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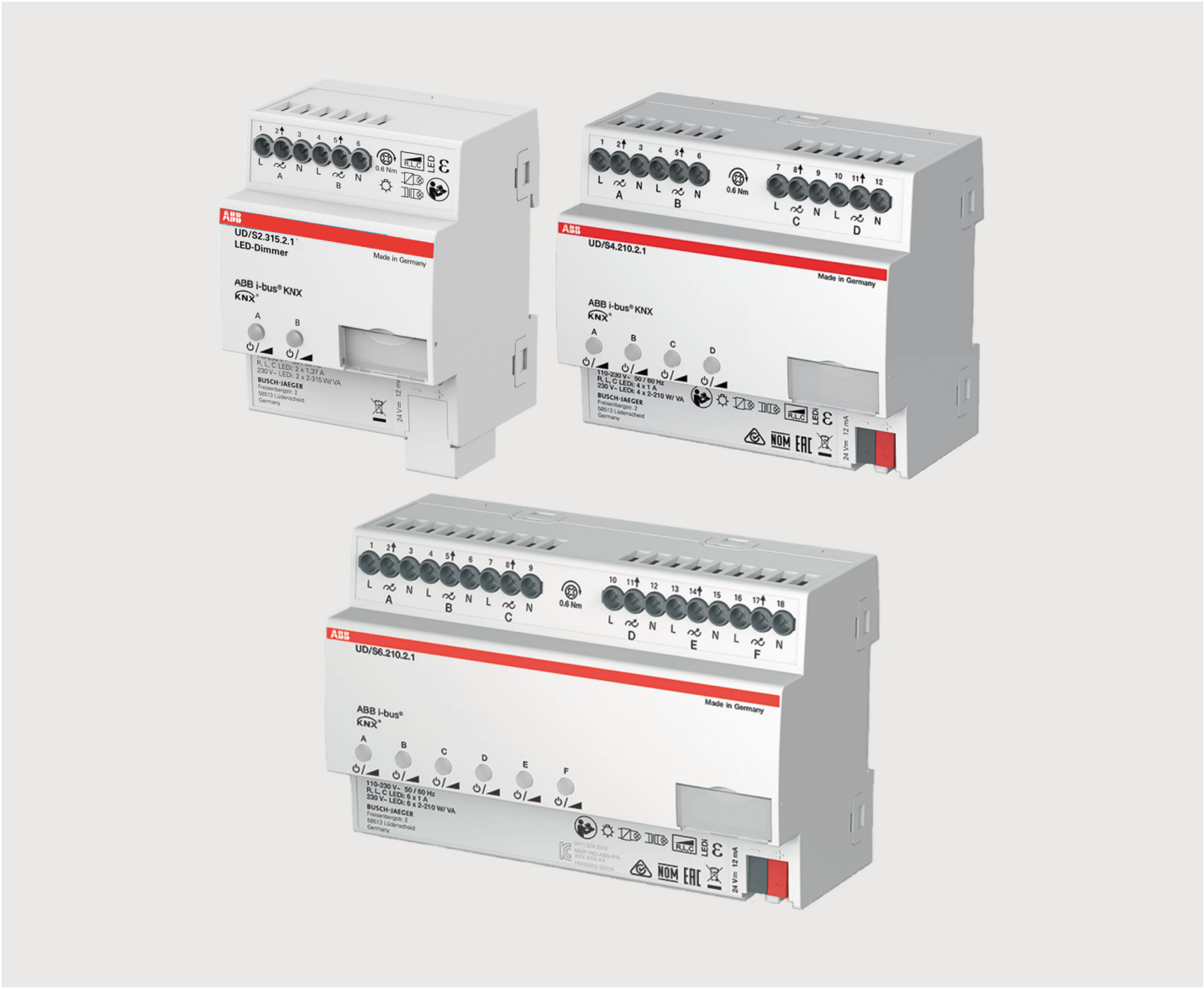
Product manual

LED dimmer 4/6x210 W, MDRC UD/Sx.210.2.1x
LED dimmer 2/4/6x315 W, MDRC UD/Sx.315.2.1x
LED dimmer 1x1260 W, MDRC UD/Sx.1260.2.1x



PRODUCT SELECTION GUIDE

ABB i-bus® KNX
Lighting Control

■ = Function is supported

– = Function is not supported

1) = Selected LED retrofit lamps are tested and approved. Restrictions have to be observed Details see Busch-Dimmer® Tool (www.busch-jaeger.com)

