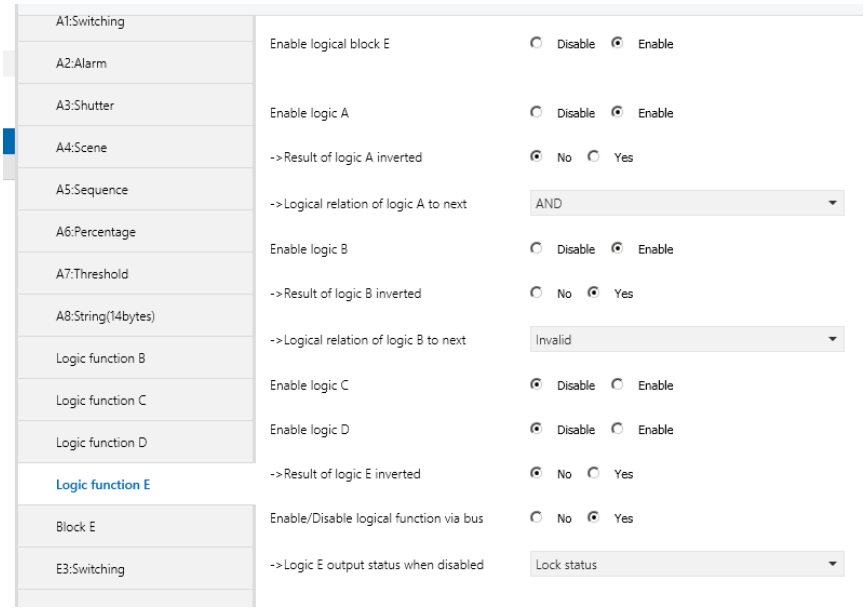
561	Dry status report cycle: base	-(1sec) -1min -1hour	*This parameter isused to set the time base of status report cyclically.*
562	Dry status report of minimum time interval: base	-(1sec) -1min -1hour	*This parameter isused to set the time base of status report when changed.*
563	Factor[1..255]->time=base*factor	(1)..255	*This parameter isused to set the time factor, the report time interval = base* factor*
564	Enable external telegram <1>..<5>	-(Disable) -1bit value('1'/'0') -1byte threshold (0..255) -2bytes threshold (0..65535) -2bytes float threshold (0..3000) -4bytes threshold (0..2147483647)	*Set the external telegram's type here.*
565	Extern telegram status	-('1' is True, '0' is False) -'0' is True, '1' is False	***'1' is True, '0' is False:** when receives 1, the input status is true; when receives 0, the input status is false* ***'0' is True, '1' is False:** when receives 0, the input status is true; when receives 1, the input status is false*
566	Default status after bus voltage recovery	-(True) -False	*Set the default status of external telegram after voltage recovery.*
567	1byte threshold(0..255)	0..(100)..255	*Set the threshold value of 1 byte*
568	Quiver:<(threshold-n) or >(threshold+n) on false	0..(1)..255	*Set the quiver value for threshold, when it receives the value <threshold-n or >threshold+n, the input status is false*
569	Extern telegram status	-(True if REV value>=Threshold, else False) -True if REV value<=Threshold, else False	***True if REV value >= threshold, else False:** when external telegram value >= threshold, the input status is true, else is false.* ***True if REV value <= threshold, else False:** when external telegram value <= threshold, the input status is true, else is false.*
570	Default status after bus voltage recovery	-(True) -False	*Set the default status as true or false after voltage recovery.*
571	2byte threshold(0..65535)	0..(1000)..65535	*Set the threshold value of 2 bytes*
572	Quiver:<(threshold-n) or >(threshold+n) on false	0..(1)..255	*Set the quiver value for threshold, when it receives the value <threshold-n or >threshold+n, the input status is false*
573	Extern telegram status	-(True if REV value>=Threshold, else False) -True if REV value<=Threshold, else False	***True if REV value >= threshold, else False:** when external telegram value >= threshold, the input status is true, else is false.* ***True if REV value <= threshold, else False:** when external telegram value <= threshold, the input status is true, else is false.*
574	Default status after bus voltage recovery	-(True) -False	*Set the default status as true or false after voltage recovery.*
575	2bytes float	0..(100)..3000	*Set the threshold value of 2 bytes float*

	threshold(0..3000)		
576	Quiver:<(threshold-n) or >(threshold+n) on false	0..(1)..255	*Set the quiver value for threshold, when it receives the value <threshold-n or >threshold+n, the input status is false*
577	Extern telegram status	-(True if REV value>=Threshold, else False) -True if REV value<=Threshold, else False	***True if REV value >= threshold, else False:*** *when external telegram value >= threshold, the input status is true, else is false.* ***True if REV value <= threshold, else False:*** *when external telegram value <= threshold, the input status is true, else is false.*
578	Default status after bus voltage recovery	-(True) -False	*Set the default status as true or false after voltage recovery.*
579	4bytes threshold (0..2147483647)	0..(1000000).. 2147483647	*Set the threshold value of 4 bytes*
580	Quiver:<(threshold-n) or >(threshold+n) on false	0..(1)..255	*Set the quiver value for threshold, when it receives the value <threshold-n or >threshold+n, the input status is false*
581	Extern telegram status	-(True if REV value>=Threshold, else False) -True if REV value<=Threshold, else False	***True if REV value >= threshold, else False:*** *when external telegram value >= threshold, the input status is true, else is false.* ***True if REV value <= threshold, else False:*** *when external telegram value <= threshold, the input status is true, else is false.*
582	Default status after bus voltage recovery	-(True) -False	*Set the default status as true or false after voltage recovery.*
3.2.2 Temperature sensor			
583	Temperature compensation (-5C..+5C)	-5C..(0C)..+5C	*Use to adjust temperature to the correct value*
584	Temperature >= Threshold1(-30C..+50C)	-30..(20)..50	*Set the threshold 1 value*
585	Temperature <= Threshold2(-30C..+50C)	-30..(30)..50	*Set the threshold 2 value*
586	Temperature input status	-(In range is True, else False) -Out range is True, else False	***In range is True, else False:*** *the input status is true when the temperature in the range; else it's false* ***Out range is True, else False:*** *the input status is true when the temperature out of the range; else it's false*
587	Temperature report	-(No) -Yes	***No:*** *will not report temperature to the bus* ***Yes:*** *will report temperature to the bus when it's in the effective range*
588	Temperature report mode	-(Report when changed) -Report cyclic	***Report when changed:*** *it will report the temperature to the bus only when it's changed* ***Report cyclic:*** *it will report the temperature to the bus cyclically*
589	Temperature report of minimum time interval: base	-(1sec) -1min -1hour	*This parameter isused to set the time base oftemperature report when changed.*

590	Temperature report cycle :base	-(1sec) -1min -1hour	*This parameter isused to set the time base of temperature report cyclically.*
591	Factor[1..255]->time=base*factor	1..255	*This parameter isused to set the time factor, the report time interval = base* factor*
592	Enable external telegram <1>..<5>	-(Disable) -1bit value('1'/'0') -1byte threshold (0..255) -2bytes threshold (0..65535) -2bytes float threshold (0..3000) -4bytes threshold (0..2147483647)	*Set the external telegram's type here.*
593	Extern telegram status	-('1' is True, '0' is False) -'0' is True, '1' is False	***'1' is True, '0' is False:** when receives 1, the input status is true; when receives 0, the input status is false* ***'0' is True, '1' is False:** when receives 0, the input status is true; when receives 1, the input status is false*
594	Default status after bus voltage recovery	-(True) -False	*Set the default status of external telegram after voltage recovery.*
595	1byte threshold(0..255)	0..(100)..255	*Set the threshold value of 1 byte*
596	Quiver:<(threshold-n) or >(threshold+n) on false	0..(1)..255	*Set the quiver value for threshold, when it receives the value <threshold-n or >threshold+n, the input status is false*
597	Extern telegram status	-(True if REV value>=Threshold, else False) -True if REV value<=Threshold, else False	***True if REV value >= threshold, else False:** when external telegram value >= threshold, the input status is true, else is false.* ***True if REV value <= threshold, else False:** when external telegram value <= threshold, the input status is true, else is false.*
598	Default status after bus voltage recovery	-(True) -False	*Set the default status as true or false after voltage recovery.*
599	2byte threshold(0..65535)	0..(1000)..65535	*Set the threshold value of 2 bytes*
600	Quiver:<(threshold-n) or >(threshold+n) on false	0..(1)..255	*Set the quiver value for threshold, when it receives the value <threshold-n or >threshold+n, the input status is false*
601	Extern telegram status	-(True if REV value>=Threshold, else False) -True if REV value<=Threshold, else False	***True if REV value >= threshold, else False:** when external telegram value >= threshold, the input status is true, else is false.* ***True if REV value <= threshold, else False:** when external telegram value <= threshold, the input status is true, else is false.*
602	Default status after bus voltage recovery	-(True) -False	*Set the default status as true or false after voltage recovery.*
603	2bytes float threshold(0..3000)	0..(100)..3000	*Set the threshold value of 2 bytes float*
604	Quiver:<(threshold-n) or >(threshold+n) on false	0..(1)..255	*Set the quiver value for threshold, when it receives the value <threshold-n*

			or >threshold+n, the input status is false
605	Extern telegram status	-(True if REV value>=Threshold, else False) -True if REV value<=Threshold, else False	***True if REV value >= threshold, else False:*** *when external telegram value >= threshold, the input status is true, else is false.* ***True if REV value <= threshold, else False:*** *when external telegram value <= threshold, the input status is true, else is false.*
606	Default status after bus voltage recovery	-(True) -False	*Set the default status as true or false after voltage recovery.*
607	4bytes threshold (0..2147483647)	0..(1000000)..2147483647	*Set the threshold value of 4 bytes*
608	Quiver:<(threshold-n) or >(threshold+n) on false	0..(1)..255	*Set the quiver value for threshold, when it receives the value <threshold-n or >threshold+n, the input status is false*
609	Extern telegram status	-(True if REV value>=Threshold, else False) -True if REV value<=Threshold, else False	***True if REV value >= threshold, else False:*** *when external telegram value >= threshold, the input status is true, else is false.* ***True if REV value <= threshold, else False:*** *when external telegram value <= threshold, the input status is true, else is false.*
610	Default status after bus voltage recovery	-(True) -False	*Set the default status as true or false after voltage recovery.*
611	Logical relation of Block A-D	-(AND) -OR	*Set the logical relation of the block*
612	Result of logic A-D inverted	-(No) -Yes	***NO:*** *will not invert the block's logic status* ***YES:*** *will invert the block's logic status*
613	Enable/Disable logical function via bus	-(No) -Yes	***No:*** *can not change logic function via bus* ***Yes:*** *when receives 1, enable the logic function; when receives 0, disable logic function*

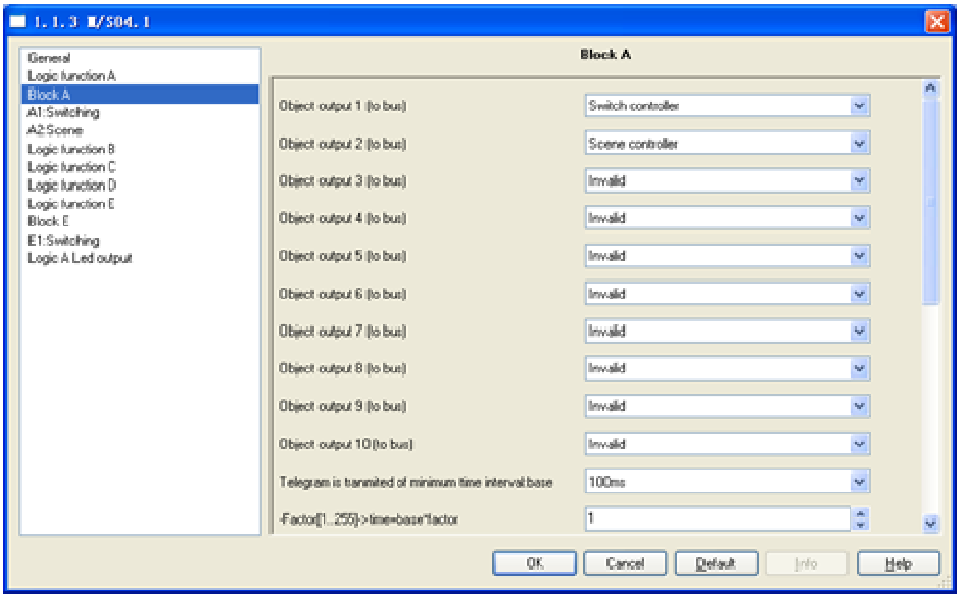
3.3_Logic function E



No.	ETS-Parameter	Range (default)	Description
614	Enable logical block E	-(Disable) -Enable	***Disable:*** *disable the logic block E function* ***Enable:*** *enable the logic block E function*
615	Enable logic A	-(Disable) -Enable	*Enable/disable the logic A to be one logic input*
616	Result of logic A inverted	-(No) -Yes	*NO: will not invert block A's logic status* *YES: will invert block A's logic status*
617	Logical relation of logic A to next	-AND -OR -(Invalid)	*Set the logic relation between logic A and the next logic block*
618	Enable logic B	-(Disable) -Enable	*Enable/disable the logic B to be one logic input*
619	Result of logic B inverted	-(No) -Yes	*NO: will not invert block B's logic status* *YES: will invert block B's logic status*
620	Logical relation of logic B to next	-AND -OR -(Invalid)	*Set the logic relation between logic B and the next logic block*
621	Enable logic C	-(Disable) -Enable	*Enable/disable the logic C to be one logic input*
622	Result of logic C inverted	-(No) -Yes	*NO: will not invert block C's logic status* *YES: will invert block C's logic status*
623	Logical relation of logic C to next	-AND -OR -(Invalid)	*Set the logic relation between logic C and the next logic block*
624	Enable logic D	-(Disable) -Enable	*Enable/disable the logic D to be one logic input*
625	Result of logic D inverted	-(No) -Yes	*NO: will not invert block D's logic status* *YES: will invert block D's logic status*
626	Logical relation of logic D to next	-AND -OR -(Invalid)	*Set the logic relation between logic D and the next logic block*
627	Result of logic E inverted	-(No) -Yes	*NO: will not invert block E's logic status* *YES: will invert block E's logic status*
628	Enable/Disable logical	-(No)	***No:*** *can not change logic function via bus*

	function via bus	-Yes	***Yes:*** *when receives 1, enable the logic function; when receives 0, disable logic function*
629	Logic E output status when disabled	-(Lock status) -True -False	*Set the logic output status when disable the logic E* ***Lock status:*** *keep the last time's status* ***True:*** *set the logic status to be true* ***False:*** *set the logic status to be false*

