

APPLICATION PROGRAM INFORMATION

M/R4.16.1, M/R8.16.1, M/R12.16.1, M/R16.16.1

KNX/EIB-BUS

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This document describes the M/R4.16.1 M/R8.16.1 M/R12.16.1 M/R16.16.1-functions with the KNX-product- application: Switch 16A Actuator (V1.2).vd5

Compiled by (english name): Mr. Han

HDL-Position: Technical Manager, KNX-Products

Location: Gungzhou Date: 15. April.2015 Signature: _____

Approved by (english name): _____

HDL-Position: Technical Manager

Location: Gungzhou Date: 15. April.2015 Signature: _____

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

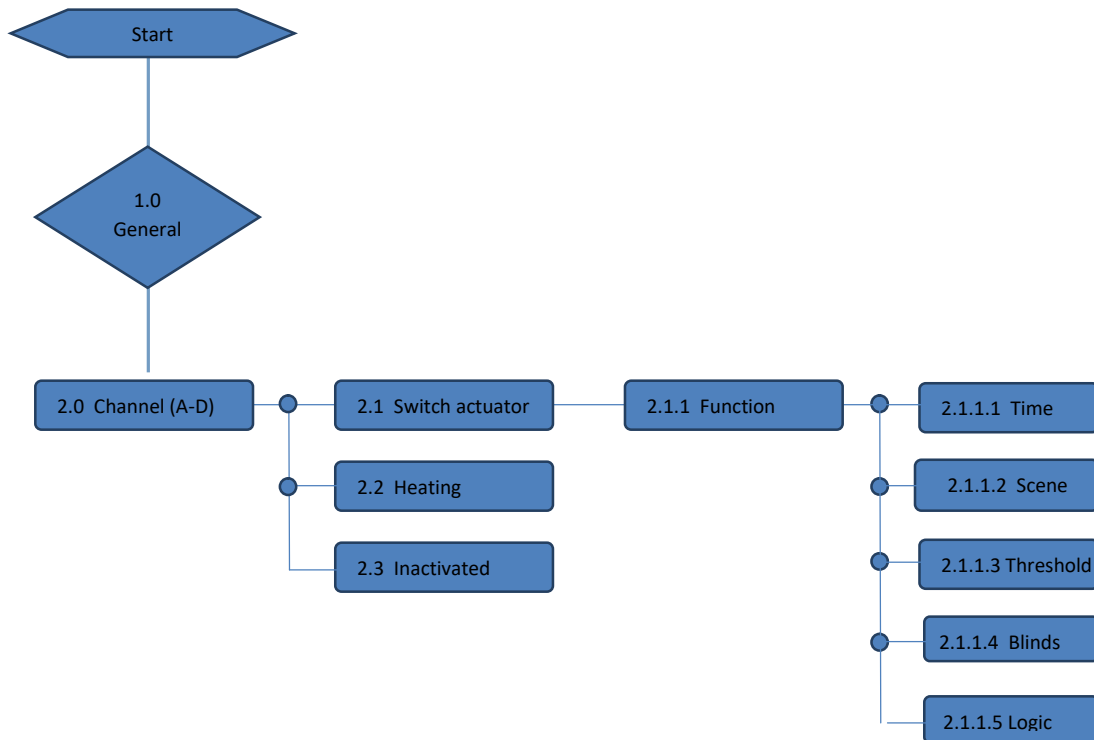
A.

The 16A relay can control the lighting, and has heating logic function, heating function... This manual contains the programming of this device.



B.

4/8/12/16CH 16A relay's setting is same. Here, take 4CH 16A Relay as an example.



C.

1.0_General

1.1.3 M/R4.16.1 > General

General	Operation delay after recovery(2...200s)	2
Channel A	Heartbeat telegram	Send value "0" cyclically
Channel B	-Telegram is sent time interval(1..65535s)	5
Channel C	Relay drive voltage	13v
Channel D	Relay pulse time	20ms

