K-BUS KNX-RS485/RS232

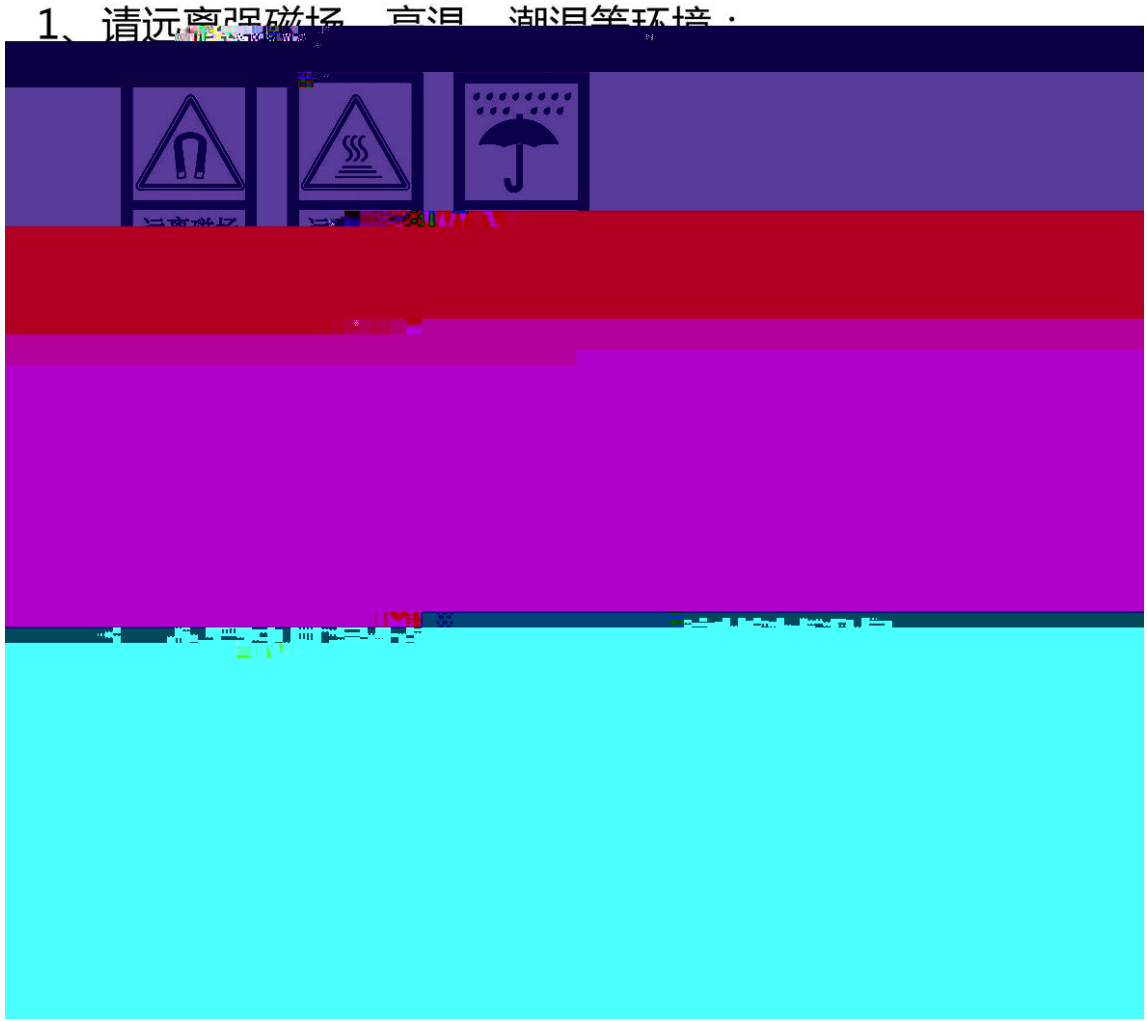
KNX G RS485/RS232_V2.1

BTPG-04/03.1

KNX/EIB

注意事项

1、请远离强磁场、高温、潮湿等环境；



---- 1

---- 2

---- 2

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---- 4

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KNX-RS485/RS232 k

Modbus/RS485/RS232 KNX k

KNX-RS485/RS232

k

KNX-RS485/RS232 KNX 12-30V DC k

.knxprod ETS ETS5.7

k

- ! ! !
- **500** !

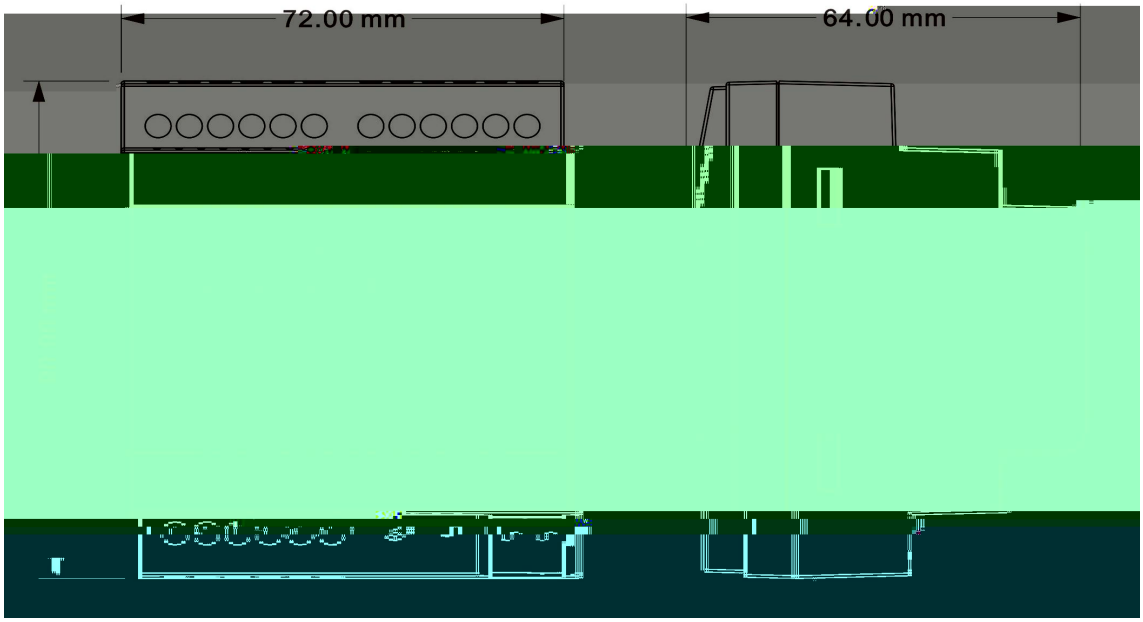
1 >/2 >/4 >/1 /2

- **M** **125** **KNX**
- **M** **KNX** **BA**
-
- ! ! **VRV** **M** **RTU** **64**
-

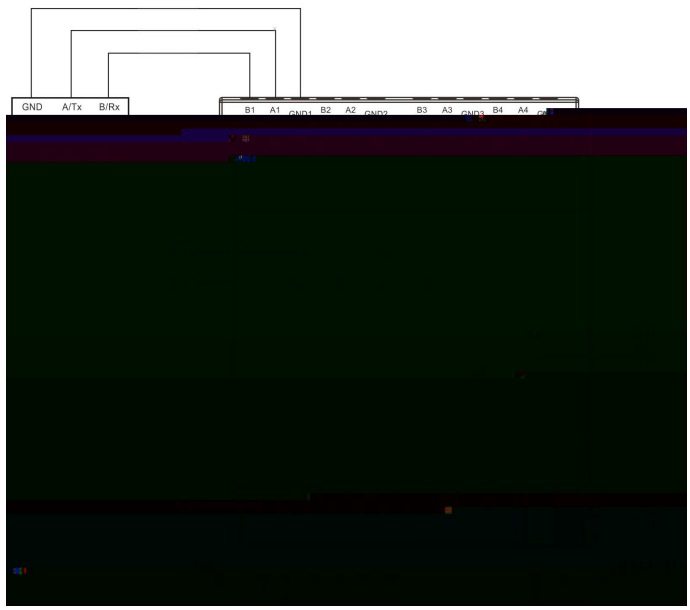
	21-30V DC KNX
	<12mA 30V DC
	<360mW
	12-30V DC
	<60mA 30V DC
	<1.8W
KNX	(/)
RS485/RS232	
	0.2-2.5mm^2
	0.4N-m
LED	
	KNX ->
LED	->KNX
LED	
	¨ 5 -C ... + 45 -C
	¨ 25 -C ... + 55 -C
	¨ 25 -C ... + 70 -C
	<93%
35mm	
72 x 90 x 64mm	
0.17KG	

RS485 **EIA/TIA RS-485-A** **1**

3.1.



3.2.



F RS485/232

B1 ! A1 1 RS485

TX1 ! RX1 1 RS232

1 k

RS485 RS232

220V

F LED

LED

LED

k

KNX

KNX G RS485/RS232/1.1	**2049**	**4000**	**4000**

! KNX k

500 !

1bit/2bit/4bit/1byte/2byte k

M

Modbus 125 KNX k

M

Modbus KNX BA k

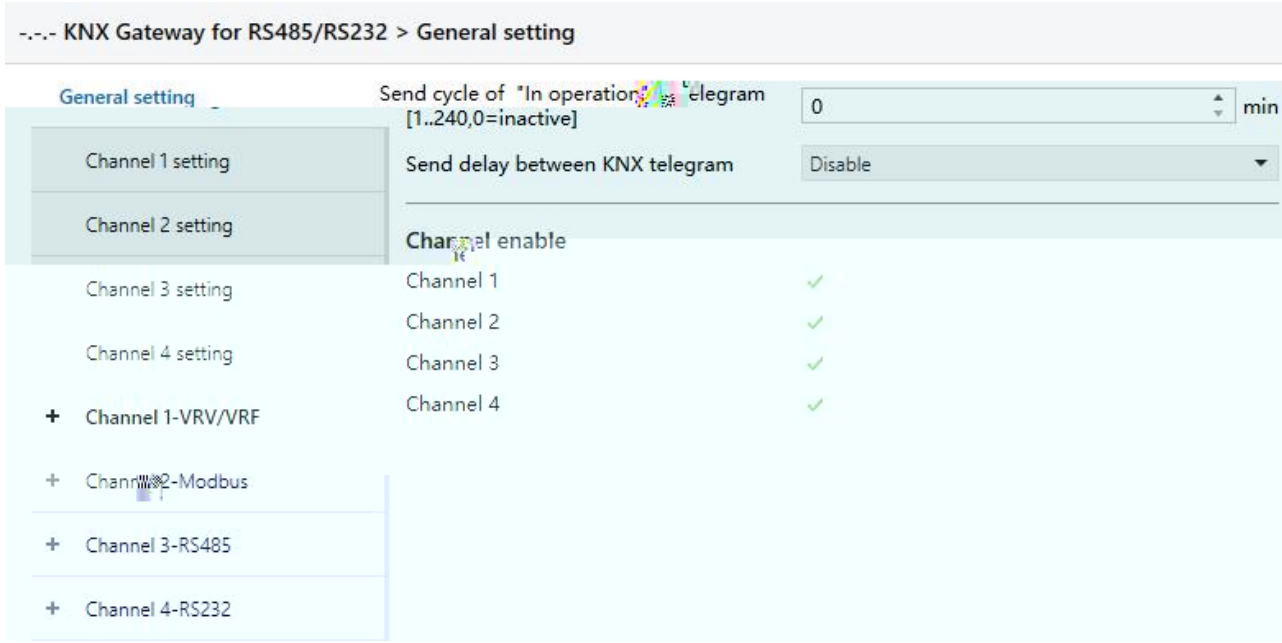
k

! ! VRV Modbus RTU 64 k

k

ETS

5.1. G >



5.1 General setting

S I > [1...240 , 0 = > >]

k 0

In operation k 0 In operation

1 k **0 240 0=**

k

S KNX

KNX Disable KNX k

D>

50

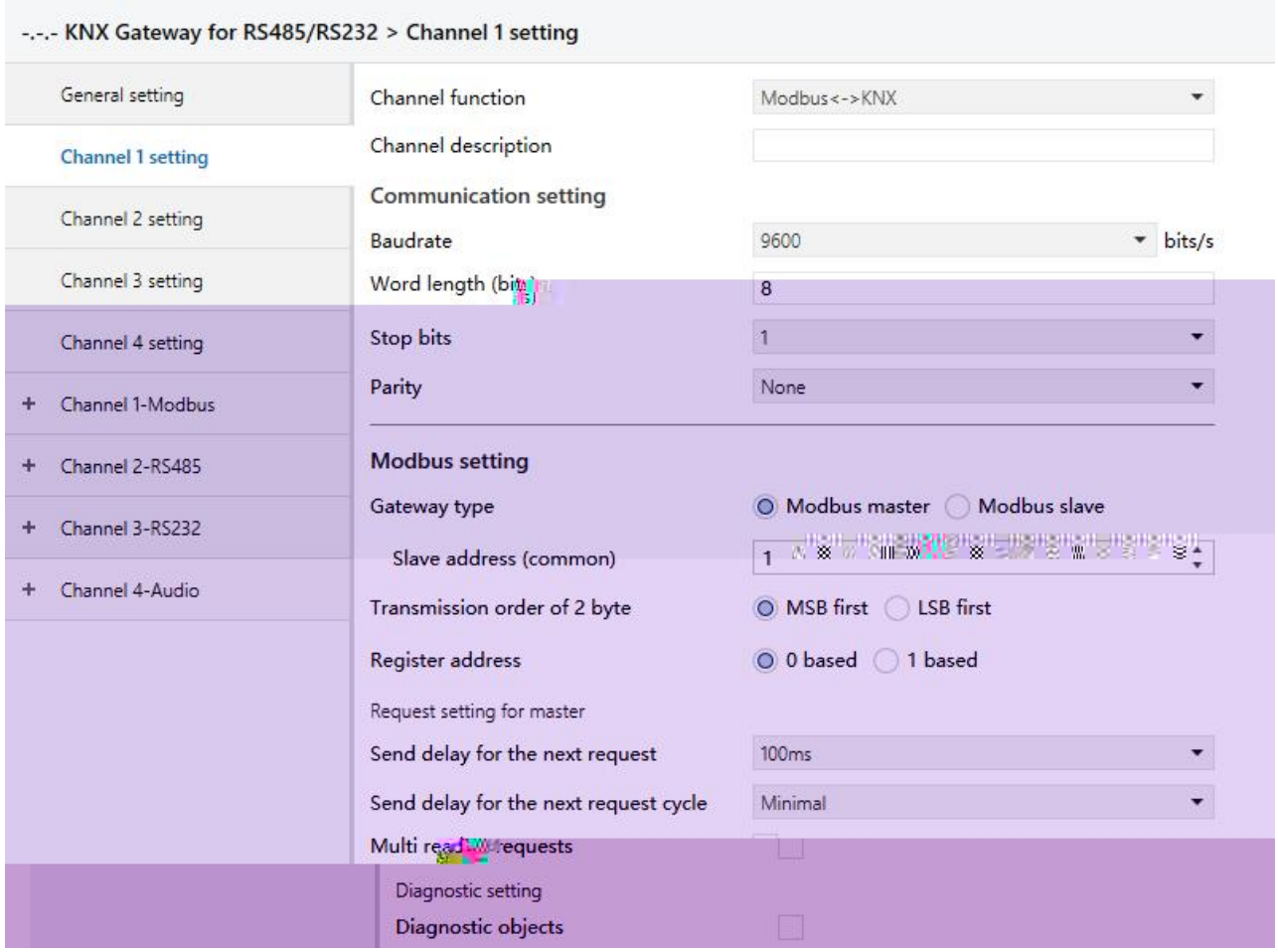
...