3.4_Block A-E



No.	ETS-Parameter	Range (default)	Description
630	Object output 1-10 (to bus)	-(Invalid) -Switch controller -Alarm controller -Shutter controller -Scene controller -Sequence controller -Percentage controller -Threshold controller -String (14bytes) controller	*Select the output type for logic control*
631	Telegram is transmitted of minimum time interval: base	10ms..(100ms)..1hour	*Set the time base of minimum time interval to transmit the telegram*
632	Factor[1..255]->time=base*factor	(1)..255	*Set the time factor of minimum time interval to transmit the telegram, the minimum time interval=base*factor*
633	Repeat to transmit the telegram enable	-(No) -Yes	***No:*** *disable the repeat transmission function* ***Yes:*** *repeat to transmit the telegram*
634	Transmit telegram on	-True -False	*Set the telegram type to transmit* ***True:*** *only transmit the true telegram*

		-(True and False)	***False:****only transmit the false telegram* ***True and false:*** *transmit the true and false telegram*
635	Transmit time interval(2..255min)	(2)..255	*Set the time interval to transmit the telegram*
3.4.1_A-E 0..10: Switching			
636	The status after bus voltage recovery	-Invalid -ON -OFF -Recovery -(According to logical status)	*Set the switch status after bus voltage recovery* ***Invalid:*** *the status is invalid* ***ON:*** *will switch ON the channel after bus voltage recovery.* ***OFF:*** *will switch OFF the channel after bus voltage recovery.* ***Recovery:*** *restore the switch status before power off* ***According to logical status:****if logical status is true, trigger the action which set in logical output when true; if logical status is false, trigger the action which set in logical output when false.*
637	Logical block output when TRUE	-Invalid -Toggle -(ON) -OFF	*Set the switch output function when true* ***Invalid:*** *the switch output is invalid* ***Toggle:*** *It will invert the last time's value then send itout when true* ***ON:*** *The value it will send is 1 when true* ***OFF:*** *The value it will send is 0 when true*
638	Time delay for logical block when TRUE (0..65535s)	(0)..65535	*Set the delay time to send out the control telegram when true*
639	Logical block output when FALSE	-Invalid -Toggle -ON -(OFF)	*Set the switch output function when false* ***Invalid:*** *the switch output is invalid* ***Toggle:*** *It will invert the last time's value then send itout when false* ***ON:*** *The value it will send is 1 when false* ***OFF:*** *The value it will send is 0 when false*
640	Time delay for logical block when FALSE (0..65535s)	(0)..65535	*Set the delay time to send out the control telegram when false*
3.4.2_A-E 1..10: Alarm			
641	The status after bus voltage recovery	-Invalid -Alarm -No alarm -Recovery -(According to logical status)	*Set the alarm status after bus voltage recovery* ***Invalid:*** *the status is invalid* ***Alarm:*** *will send alarm telegram after bus voltage recovery.* ***No Alarm:*** *will send no alarm telegram after bus voltage recovery.* ***Recovery:*** *restore the alarm status before power off* ***According to logical status:****if logical status is true, trigger the action which set in logical output when true; if logical status is false, trigger the action which set in logical output when false.*
642	Logical block output when TRUE	-Invalid -Toggle -(Alarm) -No Alarm	*Set the alarm output function when true* ***Invalid:*** *the alarm output is invalid* ***Toggle:*** *It will invert the last time's value then send itout when true*

			Alarm: *The value it will send is 1 when true* ***No Alarm:*** *The value it will send is 0 when true*
643	Time delay for logical block when TRUE (0..65535s)	(0)..65535	*Set the delay time to send out the control telegram when true*
644	Logical block output when FALSE	-Invalid -Toggle -Alarm -(No Alarm)	*Set the alarm output function when false* ***Invalid:*** *the alarm output is invalid* ***Toggle:*** *It will invert the last time's value then send itout when false* ***Alarm:*** *The value it will send is 1 when false* ***No Alarm:*** *The value it will send is 0 when false*
645	Time delay for logical block when FALSE (0..65535s)	(0)..65535	*Set the delay time to send out the control telegram when false*
3.4.3_A-E 1..10: Shutter			
646	The status after bus voltage recovery	-Invalid -UP -DOWN -Recovery -(According to logical status)	*Set the shutter status after bus voltage recovery* ***Invalid:*** *the status is invalid* ***UP:*** *will send up telegram after bus voltage recovery.* ***DOWN:*** *will send down telegram after bus voltage recovery.* ***Recovery:*** *restore the shutter status before power off* ***According to logical status:****if logical status is true, trigger the action which set in logical output when true; if logical status is false, trigger the action which set in logical output when false.*
647	Logical block output when TRUE	-Invalid -Toggle -(UP) -DOWN	*Set the shutter output function when true* ***Invalid:*** *the shutter output is invalid* ***Toggle:*** *It will send up/down telegram when true* ***UP:*** *it will send move up telegram when true* ***DOWN:*** *it will send move down telegram when true*
648	Time delay for logical block when TRUE (0..65535s)	(0)..65535	*Set the delay time to send out the control telegram when true*
649	Logical block output when FALSE	-Invalid -Toggle -UP -(DOWN)	*Set the shutter output function when false* ***Invalid:*** *the shutter output is invalid* ***Toggle:*** *It will send up/down telegram when false* ***UP:*** *it will send move up telegram when false* ***DOWN:*** *it will send move down telegram when false*
650	Time delay for logical block when FALSE (0..65535s)	(0)..65535	*Set the delay time to send out the control telegram when false*
3.4.4_A-E 1..10: Scene			
651	The status after bus voltage recovery	-Invalid -Defined scene -Recovery -(According to logical	*Set the output scene after bus voltage recovery* ***Invalid:*** *the scene output is invalid* ***Defined scene:*** *will output defined scene*

		status)	*after bus voltage recovery.* ***Recovery:*** *restore the scene before power off* ***According to logical status:****if logical status is true, trigger the action which set in logical output when true; if logical status is false, trigger the action which set in logical output when false.*
652	Recovery defined scene NO.	(Scene NO.01)..Scene NO.64	*Set the output scene number for defined scene option*
653	Logical block output when TRUE	(Scene NO.01)..Scene NO.64	*Set the output scene number when true*
654	Time delay for logical block when TRUE (0..65535s)	(0)..65535	*Set the delay time to send out the control telegram when true*
655	Logical block output when FALSE	-Invalid -Scene NO.01..(Scene NO.2)..Scene NO.64	*Set the output scene number when false*
656	Time delay for logical block when FALSE (0..65535s)	(0)..65535	*Set the delay time to send out the control telegram when false*
3.4.5_A-E 1..10: Sequence			
657	The status after bus voltage recovery	-Invalid -Start -Stop -Recovery -(According to logical status)	*Set the output sequence after bus voltage recovery* ***Invalid:*** *the sequence output is invalid* ***Start:*** *will send telegram 1 to start the sequence after bus voltage recovery.* ***Stop:*** *will send telegram 0 to stop the sequence after bus voltage recovery.* ***Recovery:*** *restore the sequence status before power off* ***According to logical status:****if logical status is true, trigger the action which set in logical output when true; if logical status is false, trigger the action which set in logical output when false.*
658	Logical block output when TRUE	-Invalid -Toggle -(Start) -Stop	*Set the sequence output function when true* ***Invalid:*** *the sequence output is invalid* ***Toggle:****It will invert the last time's value then send itout when true* ***Start:*** *will send telegram 1 to start the sequence when true* ***Stop:*** *will send telegram 0 to stop the sequence when true*
659	Time delay for logical block when TRUE (0..65535s)	(0)..65535	*Set the delay time to send out the control telegram when true*
660	Logical block output when FALSE	-Invalid -Toggle -Start -(Stop)	*Set the sequence output function when false* ***Invalid:*** *the sequence output is invalid* ***Toggle:****It will invert the last time's value then send itout when false* ***Start:*** *will send telegram 1 to start the sequence when false* ***Stop:*** *will send telegram 0 to stop the sequence when false*
661	Time delay for logical block when FALSE (0..65535s)	(0)..65535	*Set the delay time to send out the control telegram when false*

3.4.6_A-E 1..10: Percentage			
662	The status after bus voltage recovery	-Invalid -Defined percentage -Recovery -(According to logical status)	*Set the output percentage after bus voltage recovery* ***Invalid:*** *the percentage output is invalid* ***Defined percentage:*** *will output defined percentage value after bus voltage recovery.* ***Recovery:*** *restore the percentage value before power off* ***According to logical status:****if logical status is true, trigger the action which set in logical output when true; if logical status is false, trigger the action which set in logical output when false.*
663	Recovery defined percentage	(0%(0))..100%(255)	*Set the output percentage value for defined percentage option*
664	Logical block output when TRUE	Invalid, 0%(0)..(100%(255))	*Set the output percentage value when true*
665	Time delay for logical block when TRUE (0..65535s)	(0)..65535	*Set the delay time to send out the control telegram when true*
666	Logical block output when FALSE	Invalid, (0%(0))..100%(255)	*Set the output percentage value when false*
667	Time delay for logical block when FALSE (0..65535s)	(0)..65535	*Set the delay time to send out the control telegram when false*
3.4.7_A-E 1..10: Threshold			
668	Threshold control type	-(1byte threshold) -2bytes threshold	*Set the threshold control type*
669	The status after bus voltage recovery	-Invalid -Defined threshold -Recovery -(According to logical status)	*Set the output threshold value after bus voltage recovery* ***Invalid:*** *the threshold output is invalid* ***Defined threshold:*** *will output defined threshold value after bus voltage recovery.* ***Recovery:*** *restore the threshold value before power off* ***According to logical status:****if logical status is true, trigger the action which set in logical output when true; if logical status is false, trigger the action which set in logical output when false.*
670	Recovery defined threshold (0..255)	(0)..255	*Set the output threshold value for defined threshold option*
671	Recovery defined threshold (0..65535)	(0)..65535	*Set the output threshold value for defined threshold option*
672	TRUE is valid?	-No -(Yes)	***No:*** *disable the logic true function* ***Yes:*** *enable the logic true function*
673	Logical block output when TRUE	0..(255)	*Set the output threshold value when true*
674	Logical block output when TRUE	0..(1000)..65535	*Set the output threshold value when true*
675	Time delay for logical block when TRUE (0..65535s)	(0)..65535	*Set the delay time to send out the control telegram when true*
676	FALSE is valid?	-No -(Yes)	***No:*** *disable the logic false function* ***Yes:*** *enable the logic false function*
677	Logical block output when FALSE	(0)..255	*Set the output threshold value when false*

678	Logical block output when FALSE	(0)..65535	*Set the output threshold value when false*
679	Time delay for logical block when FALSE (0..65535s)	(0)..65535	*Set the delay time to send out the control telegram when false*
3.4.8_A-E 1..10: String(14bytes)			
680	The status after bus voltage recovery	-Invalid -Defined string -(According to logical status)	*Set the output string content after bus voltage recovery* ***Invalid:*** *the string output is invalid* ***Defined string:*** *will output defined string content after bus voltage recovery.* ***Recovery:*** *restore the string content before power off* ***According to logical status:****if logical status is true, trigger the action which set in logical output when true; if logical status is false, trigger the action which set in logical output when false.*
681	Recovery defined string	(Hello world!)	*Set the output string content for defined string option*
682	TRUE is valid?	-No -(Yes)	***No:*** *disable the logic true function* ***Yes:*** *enable the logic true function*
683	Logical block output when TRUE	(Hello world!)	*Set the output string content when true*
684	Time delay for logical block when TRUE (0..65535s)	(0)..65535	*Set the delay time to send out the control telegram when true*
685	FALSE is valid?	-No -(Yes)	***No:*** *disable the logic false function* ***Yes:*** *enable the logic false function*
686	Logical block output when FALSE	(Hello world!)	*Set the output string content when false*
687	Time delay for logical block when FALSE (0..65535s)	(0)..65535	*Set the delay time to send out the control telegram when false*

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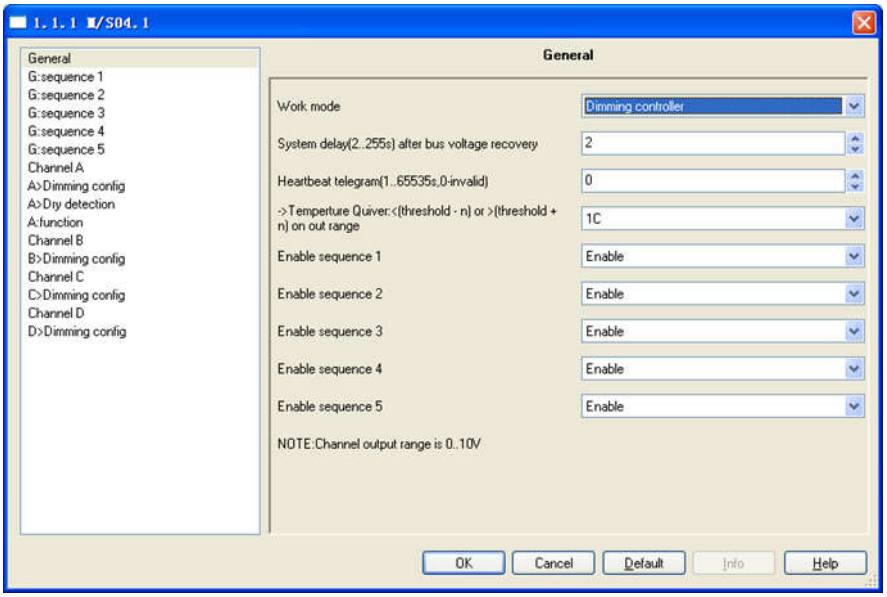
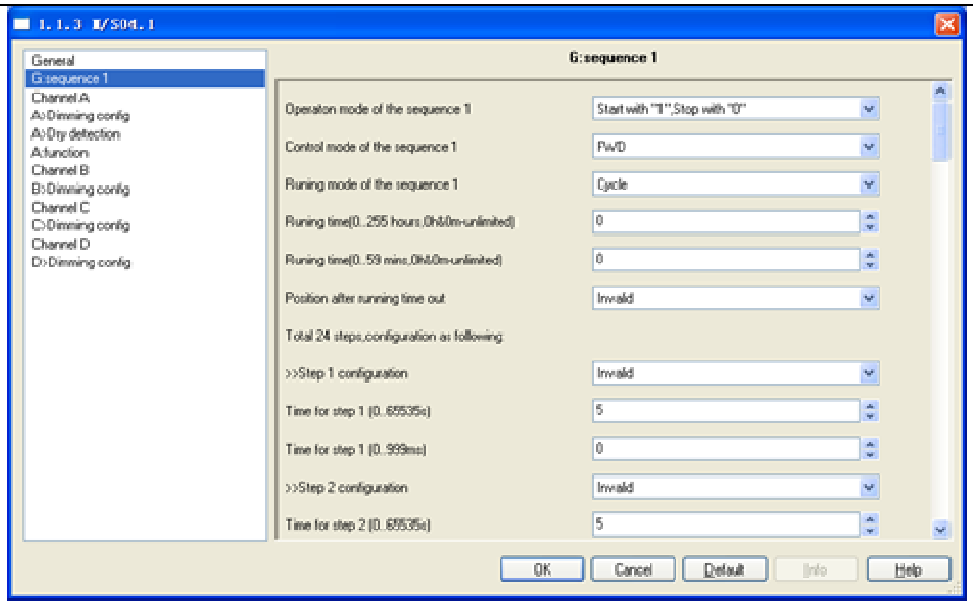
4.0 Dimming controller