No.	ETS-Parameter	Range (default)	Description
1	Operation delay after recovery (2...200s)	(2)...200s	Set the delay time for the device to work after power on
2	Heartbeat telegram	-(Disable) -Send value "0" cyclically -Send value "1" cyclically -Send value "1/0" inverted cyclically	Enable/Disable heartbeat telegram function
3	-Telegram is sent time interval (1...65535s)	1...(5)...65535s	Set the interval time for sending the telegram
4	Relay drive voltage	10V...(13V)...15.5V	Set the parameter for relay drive voltage
5	Relay pulse time	10ms...(20ms)...250ms	Set the parameter for relay pulse time

we adopt magnetic latching relay for 16 A relay module, its on/off switching shall be triggered by a certain width of pulse signal, therefore, it needs a pull-in drive voltage to switch on/off the relay channel, the default optimal setting for drive voltage is 13V, and optimal pulse time is 20ms, but when the pull-in drive voltage is not enough big, it will make the switching on/off failed, in this case, it need to increase the drive voltage and pulse-time, otherwise, no need to modify the default setting.

Relay

On driver pulse

Off driver pulse

2.0_Channel A-D work mode(All channel's setting is same, here take channel A as an example)

1.1.3 M/R4.16.1 > Channel A

General	Channel A work mode	Switch actuator
Channel A	Normally connected type	<input type="radio"/> Normally Closed <input checked="" type="radio"/> Normally Opened
Channel B	Response of switch state ON/OFF	No response
Channel C	Save statistic for ON switching 'time (hour-2bytes)'	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Channel D	Save statistic for ON switching 'counter (4bytes)'	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
	Switch state on bus voltage fail	Unchange
	Switch state after bus voltage recovery	Unchange
	Show function page=>>	<input checked="" type="radio"/> No <input type="radio"/> Yes

No.	ETS-Parameter	Range (default)	Description
6	Channel A work mode	-(Switch actuator) -Heating actuator -Inactivated	Set the parameter for work mode, if you select the inactivated, the channel will be invalid
2.1_Switch actuator			
7	Normally connected type	-(Normally Opened) -Normally Closed	Set the load type Normally Opened: The normally status is opened Normally Closed: The normally status is closed
8	Response of switch state ON/OFF	-(No response) -Always response -Only after change	Set the parameter for the state feedback No response: no response for the switch state Always response: always respond the switch state Only after change: When the state is changed, will respond
9	Save statistic for ON switching "time (hour-2bytes)"	-Enable -(Disable)	Enable/disable statistic for ON time
10	->Alarm for time out	-Yes -(No)	If select "Yes", when time out, will alarm If select "No". when time out, won't alarm
11	- Alarm when time out	1...(30000)...65535h	Set the time alarm
12	-Alarm telegram interval when timer out(1...255s)	1...(10)...255s	Set the time for alarm interval
13	-Alarm telegram number(1...255,0-unlimited)	(0)...1...255	Set the parameter for the alarm telegram number
14	Save statistic for ON switching "counted(4 bytes)	-Enable -(Disable)	Enable/disable statistic ON counter
15	->Alarm for counter out	-Yes -(No)	If select "Yes", when time out, will alarm If select "No". when time out, won't alarm
16	-Alarm when counter out (10...1000000)	10...(100000)...10000000	Set the parameter for the time counter
17	-Alarm telegram interval when counter out(1...255s)	1...(10)...255s	Set the time for alarm interval

18	Switch state on bus voltage fail	-Unchanged -(ON) -OFF	Set the parameter when the bus voltage is failure Unchanged : the switch will unchanged after bus voltage fail ON: will switch ON after bus voltage fail OFF: will switch OFF after bus voltage fail
19	Switch state after bus voltage recovery	-Unchanged -ON -(Recovery) -OFF	Set the parameter when power on and the bus voltage recover Unchanged: the switch will unchanged after the bus voltage recovery ON: will switch ON after bus voltage recovery OFF: will switch OFF after bus voltage recovery
20	Show function page==>>	-Yes -(No)	Enable/disable function page

2.1.1_Function:

1.1.3 M/R4.16.1 > A:function

General	Enable function "time"	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Channel A	Enable function "scene"	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
A:function	Enable function "threshold"	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Channel B	Enable function "blinds"	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Channel C	Enable function "logic"	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Channel D		

21	Enable function "time"	-Enable -(Disable)	Enable/disable the time function
22	Enable function "scene"	-Enable -(Disable)	Enable/disable the scene function
23	Enable function "threshold"	-Enable -(Disable)	Enable/disable the threshold function
24	Enable function "blinds"	-Enable -(Disable)	Enable/disable the blinds function
25	Enable function "logic"	-Enable -(Disable)	Enable/disable the logic function