2) = One channel uses 500 W

	Universal Dim Actuators			LED Dimmer with constant curve	
	UD/S x.210.2.1	**UD/S 2.300.2**	**6197/x-101-500 (x=12-15, 52, 53)**	**6155/30-500 1–4-fold**	**6155/40-500 1–4-fold with power supply**
General					
Supply voltage	110 – 230 V AC ± 10 %, 50/60 Hz	230 V -15/+10 %, 50/60 Hz	230 V AC ± 10 %, 50/60 Hz	12...24 V DC	230 V AC ± 10%, 50/60 Hz
Type of installation	MDRC	MDRC	MDRC	Wall (surface)	Wall (surface)
Module width (18 mm)	6/8	4	8/12	–	–
Number of outputs	4/6	2	1, 4, 6	4	4
Maximum load per channel	4 x 210 W (1 x 600 W)/ 6 x 210 W (1 x 800 W)	2 x 300 W, or 1x 500 W/VA	210, 315, 600, 1260, 2400 VA	1 x 10 A/ 4 x 2.5 A	1 x 4 A/ 4 x 1 A
Incoming supply	4/6 phase inputs	2 phase inputs	3 phase inputs	1 phase input	1 phase input
Load types					
230 V incandescent lamps	■	■	■	–	–
230 V halogen lamps	■	■	■	–	–
Low-voltage halogen lamps with conventional transformers or electronic transformers	■	■	■	–	–
LED strips or 12/24 V lamps	–	–	–	■	■
LED Retrofit 230 V	■	–	■ 1)	–	–
Grouping of channels for load increase	■	■ 2)	■	■	■
Switching					
Brightness value when turned on	■	■	■	■	■
Dimming speed for switching on and off	■	■	■	■	■
Dimming					
Min. and max. dimming values	■	■	■	■	■
Switching on/off via rel. dimming	■	■	■	■	■

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	Universal Dim Actuators			LED Dimmer with constant curve	
	UD/S x.210.2.1	UD/S 2.300.2	6197/x-101-500 (x=12-15, 52, 53)	6155/30-500 1–4-fold	6155/40-500 1–4-fold with power supply
Further functions					
Forced operation	■	■	–	–	–
Dimming curve adjustment	■	■	■	–	–
Reaction on bus voltage failure	■	■	■	–	–
Behavior on bus voltage recovery	■	■	■	■	■
Status feedback	■	■	■	■	■
Blocking channel	■	■	■	■	■
Scenes	■	■	■	■	■
Phase angle control: automatic, leading or trailing edge	■	■	■	–	–
Additional logic functions	■	–	■	–	–
Staircase lighting	■	■	■	–	–

ABB i-bus® KNX
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1) = The maximum peak inrush current may not be exceeded

	Switch/Dim Actuators			Constant Light Control	
	SD/S 2.16.1	**SD/S 4.16.1**	**SD/S 8.16.1**	**LR/S 2.16.1**	**LR/S 4.16.1**
General					
Supply voltage	KNX	KNX	KNX	KNX	KNX
Type of installation	MDRC	MDRC	MDRC	MDRC	MDRC
Module width (18 mm)	4	6	8	4	6
Number of outputs 1-10 V (passive)	2	4	8	2	4
Manual operation	■	■	■	■	■
Maximum current per control output	100 mA	100 mA	100 mA	100 mA	100 mA
Maximum cable length at maximum load (100 mA)	70 m (cable cross-section 0.8 mm^2) 100 m (cable cross-section 1.5 mm^2)	70 m (cable cross-section 0.8 mm^2) 100 m (cable cross-section 1.5 mm^2)	70 m (cable cross-section 0.8 mm^2) 100 m (cable cross-section 1.5 mm^2)	70 m (cable cross-section 0.8 mm^2) 100 m (cable cross-section 1.5 mm^2)	70 m (cable cross-section 0.8 mm^2) 100 m (cable cross-section 1.5 mm^2)
Light sensor (LF/U 2.1)	–	–	–	2	4
Maximum cable length per sensor (P-YCYM or J-Y(ST)Y cable (SELV), diameter 0.8 mm	–	–	–	100 m	100 m
Power loss per device at max. load	2.6 W	5.2 W	10.4 W	2.6 W	5.2 W
Switching capacity					
Rated current I_n	16 A AC1	16 A AC1	16 A AC1	16 A AC1	16 A AC1
Rated voltage U_n	250/440 V AC	250/440 V AC	250/440 V AC	250/440 V AC	250/440 V AC
AC1 operation (cos ϕ = 0.8) DIN EN 60 947-4-1	16 A	16 A	16 A	16 A	16 A
AC3 operation (cos ϕ = 0.45) DIN EN 60 947-4-1	8 A/ 230 V	8 A/ 230 V	8 A/ 230 V	8 A/ 230 V	8 A/ 230 V
Fluorescent lighting load AX DIN EN 60 669-1	10 A (140 µF) 1)	10 A (140 µF) 1)	10 A (140 µF) 1)	10 A (140 µF) 1)	10 A (140 µF) 1)
Minimum switching capacity	100 mA/12 V	100 mA/12 V	100 mA/12 V	100 mA/12 V	100 mA/12 V
DC current switching capacity (resistive load)	10 A/24 V DC	10 A/24 V DC	10 A/24 V DC	10 A/24 V DC	10 A/24 V DC
Mechanical service life	> 3 x 10^6	> 3 x 10^6	> 3 x 10^6	> 3 x 10^6	> 3 x 10^6
Electronic endurance to DIN IEC 60 947-4-1					
Rated current AC1 (240 V/cos ϕ = 0.8)	100,000	100,000	100,000	100,000	100,000
Rated current AC3 (240 V/cos ϕ = 0.45)	30,000	30,000	30,000	30,000	30,000
Rated current AC5a (240 V/cos ϕ = 0.45)	30,000	30,000	30,000	30,000	30,000
Incandescent lamp load at 230 V AC	2,300 W	2,300 W	2,300 W	2,300 W	2,300 W
Fluorescent lamps T5/T8					
Uncorrected	2,300 W	2,300 W	2,300 W	2,300 W	2,300 W
Parallel compensated	1,500 W	1,500 W	1,500 W	1,500 W	1,500 W
DUO circuit	1,500 W	1,500 W	1,500 W	1,500 W	1,500 W
Low-voltage halogen lamps					
Inductive transformer	1,200 W	1,200 W	1,200 W	1,200 W	1,200 W
Electronic transformer	1,500 W	1,500 W	1,500 W	1,500 W	1,500 W
Halogen lamp 230 V	2,500 W	2,500 W	2,500 W	2,500 W	2,500 W
Dulux lamps					
Uncorrected	1,100 W	1,100 W	1,100 W	1,100 W	1,100 W
Parallel compensated	1,100 W	1,100 W	1,100 W	1,100 W	1,100 W
Mercury-vapour lamps					
Inductive transformer	2,000 W	2,000 W	2,000 W	2,000 W	2,000 W
Electronic transformer	2,000 W	2,000 W	2,000 W	2,000 W	2,000 W