500

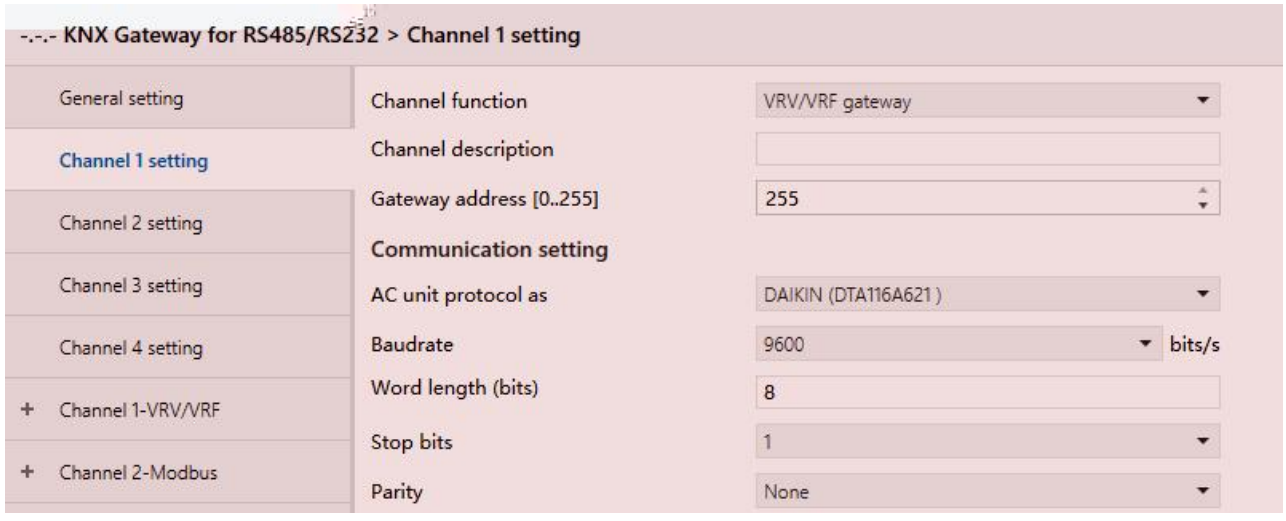
C =1 4

k

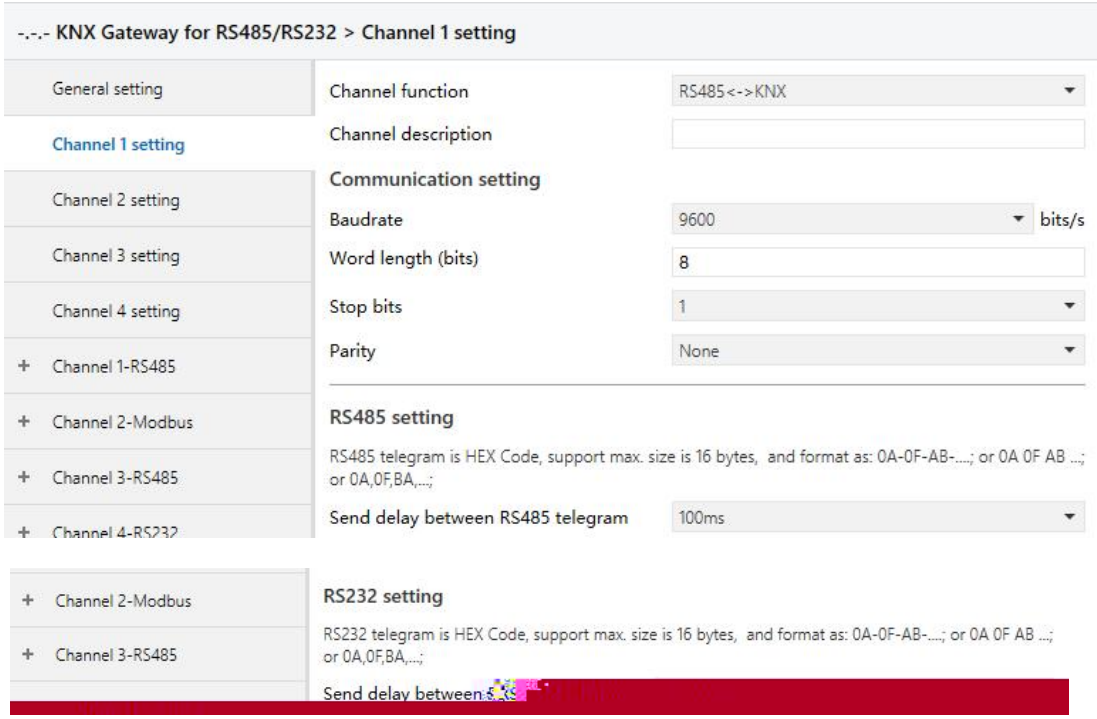
5.2. C >



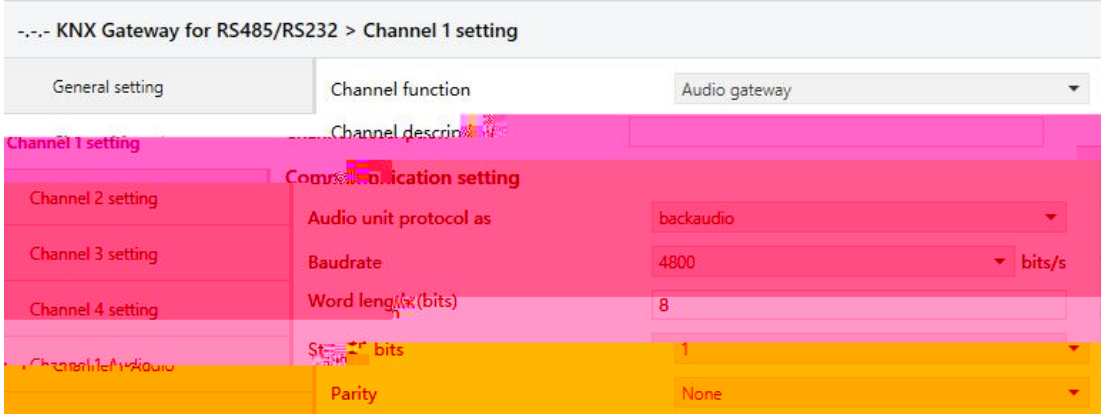
Modbus<->KNX



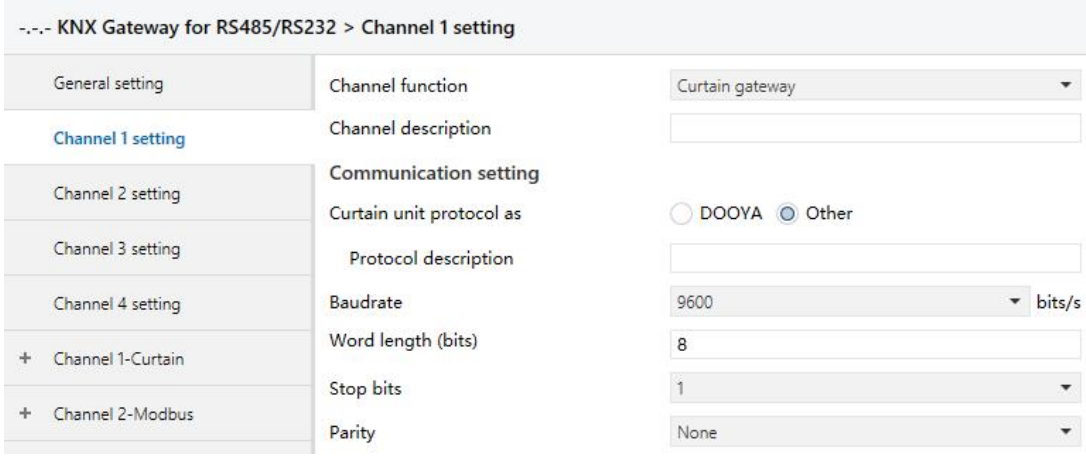
VRV/VRF gateway



RS485/RS232<->KNX



Audio gateway



Curtain gateway

5.2 Channel x setting

C >

k

M <->KNX

RS485<->KNX

RS232<->KNX

VRV/VRF

A >

C >

2/3/4 VRV/VRF k 3/4 k

C > >

30 k

G [0..255]

VRV/VRF gateway k k **0..255**

C > > >

AC >

VRV/VRF gateway k DTA116A621 k

DAIKIN (DTA116A621)

HITACHI (HL03B)

M> > >(ABJK-CCM10)

F > (UTY-VMGX)

G

T > (IFMB645TLE)

O

C > >

Curtain gateway k DOOYA k

DOOYA

O

A > >

Audio gateway k k

>

Y

M>Y

W>

O

' ' P > >

3 Other k 4 k

B

k

1200 > /

2400 > /

...

115200 > /

W (>)

k 8 k

S >

k **0.5 / 1 / 1.5 / 2**

P >

k

E

O

N

M > M <->KNX

G

k

M

M

2/3/4 M k

S ( )

k

0..247

T > > 2

2 k

MSB >

LSB >

R >

0 1 k

0

1

R >

S

Modbus master k

100

200

300

500

k

S

Modbus master k

k

M> >

1

2

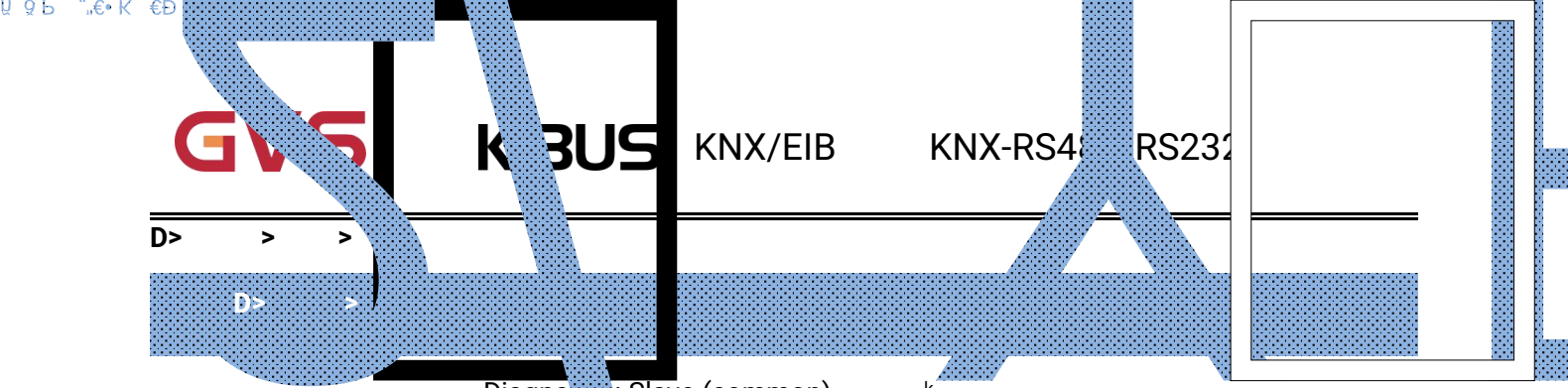
...