2.1.1.1_Time

1.1.3 M/R4.16.1 > A:time			
General	Time function	Flashing	
Channel A	Condition of flash start/stop	Start with '1', stop with '0'	
A:function	>>Time for on:(0..255 Min)	0	
A:time	--Time for on:(0..59 Sec)	5	
Ascene	>>Time for off:(0..255 Min)	0	
A:threshold	--Time for off:(0..59 Sec)	5	
A:blinds	Flashing cycles(1..100,0-Unlimited)	0	
A:logic	Position after stop flashing	Unchange	
Channel B			
Channel C			
Channel D			
26	Time function	-(Flashing) -staircase lighting -ON/OFF delay	Set the parameter for the time function
--Flashing			
27	Condition of flash start/ stop	-(Start with '1', stop with '0') -Start with '0', start with '1' -Always flash, start with '1' / '0'	Set the parameter for the condition of flash Start with '1'. Stop with '0': send telegram '1', will start flashing; send telegram '0', will stop flashing Start with '0', stop with '1': send telegram '0'. Will start flashing, send telegram '1'. Will stop flashing Always flash, start with '1' / '0': Start flashing with '1' or '0'
28	>>Time for on: (0...255Min)	(0)...255Min	Set the time for ON status
29	--Time for on: (0...59Sec)	0...(5)...59Sec	Set the time for ON status
30	>>Time for off: (0...255Min)	(0)...255Min	Set the time for OFF status
31	-- Time for off : (0...59Sec)	0...(5)...59Sec	Set the time for OFF status
32	Flashing cycles(1...100,0-Unlimited)	(0)...1...100	Set the parameter for flashing cycles
33	Position after stop flashing	-(Unchanged) -ON -OFF	Set the parameter for after stop flashing Unchanged: the status will be unchanged after stop flashing ON: the status will be ON after stop flashing OFF: the status will be OFF after stop flashing
--Staircase lighting			
34	Control staircase lighting	-(Start with '1', stop with '0') -Start with '1', Invalid with '0' -start with '1' / '0', can't stop	Set the parameter for the staircase lighting Start with '1'. Stop with '0':

			<p>send telegram '1', the staircase lighting will be ON; send telegram '0', the staircase lighting will be OFF Start with '1', Invalid with '0': send telegram '1'. The staircase lighting will be ON, send telegram '0'. The staircase lighting will be invalid Start with '1'/'0', can't stop: when send the telegram '1'/'0', the staircase lighting will be always ON</p>
35	Change staircase lighting time via bus	- (No) - Yes	Set the parameter for the staircase lighting delay off time via bus
36	Alarm staircase lighting to bus	- (No) - Yes	Set the parameter for alarm staircase lighting No: No alarm Yes: will alarm the staircase lighting
37	>>Time for off: (0...255Min)	(0)...255Min	Set the time for OFF status
38	--Time for off: (0...59Sec)	0...(5)...59Sec	Set the time for OFF status
39	Warning staircase lighting(ON->OFF->ON)	- Yes - (No)	Set the parameter for the warning staircase lighting Yes: will warn No: won't warn
40	-Warning before the end of time(3...255Sec)	(3)...255	Set the parameter
41	Duration time for warning(1...200Sec)	(1)...200Sec	Set the duration time for warning
--ON/OFF delay			
42	>>Delay for switching ON: (0...255Min)	(0)...255Min	Set the delay time for ON status
43	--Delay for switching ON: (0...59Sec)	(0)...59Sec	Set the delay time for ON status
44	>>Delay for switching OFF: (0...255Min)	(0)...255Min	Set the delay time for OFF status
45	--Delay for switching OFF	(0)...59Sec	Set the delay time for OFF status
46	>>Delay for switching ON: (0...255Min)	(0)...255Min	Set the delay time for ON status
47	--Delay for switching ON: (0...59Sec)	(0)...59Sec	Set the delay time for ON status
48	>>Delay for switching OFF: (0...255Min)	(0)...255Min	Set the delay time for OFF status
49	--Delay for switching OFF	(0)...59Sec	Set the delay time for OFF status
2.1.1.2_Scene			