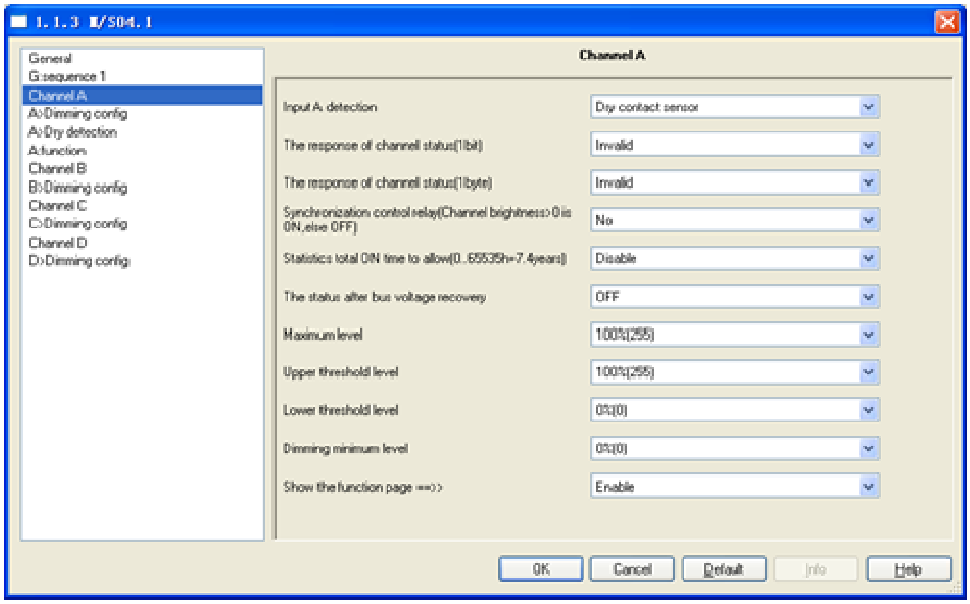
No.	ETS-Parameter	Range (default)	Description
688	Work mode	- (Sensors controller) - Logical controller **- Dimming controller**	*Set the work mode- dimming controller*
689	System delay (2-255s) after bus voltage recovery	(2)..255s	*Set the delay time for the device to work after power on, the range is 2-255s*
690	Heartbeat telegram (1..65535s,0-invalid)	(0)..65535s	*If the parameter is set to nonzero, the device will send a telegram data (alternately between 0 and 1) cyclically after time out; if it's set to 0, this function is invalid.*
691	Temperature Quiver: < (threshold – n) or >(threshold +n) on out range)	0C, (1C),..10C	*The effective range is larger than threshold1 and less than threshold2 The setting range is larger than the (threshold1–n) and less than (threshold2+n).* *Suppose the temperature is in the effective range, when it changes within the setting range, the status will not change.* *Suppose the temperature is in the effective range, when it changes out of the setting range, the status will change.* *Suppose the temperature is not in the effective range, only when the temperature changes into the effective range, the status will change.*
692	Enable sequence 1-5	-(Disable) -Enable	***Disable:*** *sequence function is invalid* ***Enable:*** *enable the sequence control function*

4.1 G: sequence 1-5



No.	ETS-Parameter	Range (default)	Description
693	Operation mode of the sequence 1-5	-(Start with “1”,Stop with “0”) -Start with “0”,Stop with “1” -Start with “1/0”,can’t stop	***Start with “1”,Stop with “0”:*** *When receives “1”, run the sequence; When receives 0, stop the sequence.* ***Start with “0”, Stop with “1”:*** *when receives 0, run the sequence;* *When receives 1, stop the sequence.* ***Start with “1/0”,can’t stop:****whether receives 1 or 0, run the sequence.*
694	Control mode of the sequence 1-5	-(FWD) -REW -Random	***FWD****: Forward mode* ***REW****: Back work mode* ***RANDOM****: Random mode*
695	Running mode of the sequence 1-5	-Single -(Cycle)	***Single****: Run only one time* ***Cycle****: run the sequence cyclically*
696	Running time(0…255hours,0h&0m-unlimited)	(0)..255	*Set the sequence running time(0-255h), after the time, it will stop running automatically.* *if the time is set to 0h&0m, then the running time is unlimited.*
697	Running time(0…59mins, 0h&0m-unlimited)	(0)..59	*Set the sequence running time(0-59min), after the time, it will stop running automatically.* *if the time is set to 0h&0m, then the running time is unlimited.*
698	Position after time out	-(Invalid) -Scene NO.1..Scene NO.64	*If the sequence running in Cycle mode, and the run time is greater than zero, After time out, the sequence will call the defined scene.*
699	Step1..24 configuration	-(Invalid) -Scene NO.1..Scene NO.64	*Set the running scene for each step, one sequence can have up to 24 steps*
700	Time for step 1..24 (0…65535s)	0..(5)..65535	*Set the running time(0-65535s) for each step.*
701	Time for step 1(0…999ms)	(0)..999	*Set the running time(0-999ms) for each step.*

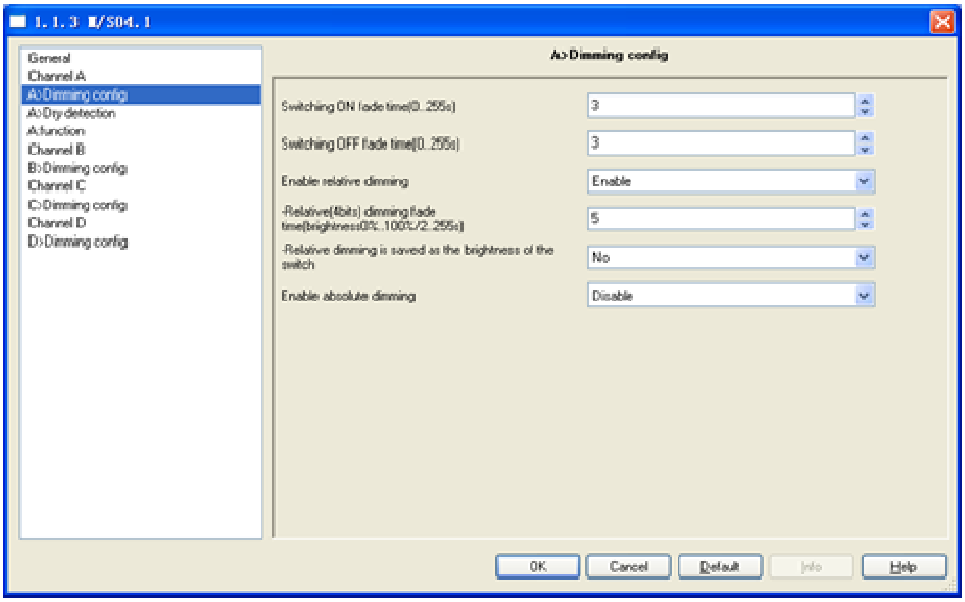
4.2 Channel A-D



No.	ETS-Parameter	Range (default)	Description
702	Input A-D detection	-(No detection) -Dry contact sensor -Temperature sensor	***No detection:*** *Input type is invalid.* ***Dry contact:*** *input type is dry contact sensor* ***Temperature sensor:*** *input type is temperature sensor*
703	The response of channel status(1bit)	-(Invalid) -1bit always response -1bit only changed	***1 bit always response:*** *it will always report status to bus,* *If the brightness>0, report telegram 1* *If the brightness=0, report telegram0* ***1 bit only changed:*** *it will report when the brightness change from nonzero(zero) to zero (nonzero).*
704	The response of channel status(1byte)	-(Invalid) -1byte always response -1byte only changed	***1 byte always response:*** *it will always report the brightness value to bus.* ***1 byte only changed:*** *it will report the brightness value to bus only when change*
705	Synchronization control relay (Channel brightness>0 is ON, else OFF)	-(No) -Yes	*Use to control the relay, when receives the brightness>0 telegram, switch on the relay; when receives the brightness=0 telegram, switch off the relay. It's specially used to shut down the ballast completely with the help of relay.*
706	Statistics total ON time to allow (0..65535h=7.4years)	-(Disable) -Enable	*This function is used to calculate the total ON time for channel output, the maximum time is 65535h. This function is very useful, because user can know channel work status through this function.* ***Disable:*** *don't timing.* ***Enable:****enable statistics time function.*
707	Alarm when time out (1…65535h,0-invalid)		*When the device's operating time arrives the setting value will send alarm telegram.*

708	Transmit telegram interval when alarm (1..255s)		*Set the time interval to transmit the alarm telegram.*
709	The status after bus voltage recovery	-(OFF) -Defined brightness value -Last brightness value	***OFF:** the channel's status is off after bus voltage recovery* ***Defined brightness value:** the channel's status is set to defined brightness value after bus voltage recovery* ***Last brightness value:** the channel's status will restore to last brightness value before power off*
710	Brightness value	(0%(0))..100%(255)	*Set the output brightness value for defined brightness value option.*
711	Maximum level	0%(0)..(100%(255))	*Set the maximum level.*
712	Upper threshold level	0%(0)..(100%(255))	*Set the upper threshold level.*
713	Lower threshold level	(0%(0))..100%(255)	*Set the lower threshold level.*
714	Dimming minimum level	(0%(0))..100%(255)	*Set the dimming minimum level.*
715	Show the function page	-(Disable) -Enable	***Disable:** Don't show the function page about dimmer.* ***Enable:** Show the function page, the page is used to set the function about dimmer.*

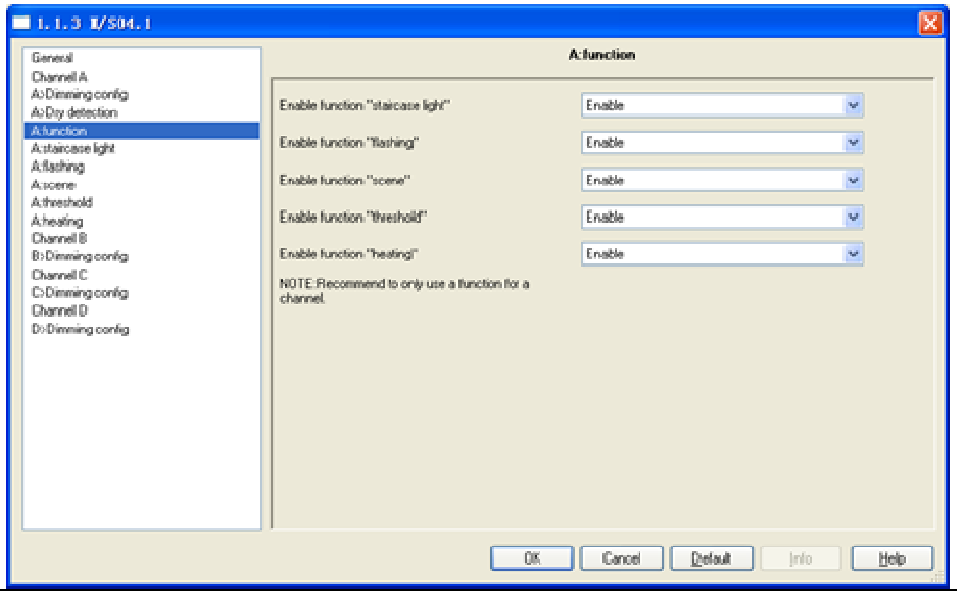
4.3 A-D Dimming config



No.	ETS-Parameter	Range (default)	Description
716	Switching ON fade time(0…255s)	0..(3)..255	*Set the fade time to switch on. It will take the setting time to change value from 0% to 100%.*

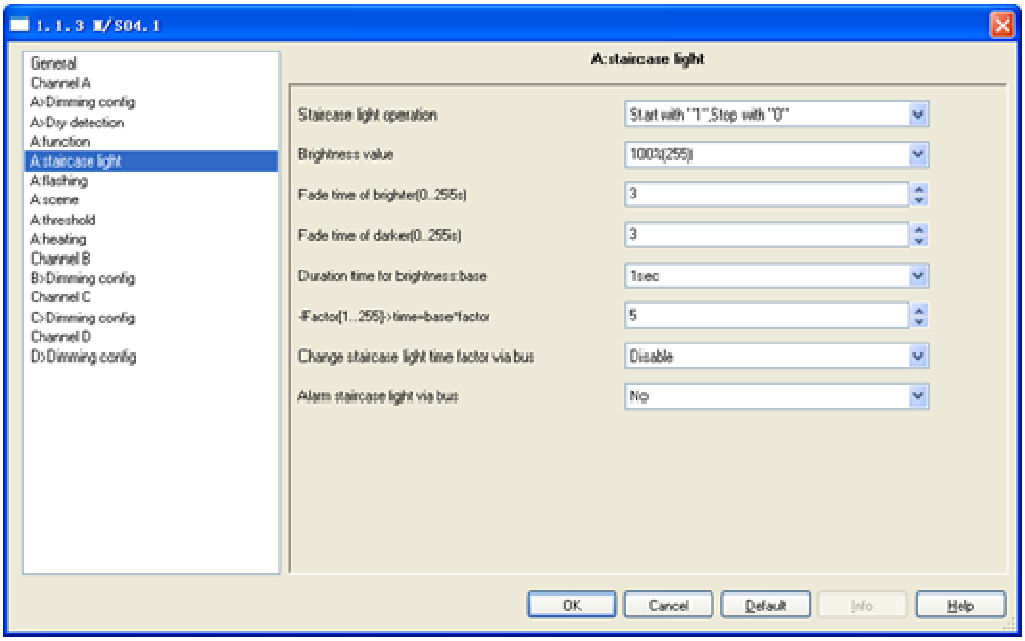
717	Switching OFF fade time(0…255s)	0..(3)..255	*Set the fade time to switch off. It will take the setting time to change value from 100% to 0%.*
718	Enable relative dimming	-Disable -(Enable)	***Disable:** disable therelative dimming function* ***Enable:** enable the relative dimming function*
719	Relative(4bits) dimming fade time (brightness 0%..100%/2..255s)	2..(5)..255	*Set the fade time for relative dimming. It will takes the setting time to change value from 0%(100%) to 100%(0%).*
720	Relative dimming is saved as the brightness of the switch	-No -(Yes)	***No:** when turn on light, the brightness will go to 100%.* ***Yes:**when turn on light, the brightness will go to last dimming brightness before turn off*
721	Enable absolute dimming	-Disable -(Enable)	***Disable:** disable theabsolute dimming function* ***Enable:** enable the absolute dimming function*
722	Absolute(1byte) dimming fade time (brightness 0%..100%/0..255s)	0..(5)..255	*Set the fade time for absolute dimming. It will takes the setting time to change value from 0%(100%) to 100%(0%).*
723	Absolute dimming is saved as the brightness of the switch	-No -(Yes)	***No:** when turn on light, the brightness will go to 100%.* ***Yes:**when turn on light, the brightness will go to lastbrightness before turn off*

