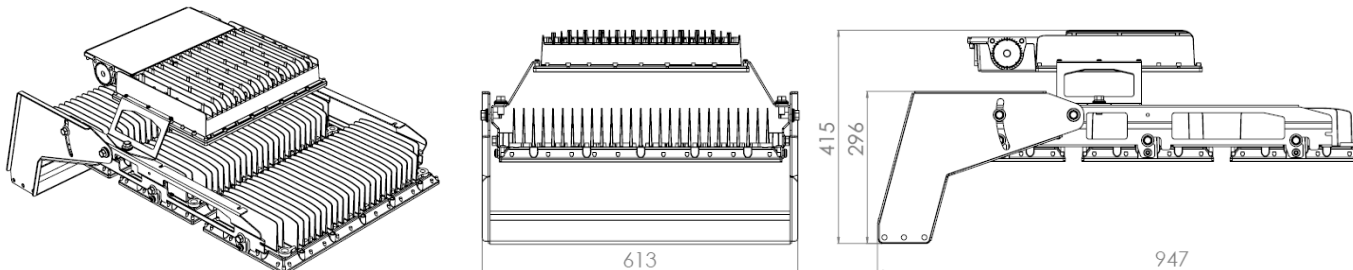


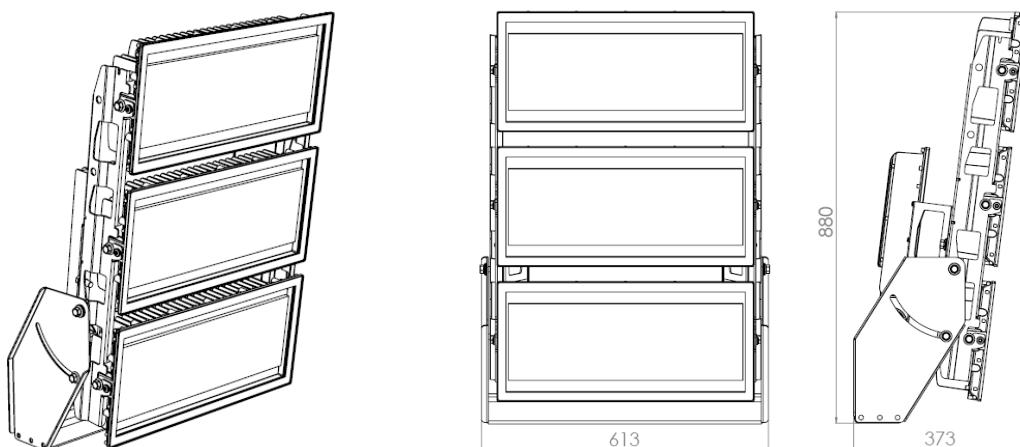
Bubo 1.5 B3 & B2 - Mounting instructions