1.1.3 M/R4.16.1 > A:scene

General	>>Output is assigned to (scene 1..64 or not allocate)	Not allocate
Channel A	--Ouput ON/OFF:	<input checked="" type="radio"/> OFF <input type="radio"/> ON
A:function	--Output Delay:	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
A:time	>>Output is assigned to (scene 1..64 or not allocate)	Not allocate
A:scene	--Ouput ON/OFF:	<input checked="" type="radio"/> OFF <input type="radio"/> ON
A:threshold	--Output Delay:	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
A:blinds	>>Output is assigned to (scene 1..64 or not allocate)	Not allocate
A:logic	--Ouput ON/OFF:	<input checked="" type="radio"/> OFF <input type="radio"/> ON
Channel B	--Output Delay:	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Channel C	>>Output is assigned to (scene 1..64 or not allocate)	Not allocate
Channel D	--Ouput ON/OFF:	<input checked="" type="radio"/> OFF <input type="radio"/> ON
	--Output Delay:	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
	>>Output is assigned to (scene 1..64 or not allocate)	Not allocate
	--Ouput ON/OFF:	<input checked="" type="radio"/> OFF <input type="radio"/> ON
	--Output Delay:	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
	>>Output is assigned to (scene 1..64 or not allocate)	Not allocate
	--Ouput ON/OFF:	<input checked="" type="radio"/> OFF <input type="radio"/> ON
	--Output Delay:	<input checked="" type="radio"/> Disable <input type="radio"/> Enable

Associations	Parameter	Value	Description
50	>>Output is assigned to (scene1...64 or not allocate)	-(Not allocate) -Scene No.1...64	Set the parameter for scene
51	--Output ON/OFF	-ON -(OFF)	Set the switch status for output
52	--Output Delay	-Enable -(Disable)	Enable/disable the output delay

2.1.1.3_threshold

1.1.3 M/R4.16.1 > A:threshold

General	"Threshold input" type	<input checked="" type="radio"/> 1 byte(0..255) <input type="radio"/> 2 bytes(0..65535)
Channel A	--Enable threshold 1 value on bus	<input checked="" type="radio"/> No <input type="radio"/> Yes
A:function	--Enable threshold 2 value on bus	<input checked="" type="radio"/> No <input type="radio"/> Yes
A:time	->Threshold 1 value is (0..255)	80
A:scene	->Threshold 2 value is (0..255)	180
A:threshold	"Threshold input(0..255)" after bus voltage recovery	0
A:blinds	->{Input object value<Lower threshold}	ON
A:logic	->{Lower thr...<=Object value<=Upper thr..}	Unchange
Channel B	->{Input object value>Upper threshold}	OFF
Channel C		
Channel D		

53	"Threshold input" type	-(1 byte(0...255)) -2 bytes(0...65535)	Set the type for threshold input
54	-Enable threshold 1 value on bus	-Yes -(No)	If select Yes, the threshold 1 value will be valid If select No, the threshold 1 value will be invalid
55	-Enable threshold 2 value on bus	-Yes -(No)	If select Yes, the threshold 2 value will be valid If select No, the threshold 2 value will be invalid
56	->Threshold 1 value is (0...255)	0...(80)...255	Set the value for threshold 1
57	->Threshold 2 value is (0...255)	0...(180)...255	Set the value for threshold 2
58	->Threshold 1 value is (0...65535)	0...(10000)...65535	Set the value for threshold 1
59	->Threshold 2 value is (0...65535)	0...(30000)...65535	Set the value for threshold 2
60	"Threshold input(0...255)" after bus voltage recovery	(0)...255	Set the parameter for the "threshold input" after power on recovery
61	"Threshold input(0...65535)" after bus voltage recovery	(0)...65535	Set the parameter for the "threshold input" after power on recovery
66	-> {Input object value<Lower threshold}	-Unchanged -(ON) -OFF	Set the status when input object value is less than lower threshold Unchanged: The switch position is unchanged ON: The switch is ON OFF: The switch is OFF
67	->{Lower thr...<=Object value<=Upper thr...}	-(Unchanged) -ON	Set the status when the object value is between lower thr...