4.4 A-D:function



No.	ETS-Parameter	Range (default)	Description
724	Enable function 'staircase light'	-(Disable) -Enable	***Disable:*** *the staircase light function is invalid* ***Enable:*** *the staircase light function is valid*
725	Enable function 'flashing'	-(Disable) -Enable	***Disable:*** *the flashing function is invalid* ***Enable:*** *the flashing function is valid*
726	Enable function 'scene'	-(Disable) -Enable	***Disable:*** *the scene function is invalid* ***Enable:*** *the scene light function is valid*
727	Enable function 'threshold'	-(Disable) -Enable	***Disable:*** *the threshold function is invalid* ***Enable:*** *the threshold function is valid*
728	Enable function 'heating'	-(Disable) -Enable	***Disable:*** *the heating function is invalid* ***Enable:*** *the heating light function is valid*

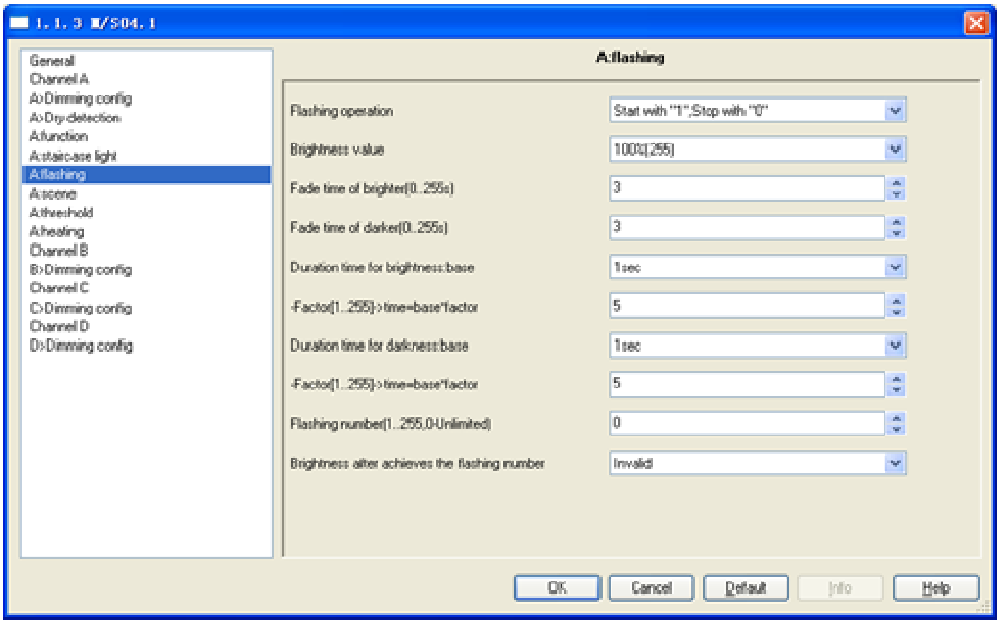
4.5 A-D:staircase light



No.	ETS-Parameter	Range (default)	Description
729	Staircase light operation	-(Start with "1", stop with"0") -Start with"1", invalid with"0" -Start with"1/0",can't stop	***Start with "1",Stop with "0":*** *When receives "1", run the staircase light; When receives 0, stop it.* ***Start with "0", Stop with "1":*** *when receives 0, run the staircase light; When receives 1, stop it.* ***Start with "1/0",can't stop:****whether receives 1 or 0, run the staircase light.*
730	Brightness value	0%(0)..(100%(255))	*Set the brightness value for staircase light.*
731	Fade time of brighter(0...255s)	0..(3)..255	*Set the fade time to switch on. It will take the setting time to change value*

			from 0% to 100%.
732	Fade time of darker(0...255s)	0..(3)..255	*Set the fade time to switch off. It will take the setting time to change value from 100% to 0%.*
733	Duration time for brightness: base	-(1sec) -1min -1hour	*Set the duration time for staircase light, it will auto off after this time. Duration time=base*factor.*
734	Factor[1..255]->time=base*factor	1..(5)..255	*Set the duration time for staircase light, it will auto off after this time. Duration time=base*factor.*
735	Change staircase lighting time factor via bus	-(Disable) -Enable	***Disable:** Can't modify staircase light duration time factor via bus, only can be set in database.* ***Enable:** allow tomodify staircase light duration time factor via bus.*
736	Alarm staircase light via bus	-(No) -Yes	***NO:** will not send out alarm telegram when trigger the staircase light* ***YES:**will send out alarm telegram when trigger the staircase light*

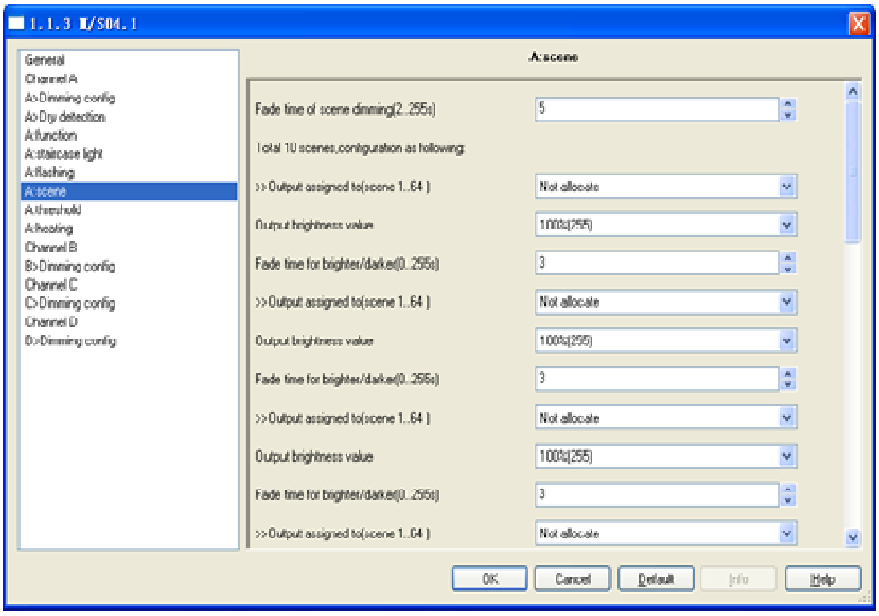
4.6 A-D:flashing



No.	ETS-Parameter	Range (default)	Description
737	Flashing operation	-(Start with "1", stop with"0") -Start with"0", stop with"1" -Start with"1/0",can't stop	***Start with "1",Stop with "0":** When receives "1", run the flashing function; When receives 0, stop it.* ***Start with "0", Stop with "1":** when receives 0, run the flashing function; When receives 1, stop it.* ***Start with "1/0",can't stop:**whether receives 1 or 0, run the flashing function.*
738	Brightness value	0%(0)..(100%(255))	*Set the brightness value for flashing*
739	Fade time of	0..(3)..255	*Set the fade time to switch on. It will*

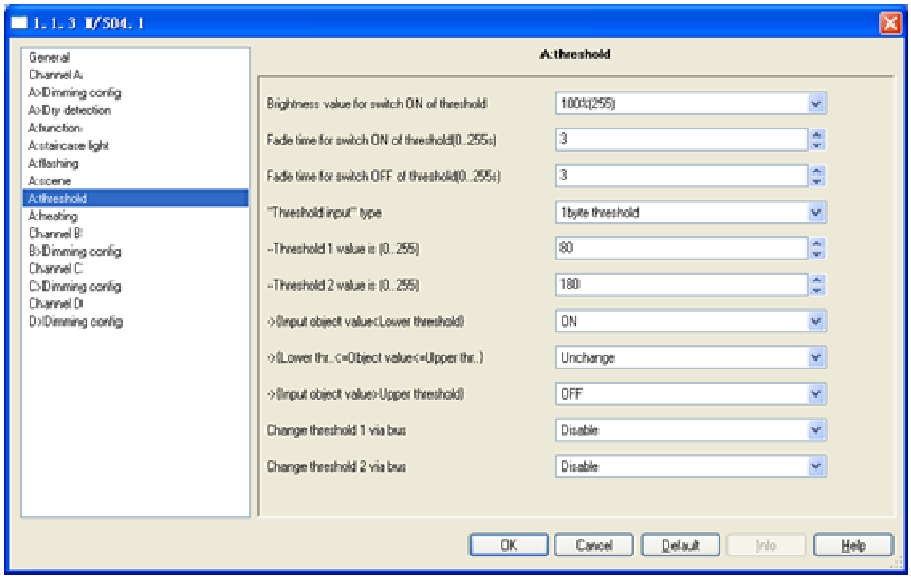
	brighter(0...255s)		*take the setting time to change value from 0% to 100%.*
740	Fade time of darker(0...255s)	0..(3)..255	*Set the fade time to switch off. It will take the setting time to change value from 100% to 0%.*
741	Duration time for brightness: base	-(1sec) -1min -1hour	*Set the duration time for on, it will auto off after this time. Duration time=base*factor.*
742	Factor[1..255]->time=base*factor	1..(5)..255	*Set the duration time for on, it will auto off after this time. Duration time=base*factor.*
743	Duration time for darkness: base	-(1sec) -1min -1hour	*Set the duration time for off, it will auto on after this time. Duration time=base*factor.*
744	Factor[1..255]->time=base*factor	1..(5)..255	*Set the duration time for off, it will auto on after this time. Duration time=base*factor.*
745	Flashing number (1...255, 0-Unlimited)	(0)..255	*Set the flashing times, it will stop flashing after achievesthis times. 0-unlimited.*
746	Brightness after achieves the flashing number	-(Invalid) -0%(0)..100%(255)	*Set the brightness after achieves the flashing times.*

4.7 A-D:scene



No.	ETS-Parameter	Range (default)	Description
747	Fade time of scene dimming: (2...255s)	2..(5)..255	*Set the fade time for scene dimming*
748	10x Output assigned to(scene 1..64)	-(Not allocated) -Scene NO.1..Scene NO.64	*Allocate the scenes for different steps*
749	Output brightness value	-0%(0)..(100%(255))	*Set the channel output brightness value for a certain scene*
750	Fade time for brighter/darker (0…255s)	0..(3)..255	*Set the fade time for the scene, it will take the setting time to change from one scene to another*

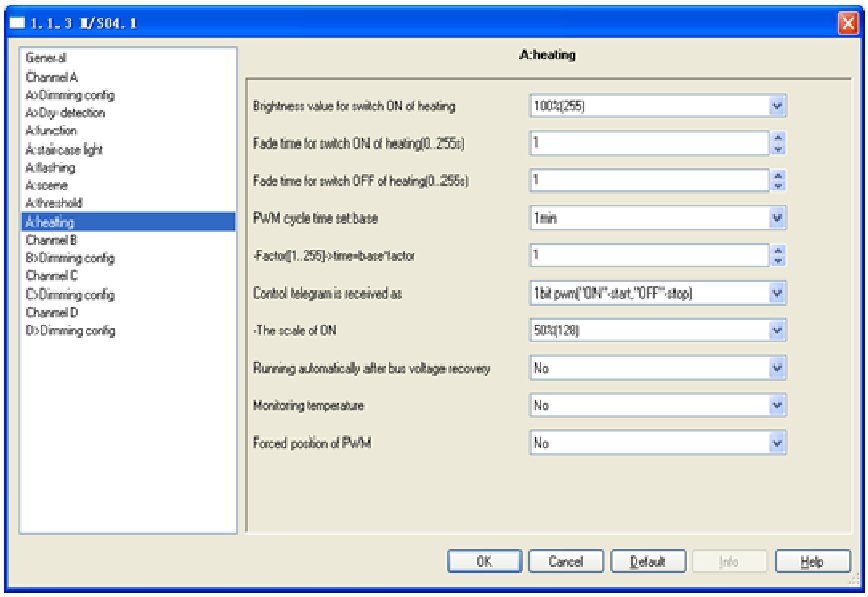
4.8 A-D:threshold



No.	ETS-Parameter	Range (default)	Description
751	Brightness value for switch ON of threshold	0%(0)..(100%(255))	*Set the brightness for switch on of threshold*
752	Fade time for switch ON of threshold (0…255s)	0..(3)..255	*Set the fade time to switch on, it will takes the setting time to change value from 0% to 100%.*
753	Fade time for switch OFF of threshold (0…255s)	0..(3)..255	*Set the fade time to switch off. It will takes the setting time to change value from 100% to 0%.*
754	'Threshold input' type	-(1byte threshold) -2bytes threshold	*Set the type of threshold.*
755	Threshold 1 value is (0…255)	0..(80)..255	*Set threshold 1 value*
756	Threshold 1 value is (0…65535)	0..(10000)..65535	*Set threshold 1 value*
757	Threshold 2 value is (0…255)	0..(180)..255	*Set threshold 2 value*
758	Threshold 2 value is (0…65535)	0..(30000)..65535	*Set threshold 2 value*
759	(Input object value<Lower threshold)	-Unchange -(ON) -OFF	*If input value< lower threshold, the switch will do the action according to below setting:* ***Unchange:*** *The channel switch position will not change.* ***ON:*** *The channel switch position will set to ON.* ***OFF:*** *The channel switch position will set to OFF*
760	(Lower threshold<=Input value<=Upper threshold)	-(Unchange) -ON -OFF	*If lower threshold <=input value< =upper threshold, the switch will do the action according to below setting:* ***Unchange:*** *The channel switch position will not change.* ***ON:*** *The channel switch position will*

			set to ON. ***OFF:*** *The channel switch position will set to OFF*
761	(Input value>Upper threshold)	-Unchange -ON -(OFF)	*If upper threshold <input value, the switch will do the action according to below setting:* ***Unchange:*** *The channel switch position will not change.* ***ON:*** *The channel switch position will set to ON.* ***OFF:*** *The channel switch position will set to OFF*
762	Change threshold 1 via bus	-(Disable) -Enable	***Disable****: do not allow to change the threshold 1 value from bus.* ***Enable****:Allow to change the threshold 1 value from bus.*
763	Change threshold 2 via bus	-(Disable) -Enable	***Disable****: do not allow to change the threshold 2 value from bus.* ***Enable****:Allow to change the threshold 2 value from bus.*

4.9 A-D:heating



No.	ETS-Parameter	Range (default)	Description
764	Brightness value for switch ON of heating	0%(0)..(100%(255))	*Set the brightness(working power)for switch on of heating*
765	Fade time for switch ON of heating (0…255s)	0..(1)..255	*Set the fade time to switch on, it will takes the setting time to change value from 0% to 100%.*
766	Fade time for switch OFF of heating (0…255s)	0..(1)..255	*Set the fade time to switch off. It will takes the setting time to change value from 100% to 0%.*
767	PWM cycle time set: base	-(1min) -1hour	*Set the PWM cycle time, the cycle time =base*factor*
768	Factor[1..255]->time=base*factor	(1)..255	*Set the PWM cycle time, the cycle time =base*factor*