10

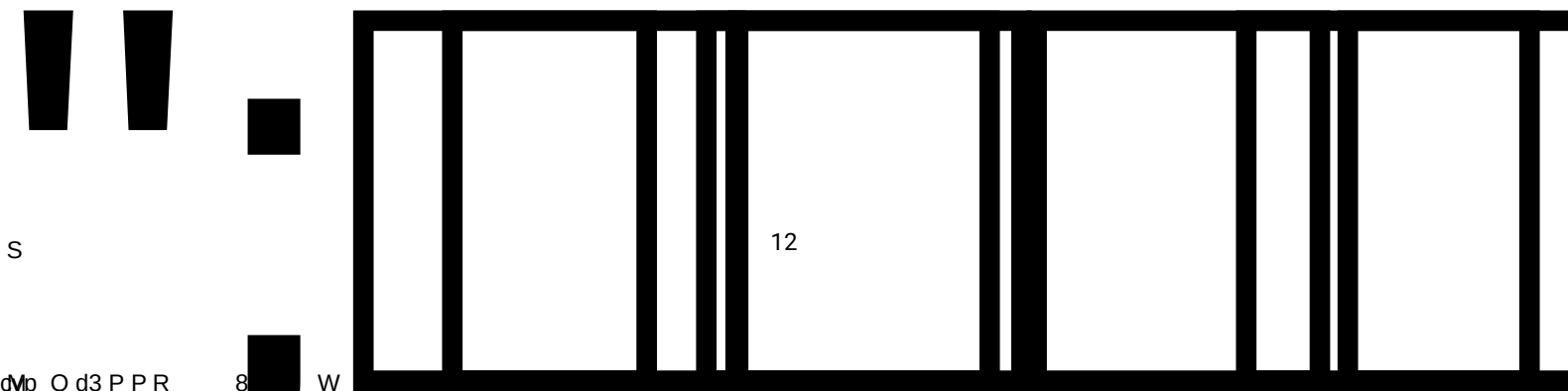
M >

Modbus master

k 16 k

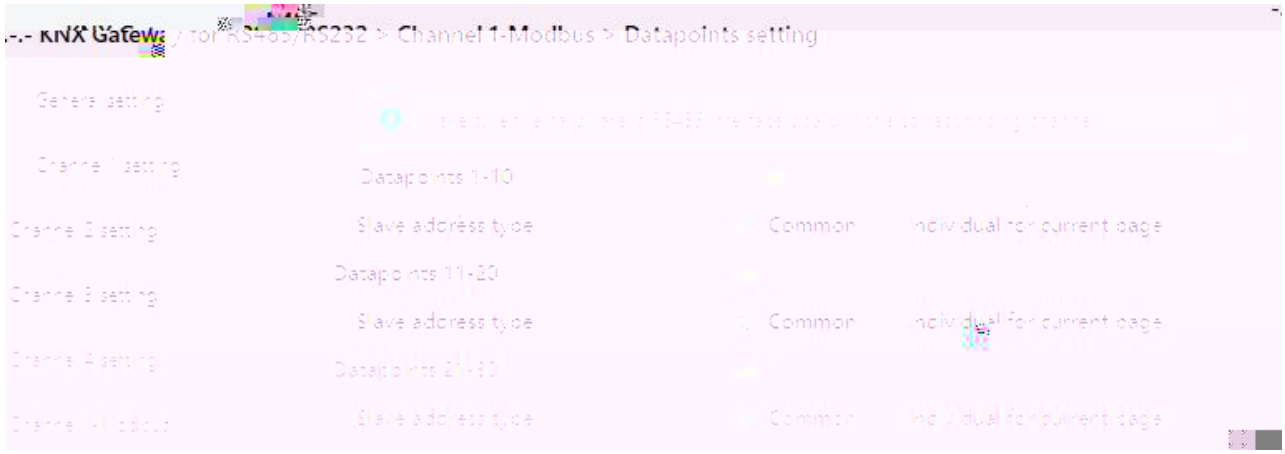


RS485/RS232 16 0A-0F-AB -....; 0A 0F AB ...;



5.3. M <->KNX

5.3.1. D > >



5.3.1 “Datapoints setting”

M > RS485 > > >

RS485 k

D > 1-10/11-20/21-30/...

Modbus<->KNX 10 k

M <->KNX 1 500 2/3/4 50 k

S

“Modbus master” k k

C

I > >

I > >

S

1-10

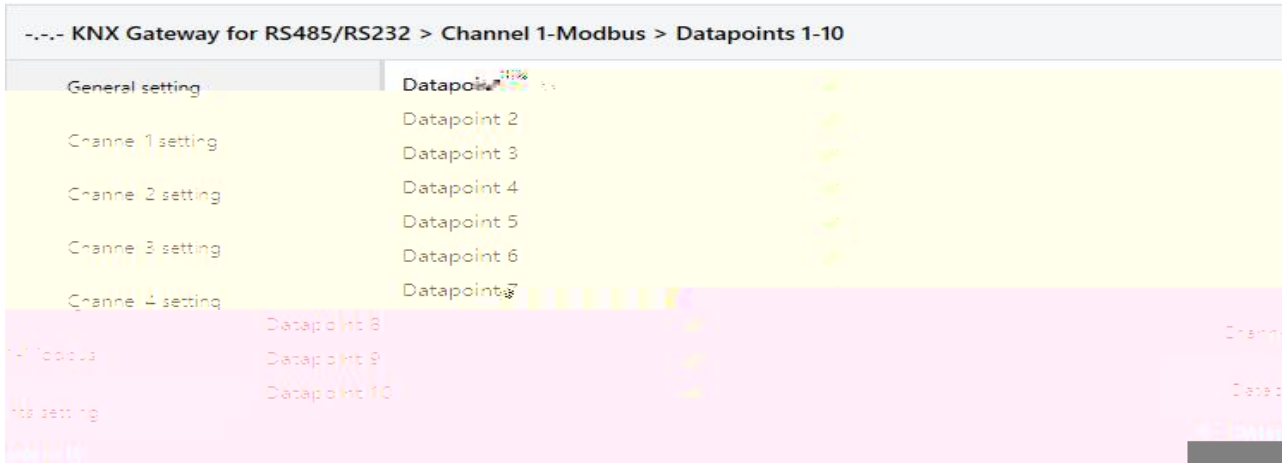
k **0..247**

S > > (30 .)

30 k

10 “Diagnostic: Slave (Datapoint 1-10)” k

5.3.2. D >

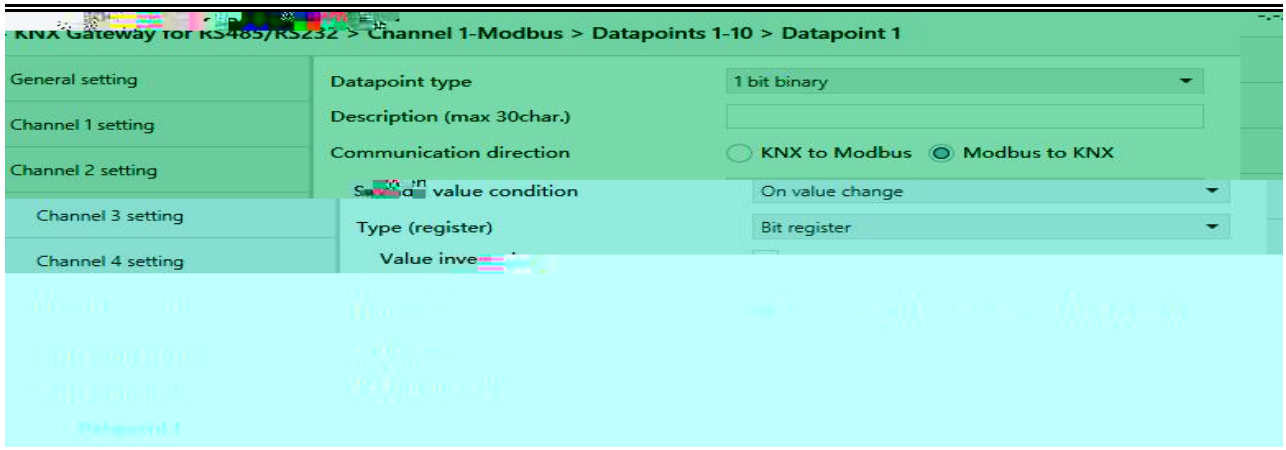


5.3.2.1 “Datapoints 1-10”

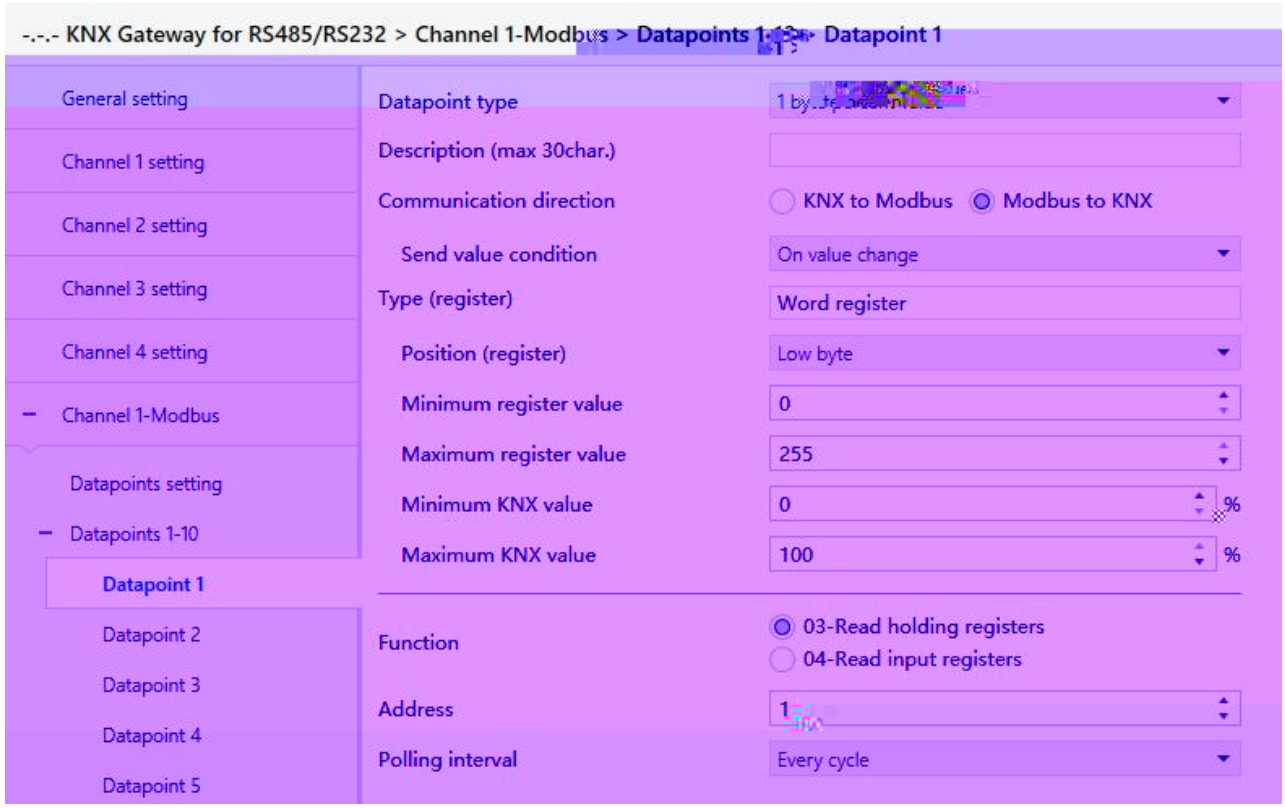
D > 1/2/3/..