		-OFF	and upper thr... <i>Unchanged: The switch position is unchanged</i> <i>ON: The switch is ON</i> <i>OFF: The switch is OFF</i>
68	->{Input object value> Upper threshold}	-Unchanged -ON -(OFF)	Set the status when the input object is less than upper threshold <i>Unchanged: The switch position is unchanged</i> <i>ON: The switch is ON</i> <i>OFF: The switch is OFF</i>

2.1.1.4_blinds

1.1.3 M/R4.16.1 > A:blinds

General	Blinds UP('0'-value)	Channel A
Channel A	Blinds DOWN('1'-value)	Channel B
A:function	Control mode	<input checked="" type="radio"/> Move UP/DOWN and Adjustment <input type="radio"/> Move UP/DOWN
A:time	Adjustment time	100ms
A:scene	Delay time for running direction changed	200ms
A:threshold	Moving time(2..65535s)	10

[A:blinds](#)

[A:logic](#)

Channel B

Channel C

Channel D

69	Blinds UP('0'-value)	Channel A	This setting is according to the current channel
70	Blinds DOWN('1'-value)	-(Channel B) -Channel C -Channel D	Select the channel for the blind down
71	Control mode	-(Move UP/DOWN and Adjustment) -Move UP/DOWN	Set the parameter for the control mode <i>Move UP/DOWN and Adjustment: control the blinds UP/Down , can also adjust the blinds</i> <i>Move UP/DOWN: can only control the blinds UP/Down</i>
72	Adjustment time	50ms...(100ms)...5s	Set the adjustment time
73	Delay time for running direction changed	50ms...(200ms)...5s	Set the delay time for running direction changed
74	Moving time(2...65535s)	2...(10)...65535s	Set the parameter for the moving time

2.1.1.5_Logic

1.1.3 M/R4.16.1 > A:logic			
General		Logic connection 1 enable	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Channel A		Logic connection 2 enable	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
A:function			
A:time			
A:scene			
A:threshold			
A:blinds			
A:logic			
Channel B			
Channel C			
Channel D			
75	Logic connection 1 enable	-Enable -(Disable)	Enable/disable the logic connection 1
76	-Function of logic block 1	-(And) -OR -XOR -GATE	Set the function for logic block 1 And: Boolean calculation is according to the "AND" OR: Boolean calculation is according to the "OR" XOR: Boolean calculation is according to "XOR" GATE: When the Condition 1 is set to '1', the channel will pass through logic block 1 to logic block 2
77	-Object value of logic connection 1 after bus voltage recovery	-'0' - '1'	Send the parameter for the logic connection 1 after bus voltage recovery
78	Result logic of block 1 inverted	-Yes -(No)	Enable/disable Result logic of block 1 inverted
79	Logic connection 2 enable	-Enable -(Disable)	Enable/disable the logic connection 2
80	-Function of logic block 2	-(And) -OR -XOR -GATE	Set the function for logic block 2 And: Boolean calculation is according to the "AND" OR: Boolean calculation is according to the "OR" XOR: Boolean calculation is according to "XOR" GATE: When the Condition 1 is set to '1', the channel will pass through logic block 1 to logic block 2

81	-Object value of logic connection 2 after bus voltage recovery	-('0') - '1'	Send the parameter for the logic connection 2 after bus voltage recovery
82	Result logic of block 2inverted	-Yes -(No)	Enable/disable Result logic of block 2 inverted

2.2_ Heating actuator

1.1.3 M/R4.16.1 > Channel A

General	Channel A work mode	Heating actuator
Channel A	Normally connected type	<input checked="" type="radio"/> Normally Closed <input type="radio"/> Normally Opened
Channel B	The switch state on bus voltage fail	Unchange
Channel C	The operation of switch after bus voltage recovery	Unchange
Channel D	Save statistic for ON switching 'counter (4bytes)'	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
	>>PWM cycle time set (1..65535) min	1
	--PWM cycle time set (0..59) sec	0
	Control telegram is received as	<input checked="" type="radio"/> 1bit pwm(ON-start/OFF-stop) <input type="radio"/> 1byte(255-ON/0-OFF/other valve)
	Transmit status response object "telegram:status heating"	No response
	"ON" position of valve	50%(128)
	Running automatically after bus voltage recovery	No
	Forced position('1'-forced,'0'-cancel)	<input checked="" type="radio"/> No <input type="radio"/> Yes