769	Control telegram is received as	-(1bit pwm(ON-start/OFF-stop) -1byte("255"-ON/"0"-OFF/ other valve)	***1bit PWM(1-start/0-stop):*** *when receives 1, will switch on for heating; when receives 0, will switch off.* ***1byte(255-ON/0-OFF/other valve):****will switch on for heating when receives 255; will switch off when receives 0 ; willopen to the corresponding pulse width of PWM according to the value of receiving other value (1-254)*
770	The scale of ON	0%(OFF)..(50%(128)..100%(ON)	*Set the pulse width of PWM to work for 1 bit PWM*
771	Running automatically after bus voltage recovery	-(No) -Defined valve -Recovery	***NO:****will not run automatically* ***Defined value:****open to the defined pulse width of PWM* ***Recovery:*** *will recovery to the corresponding position before power off*
772	Position of the valve	0%(OFF)..(50%(128)..100%(ON)	*Set the pulse width of PWM for defined value*
773	Monitoring temperature	-(No) -Yes	***No:*** *will not monitor the temperature* ***Yes:*** *will monitor the temperature*
774	Monitor cycles(1..255min)	0..(5)..255	*Set the time interval to monitor the temperature*
775	Get temperature from (If local, input select temperature detection)	-(Local) -Bus	*Set the temperature source for heating* ***Local:*** *need to connect temperature sensor for the current input channel to detect temperature* ***Bus:*** *read temperature from another device*
776	Bus temperature compensation(-5C..+5C)	-5C..(0C)..+5C	*Set the compensation value to correct the temperature*
777	Temperature >= Threshold1(-30C..+50C)	-30..(30)..50	*Set the temperature threshold 1 value*
778	Temperature <= Threshold2(-30C..+50C)	-30..(20)..50	*Set the temperature threshold 2 value*
779	Temperature threshold1 operation	-Invalid -ON and start PWM -(OFF and stop PWM)	*Set the action when temperature reaches to the threshold 1 value* ***Invalid:*** *no action* ***ON and start PWM:*** *will switch on and start PWM* ***OFF and stop PWM:*** *will switch off and stop PWM*
780	Temperature threshold1 alarm	-(No) -Yes	*Set to alarm or not when temperature reaches to the threshold 1 value* ***No:*** *will not alarm* ***Yes:*** *will send alarm telegram to bus*
781	Temperature threshold2 operation	-Invalid -(ON and start PWM) -OFF and stop PWM	*Set the action when temperature reaches to the threshold 2 value* ***Invalid:*** *no action* ***ON and start PWM:*** *will switch on and start PWM* ***OFF and stop PWM:*** *will switch off and stop PWM*
782	Temperature threshold2 alarm	-(No) -Yes	*Set to alarm or not when temperature reaches to the threshold 2 value* ***No:*** *will not alarm*

			***Yes:** will send alarm telegram to bus*
783	Forced position of PWM	-(No) -Yes	***No:** can not forced control when running* ***Yes:** set the position for forced control. when receives forced control telegram, it will go to the setting position.*

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D. Communication Objects (‘Electronic switch’ adjustment)

D.0 General

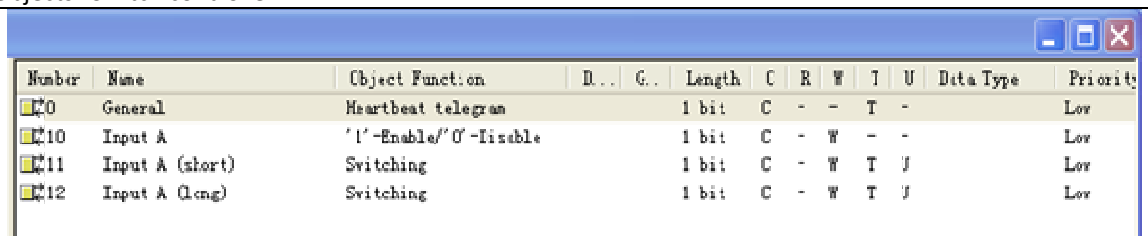
Objects “General” and Enable of “Input A”

Number	Name	Object Function	D..	G..	Length	C	R	W	T	U	Data Type	Priority
0	General	Heartbeat telegram			1 bit	C	-	-	T	-		Low
10	Input A	‘1’-Enable/‘0’-Disable			1 bit	C	-	W	-	-		Low

NO.	Object name	Function	Flags	Data type
0	General	Heartbeat telegram	C T	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”				
10	Input A	1-Enable,/0-disable	C W	DPT 1.003 1bit
This communication object is used to enable/disablethe input A. when receive the telegram 1, enable the input A function, when received the telegram 0 ,disable the input A function.				

D.1 Dry contact sensor

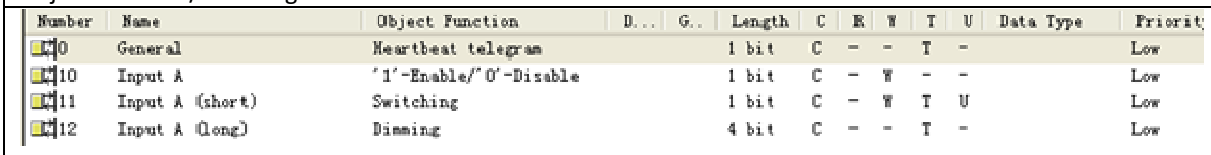
Objects “Switch controller”



Number	Name	Object Function	D..	G..	Length	C	R	W	T	U	Data Type	Priority
0	General	Heartbeat telegram			1 bit	C	-	-	T	-		Low
10	Input A	‘1’-Enable/‘0’-Disable			1 bit	C	-	W	-	-		Low
11	Input A (short)	Switching			1 bit	C	-	W	T	U		Low
12	Input A (long)	Switching			1 bit	C	-	W	T	U		Low

NO.	Object name	Function	Flags	Data type
11	Input A(short)	switching	C W T U	DPT 1.001 1bit
12	Input A(long)	switching	C W T U	DPT 1.001 1bit
These communication objects are for switching control. when short/long press the dry contact A, it will send telegrams to bus to control the output.				

Objects “Switch/Dimming controller”

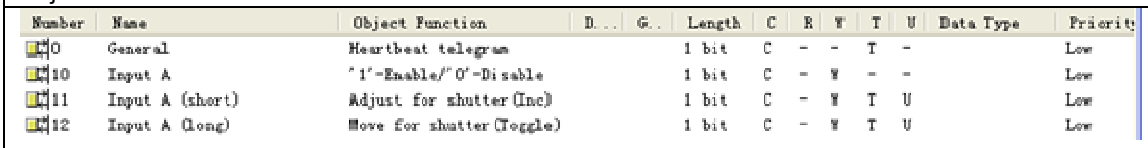


Number	Name	Object Function	D...	G..	Length	C	R	W	T	U	Data Type	Priorit
0	General	Heartbeat telegram			1 bit	C	-	-	T	-		Low
10	Input A	'1'-Enable/'0'-Disable			1 bit	C	-	W	-	-		Low
11	Input A (short)	Switching			1 bit	C	-	W	T	U		Low
12	Input A (long)	Dimming			4 bit	C	-	-	T	-		Low

NO.	Object name	Function	Flags	Data type
11	Input A(short)	Switching	C W T U	DPT 1.001 1 bit
12	Input A(long)	Dimming	C T	DPT 3.007 4 bit

These communication objects are for relative dimming control.short press to on/off the dimmer; long press to dim the dimmer.

Objects “shutter controller”

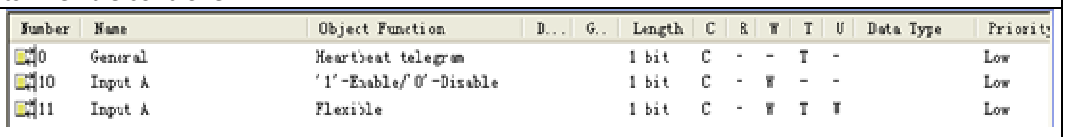


Number	Name	Object Function	D...	G..	Length	C	R	W	T	U	Data Type	Priorit
0	General	Heartbeat telegram			1 bit	C	-	-	T	-		Low
10	Input A	'1'-Enable/'0'-Disable			1 bit	C	-	W	-	-		Low
11	Input A (short)	Adjust for shutter(Inc)			1 bit	C	-	W	T	U		Low
12	Input A (long)	Move for shutter(Toggle)			1 bit	C	-	W	T	U		Low

NO.	**Object name**	**Function**	**Flags**	**Data type**
11	Input A(short)	Adjust for shutter(Inc)	C W T U	DPT 1.007 1 bit
12	Input A(long)	Move for shutter(Toggle)	C W T U	DPT 1.007 1 bit

These communication objects are for shutter control.short press to stop the shutter/adjust the louver; long press to move up/down the shutter.

Objects “Flexible controller”

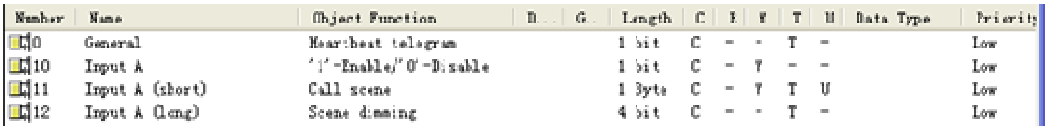


Number	Name	Object Function	D...	G..	Length	C	R	W	T	U	Data Type	Priorit
0	General	Heartbeat telegram			1 bit	C	-	-	T	-		Low
10	Input A	'1'-Enable/'0'-Disable			1 bit	C	-	W	-	-		Low
11	Input A	Flexible			1 bit	C	-	W	T	W		Low

NO.	**Object name**	**Function**	**Flags**	**Data type**
11	Input A	Flexible	C W T U	DPT 1.001 1 bit

This communication object is for flexible control. when control the dry contact, it will sends the defined value “1”or“0” to bus

Objects „Scene controller“



Number	Name	Object Function	D...	G..	Length	C	R	W	T	U	Data Type	Priorit
0	General	Heartbeat telegram			1 bit	C	-	-	T	-		Low
10	Input A	'1'-Enable/'0'-Disable			1 bit	C	-	W	-	-		Low
11	Input A (short)	Call scene			1 Byte	C	-	W	T	U		Low
12	Input A (long)	Scene dimming			4 bit	C	-	-	T	-		Low

NO.	**Object name**	**Function**	**Flags**	**Data type**

11	Input A(short)	Call scene	C W T U	DPT 18.001 1 byte
12	Input A(long)	Scene dimming	C T	DPT 3.007 4 bit
Thesecommunication objectsare for scene control. short press to call scene; long press todim the scene				

Objects „Sequence controller“

Number	Name	Object Function	D...	G..	Length	C	R	W	T	U	Data Type	Priority
0	General	Heartbeat telegram			1 bit	C	-	-	T	-		Low
10	Input A	'1'-Enable/'0'-Disable			1 bit	C	-	W	-	-		Low
11	Input A (short)	Sequence			1 bit	C	-	W	T	U		Low
12	Input A (long)	Sequence			1 bit	C	-	W	T	U		Low

NO.	Object name	Function	Flags	Data type
11	Input A(short)	Sequence	C W T U	DPT 1.010 1 bit
12	Input A(long)	Sequence		
Thesecommunication object is for sequence control. Short/long press can trigger different sequence				

Objects „Percentage controller“

Number	Name	Object Function	D...	G..	Length	C	R	W	T	U	Data Type	Priority
0	General	Heartbeat telegram			1 bit	C	-	-	T	-		Low
10	Input A	'1'-Enable/'0'-Disable			1 bit	C	-	W	-	-		Low
11	Input A (short)	Percentage			1 Byte	C	-	W	T	U		Low
12	Input A (long)	Percentage			1 Byte	C	-	W	T	U		Low

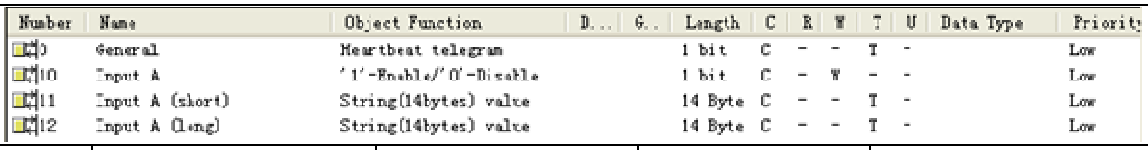
NO.	Object name	Function	Flags	Data type
11	Input A(short)	Percentage	C W T U	DPT 5.001 1 byte
12	Input A(long)	percentage		
Thesecommunication objects are for sequence control. Short/long press can send out different percentage value				

Objects “Threshold controller”

Number	Name	Object Function	D...	G..	Length	C	R	W	T	U	Data Type	Priority
0	General	Heartbeat telegram			1 bit	C	-	-	T	-		Low
10	Input A	'1'-Enable/'0'-Disable			1 bit	C	-	W	-	-		Low
11	Input A (short)	Threshold(1byte)			1 Byte	C	-	W	T	U		Low
12	Input A (long)	Threshold(1byte)			1 Byte	C	-	W	T	U		Low

NO.	Object name	Function	Flags	Data type
11	Input A(short)	Threshold (1bytes)	C W T U	DPT 5.004 2 bytes
12	Input A(long)	Threshold (1byte)	C W T U	DPT 7.001 1 byte
These communication objectsare for threshold control.Short/long press can send out different threshold value				

Objects „String (14bytes) controller“

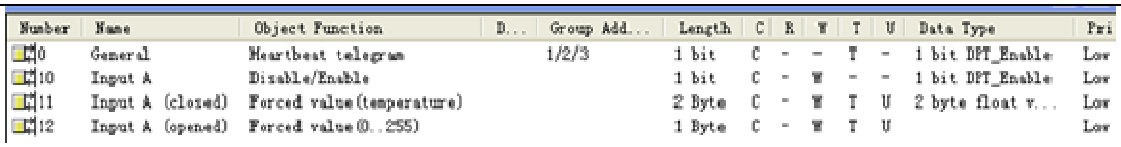


Number	Name	Object Function	D...	G..	Length	C	R	W	T	U	Data Type	Priority
0	General	Heartbeat telegram			1 bit	C	-	-	T	-		Low
10	Input A	'1'-Enable/'0'-Disable			1 bit	C	-	W	-	-		Low
11	Input A (short)	String(14bytes) value			14 Byte	C	-	-	T	-		Low
12	Input A (long)	String(14bytes) value			14 Byte	C	-	-	T	-		Low

NO.	Object name	Function	Flags	Data type
11	Input A(short)	String(14 bytes)value	C T	DPT 16.000 2 bytes
12	Input A(long)	String(14 bytes)value	C T	DPT16.000 1 byte

Thesecommunication objectsare for string control. Short/long press can send out different string content

Objects „Forced position controller“

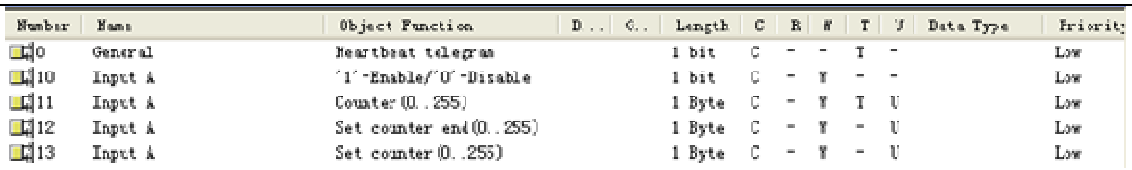


Number	Name	Object Function	D...	Group Add...	Length	C	R	W	T	U	Data Type	Pri
0	General	Heartbeat telegram		1/2/3	1 bit	C	-	-	T	-	1 bit DPT_Enable	Low
10	Input A	Disable/Enable			1 bit	C	-	W	-	-	1 bit DPT_Enable	Low
11	Input A (closed)	Forced value(temperature)			2 Byte	C	-	W	T	U	2 byte float v...	Low
12	Input A (opened)	Forced value(0..255)			1 Byte	C	-	W	T	U		Low