Modbus<->KNX k

Modbus<->KNX k

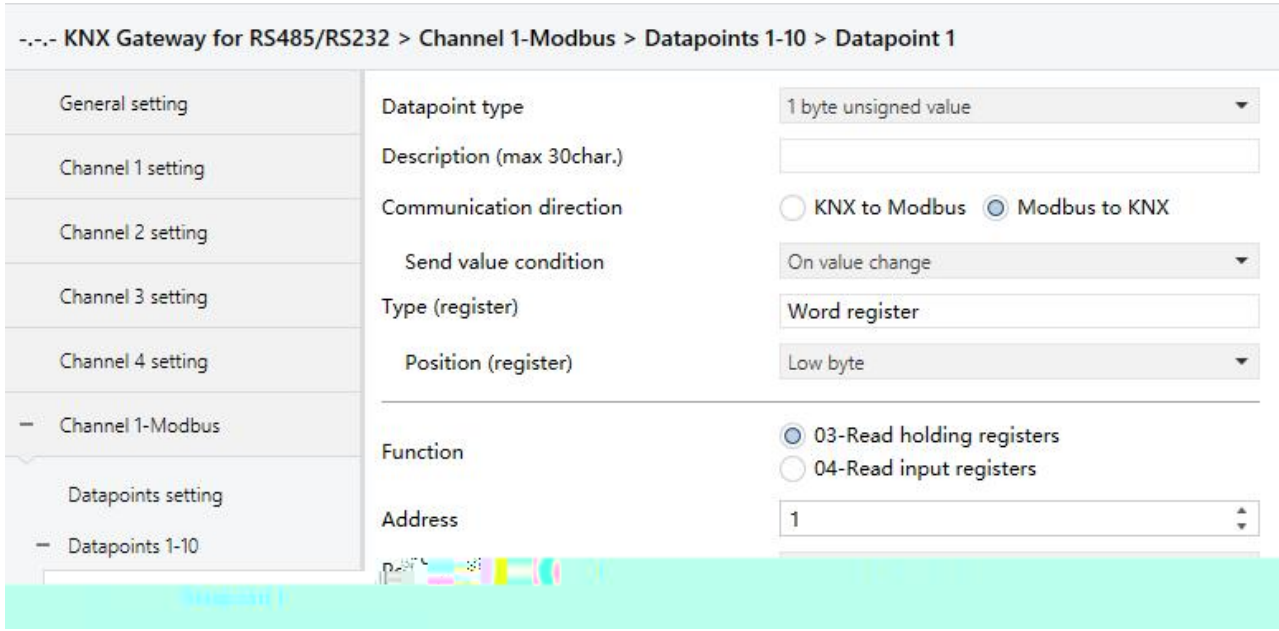


1 bit binary

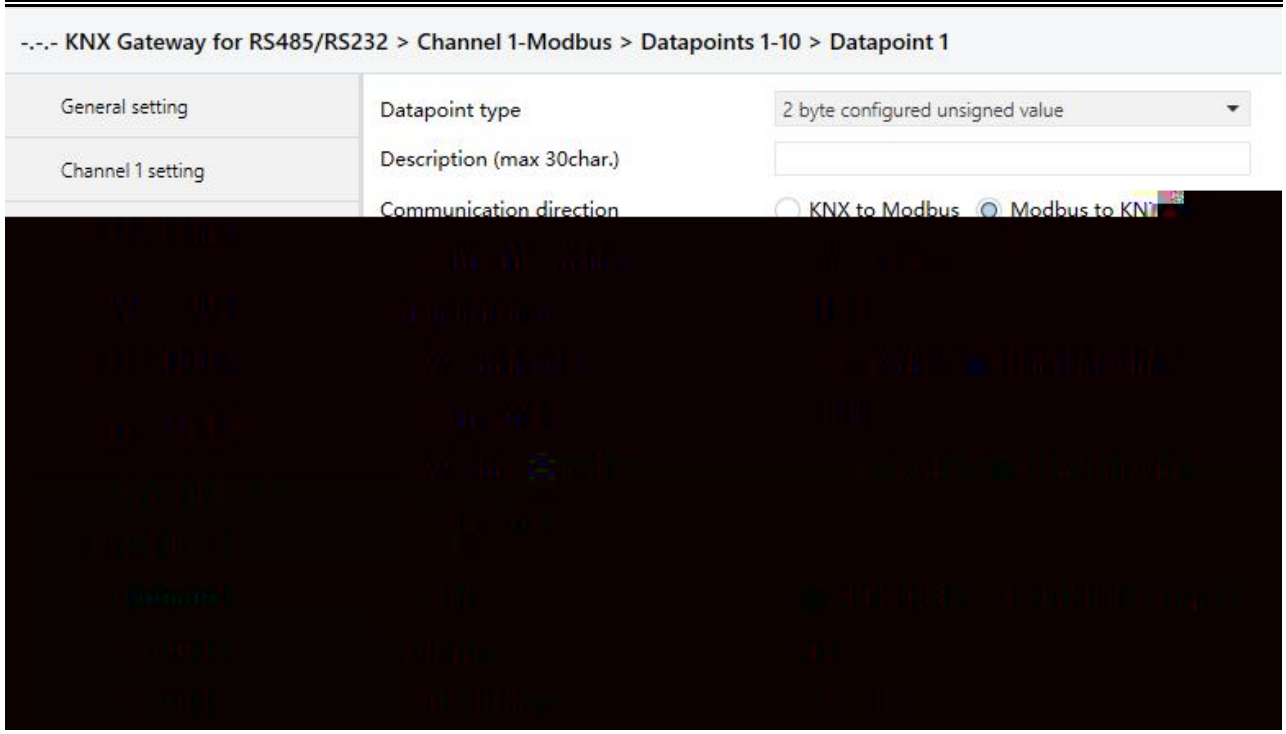


1 byte percent value

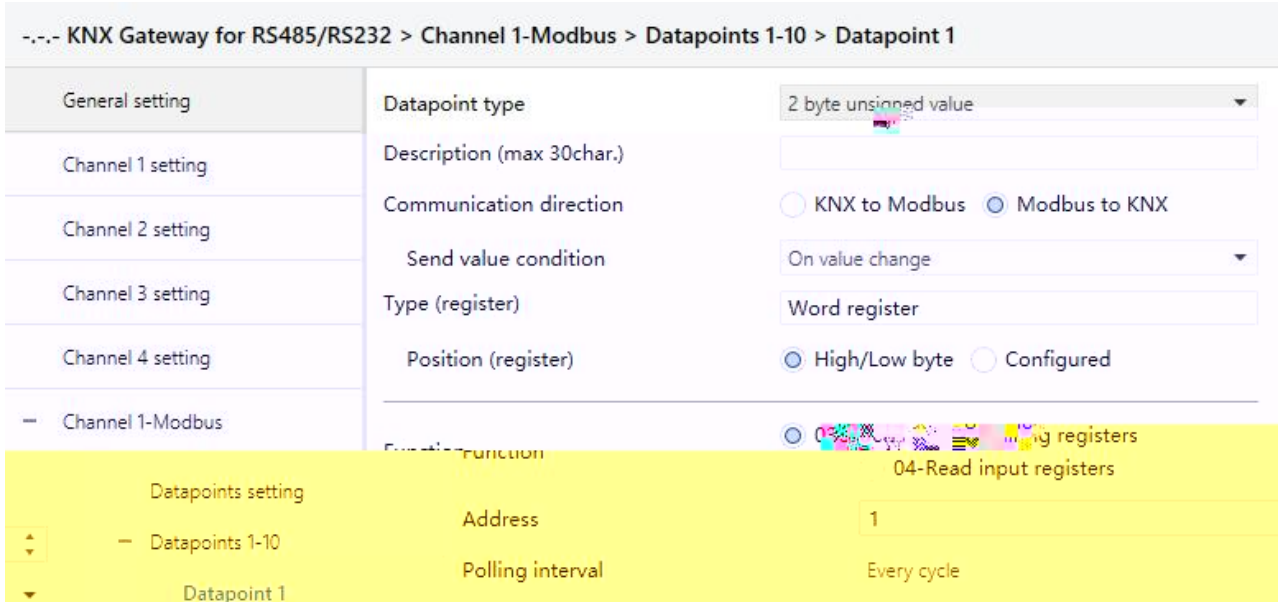
1 byte configured unsigned value



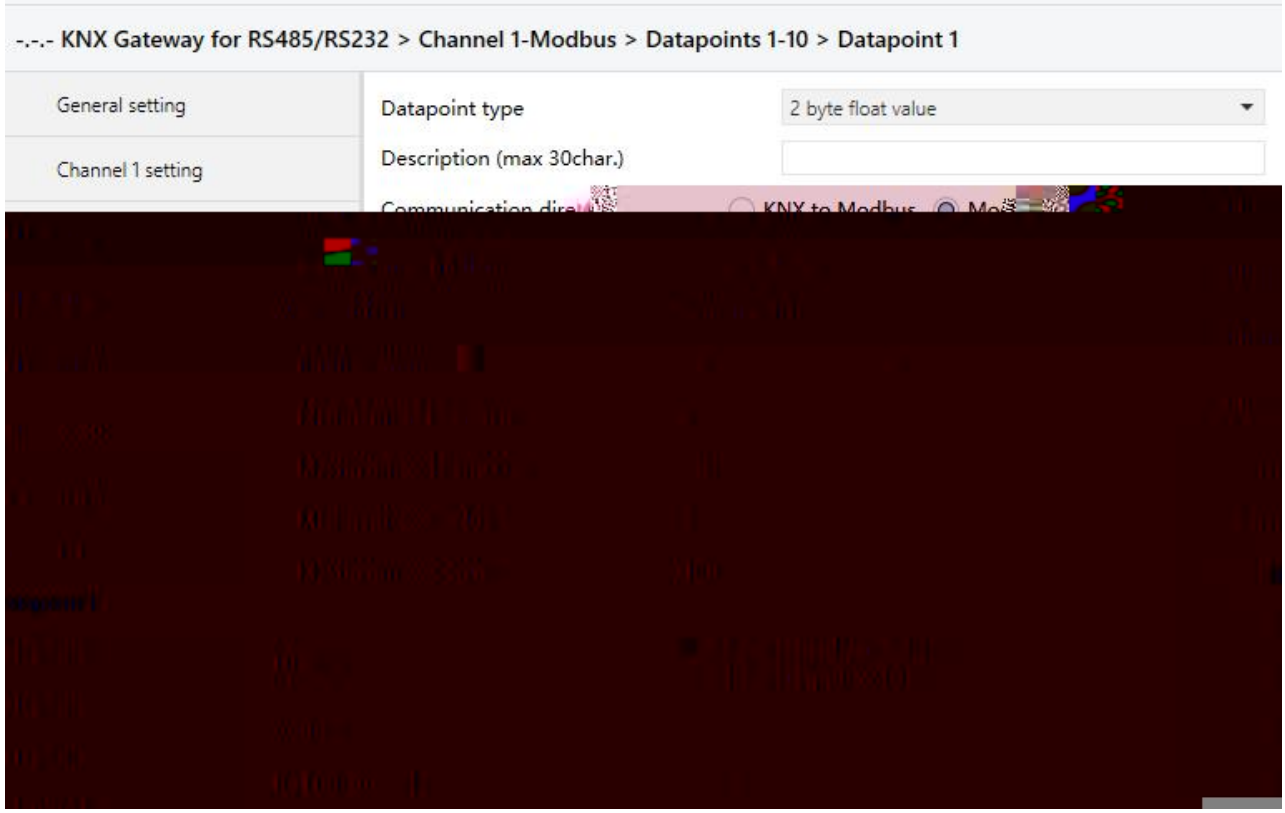
1 byte unsigned value



2 byte configured unsigned value



2 byte unsigned value



2 byte float value

5.3.2.2 Datapoints x

D >

k

1 > >

1

1 > >

1 >

2 > >

2 >

2

D > > (30)

k 30 k

C > > > >

k

KNX M

M KNX

S >>

Modbus to KNX k k

O

O

C >

C >

C > [1..255] >

Cyclic sends... k k **1..255**

5.3.2.1. 1 > >

T (>)

k

B> >

B> > >

V > >

V >

Bit register Bit in word register k

k

P >> (>)

Bit in word register k k

B> 00

B> 01

...

B> 15

B>

Value in word register k k

16 >

15 >

...

01 >

O

Value in word register k k

B> 00

B> 01

...

B> 15

V > > k

16 > k 1 > 0

1 k

08bit 08bit k

bit count 08bit Offset 08bit

B15 B14 B13 B12 B11 B10 B9 B8 B7 B6 B5 B4 B3 B2 B1 B0

16bit k

M KNX

```
* *    C      ( > )
```

Value in word register k k

0..65535

```
* *    W    > > ,
* *    W    > = ,
* *    W    > < ,
```

Value in word register k k / /

ON/OFF k

N >

S ON

S OFF

KNX M

```
* *    W      > >   =ON
* *    W      > >   =OFF
```

Value in word register k ON/OFF

k

N >

S >

```
' '     R  >
```

Value in word register Set register value k

ON/OFF k

0..65535

5.3.2.2. 1

```
   T  (  >  )
```

k **W** **>** k

```
   P  >>  (  >  )
```

k

L

H>

H> /L

```
' '     M> >      >

' '     M  >      >
```

KNX k

Low byte High byte **0..255**

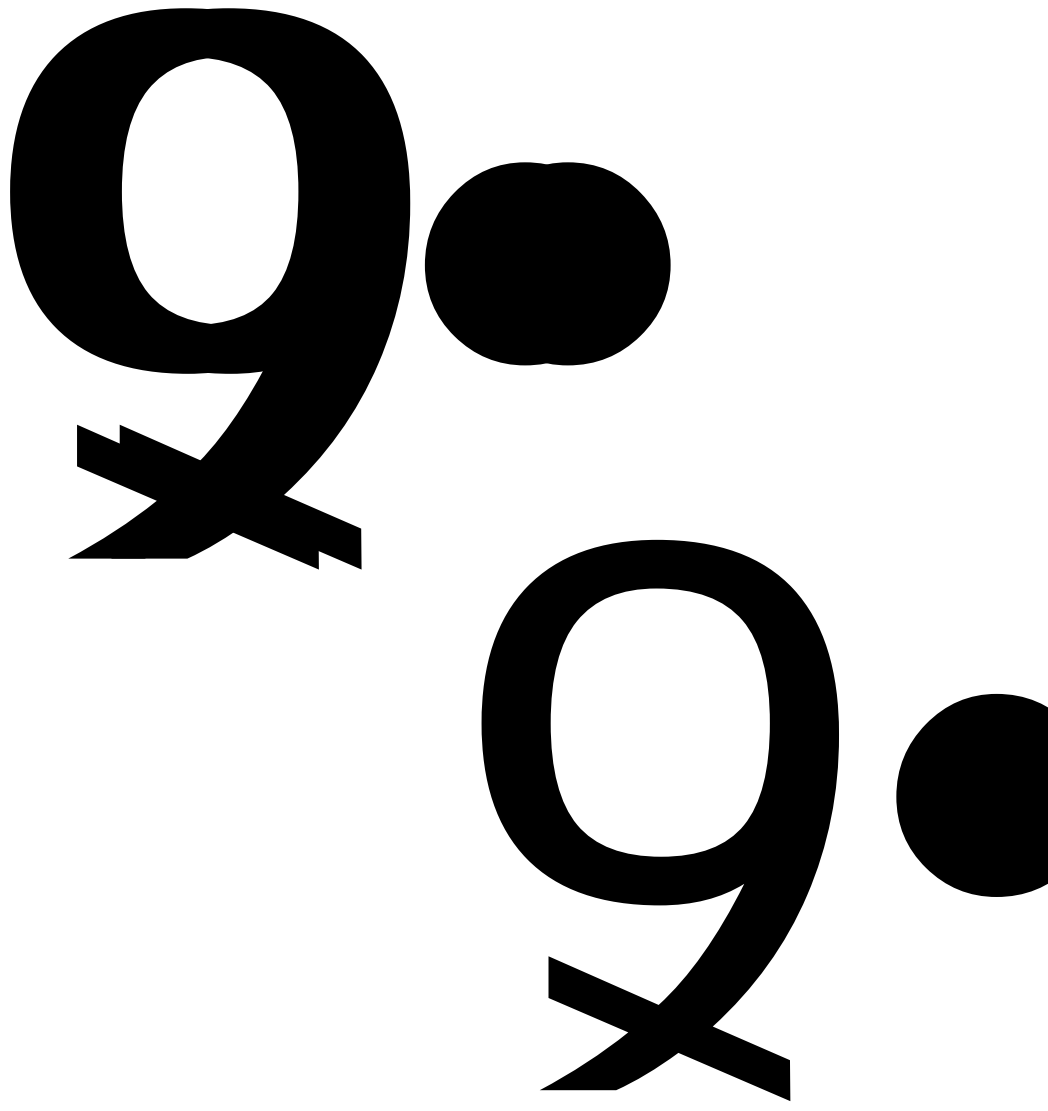
Low byte/High byte **0..65535**

```
' '     M> >   KNX

' '     M  >   KNX
```

/ KNX k **0..100 (%)**

KNX k



```
* *      O
```

Value in word register k k

B> 00

B> 01

...

B> 15

M KNX

```
* *      W      >      1

* *      W      >      0
```

Bit register Bit in word register k 1/0

k

N >

S >

```
* *      O
```

Bit register Bit in word register Set register value k

1/0 k **0..255**

```
* *      C          (   >   )
```

Value in word register k k

0..65535

```
* *      W      >      >

* *      W      >      =

* *      W      >      <
```

Value in word register k / /

k

N >

S >

```
" "     O
```

Value in word register Set register value k

/ / k **0..255**

KNX M

```
" "     C       ( > )
```

Bit in word register Value in word register k

k

0..255

```
" "     W   >   >   ,
" "     W   >   =   ,
" "     W   >   <   ,
```

Bit register Bit in word register k k

/ / 1/0 k

N >

S > 1

S > 0

```
" "     W   >   >   ,
" "     W   >   =   ,
" "     W   >   <   ,
```

Value in word register k k / /

k

N >

S >

R >

Value in word register Set register value k

k

0..65535

5.3.2.4. 1 >

T (>)

k **W >** k

P >> (>)

k

L

H>

C >

B>

Configured k k

08 >

07 >

...

01 >

0

Configured k k

B> 00

B> 01

...

B> 15

5.3.2.5. 2 > >

```
T ( > )
```

k

B> >

B> > >

V > >

```
' ' P >> ( > )
```

Bit in word register k k

B> 00

B> 01

...

B> 15

```
' ' B>
```

Value in word register k k

16 >

15 >

...

01 >

```
' ' Q
```

Value in word register k k

B> 00

B> 01

...