No.	ETS-Parameter	Range (default)	Description
83	Normally connected type	-(Normally closed) -Normally opened	Set the type for the normally connected
84	The switch state on bus voltage fail	-(Unchanged) -ON -OFF	Set the parameter for the switch state <i>Unchanged:</i> the switch state is unchanged after bus voltage failure <i>ON:</i> the switch state is ON after bus voltage failure <i>OFF:</i> the switch state is OFF after bus voltage failure
85	The operation of switch after bus voltage recovery	-(Unchanged) -ON -Recovery -OFF	Set the parameter for the operation of switch <i>Unchanged:</i> the switch will be unchanged after bus voltage recovery <i>ON:</i> the switch will be ON after bus voltage <i>Recovery:</i> the switch will be recovery after bus voltage\ <i>OFF:</i> the switch will be OFF after bus voltage
86	Save statistic for ON switching	-Enable	Enable/disable Statistics ON

	'counter(4 bytes)'	-(Disable)	<i>counter</i>
87	-> Alarm for counter out	-(No) -Yes	<i>Enable/disable the function If select yes, will alarm If select No, won't alarm</i>
88	--Alarm when counter out(10...100000000)	10...(100000)	<i>Set the value for alarm when counter out</i>
89	--Alarm telegram interval when counter out(1...255s)	1...(10)...255s	<i>Set the interval time for alarm when counter out</i>
90	--Alarm telegram number(1...255, 0-unlimited)	-(0-unlimited) -1...255	<i>Set the telegram value for alarm</i>
91	>>PWM cycle time set (1..65535) min	(1)...65535min	<i>Set the time for PWM cycle</i>
92	-PWN cycle time set (0...59)Sec	(0)...59Sec	<i>Set the time for PWM cycle</i>
93	Control telegram is received as	-1 bit PWM (ON-Start/OFF-Stop) -1 byte(255-ON/0-OFF/Other value)	<i>Send the telegram for control -1 bit PWM (ON-Start/OFF-Stop): when send the telegram '1', the switch will be on, when send the telegram '0', the switch will be stopped -1 byte(255-ON/0-OFF/Other value): when send the telegram '255', the switch will be ON, when send the telegram '0', the switch will be OFF, and the switch status will be according to the value</i>
94	Transmit status response object "telegram: status heating"	-(No response) -Always response -Only after change	<i>Set the parameter for the switch setting No response: the switch will be no response Always response: will be always response when receive the telegram Only after change: when the switch status is changed, will response</i>
95	"ON" position of value	0%(OFF)...(50%)...100%(ON)	<i>Set the value for the PWM</i>
96	Running automatically after bus voltage recovery	-(No) -Defined value -Recovery	<i>Set the parameter for the PWM after bus voltage recovery No: the PWM won't run automatically Defined value: The PWM will run automatically according to the setting value Recovery: the PWM will run automatically according to the last save value</i>
97	-Position of the valve	0%(OFF)...(50%)...100%(ON)	<i>Set the value for the PWM position</i>
98	Forced position('1'- forced, '0'-cancel)	-(No) -Yes	<i>Enable/ disable the forced position</i>
99	-Value of PWM	0%(OFF)...(50%)...100%(ON)	<i>Set the value for the PWM</i>
100	-Forced cancel operation	-(Return to normally heating value)	<i>Set the parameter for the forced operation</i>

		-Stop heating	-Return to normally heating value: When cancel the forced operation, will return to normally heating value -Stop heating: When cancel the forced operation, will stop heating.
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XX

D. Communication Objects

D.0 General

Objects "General" and Channel A-D							
Number	Name	Object Function	Descripti Group	Length	C R W T U	Data Type	Priority
0	General	Heartbeat telegram		1 bit	C - - T -	enable	Low
10	Output A	Heat with 1bit control		1 bit	C - W - U	switch	Low
30	Output B	Channel output		1 bit	C - W - U	switch	Low
50	Output C	Channel output		1 bit	C - W - U	switch	Low
70	Output D	Channel output		1 bit	C - W - U	switch	Low