NO.	Object name	Function	Flags	Data type
11	Input A(short)	Forced value (temperature)	C W T U	DPT 5.004 2 bytes
12	Input A(long)	Forced value (0…255)	C W T U	DPT 7.001 1 byte

Thesecommunication objectsare for forced value control. Short/long press can send out different control value

Objects „Counter controller“

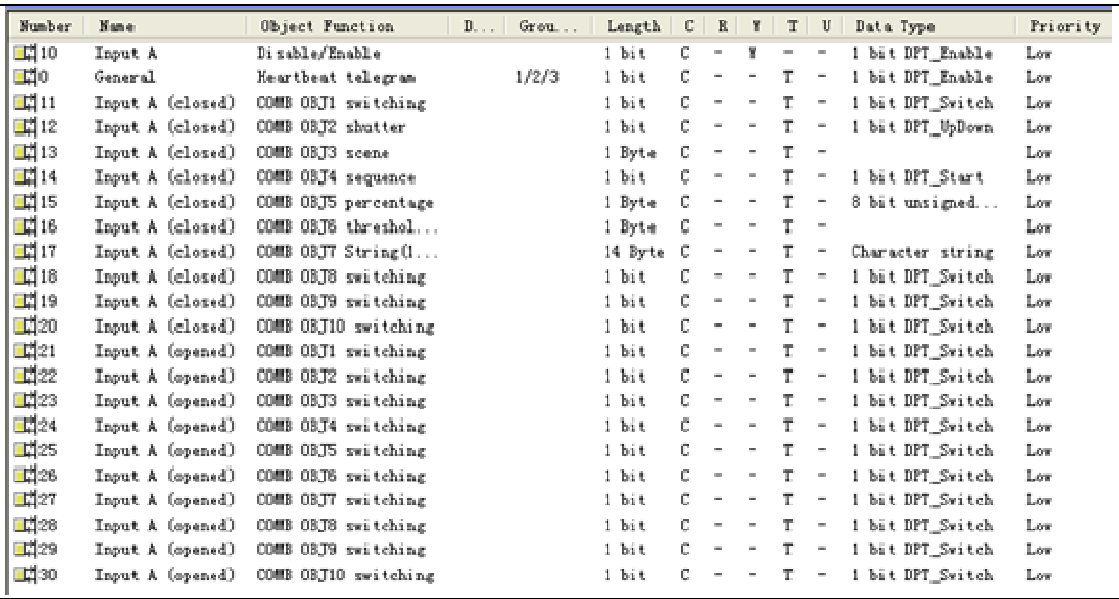


Number	Name	Object Function	D..	G..	Length	C	R	W	T	U	Data Type	Priority
0	General	Heartbeat telegram			1 bit	C	-	-	T	-		Low
10	Input A	'1'-Enable/'0'-Disable			1 bit	C	-	W	-	-		Low
11	Input A	Counter(0..255)			1 Byte	C	-	W	T	U		Low
12	Input A	Set counter end(0..255)			1 Byte	C	-	W	-	U		Low
13	Input A	Set counter(0..255)			1 Byte	C	-	W	-	U		Low

NO.	Object name	Function	Flags	Data type
11	Input A	Counter (0…255)	C W T U	DPT 5.004 1 byte
12	Input A	Set counter end(0…255)	C W U	DPT 5.004 1 byte
13	Input A	Set counter (0…255)	C W U	DPT 5.004 1 byte

Thesecommunication objectsare for counter control.Use object 11 to start the counter function, use object 12 to set the end of the counter; use object 13 to set the start of the counter

Objects „Combination controller“



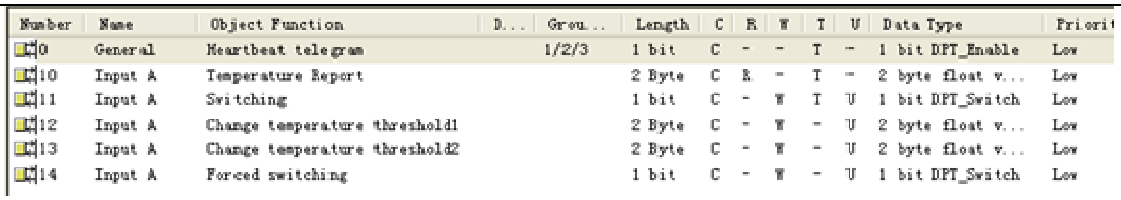
Number	Name	Object Function	D...	Grou...	Length	C	R	W	T	U	Data Type	Priority
10	Input A	Disable/Enable			1 bit	C	-	W	-	-	1 bit DPT_Enable	Low
0	General	Heartbeat telegram		1/2/3	1 bit	C	-	-	T	-	1 bit DPT_Enable	Low
11	Input A (closed)	COMB OBJ1 switching			1 bit	C	-	-	T	-	1 bit DPT_Switch	Low
12	Input A (closed)	COMB OBJ2 shutter			1 bit	C	-	-	T	-	1 bit DPT_UpDown	Low
13	Input A (closed)	COMB OBJ3 scene			1 Byte	C	-	-	T	-		Low
14	Input A (closed)	COMB OBJ4 sequence			1 bit	C	-	-	T	-	1 bit DPT_Start	Low
15	Input A (closed)	COMB OBJ5 percentage			1 Byte	C	-	-	T	-	8 bit unsigned...	Low
16	Input A (closed)	COMB OBJ6 threshol...			1 Byte	C	-	-	T	-		Low
17	Input A (closed)	COMB OBJ7 String(1...			14 Byte	C	-	-	T	-	Character string	Low
18	Input A (closed)	COMB OBJ8 switching			1 bit	C	-	-	T	-	1 bit DPT_Switch	Low
19	Input A (closed)	COMB OBJ9 switching			1 bit	C	-	-	T	-	1 bit DPT_Switch	Low
20	Input A (closed)	COMB OBJ10 switching			1 bit	C	-	-	T	-	1 bit DPT_Switch	Low
21	Input A (opened)	COMB OBJ1 switching			1 bit	C	-	-	T	-	1 bit DPT_Switch	Low
22	Input A (opened)	COMB OBJ2 switching			1 bit	C	-	-	T	-	1 bit DPT_Switch	Low
23	Input A (opened)	COMB OBJ3 switching			1 bit	C	-	-	T	-	1 bit DPT_Switch	Low
24	Input A (opened)	COMB OBJ4 switching			1 bit	C	-	-	T	-	1 bit DPT_Switch	Low
25	Input A (opened)	COMB OBJ5 switching			1 bit	C	-	-	T	-	1 bit DPT_Switch	Low
26	Input A (opened)	COMB OBJ6 switching			1 bit	C	-	-	T	-	1 bit DPT_Switch	Low
27	Input A (opened)	COMB OBJ7 switching			1 bit	C	-	-	T	-	1 bit DPT_Switch	Low
28	Input A (opened)	COMB OBJ8 switching			1 bit	C	-	-	T	-	1 bit DPT_Switch	Low
29	Input A (opened)	COMB OBJ9 switching			1 bit	C	-	-	T	-	1 bit DPT_Switch	Low
30	Input A (opened)	COMB OBJ10 switching			1 bit	C	-	-	T	-	1 bit DPT_Switch	Low

NO.	Object name	Function	Flags	Data type
11		COMB OBJ1 switching	C T	DPT 1.001 1 bit
…	*Input A(short)*	COMB OBJ1 shutter	C T	DPT 1.008 1 bit
20		COMB OBJ1 scene	C T	DPT 18.001 1 byte
		COMB OBJ1 sequence	C T	DPT 1.010 1 bit
		COMB OBJ1 percentage	C T	DPT 5.001 1 byte
		COMB OBJ1 Threshold(0…255)	C T	DPT 5.004 1 byte
		COMB OBJ1 Threshold(0…65535)	C T	DPT 7.001 2 byte
		COMB OBJ1 String (14 bytes)	C T	DPT 16.000 14 byte
These communication objects are for combination control. it contains switch, shutter, scene, sequence, percentage, threshold, string(14 bytes) controller, short press to send out these control telegrams				
21		COMB OBJ1 switching	C T	DPT 1.001 1 bit
…		COMB OBJ1 shutter	C T	DPT 1.008 1 bit
30	Input A(long)	COMB OBJ1 scene	C T	DPT 18.001 1 byte
		COMB OBJ1 sequence	C T	DPT 1.010 1 bit
		COMB OBJ1 percentage		DPT 5.001 1 byte
		COMB OBJ1 Threshold(0…255)	C T	DPT 5.004 1 byte
		COMB OBJ1 Threshold(0…65535)	C T	DPT 7.001 2 byte
		COMB OBJ1 String (14 bytes)	C T	DPT 16.000 14 byte

These communication objects are for combination control. it contains switch, shutter, scene, sequence, percentage, threshold, string(14 bytes) controller, long press to send out these control telegrams

D.2 Temperature sensor

Objects „Switch controller“

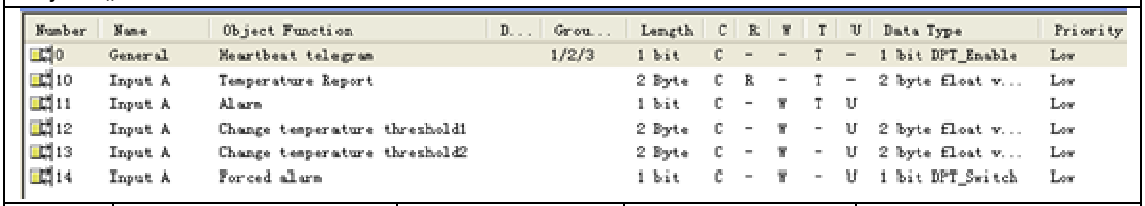


Number	Name	Object Function	D...	Grou...	Length	C	R	W	T	U	Data Type	Priori
0	General	Heartbeat telegram		1/2/3	1 bit	C	-	-	T	-	1 bit DPT_Enable	Low
10	Input A	Temperature Report			2 Byte	C	R	-	T	-	2 byte float v...	Low
11	Input A	Switching			1 bit	C	-	W	T	U	1 bit DPT_Switch	Low
12	Input A	Change temperature threshold1			2 Byte	C	-	W	-	U	2 byte float v...	Low
13	Input A	Change temperature threshold2			2 Byte	C	-	W	-	U	2 byte float v...	Low
14	Input A	Forced switching			1 bit	C	-	W	-	U	1 bit DPT_Switch	Low

NO.	Object name	Function	Flags	Data type
11	Input A	Switching	C W T U	DPT 1.001 1 bit
12 **13**	Input A	Change temperature threshold 1/2	C W U	DPT 9.001 2 byte
14	Input A	Forced switching	C W U	DPT 9.001 1 bit

These communication objects are for switch control. when temperature in the range, object 11 will send out the switch telegram to bus. Use object 12 to change the threshold 1 value, object 13 to change the threshold 2 value; use object 14 for forced switch control, then the temperature control will be invalid.

Objects „Alarm controller“

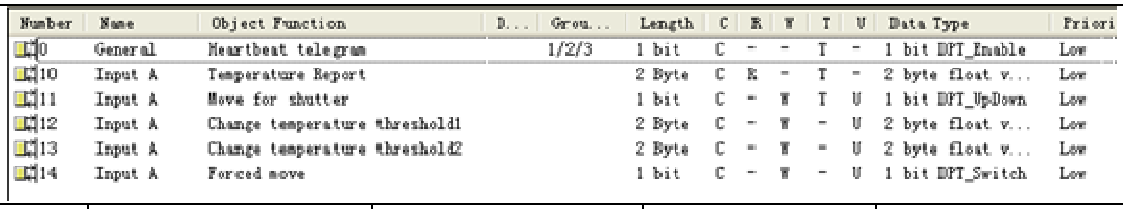


Number	Name	Object Function	D...	Grou...	Length	C	R	W	T	U	Data Type	Priority
0	General	Heartbeat telegram		1/2/3	1 bit	C	-	-	T	-	1 bit DPT_Enable	Low
10	Input A	Temperature Report			2 Byte	C	R	-	T	-	2 byte float v...	Low
11	Input A	Alarm			1 bit	C	-	W	T	U		Low
12	Input A	Change temperature threshold1			2 Byte	C	-	W	-	U	2 byte float v...	Low
13	Input A	Change temperature threshold2			2 Byte	C	-	W	-	U	2 byte float v...	Low
14	Input A	Forced alarm			1 bit	C	-	W	-	U	1 bit DPT_Switch	Low

NO.	Object name	Function	Flags	Data type
11	Input A	Alarm	C W T U	DPT 1.005 1 bit
12 **13**	Input A	Change temperature threshold 1/2	C W U	DPT 9.001 2 byte
14	Input A	Forced alarm	C W U	DPT 1.001 1 bit

These communication objects are for alarm control. when temperature in the range, object 11 will send out the alarm telegram to bus. Use object 12 to change the threshold 1 value, object 13 to change the threshold 2 value; use object 14 for forced alarm control, then the temperature control will be invalid.

Objects „Shutter controller“

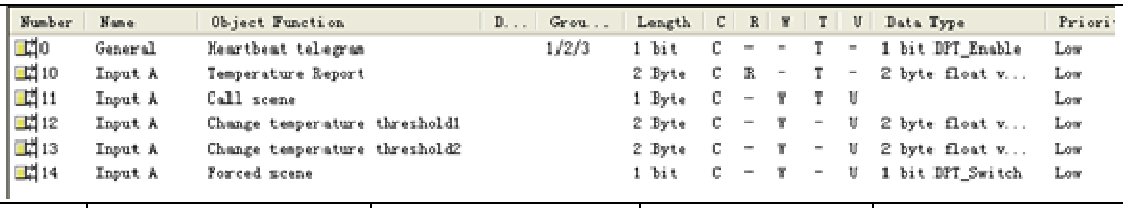


Number	Name	Object Function	D...	Grou...	Length	C	R	W	T	U	Data Type	Priori
0	General	Heartbeat telegram		1/2/3	1 bit	C	-	-	T	-	1 bit DPT_Enable	Low
10	Input A	Temperature Report			2 Byte	C	R	-	T	-	2 byte float v...	Low
11	Input A	Move for shutter			1 bit	C	-	W	T	U	1 bit DPT_UpDown	Low
12	Input A	Change temperature threshold1			2 Byte	C	-	W	-	U	2 byte float v...	Low
13	Input A	Change temperature threshold2			2 Byte	C	-	W	-	U	2 byte float v...	Low
14	Input A	Forced move			1 bit	C	-	W	-	U	1 bit DPT_Switch	Low

NO.	Object name	Function	Flags	Data type
11	Input A	Move for shutter	C W T U	DPT 1.008 1 bit
12 **13**	Input A	Change temperature threshold 1/2	C W U	DPT 9.001 2 byte
14	Input A	Forced move	C W U	DPT 1.001 1 bit

These communication objects are for shutter control. when temperature in the range, object 11 will send out the up/down telegram to bus. Use object 12 to change the threshold 1 value, object 13 to change the threshold 2 value; use object 14 for forced moving control, then the temperature control be will invalid.