B> 15

M KNX

```
' ' W > 1

' ' W > 0
```

Bit register Bit in word register k 1/0

k

N >

S >

O

Bit register Bit in word register Set register value k

1/0 k **0..65535**

C (>)

Value in word register k k

0..65535

W > >

W > =

W > <

Value in word register k / /

k

N >

S >

O

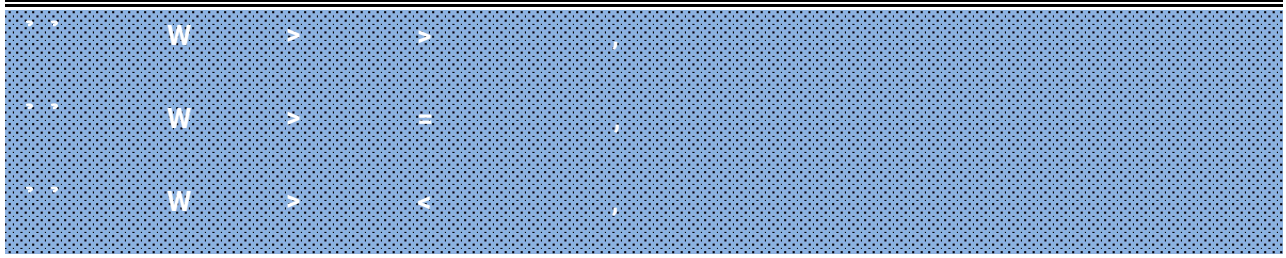
Value in word register Set register value k

/ / k **0..65535**

KNX M

C (>)

k **0..65535**



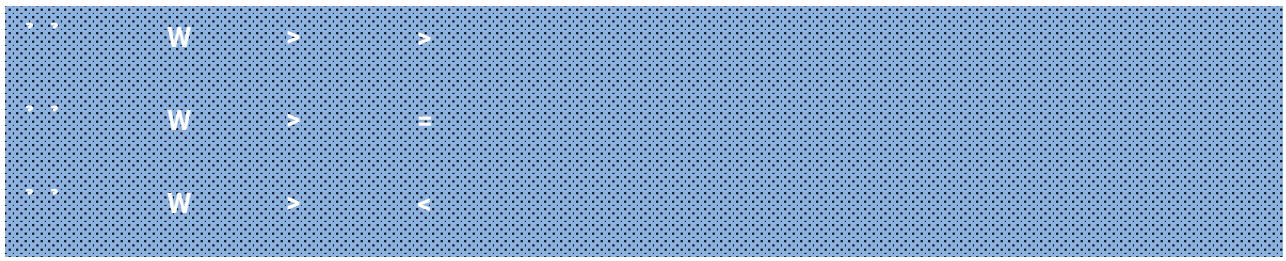
Bit register Bit in word register k k

/ / 1/0 k

N >

S > 1

S > 0

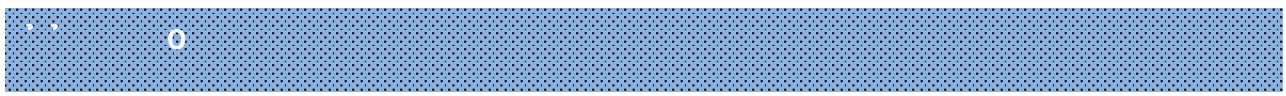


Value in word register k / /

k

N >

S >



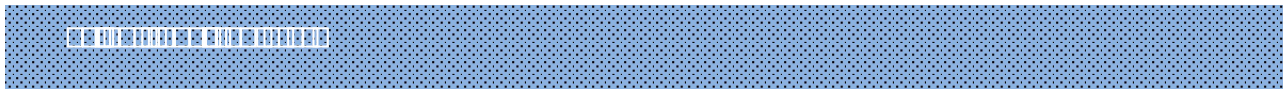
Value in word register Set register value k

/ / k **0..65535**

5.3.2.6. 2 >

T (>)

k W > k



5.3.2.7. 2

```
T ( > )
```

k **W** **>** k

```
P >> ( > )
```

k

L ¨ >

H> ¨ >

H> /L ¨ >

L ¨ 2

H> ¨ 2

H> /L ¨ 2

```
˚ ˚ M> > >

˚ ˚ M > >
```

KNX k

Low byte ¨ unsigned High byte ¨ unsigned **0..255**

High/Low byte ¨ unsigned **0..65535**

Low byte ¨ 2th complement High byte ¨ 2th complement **-128..127**

High/Low byte ¨ 2th complement **-32768..32767**

```
˚ ˚ M> > KNX

˚ ˚ M > KNX
```

/ KNX k **-671088.00 ...670760.00**

5.3.2.8.

` ` F >

Modbus k KNX Modbus / !

k

Bit register

Modbus Master Modbus to KNX Modbus Slave KNX to Modbus

01-R >

02-R > >

Modbus Master KNX to Modbus **05-W > > >**

Modbus Slave Modbus to KNX **05,15-W > > / > > /**

word register / Bit in word register / Value in word register

Modbus Master Modbus to KNX Modbus Slave KNX to Modbus

03-R > >

04-R > >

Modbus Master KNX to Modbus **06-W > > > >**

Modbus Slave Modbus to KNX **06,16-W > > / > > >**

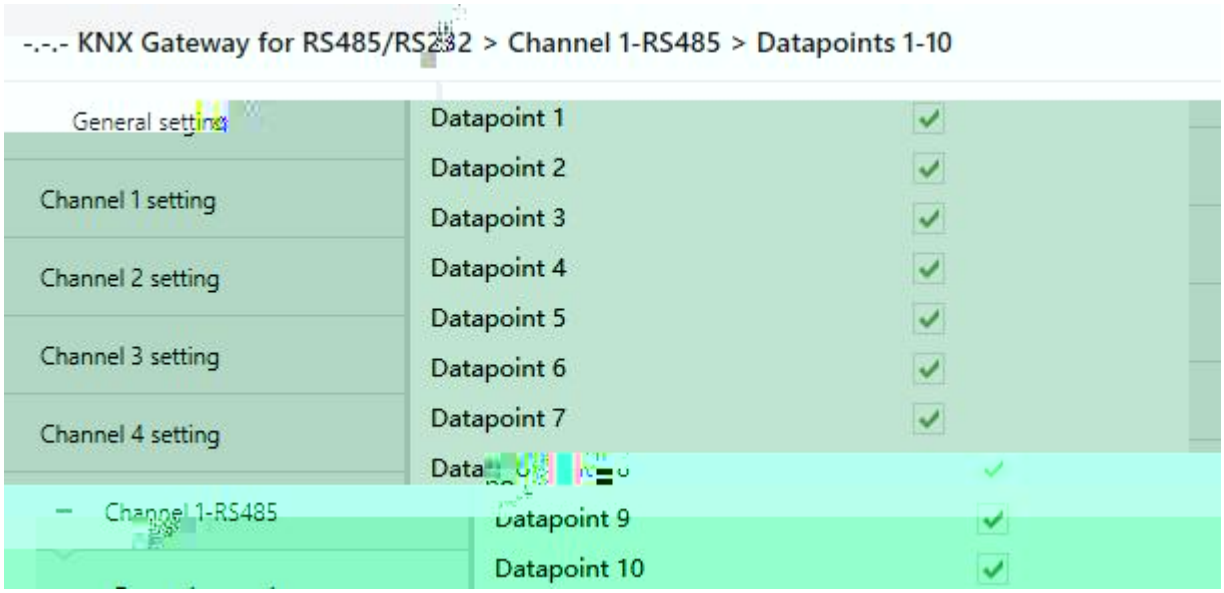
/

A

Modbus k **0..65535**

	based 1	0	□□□ □

5.4.2. D >

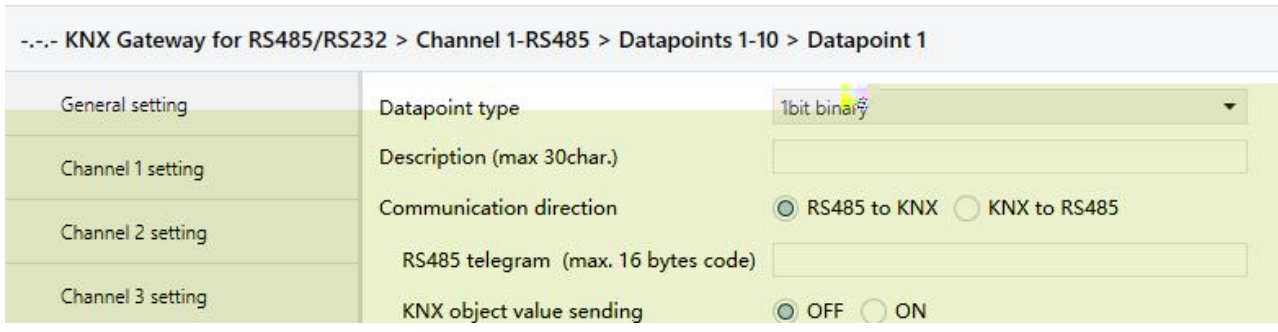


5.4.2.1 Datapoints 1-10

D > 1/2/3/...

RS48/RS232<->KNX k

RS485/RS232<->KNX k



5.4.2.1 Datapoints x

D >

k

1 > >

1 >

1

2 >

D > > (30)

k 30 k

C > > > >

k

RS485/RS232 KNX

KNX RS485/RS232

` ` RS485/RS232 (. 16)

RS485/RS232 k 16 k

RS485/RS232 16 0A-0F-AB -....; 0A 0F AB ...; 0A,0F,BA,...;

` ` KNX >

RS485/RS232 to KNX k KNX

1 bit binary

OFF

ON

1 byte unsigned value **0..255**

1byte recall scene

S N .1

S N .2

...

S N .64

2byte unsigned value **0..65535**

KNX to RS485/RS232 k KNX

1 bit binary

OFF

ON

1 byte unsigned value **0..255**

1byte recall scene

S N .1

S N .2

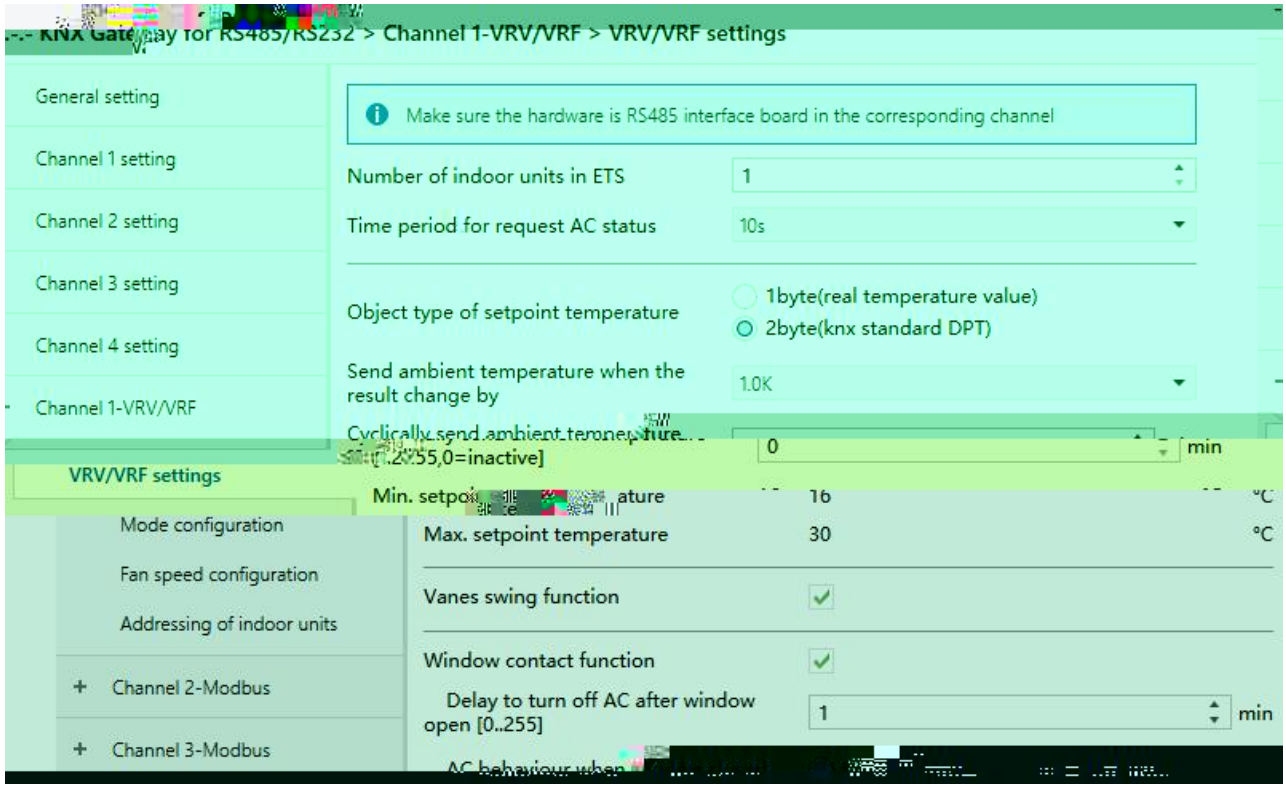
...