NO.	Object name	Function	Flags	Data type
0	General	Heartbeat telegram	C T	DPT1.003 1bit
This communication object is used to send the heartbeat telegram				
10	Output A	Channel output	C W U	DPT1.001 1bit
30	Output B	Channel output	C W U	DPT1.001 1bit
50	Output C	Channel output	C W U	DPT1.001 1bit
70	Output D	Channel output	C W U	DPT1.001 1bit
These communication objects are used to control the channel, when send the telegram '1', the channel will be on. If send the telegram '0' the channel will be off				

D.1 Switch actuator (All channel setting is same, here take channel A as an example)

Objects "response"

Number	Name	Object Function	Descripti	Group	Length	C	R	W	T	U	Data Type	Priority
0	General	Heartbeat telegram			1 bit	C	-	-	T	-	enable	Low
10	Output A	Heat with 1bit control			1 bit	C	-	W	-	U	switch	Low
11	Output A	Always response swi...			1 bit	C	R	-	T	-	switch	Low

NO.	Object name	Function	Flags	Data type
11	Output A	Always response switch status	C R T	DPT1.001 1bit

This communication object is used to respond the switch status

Number	Name	Object Function	Descripti	Group	Length	C	R	W	T	U	Data Type	Priority
0	General	Heartbeat telegram			1 bit	C	-	-	T	-	enable	Low
10	Output A	Heat with 1bit control			1 bit	C	-	W	-	U	switch	Low
11	Output A	Always response swi...			1 bit	C	R	-	T	-	switch	Low

NO.	Object name	Function	Flags	Data type
11	Output A	Response status after change	C R T	DPT1.001 1 bit

This communication object is used to respond the switch status

Objects "R/W statistic for time"												
11	Output A	response status after change			1 bit	C	R	-	T	-	1 bit DPT1_switch	
12	Output A	R/W statistic for time			2 Byte	C	R	W	T	U		
13	Output A	Alarm for ON time out			1 bit	C	R	-	T	-		

NO.	Object name	Function	Flags	Data type
12	Output A	R/W statistic for time	C R W T U	DPT7.007 2 Byte

This communication object is used for statistics ON time of the channel, it can read/write the statistics ON time

Objects "Alarm for ON time out"												
13	Output A	Alarm for ON time out			1 bit	C	R	-	T	-		

NO.	Object name	Function	Flags	Data type
13	Output A	Alarm for ON time out	C R T	DPT 1.005 1 bit

This communication object is used for alarm, when the switch is ON

Objects "R/W statistic for counter"												
14	Output A	R/W statistic for counter			4 Byte	C	R	W	T	U	4 byte unsigned value DPT...	

NO.	Object name	Function	Flags	Data type
14	Output A	R/W statistic for counter	C R W T U	DPT 12.001 4 byte

This communication object is used for statistics ON time of the channel, it can read/write statistics ON counter

Objects "Alarm for counter out"				
15	Output A	Alarm for counter out	1 bit	C R T
NO.	Object name	Function	Flags	Data type
15	Output A	Alarm for counter out	C R T	DPT 1.005 1 bit
<i>This communication object is used for alarm when counter out</i>				

Objects "time"				
16	Output A	Flashing	1 bit	C W U 1 bit DPT_Switch
No	Object name	Function	Flags	Data type
16	Output A	Flashing	C W U	DPT1.001 1 bit
<i>This communication object is used to start or stop flashing</i>				
17	Output A	Staircase light	1 bit	C W U 1 bit DPT_Switch
17	Output A	Staircase light	C W U	DPT1.001 1 bit
<i>This communication object is used to start or stop staircase light</i>				
18	Output A	Change staircase lighting time	2 Byte	C W U
18	Output A	Change staircase lighting time	C W U	DPT7.005 2 byte
<i>This communication object is used to modify the staircase lighting time</i>				
19	Output A	Alarm staircase lighting	1 bit	C R T
19	Output A	Alarm staircase lighting	C R T	DPT 1.005 1 bit
<i>This communication object is used to alarm the staircase lighting</i>				

Objects "Scene"				
20	Output A	Scene(8bit)	1 Byte	C W U
NO.	Object name	Function	Flags	Data type
20	Output A	Scene(8 bit)	C W U	DPT18.001 1 byte
<i>This communication object is used to control the scene</i>				

Objects "threshold"				
21	Output A	Threshold input	1 Byte	C W U
NO.	Object name	Function	Flags	Data type
21	Output A	Threshold input	C W U	DPT 5.004 1 Byte
21	Output A	Threshold input	2 Byte	C W U 2 byte unsigned value DPT..