Objects „Scene controller“

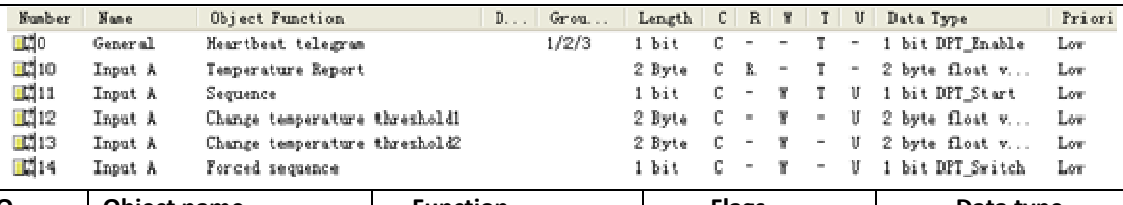


Number	Name	Object Function	D...	Grou...	Length	C	R	W	T	U	Data Type	Priori
0	General	Heartbeat telegram		1/2/3	1 bit	C	-	-	T	-	1 bit DPT_Enable	Low
10	Input A	Temperature Report			2 Byte	C	R	-	T	-	2 byte float v...	Low
11	Input A	Call scene			1 Byte	C	-	W	T	U		Low
12	Input A	Change temperature threshold1			2 Byte	C	-	W	-	U	2 byte float v...	Low
13	Input A	Change temperature threshold2			2 Byte	C	-	W	-	U	2 byte float v...	Low
14	Input A	Forced scene			1 bit	C	-	W	-	U	1 bit DPT_Switch	Low

NO.	Object name	Function	Flags	Data type
11	Input A	Call scene	C W T U	DPT 18.001 1 bit
12 **13**	Input A	Change temperature threshold 1/2	C W U	DPT 9.001 2 byte
14	Input A	Forced scene	C W U	DPT 1.001 1 bit

These communication objects are for scene control. when temperature in the range, object 11 will call the setting scene. Use object 12 to change the threshold 1 value, object 13 to change the threshold 2 value; use object 14 for forced scene control, then the temperature control will be invalid.

Objects „Sequence controller“

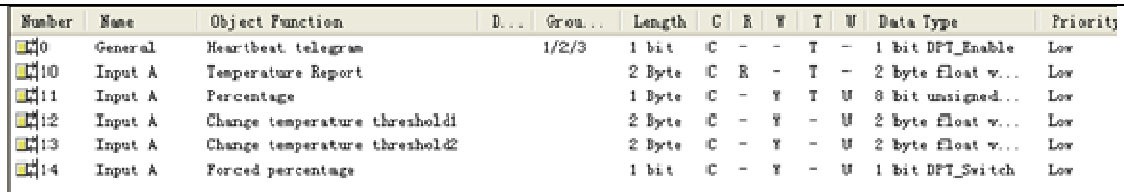


Number	Name	Object Function	D...	Grou...	Length	C	R	W	T	U	Data Type	Priori
0	General	Heartbeat telegram		1/2/3	1 bit	C	-	-	T	-	1 bit DPT_Enable	Low
10	Input A	Temperature Report			2 Byte	C	R	-	T	-	2 byte float v...	Low
11	Input A	Sequence			1 bit	C	-	W	T	U	1 bit DPT_Start	Low
12	Input A	Change temperature threshold1			2 Byte	C	-	W	-	U	2 byte float v...	Low
13	Input A	Change temperature threshold2			2 Byte	C	-	W	-	U	2 byte float v...	Low
14	Input A	Forced sequence			1 bit	C	-	W	-	U	1 bit DPT_Switch	Low

NO.	Object name	Function	Flags	Data type
11	Input A	Sequence	C W T U	DPT 1.010 1 bit
12 **13**	Input A	Change temperature threshold 1/2	C W U	DPT 9.001 2 byte
14	Input A	Forced sequence	C W U	DPT 1.001

				1 bit
These communication objects are for sequence control. when temperature in the range, object 11 will call the setting sequence. Use object 12 to change the threshold 1 value, object 13 to change the threshold 2 value; use object 14 for forced sequence control, then the temperature control will be invalid.				

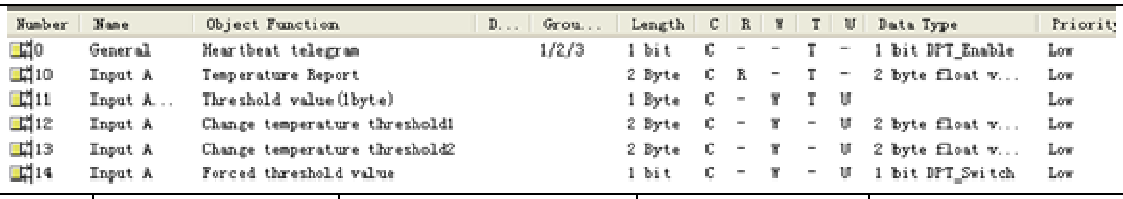
Objects „Percentage controller“



Number	Name	Object Function	D...	Grou...	Length	C	R	W	T	U	Data Type	Priority
0	General	Heartbeat telegram		1/2/3	1 bit	C	-	-	T	-	1 bit DPT_Enable	Low
10	Input A	Temperature Report			2 Byte	C	R	-	T	-	2 byte float v...	Low
11	Input A	Percentage			1 Byte	C	-	W	T	U	8 bit unsigned...	Low
12	Input A	Change temperature threshold1			2 Byte	C	-	W	-	U	2 byte float v...	Low
13	Input A	Change temperature threshold2			2 Byte	C	-	W	-	U	2 byte float v...	Low
14	Input A	Forced percentage			1 bit	C	-	W	-	U	1 bit DPT_Switch	Low

NO.	Object name	Function	Flags	Data type
11	Input A	Percentage	C W T U	DPT 5.001 1 byte
12 **13**	Input A	Change temperature threshold 1/2	C W U	DPT 9.001 2 byte
14	Input A	Forced percentage	C W U	DPT 1.001 1 bit
These communication objects are for percentage control. when temperature in the range, object 11 will send out the setting percentage value. Use object 12 to change the threshold 1 value, object 13 to change the threshold 2 value; use object 14 for forced percentage control, then the temperature control will be invalid.				

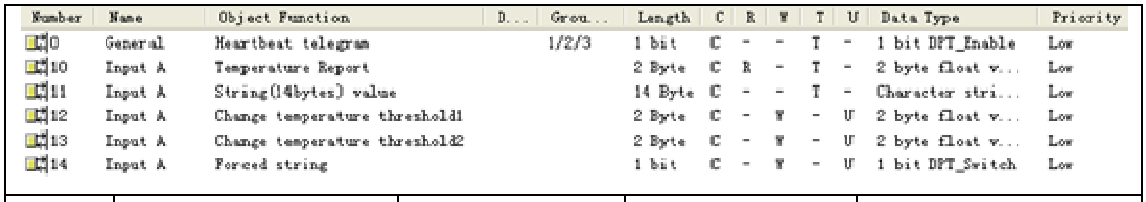
Objects „Threshold controller“



Number	Name	Object Function	D...	Grou...	Length	C	R	W	T	U	Data Type	Priority
0	General	Heartbeat telegram		1/2/3	1 bit	C	-	-	T	-	1 bit DPT_Enable	Low
10	Input A	Temperature Report			2 Byte	C	R	-	T	-	2 byte float v...	Low
11	Input A...	Threshold value(1byte)			1 Byte	C	-	W	T	U		Low
12	Input A	Change temperature threshold1			2 Byte	C	-	W	-	U	2 byte float v...	Low
13	Input A	Change temperature threshold2			2 Byte	C	-	W	-	U	2 byte float v...	Low
14	Input A	Forced threshold value			1 bit	C	-	W	-	U	1 bit DPT_Switch	Low

NO.	Object name	Function	Flags	Data type
11	Input A	Threshold value(1 byte)	C W T U	DPT 5.001 1 byte
12 **13**	Input A	Change temperature threshold 1/2	C W U	DPT 9.001 2 byte
14	Input A	Forced threshold value	C W U	DPT 1.001 1 bit
These communication objects are for threshold control. when temperature in the range, object 11 will send out the setting threshold value. Use object 12 to change the temperature threshold 1 value, object 13 to change the temperature threshold 2 value; use object 14 for forced threshold control, then the temperature control will be invalid.				

Objects „String (14bytes) controller

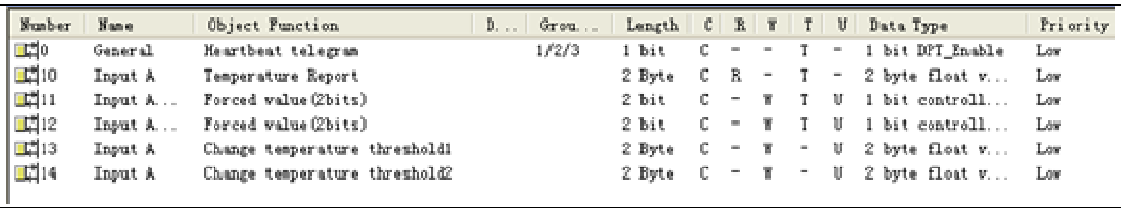


Number	Name	Object Function	D...	Grou...	Length	C	R	W	T	U	Data Type	Priority
0	General	Heartbeat telegram		1/2/3	1 bit	C	-	-	T	-	1 bit DPT_Enable	Low
10	Input A	Temperature Report			2 Byte	C	R	-	T	-	2 byte float v...	Low
11	Input A	String(14bytes) value			14 Byte	C	-	-	T	-	Character stri...	Low
12	Input A	Change temperature threshold1			2 Byte	C	-	W	-	U	2 byte float v...	Low
13	Input A	Change temperature threshold2			2 Byte	C	-	W	-	U	2 byte float v...	Low
14	Input A	Forced string			1 bit	C	-	W	-	U	1 bit DPT_Switch	Low

NO.	Object name	Function	Flags	Data type
11	Input A	String(14bytes) value	C W T U	DPT 16.000 1 byte
12 **13**	Input A	Change temperature threshold 1/2	C W U	DPT 9.001 2 byte
14	Input A	Forced string	C W U	DPT 1.001 1 bit

These communication objects are for string control. when temperature in the range, object 11 will send out the setting string content. Use object 12 to change the temperature threshold 1 value, object 13 to change the temperature threshold 2 value; use object 14 for forced string control, then the temperature control will be invalid.

Objects „Forced position controller“

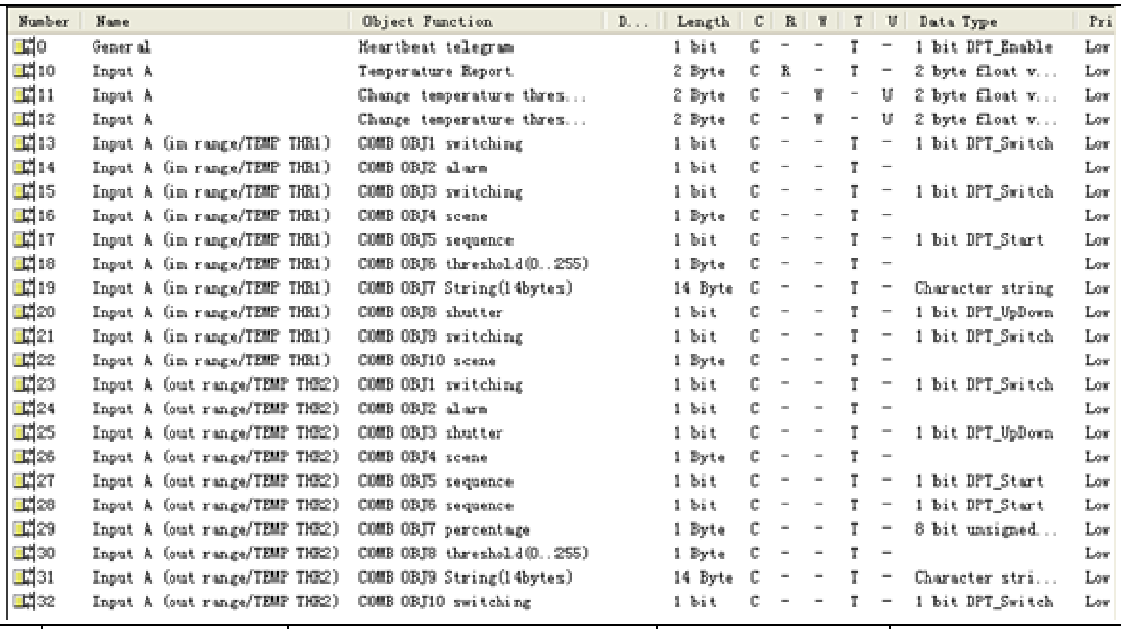


Number	Name	Object Function	D...	Grou...	Length	C	R	W	T	U	Data Type	Priority
0	General	Heartbeat telegram		1/2/3	1 bit	C	-	-	T	-	1 bit DPT_Enable	Low
10	Input A	Temperature Report			2 Byte	C	R	-	T	-	2 byte float v...	Low
11	Input A...	Forced value(2bits)			2 bit	C	-	W	T	U	1 bit controll...	Low
12	Input A...	Forced value(2bits)			2 bit	C	-	W	T	U	1 bit controll...	Low
13	Input A	Change temperature threshold1			2 Byte	C	-	W	-	U	2 byte float v...	Low
14	Input A	Change temperature threshold2			2 Byte	C	-	W	-	U	2 byte float v...	Low

NO.	Object name	Function	Flags	Data type
11 **12**	Input A (in range/TEMP THR1)/ (out range/TEMP THR2)	Forced value(2 bits)	C W U	DPT 2.001 2 bit
13 **14**	Input A	Change temperature threshold 1/2	C W U	DPT 9.001 2 byte

These communication objects are for forced position control. Use object 11 to send out forced control telegram when temperature in range or on the threshold 1 value, object 12 to send out forced control telegram when temperature out of range or on the threshold 2 value; Use object 13 to change the temperature threshold 1 value, object 14to change the temperature threshold 2 value.