S N .64

2byte unsigned value **0..65535**

5.5. VRV/VRF

5.5.1. VRV/VRF >



5.5.1 VRV/VRF setting

M > RS485 > > >

RS485 k

N > > > ETS

k **1..64**

T> > AC

k

D> / 1 / 2 / 3 / 5 / 10 / 15 / 20 / 25 / 30 / 60

O >

k

1 ( )

2 (DPT)

S >

k Disable k

D>
0.5K
1.0K
...
10K

k

C > > [0...255,0=> >] >

k 0 k **0...255**

k

M> ./ M . >

k

k

k

V > >

DAIKIN (DTA116A621) ! Toshiba Other k

k

V U -D > >

Fujitsu k k

V L -R> > >

Fujitsu k k

W> >

k

` ` D AC > [0..255] >

k k **0..255**

=0 k k

` ` AC > >

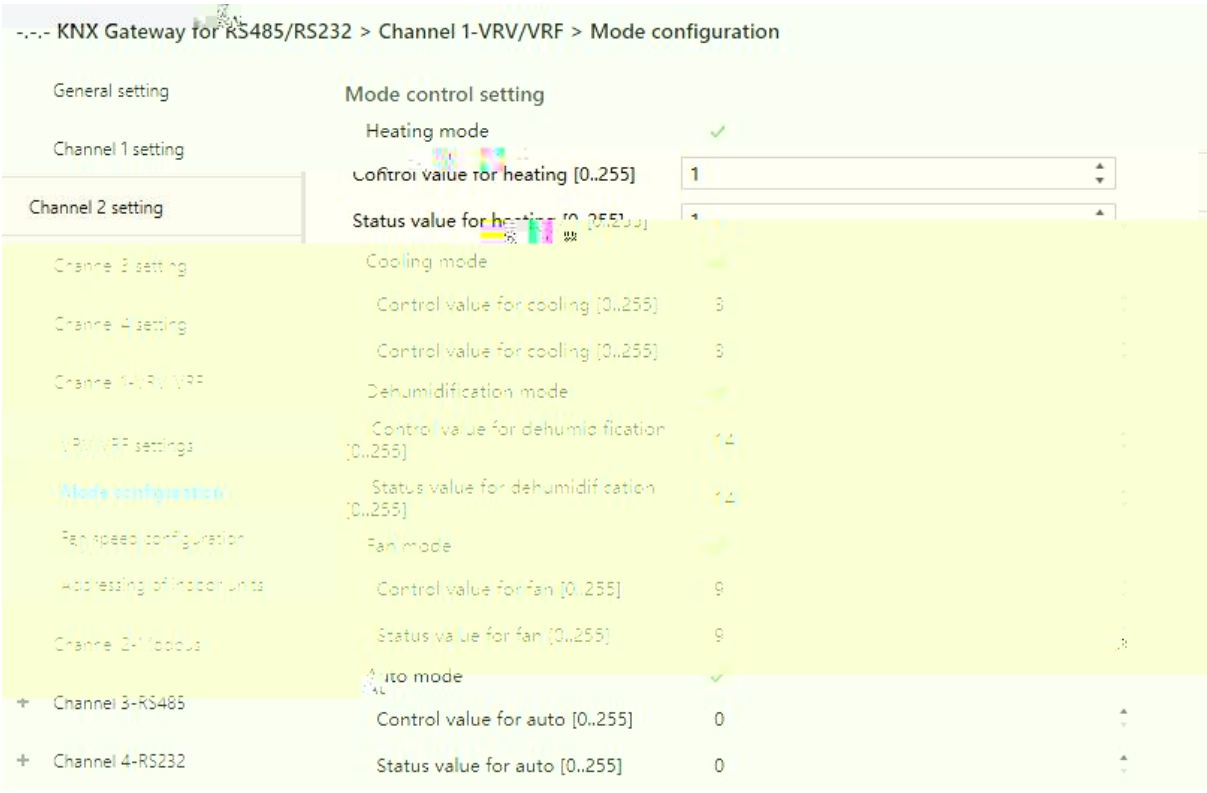
k

k

K

G

5.5.2. M > >



5.5.2 Mode configuration

M >

H > /C > /D > >> > /F /A

k

HITACHI k

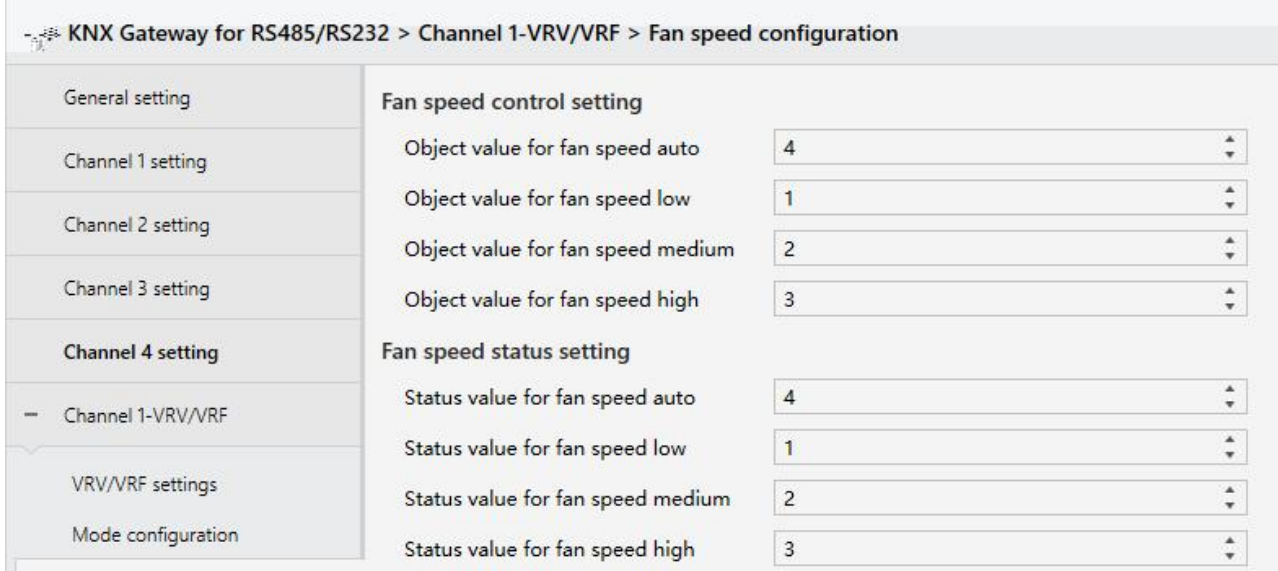
C > / > / > >> > / / [0..255]

k **0..255**

S > / > / > >> > / / [0..255]

k **0..255**

5.5.3. F > >



5.5.3 Fan speed configuration

F >

O / / > / > / >

k **0..255**

F >

S / / > / > / >

k **0..255**

DAIKIN (DTA116A621) ! Fujitsu ! Gree ! Toshiba Other

k

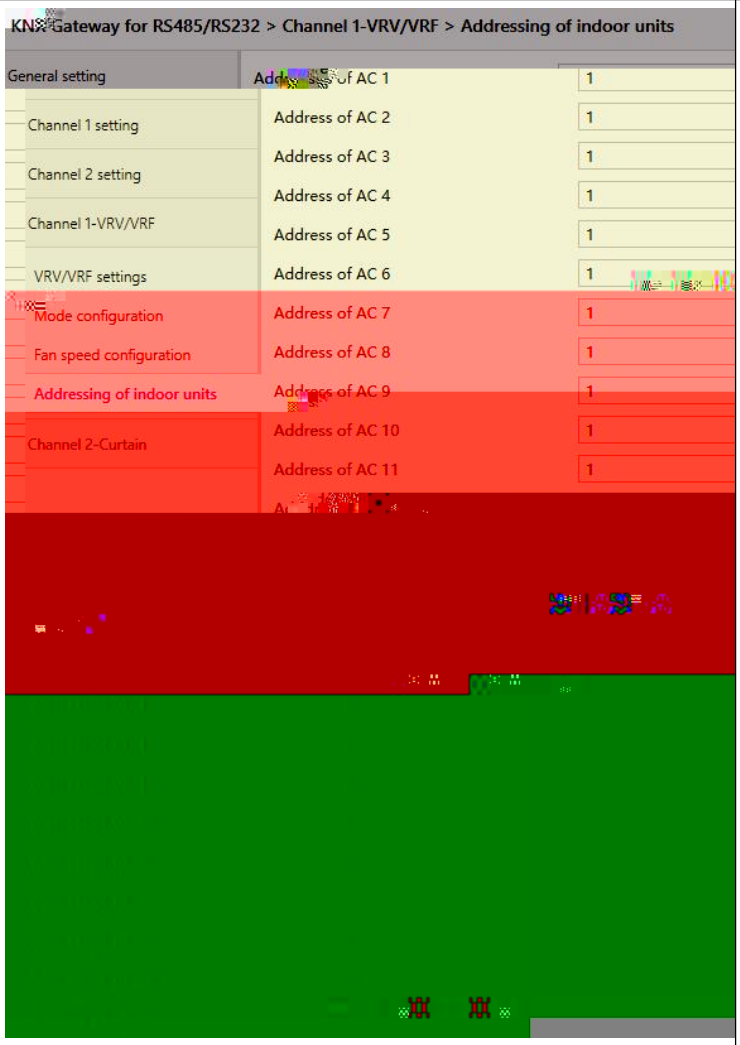
Mitsubishi k

AC1 AC16 2 AC1 AC16 2

0 15 k - 室内机地址 1-00 1-01 2-01 2

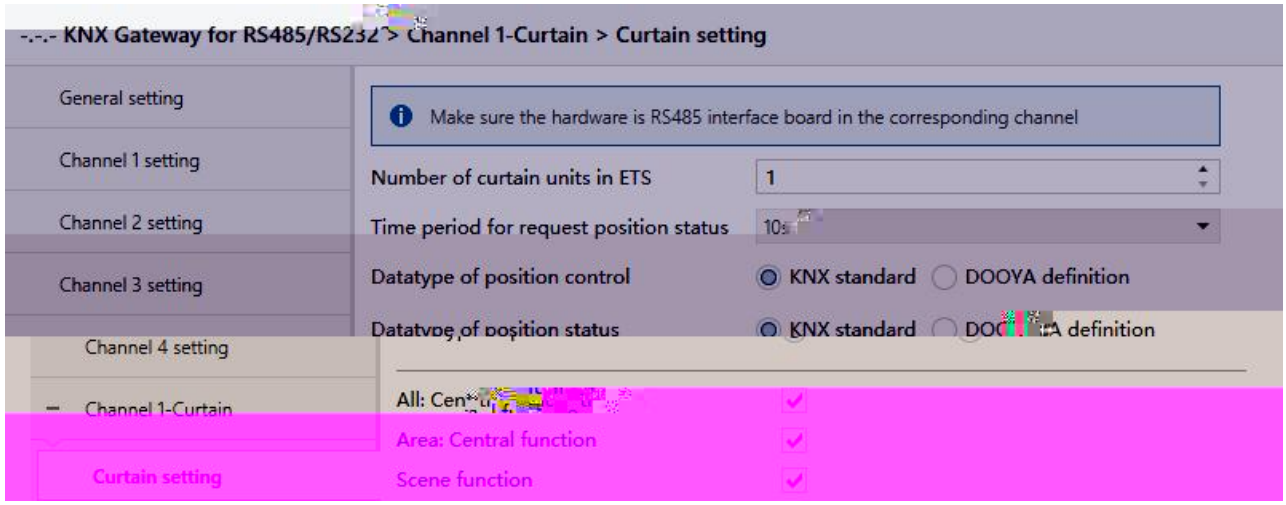
01 k

16 AC 1 0 15 k

	4 3
	3-2-2. 室内机控制 地址 室内机地址 42001-42003 1-00 42004-42006 1-01 42007-42009 1-02 42010-42012 1-03 42013-42015 1-04 42016-42018 1-05 42019-42021 1-06 42022-42024 1-07 42025-42027 1-08 42028-42030 1-09 42031-42033 1-10 42034-42036 1-11 42037-42039 1-12 42040-42042 1-13 42043-42045 1-14 42046-42048 1-15 42049-42051 2-00 42052-42054 2-01 42055-42057 2-02 42058-42060 2-03 42061-42063 2-04 42064-42066 2-05 42067-42069 2-06 42070-42072 2-07 42073-42075 2-08 42076-42078 2-09

5.6. C >

5.6.1. C > >



5.6.1 Curtain gateway

M > RS485 > > >

RS485 k

N > > > ETS

16 k **1..16**

T> > >>

k

D>

1

2

...

60

D >>

D >>

Curtain position Venetian blind position and slat k

/ k

KNX

DOOYA > >>

KNX 0%-- / 100%-- /

100%-- / 0%-- / k

A :C >

/ / / k

A :C >

/ / /

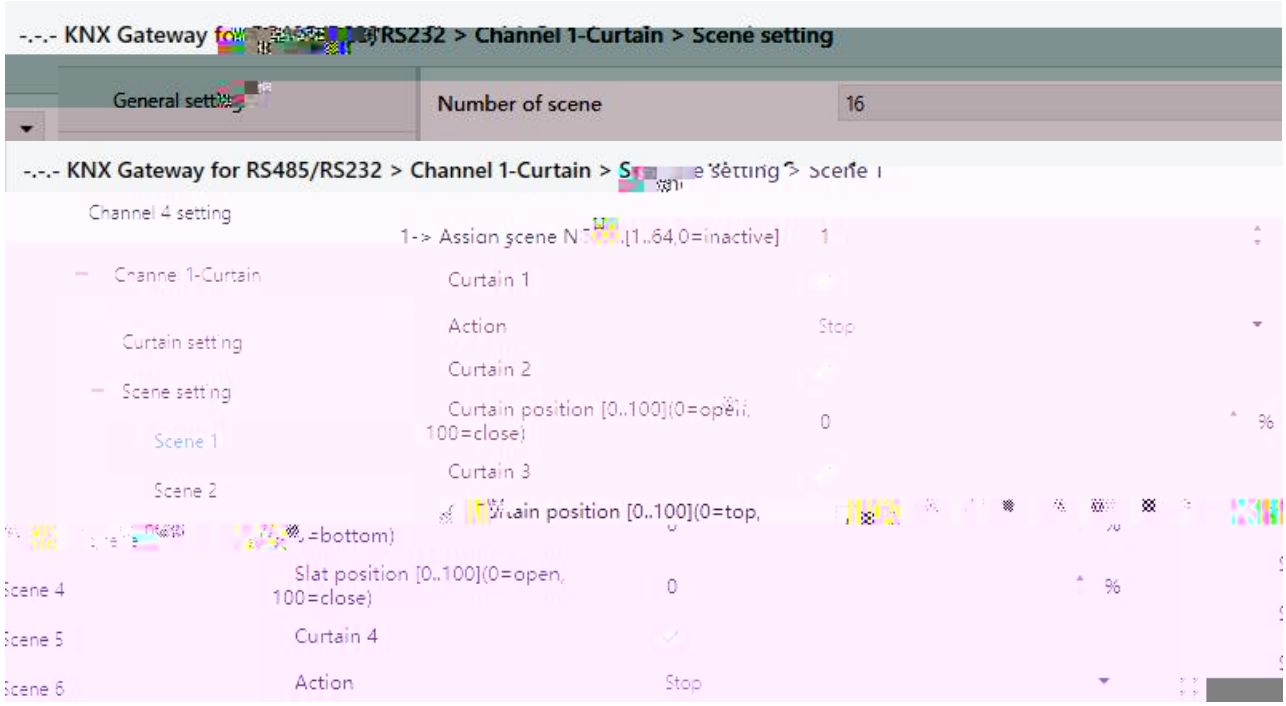
k 8 k

S >

16

/ / k

5.6.2. S >



5.6.2 “Scene setting”

k

N

16 k **1..16**

-> A > NO.[1..64,0=> >] (=16)

k **0..64 0=**

C > (=16)

k

C > >> 0..100%(0%= , 100%=)