21	Output A	Threshold input	C W U	DPT7.001 2 byte
These communication objects are used to select the threshold input value				

Objects "Change threshold"				
22	Output A	Change threshold 1	1 Byte	C - W - U
23	Output A	Change threshold 2	1 Byte	C - W - U
NO.	Object name	Function	Flags	Data type
22	Output A	Change threshold 1	C W U	DPT 5.004 1 byte
23	Output A	Change threshold 2	C W U	DPT 5.004 1 byte
22	Output A	Change threshold 1	2 Byte	C - W - U 2 byte unsigned value DPT...
23	Output A	Change threshold 2	2 Byte	C - W - U 2 byte unsigned value DPT...
22	Output A	Change threshold 1	C W U	DPT7.001 2 byte
23	Output A	Change threshold 2	C W U	DPT 5.004 2 byte
<i>These communication objects are used to change the threshold value</i>				

Objects "blinds"				
24	Output A	Moving for Blinds (0-UP, 1-DOWN)	1 bit	C - W - U 1 bit DPT_UpDown
NO.	Object name	Function	Flags	Data type
24	Output A	Moving for blinds (0-UP, 1-DOWN)	C W U	DPT1.008 1 bit
<i>This communication object is used to control the blinds moving, when send the telegram '0', it will move up, send the telegram '1', will move down.</i>				
25	Output A	Adjust/Stop for Blinds	1 bit	C - W - U
25	Output A	Adjust/stop for blinds	C W U	DPT1.007 1bit
25	Output A	Stop moving for Blinds	1 bit	C - W - U
25	Output A	Stop moving for blinds	C W U	DPT1.007
These communication objects are used to adjust or stop the blinds				

Objects "Logic"				
26	Output A	Logic connection 1	1 bit	C - W - U 1 bit DPT_Bool
27	Output A	Logic connection 2	1 bit	C - W - U 1 bit DPT_Bool
NO.	Object name	Function	Flags	Data type
26	Output A	Logic connection 1	C W U	DPT 1.002 1 bit

27	Output A	Logic connection 2	C W U	DPT1.002 1 bit
<i>These communication objects are used to enable the logic function</i>				

D 2 Heating actuator

Objects "Heating"				
NO.	Object name	Function	Flags	Data type
10	Output A	Heat with 1bit control	C W U	DPT 1.001 1 bit
<i>This communication object is used to heating actuator, default is valid. If send the telegram '1', will start, send the telegram '0' will stop</i>				
10	Output A	Heat with 1 byte control	C W U	DPT5.004 1 Byte
<i>These communication objects are used to control the heating actuator. If send the 1 byte data, will change the value. If the value is 255, the output will be ON. If the value is 0, the output will be OFF</i>				

Objects "Response"				
NO.	Object name	Function	Flags	Data type
11	Output A	Response status after change	C R T	DPT 1.001 1 bit
<i>This communication is used to respond the switch status</i>				
11	Output A	Always response switch status	C R T	DPT1.001 1 bit
<i>This communication is used to respond the switch status</i>				

Objects "Forced position"				
NO.	Object name	Function	Flags	Data type
12	Output A	Forced position	C W U	DPT 1.001 1 bit
<i>This communication is used to force PWM position</i>				

Objects "R/W statistic for counter"				
14	Output A	R/W statistic for counter	4 Byte	C R W T U 4 byte unsigned value DPT...
15	Output A	Alarm for counter out	1 bit	C R - T -
NO.	Object name	Function	Flags	Data type
14	Output A	R/W statistic for counter	C R W T U	DPT 12.001 4 byte
<i>This communication object is used for statistics ON time of the channel, it can read/write statistics ON counter</i>				

Objects "Alarm for counter out"				
15	Output A	Alarm for counter out	1 bit	C R - T -
NO.	Object name	Function	Flags	Data type
15	Output A	Alarm for counter out	C R T	DPT1.005 1 bit
<i>This communication is used for alarm when counter out</i>				

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