ABB i-bus® KNX
Lighting Control

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1) = For multiple element lamps or other types, the number of electronic ballasts must be determined using the peak inrush current of the electronic ballasts

	Switch/Dim Actuators			Constant Light Control	
	SD/S 2.16.1	SD/S 4.16.1	SD/S 8.16.1	LR/S 2.16.1	LR/S 4.16.1
Sodium-vapour lamps					
Inductive transformer	2,000 W	2,000 W	2,000 W	2,000 W	2,000 W
Electronic transformer	2,000 W	2,000 W	2,000 W	2,000 W	2,000 W
Max. peak inrush-current I_p (150 µs)	400 A	400 A	400 A	400 A	400 A
Max. peak inrush-current I_p (250 µs)	320 A	320 A	320 A	320 A	320 A
Max. peak inrush-current I_p (600 µs)	200 A	200 A	200 A	200 A	200 A
Number of ballasts (T5/T8, single element) e.g.[1)]					
18 W (ABB EVG 1 x 18 SF)	23	23	23	23	23
24 W (ABB EVG 1 x 24 CY)	23	23	23	23	23
36 W (ABB EVG 1 x 36 CF)	14	14	14	14	14
58 W (ABB EVG 1 x 58 CF)	11	11	11	11	11
80 W (Helvar EL 1 x 80 SC)	10	10	10	10	10

	Switch/Dim Actuators			Constant Light Control	
	SD/S 2.16.1	SD/S 4.16.1	SD/S 8.16.1	LR/S 2.16.1	LR/S 4.16.1
Functions					
Brightness control	–	–	–	■	■
Brightness value	■	■	■	■	■
Dimming speed for transition brightness values	■	■	■	■	■
Min. and max. value limits	■	■	■	■	■
Set switching on and off via value	■	■	■	■	■
Presets	■	■	■	■	■
Scenes	■	■	■	■	■
Switch					
Brightness value when turned on	■	■	■	■	■
Dimming speed for switching on and off	■	■	■	■	■
Dimming					
Dimming speed can be changed via KNX	■	■	■	■	■
Min. and max. dimming values	■	■	■	■	■
Switching on/off via rel. dimming	■	■	■	■	■
Forced operation					
2-bit coded forced operation	■	■	■	■	■
Behaviour after voltage recovery	■	■	■	■	■
Block Activate output via 1-bit object	■	■	■	■	■
Special					
4-point characteristic adjustment	■	■	■	■	■
Preference with bus voltage failure	■	■	■	■	■
Status feedback	■	■	■	■	■
Additional					
Slave mode e.g. for integration in the constant lighting control	■	■	■	■	■
Staircase lighting	■	■	■	■	■
Prewarning via dimming and/or KNX object	■	■	■	■	■
Commissioning and diagnostic functions					
Control and diagnosis via ABB i-bus® Tool	–	–	–	■	■