“Curtain position” k k **0..100**

C > >> 0..100%(0%= , 100%=)

“Venetian blind position and slat” k k **0..100**

S >> 0..100%(0%= , 100%=)

“Venetian blind position and slat” k k **0..100**

A >

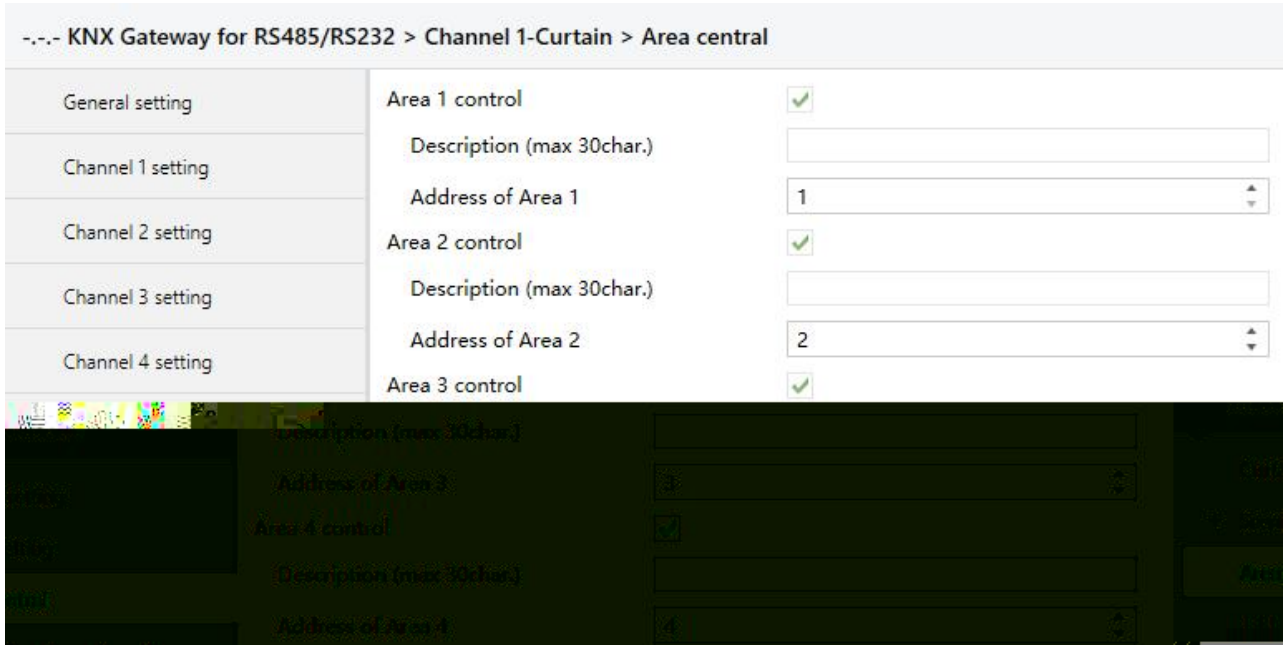
“Curtain step/move” k k

S

O

C

5.6.3. A



5.6.3 “Area central”

k

A (=8)

k

D > > (30)

k 30 k

A A (=8)

k **1..254**

5.6.4. A > > >

-.-.- KNX Gateway for RS485/RS232 > Channel 1-Curtain > Addressing of curtain units

General setting
Channel 1 setting
Channel 2 setting
Channel 3 setting

Curtain units	Curtain type	Device description	Device address	Area address
Curtain 1	Curtain step/move		1	1
Curtain 2	Curtain position		2	1
Curtain 3	Venetian blind position and slat		3	1
Curtain 4	Curtain step/move		4	1

5.6.4 “Area central”

16 k

C >

k

C > /

C > >>

V > > >>

D > > >

k 30 k

D >

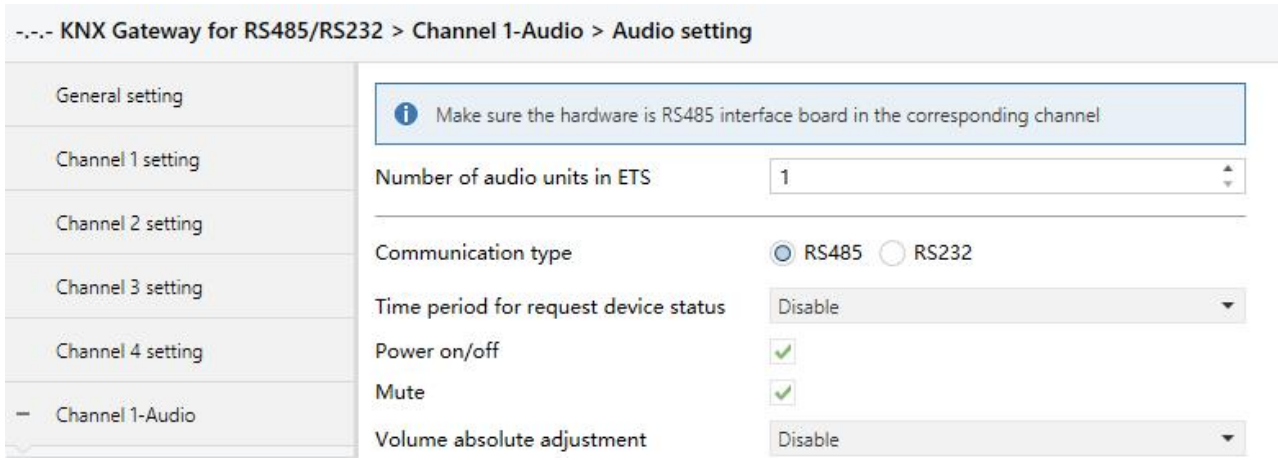
k **1..254**

A

k **1..254**

5.7. A >

5.7.1. A > >



5.7.1 “Audio setting”

M > RS485 > > >

M > RS232 > > >

RS485 RS232 k k

N > > > ETS

16 k **1..16**

C > >

k

RS485

RS232

T> > >

“backaudio” “Yodaar” “cnWise” k

k

D>

1

2

...

60

P /

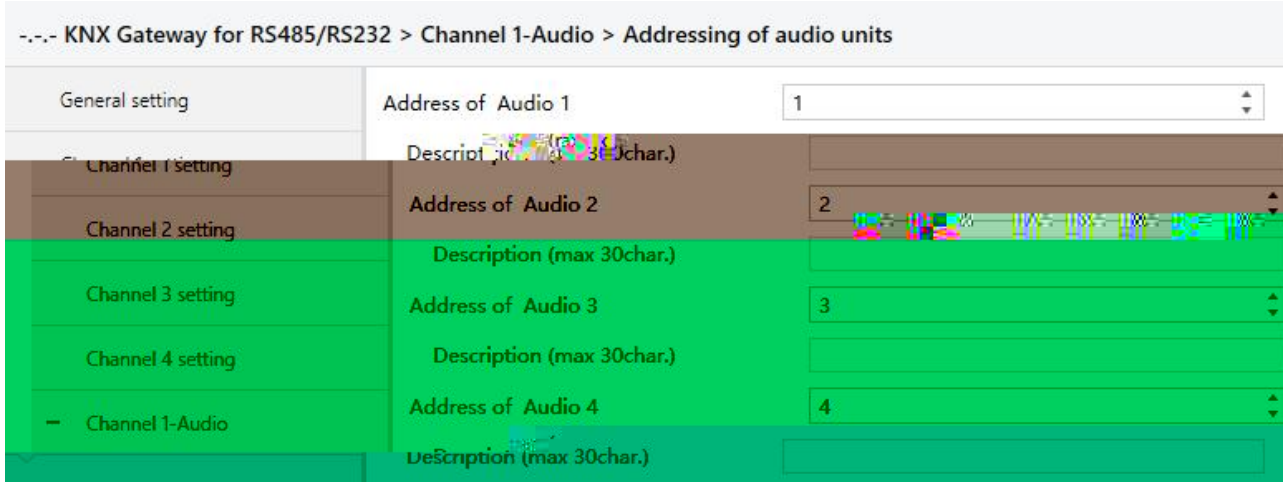
“MiYue” k k

M

“MiYue” k

backaudio Yodaar

5.7.3. A > > >



5.7.3 Addressing of audio units

A A > (=1..16)

k **0..255**

D > > (30 .)

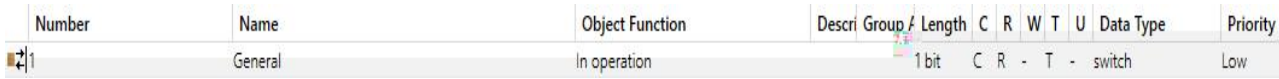
k 30 k

k

C W

R T U k

6.1. G >



Number	Name	Object Function	Descri	Group A	Length	C	R	W	T	U	Data Type	Priority
1	General	In operation			1 bit	C	R	-	T	-	switch	Low

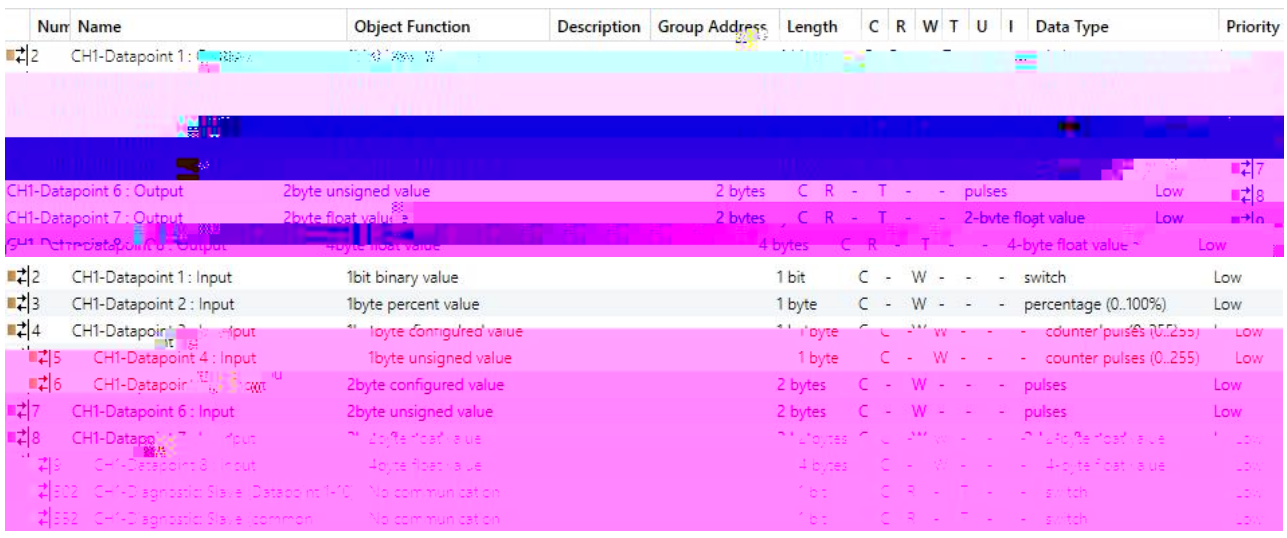
6.1 General

					DPT
1	**I >**	**G**	**1 >**	**C,R,T**	**1.001 >**
		“1”			k

6.1 General setting

6.2.

6.2.1. M <->KNX

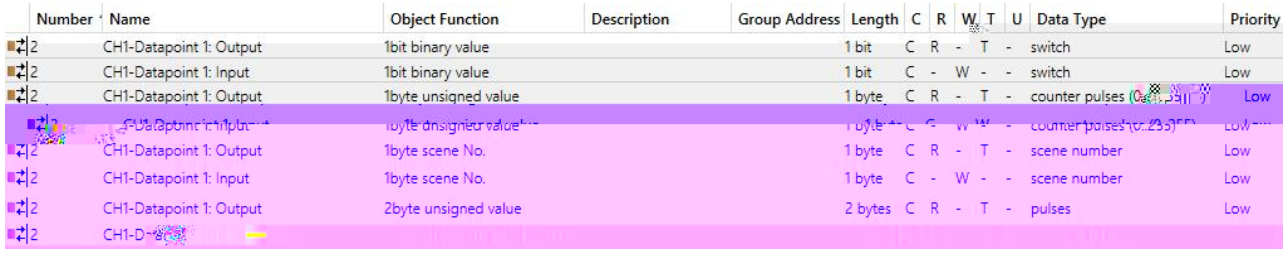


Num	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	I	Data Type	Priority
2	CH1-Datapoint 1 :												
	CH1-Datapoint 6 : Output	2byte unsigned value			2 bytes	C	R	-	T	-	-	pulses	Low
	CH1-Datapoint 7 : Output	2byte float value			2 bytes	C	R	-	T	-	-	2-byte float value	Low
	CH1-Datapoint 8 : Output	4byte float value			4 bytes	C	R	-	T	-	-	4-byte float value	Low
2	CH1-Datapoint 1 : Input	1bit binary value			1 bit	C	-	W	-	-	-	switch	Low
3	CH1-Datapoint 2 : Input	1byte percent value			1 byte	C	-	W	-	-	-	percentage (0..100%)	Low
4	CH1-Datapoint 3 : Input	1byte configured value			1 byte	C	-	W	-	-	-	counter pulses (0..255)	Low
5	CH1-Datapoint 4 : Input	1byte unsigned value			1 byte	C	-	W	-	-	-	counter pulses (0..255)	Low
6	CH1-Datapoint 5 : Input	2byte configured value			2 bytes	C	-	W	-	-	-	pulses	Low
7	CH1-Datapoint 6 : Input	2byte unsigned value			2 bytes	C	-	W	-	-	-	pulses	Low
8	CH1-Datapoint 7 : Input	2byte float value			2 bytes	C	-	W	-	-	-	2-byte float value	Low
9	CH1-Datapoint 8 : Input	4byte float value			4 bytes	C	-	W	-	-	-	4-byte float value	Low
502	CH1-Diagnostic Slave Datapoint 1	No communication			1 bit	C	R	-	T	-	-	switch	Low
502	CH1-Diagnostic Slave common	No communication			1 bit	C	R	-	T	-	-	switch	Low