Objects „Combination controller“



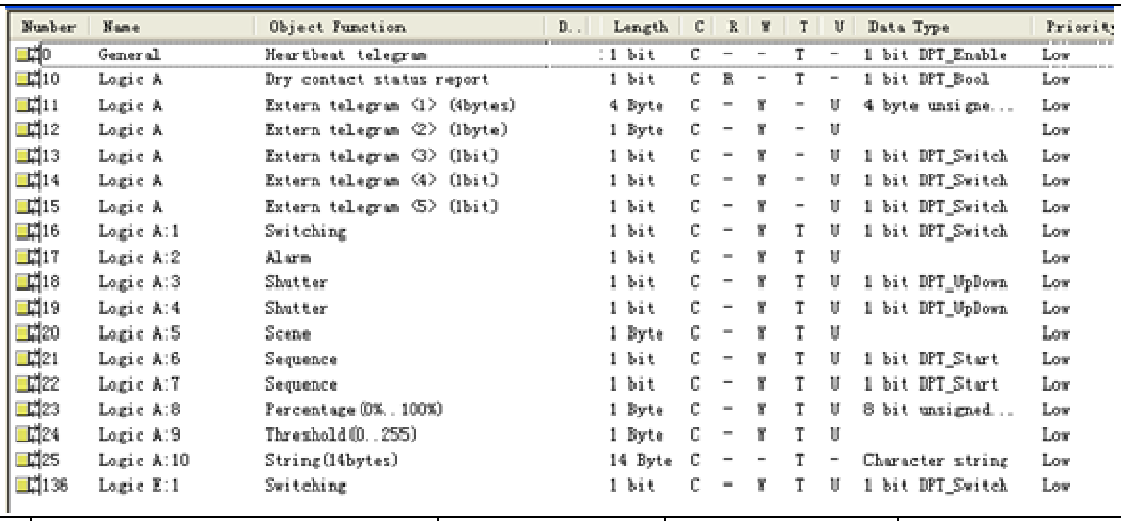
Number	Name	Object Function	D...	Length	C	R	W	T	U	Data Type	Pri
0	General	Heartbeat telegram		1 bit	C	-	-	T	-	1 bit DPT_Enable	Low
10	Input A	Temperature Report		2 Byte	C	R	-	T	-	2 byte float v...	Low
11	Input A	Change temperature thres...		2 Byte	C	-	W	-	U	2 byte float v...	Low
12	Input A	Change temperature thres...		2 Byte	C	-	W	-	U	2 byte float v...	Low
13	Input A (in range/TEMP THR1)	COMB OBJ1 switching		1 bit	C	-	-	T	-	1 bit DPT_Switch	Low
14	Input A (in range/TEMP THR1)	COMB OBJ2 alarm		1 bit	C	-	-	T	-		Low
15	Input A (in range/TEMP THR1)	COMB OBJ3 switching		1 bit	C	-	-	T	-	1 bit DPT_Switch	Low
16	Input A (in range/TEMP THR1)	COMB OBJ4 scene		1 Byte	C	-	-	T	-		Low
17	Input A (in range/TEMP THR1)	COMB OBJ5 sequence		1 bit	C	-	-	T	-	1 bit DPT_Start	Low
18	Input A (in range/TEMP THR1)	COMB OBJ6 threshold(0..255)		1 Byte	C	-	-	T	-		Low
19	Input A (in range/TEMP THR1)	COMB OBJ7 String(14bytes)		14 Byte	C	-	-	T	-	Character string	Low
20	Input A (in range/TEMP THR1)	COMB OBJ8 shutter		1 bit	C	-	-	T	-	1 bit DPT_UpDown	Low
21	Input A (in range/TEMP THR1)	COMB OBJ9 switching		1 bit	C	-	-	T	-	1 bit DPT_Switch	Low
22	Input A (in range/TEMP THR1)	COMB OBJ10 scene		1 Byte	C	-	-	T	-		Low
23	Input A (out range/TEMP THR2)	COMB OBJ1 switching		1 bit	C	-	-	T	-	1 bit DPT_Switch	Low
24	Input A (out range/TEMP THR2)	COMB OBJ2 alarm		1 bit	C	-	-	T	-		Low
25	Input A (out range/TEMP THR2)	COMB OBJ3 shutter		1 bit	C	-	-	T	-	1 bit DPT_UpDown	Low
26	Input A (out range/TEMP THR2)	COMB OBJ4 scene		1 Byte	C	-	-	T	-		Low
27	Input A (out range/TEMP THR2)	COMB OBJ5 sequence		1 bit	C	-	-	T	-	1 bit DPT_Start	Low
28	Input A (out range/TEMP THR2)	COMB OBJ6 sequence		1 bit	C	-	-	T	-	1 bit DPT_Start	Low
29	Input A (out range/TEMP THR2)	COMB OBJ7 percentage		1 Byte	C	-	-	T	-	8 bit unsigned...	Low
30	Input A (out range/TEMP THR2)	COMB OBJ8 threshold(0..255)		1 Byte	C	-	-	T	-		Low
31	Input A (out range/TEMP THR2)	COMB OBJ9 String(14bytes)		14 Byte	C	-	-	T	-	Character stri...	Low
32	Input A (out range/TEMP THR2)	COMB OBJ10 switching		1 bit	C	-	-	T	-	1 bit DPT_Switch	Low

NO.	Object name	Function	Flags	Data type
11 **12**	Input A	Change temperature thres1/2	C W U	DPT 9.001 2byte
13 **…** **22**	Input A(in range/TEMP THR1)	COMB OBJ1 switching	C T	DPT 1.001 1 bit
		COMB OBJ1 alarm	C T	DPT 1.005 1 bit
		COMB OBJ1 shutter	C T	DPT 1.008 1 bit
		COMB OBJ1 scene	C T	DPT 18.001 1 byte
		COMB OBJ1 sequence	C T	DPT 1.010 1 bit
		COMB OBJ1 percentage	C T	DPT 5.001 1 byte
		COMB OBJ1 Threshold(0…255)	C T	DPT 5.004 1 byte
		COMB OBJ1 Threshold(0…65535)	C T	DPT 7.001 2 byte
		COMB OBJ1 String (14 bytes)	C T	DPT 16.000 14 byte
These communication objects are for combination control. Use object 11 to change the temperature threshold 1 value, object 12 to change the temperature threshold 2 value. Object 13-22 is for output setting, which contains switch, shutter, scene, sequence, percentage, threshold, string(14 bytes) controller. when temperature in range or on the threshold 1 value, will send out these control telegrams				
23 **…** **32**		COMB OBJ1 switching	C T	DPT 1.001 1 bit
		COMB OBJ1 alarm	C T	DPT 1.005 1 bit
		COMB OBJ1 shutter	C T	DPT 1.008 1 bit

	Input A(out range/TEMP THR2)	COMB OBJ1 scene	C T	DPT 18.001 1 byte
		COMB OBJ1 sequence	C T	DPT 1.010 1 bit
		COMB OBJ1 percentage	C T	DPT 5.001 1 byte
		COMB OBJ1 Threshold(0…255)	C T	DPT 5.004 1 byte
		COMB OBJ1 Threshold(0…65535)	C T	DPT 7.001 2 byte
These communication objects are for combination control. Object 23-32 is for output setting, which contains switch, shutter, scene, sequence, percentage, threshold, string(14 bytes) controller. when temperature out of range or on the threshold 2 value, will send out these control telegrams				

D.3 Logical controller

Objects „Logical function A, Block A“



Number	Name	Object Function	D..	Length	C	R	W	T	U	Data Type	Priority
0	General	Heartbeat telegram		1 bit	C	-	-	T	-	1 bit DPT_Enable	Low
10	Logic A	Dry contact status report		1 bit	C	R	-	T	-	1 bit DPT_Bool	Low
11	Logic A	Extern telegram <1> (4bytes)		4 Byte	C	-	W	-	U	4 byte unsigne...	Low
12	Logic A	Extern telegram <2> (1byte)		1 Byte	C	-	W	-	U		Low
13	Logic A	Extern telegram <3> (1bit)		1 bit	C	-	W	-	U	1 bit DPT_Switch	Low
14	Logic A	Extern telegram <4> (1bit)		1 bit	C	-	W	-	U	1 bit DPT_Switch	Low
15	Logic A	Extern telegram <5> (1bit)		1 bit	C	-	W	-	U	1 bit DPT_Switch	Low
16	Logic A:1	Switching		1 bit	C	-	W	T	U	1 bit DPT_Switch	Low
17	Logic A:2	Alarm		1 bit	C	-	W	T	U		Low
18	Logic A:3	Shutter		1 bit	C	-	W	T	U	1 bit DPT_UpDown	Low
19	Logic A:4	Shutter		1 bit	C	-	W	T	U	1 bit DPT_UpDown	Low
20	Logic A:5	Scene		1 Byte	C	-	W	T	U		Low
21	Logic A:6	Sequence		1 bit	C	-	W	T	U	1 bit DPT_Start	Low
22	Logic A:7	Sequence		1 bit	C	-	W	T	U	1 bit DPT_Start	Low
23	Logic A:8	Percentage (0%..100%)		1 Byte	C	-	W	T	U	8 bit unsigned...	Low
24	Logic A:9	Threshold(0..255)		1 Byte	C	-	W	T	U		Low
25	Logic A:10	String(14bytes)		14 Byte	C	-	-	T	-	Character string	Low
136	Logic E:1	Switching		1 bit	C	-	W	T	U	1 bit DPT_Switch	Low

NO.	Object name	Function	Flags	Data type
10	Logic A	Dry contact status report	C R T	DPT 1.002 1 bit
This communication object is for dry contact status report. It will report its status to the bus when open/closed.				
11 … 15	Logic A	Extern telegram<1> … Extern telegram<5>	C W U	DPT 1.001 1bit DPT 4.001 1 byte DPT 7.001 2 byte DPT 12.001 4 byte
These communication objects are for external conditions of logic, these external telegram are provided by another devices in the system				
		Switching controller	C W T U	DPT 1.001 1bit
		Alarm controller	C W T U	DPT 1.005 1bit

16 … 25	Logic A:1 … Logic A:10	Shutter controller	C W T U	DPT 1.008 1bit
		Scene controller	C W T U	DPT 18.001 1byte
		Sequence controller	C W T U	DPT 1.010 1bit
		Percentage (0%..100%)	C W T U	DPT 5.001 1byte
		Threshold (0…255)	C W T U	DPT 5.004 1byte
		String(14bytes)	C W TU	DPT 7.001 2 byte
Set the outputs for true logic, logic A :1 to logic A:10, contains the control type about switching, alarm, shutter, scene, sequence, percentage, string (14 bytes). *Logical B, logical C, logical D are same as logic A.*				
136	Logic E:1	switching	C W T U	DPT 1.001 1 bit
		Alarm	C W T U	DPT 1.005 1 bit
		shutter	C W T U	DPT 1.008 1 bit
		scene	C W T U	DPT 18.001 1 byte
		Sequence	C W T U	DPT 1.010 1 bit
		Percentage (0%..100%)	C W T U	DPT 5.001 1 byte
		Threshold (0-255)	C W T U	DPT 5.004 1 byte
		Threshold (0-65535)	C W T U	DPT 7.001 1 byte
		String (14 bytes)	C W T U	DPT 16.000 14 byte
logic A-D logic status consist of the logic E's input, logic E will send out these control telegrams when true.				

D.4 Dimming controller

Objects „General“

Number	Name	Object Function	D..	Length	C	R	W	T	U	Data Type	Priority
0	General	Heartbeat telegram		1 bit	C	-	-	T	-	1 bit DPT_Enable	Low
5	General	Sequence 1		1 bit	C	-	W	-	U	1 bit DPT_Start	Low
6	General	Sequence 2		1 bit	C	-	W	-	U	1 bit DPT_Start	Low
7	General	Sequence 3		1 bit	C	-	W	-	U	1 bit DPT_Start	Low
8	General	Sequence 4		1 bit	C	-	W	-	U	1 bit DPT_Start	Low
9	General	Sequence 5		1 bit	C	-	W	-	U	1 bit DPT_Start	Low

NO.	Object name	Function	Flags	Data type
5 … 9	General	Sequence 1 … Sequence 5	C W U	DPT 1.010 1 bit
These communication objectsare for sequence output. The sequence will be controlled to stop/start when receive the 0/1 value				

Objects „Output A“

Number	Name	Object Function	D..	Length	C	R	W	T	U	Data Type	Prior
0	General	Heartbeat telegram		1 bit	C	-	-	T	-	1 bit DPT_Enable	Low
10	Output A	Channel output		1 bit	C	-	W	-	U	1 bit DPT_Switch	Low
13	Output A	Response status(1bit)		1 bit	C	R	-	T	-	1 bit DPT_Switch	Low
14	Output A	Response status(1byte)		1 Byte	C	R	-	T	-	8 bit unsigned...	Low
15	Output A	SYNC control relay		1 bit	C	-	-	T	-	1 bit DPT_Switch	Low
17	Output A	R/W total ON time		2 Byte	C	R	W	T	U		Low
18	Output A	Alarm when total ON time out		1 bit	C	R	-	T	-		Low
19	Output A	Staircase light		1 bit	C	-	W	-	U	1 bit DPT_Switch	Low
20	Output A	Change staircase light factor		1 Byte	C	-	W	-	U		Low
21	Output A	Alarm staircase light		1 bit	C	R	-	T	-		Low
22	Output A	Flashing		1 bit	C	-	W	-	U	1 bit DPT_Switch	Low
23	Output A	Scene(8bit)		1 Byte	C	-	W	-	U		Low
24	Output A	Scene dimming(4bit)		4 bit	C	-	W	-	U	3 bit controll...	Low
25	Output A	Threshold input		1 Byte	C	-	W	-	U		Low
26	Output A	Change threshold 1		1 Byte	C	-	W	-	U		Low
27	Output A	Change threshold 2		1 Byte	C	-	W	-	U		Low
28	Output A (PWM)	Heat with 1bit control		1 bit	C	-	W	-	U	1 bit DPT_Switch	Low
31	Output A (PWM)	TEMP threshold2 alarm		1 bit	C	R	-	T	-		Low
32	Output A (PWM)	Forced position		1 bit	C	-	W	-	U	1 bit DPT_Switch	Low

NO.	Object name	Function	Flags	Data type
10	Output A	Channel output	C W U	DPT 1.001 1 bit
This communication object is for switch output. The output A will be controlled to on/off when receive the 0/1 value				
13 **…** **27**	Output A	Response status(1 bit)	C R T	DPT 1.001 1 bit
		Response status(1byte)	C R T	DPT 5.001 1 byte
		SYNC control relay	C T	DPT 1.001 1 bit
		Temperature report	CRT	DPT 9.001 2 byte
		R/W total ON time	CRWTU	DPT 7.007 1 bit
		Alarm when total ON time out	CRT	DPT 1.005 1 bit
		Staircase light	CWU	DPT 1.001 1 bit
		Change staircase light factor	CWU	DPT 5.004 1 byte
		Alarm staircase light	CRT	DPT 1.005 1 bit
		Flashing	C WU	DPT 1.001 1 bit
		Scene(8 bit)	C WU	DPT 18.001 1 byte
		Scene dimming(4 bit)	C WU	DPT 3.007

				4 bit
		Threshold input	C WU	DPT 5.004 1 byte
		Change threshold 1	C WU	DPT 5.004 1 byte
		Change threshold 1	C WU	DPT 5.004 1 byte
These communication objects are for channel output A's function control.				
28 **…** **32**	Output A （PWM）	Heat with 1 bit control	CWU	DPT 1.001 1 bit
		TEMP threshold2 alarm	CRT	DPT 1.005 1 bit
		Forced position	CWU	DPT 1.001 1 bit
These communication objects are for combination control, *Note: Output B,C,D 's setting are all same as output A.*				

--- End of Document ---