6.2.1 Modbus<->KNX

KNX/EIB KNX-RS4

6.2.2. RS485/RS485<->KNX



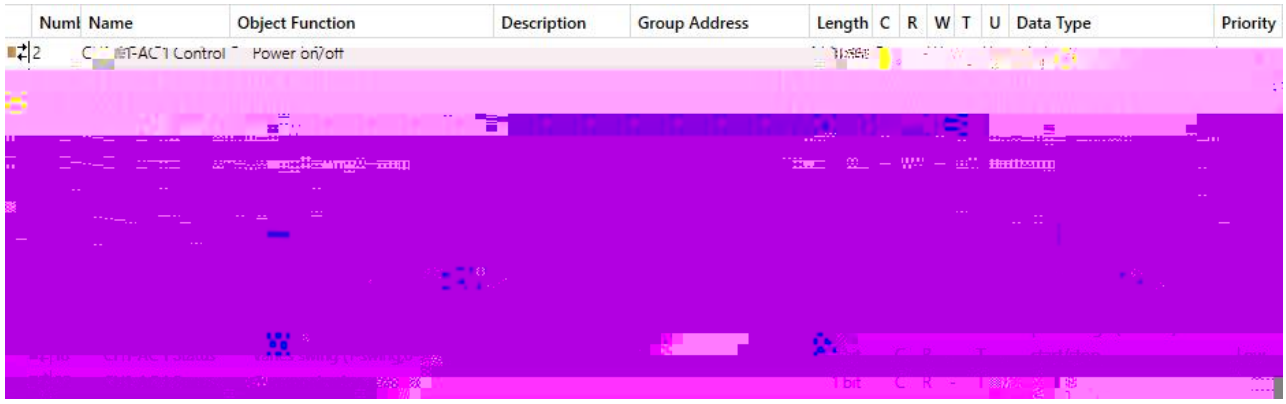
Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
2	CH1-Datapoint 1: Output	1bit binary value			1 bit	C	R	-	T	-	switch	Low
2	CH1-Datapoint 1: Input	1bit binary value			1 bit	C	-	W	-	-	switch	Low
2	CH1-Datapoint 1: Output	1byte unsigned value			1 byte	C	R	-	T	-	counter pulses (0	Low
2	CH1-Datapoint 1: Input	1byte unsigned value			1 byte	C	-	W	-	-	counter pulses (0..255)	Low
2	CH1-Datapoint 1: Output	1byte scene No.			1 byte	C	R	-	T	-	scene number	Low
2	CH1-Datapoint 1: Input	1byte scene No.			1 byte	C	-	W	-	-	scene number	Low
2	CH1-Datapoint 1: Output	2byte unsigned value			2 bytes	C	R	-	T	-	pulses	Low
2	CH1-D											

6.2.2 RS485/RS232<->KNX

					DPT
2	**1 > >** **1 >** **1 N .** **2 >**	**CH1- D > 1 : O** **CH1- D > 1 : I**	**1 >** **1** **2**	**C, R, T** **C, W**	**1.001 >** **5.010** **17.001** **7.001**
KNX RS485/232 k KNX to RSxxx (Input)/RSxxx to KNX (Output) Description (max 30char.) ...Datapoint x...					

6.2.2 RS485/232<->KNX

6.2.3. VRV/VRF



Numl	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
2	C	T-AC1 Control	Power on/off									

6.2.3 VRV/VRF gateway

						DPT
2	**P /**	**CH1-AC 1 C**	**1 >**	**C, W, U**	**1.001 >**	
	k	1- /0-				
3	**C >**	**CH1-AC 1 C**	**1 2**	**C, W, U**	**5.010 (0..255) 9.001**	
	k				0..255/0..65535	
5	**C**	**CH1-AC 1 C**	**1**	**C, W, U**	**20.105 HVAC**	
	k					
6	**F**	**CH1-AC 1 C**	**1**	**C, W, U**	**5.001**	
	k					
7	**V > (1- > ,0-)**	**CH1-AC 1 C**	**1 >**	**C, W, U**	**1.010 /**	
7	**V U -D > (1- > ,0-)**	**CH1-AC 1 C**	**1 >**	**C, W, U**	**1.010 /**	
9	**V L -R> > (1- > ,0-)**	**CH1-AC 1 C**	**1 >**	**C, W, U**	**1.010 /**	

DAIKIN (DTA116A621) ! Toshiba □□□□ Other Vanes swing (1-swing,0-stop) k

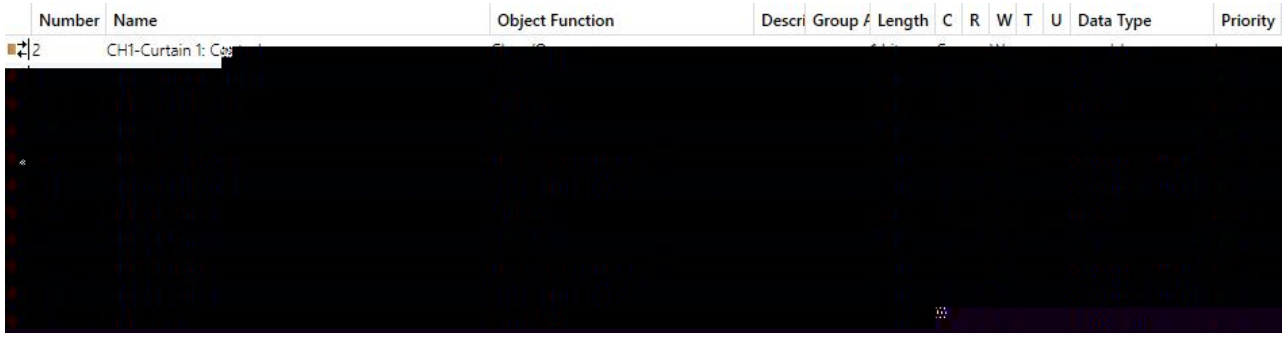
□Fujitsu □ Vanes Up-Down swing (1-swing,0-stop)

□

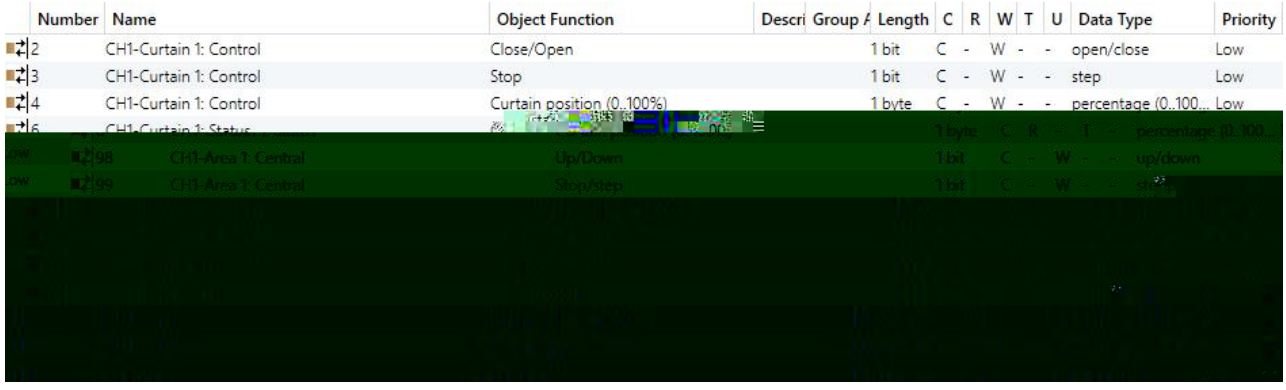
13	**P /**	**CH1-AC 1 S**	**1 >**	**C,R,T**	**1.001 >**
k 1 ˚ /0 ˚					
14	**C >**	**CH1-AC 1 S**	**1 2**	**C,R,T**	**5.010 (0..255) 9.001**
k 0..255 / 0..65535					
16	**C**	**CH1-AC 1 S**	**1**	**C,R,T**	**20.105 HVAC**
k					
17	**F**	**CH1-AC 1 S**	**1**	**C,R,T**	**5.001**
k					
18	**V > (1- > ,0-)**	**CH1-AC 1 S**	**1 >**	**C,R,T**	**1.010 /**
18	**V U -D >** **(1- > ,0-)**	**CH1-AC 1 S**	**1 >**	**C,R,T**	**1.010 /**
20	**V L -R> >** **(1- > ,0-)**	**CH1-AC 1 S**	**1 >**	**C,R,T**	**1.010 /**
DAIKIN (DTA116A621) ! Toshiba Other Vanes swing (1-swing,0-stop) k Fujitsu Vanes Up-Down swing (1-swing,0-stop) Vanes Left-Right swing (1-swing,0-stop) k k 0- /1-					
22	**C > >**	**CH1-AC 1 S**	**1 >**	**C,R,T**	**1.005**
k					

6.2.3 VRV/VRF gateway

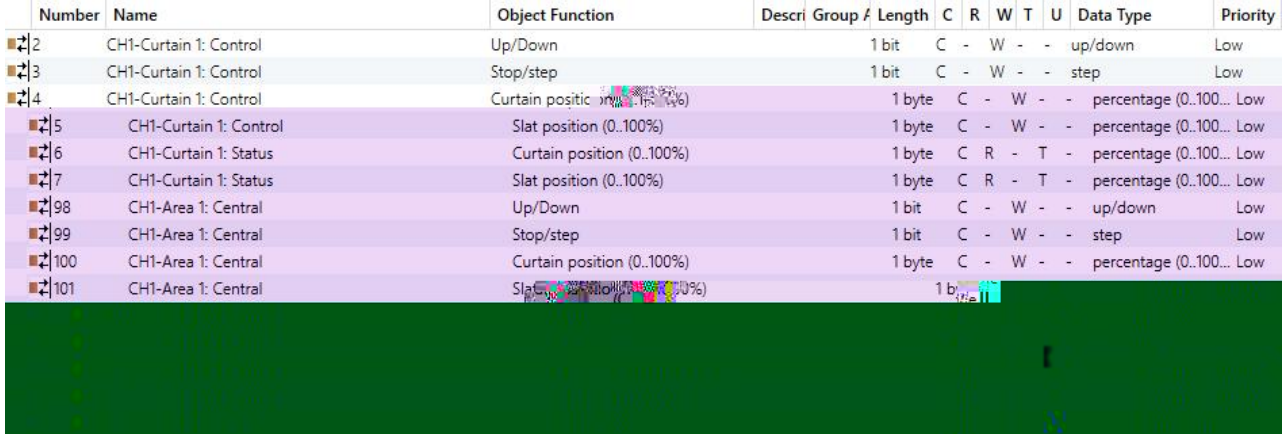
6.2.4. C >



Curtain step/move



Curtain position



Venetian blind position and slat

6.2.4 Curtain

									DPT	
2	**C**	**/O**		**CH1- C**	**> 1 : C**	**1 >**	**C,W**	**1.009**	**/**
3	**S**			**CH1- C**	**> 1 : C**	**1 >**	**C,W**	**1.007**	

/ / k Curtain step/move k

Obj.2

/ / / k Venetian blind position and slat

k

Obj.3 k

1 ˚ /

0 ˚ /

Obj.5 k 0..100%

Obj.7 k 0..100%

Obj.2 Obj.4 Obj.6 k

98	**U /D**	**CH1- A 1 : C**	**1 >**	**C,W**	**1.008 /**
99	**S /**	**CH1- A 1 : C**	**1 >**	**C,W**	**1.007**
100	**C > >> (0..100%)**	**CH1- A 1 : C**	**1**	**C,W**	**5.001**
101	**S >> (0..100%)**	**CH1- A 1 : C**	**1**	**C,W**	**5.001**

/ / / k

Obj.98 / k

1 ˚

0 ˚

Obj.99 k

1 ˚

Obj.100 k 0..100%

Obj.101 k 0..100%

Description (max 30char.) ...Area x... k

130	**U /D**	**CH1-A : C**	**1 >**	**C,W**	**1.008 /**
131	**S /**	**CH1-A : C**	**1 >**	**C,W**	**1.007**
132	**C > >> (0..100%)**	**CH1-A : C**	**1**	**C,W**	**5.001**
133	**S >> (0..100%)**	**CH1-A : C**	**1**	**C,W**	**5.001**

/ / / k

Obj.130 / k

1 ˚

0 ˚

Obj.131 k 1 ˚ Obj.132 k 0..100% Obj.133 k 0..100%					
134	**S /**	**CH1-S**	**1**	**C,W**	**18.001**
k 0..63					

6.2.4 Curtain

6.2.5. A >

6.2.5 Audio

					DPT
2	**P /**	**CH1- A > 1 : C**	**1 >**	**C,W,U**	**1.001 >**
/ / k 1 ˚ 0 ˚ Description (max 30char.) ...Audio x... k					
3	**P =1/P =0**	**CH1- A > 1 : C**	**1 >**	**C,W,U**	**1.010 /**
/ k 1 ˚ 0 ˚					

4	**N =1/P > =0**	**CH1- A > 1 : C**	**1 >**	**C,W**	**1.007**
			/	k	
	1 ˚				
	0 ˚				
5	**M**	**CH1- A > 1 : C**	**1 >**	**C,W,U**	**1.003**
6	**V +=1/V -=0**	**CH1- A > 1 : C**	**1 >**	**C,W**	**1.007**
	1bit	k			
	Obj.5	k			
	1 ˚				
	0 ˚				
	Obj.6	k			
	1 ˚				
	0 ˚				
7	**A**	**CH1- A > 1 : C**	**1**	**C,W,U**	**5.001** **5.004**
	1byte	k			
		k		0..100 / 0..255	
8	**P**	**CH1- A > 1 : C**	**1**	**C,W,U**	**5.010**
				k	
9	**P /**	**CH1- A > 1 : S**	**1 >**	**C,R,T**	**1.001 >**
		k			
	1 ˚				
	0 ˚				
10	**P =1/P =0**	**CH1- A > 1 : S**	**1 >**	**C,R,T**	**1.010 /**
		k			
	1 ˚				
	0 ˚				
11	**M**	**CH1- A > 1 : S**	**1 >**	**C,R,T**	**1.003**
	1bit		k		

1 ˚ 0 ˚					
12	**A**	**CH1- A > 1 : S**	**1**	**C,R,T**	**5.001** **5.004**
1byte 0..100 / 0..255				k	
13	**P**	**CH1- A > 1 : S**	**1**	**C,R,T**	**5.010**
k					

6.2.5 Audio