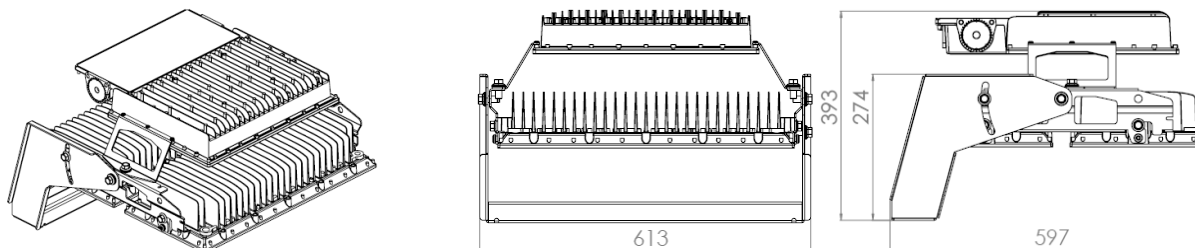
Bubo B3 Area



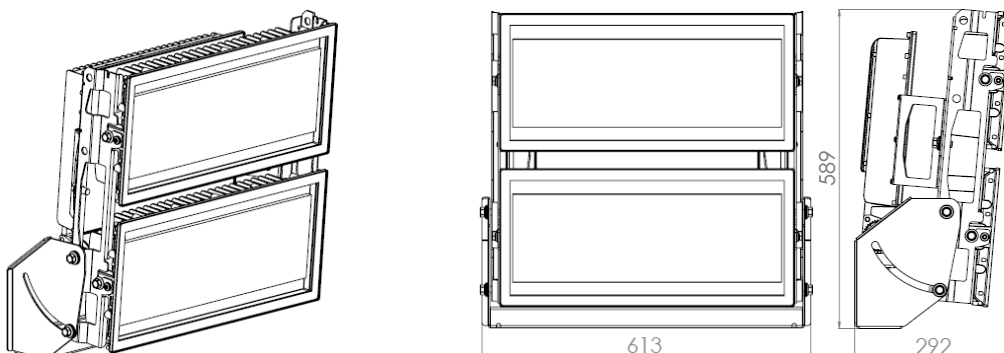
Bubo B3 Stadium



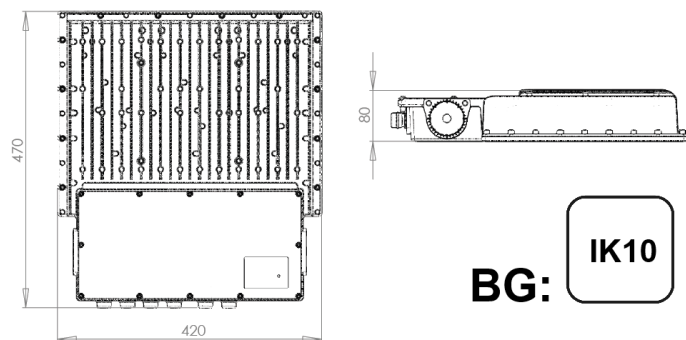
Bubo B2 Area



Bubo B2 Stadium



BG Gear unit size



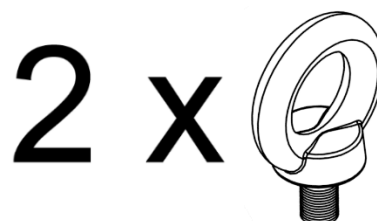
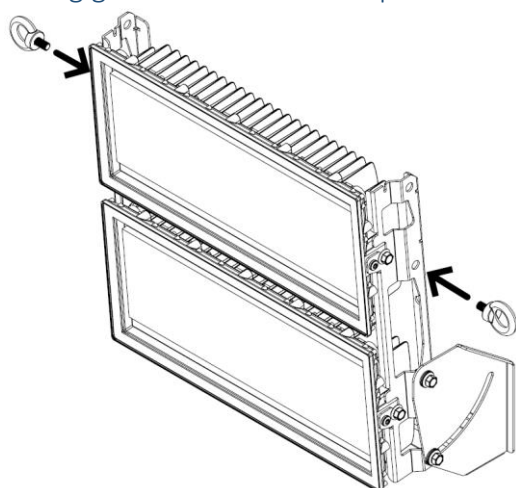
Bubo weight

	Luminaire	Area	Bracket		Hall	Drivers	
	Rack with Light Engines		Stadium			Gear unit	Bracket
Bubo B3	30 kg	9,9 kg	9,8 kg		6,3 kg	8,7 kg	0,5 kg
Bubo B2	20 kg	5,0 kg	4,3 kg			7,6 kg	0,5 kg

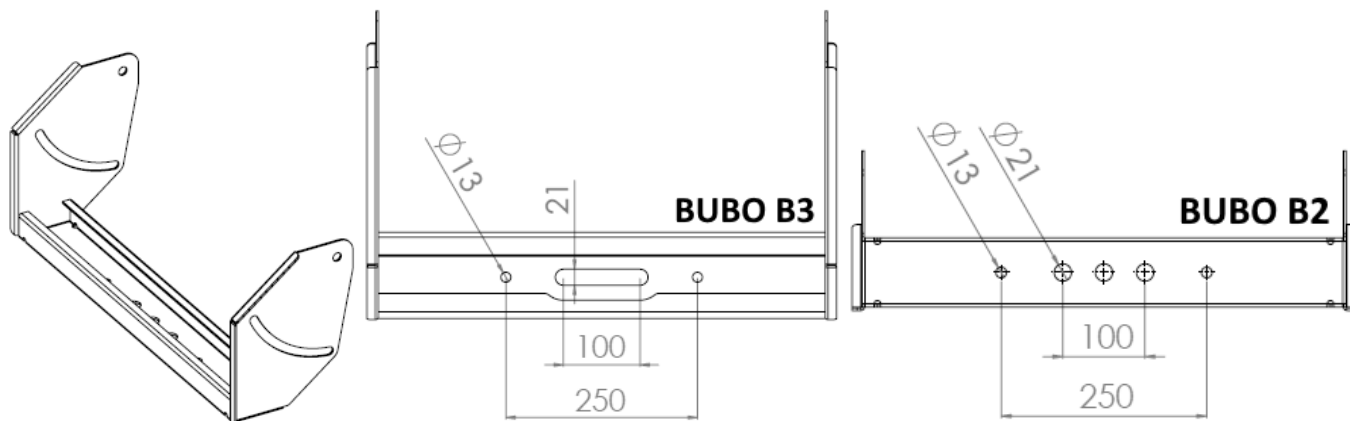
Bubo A_w m²

	Bracket Style	Drivers	Installation angle							
			0deg		15deg		40deg		65deg	
			Front	Side	Front	Side	Front	Side	Front	Side
Bubo B3	Area	With Gear unit	0,14	0,16	0,28	0,17				
		Luminaire only	0,11	0,12	0,25	0,13				
	Stadium	With Gear unit					0,41	0,15	0,51	0,15
		Luminaire only					0,41	0,11	0,51	0,12
Bubo B2	Area	With Gear unit	0,14	0,13	0,26	0,14				
		Luminaire only	0,11	0,09	0,20	0,10				
	Stadium	With Gear unit					0,35	0,12	0,38	0,12
		Luminaire only					0,30	0,08	0,36	0,09

Lifting gear M12 attachment points

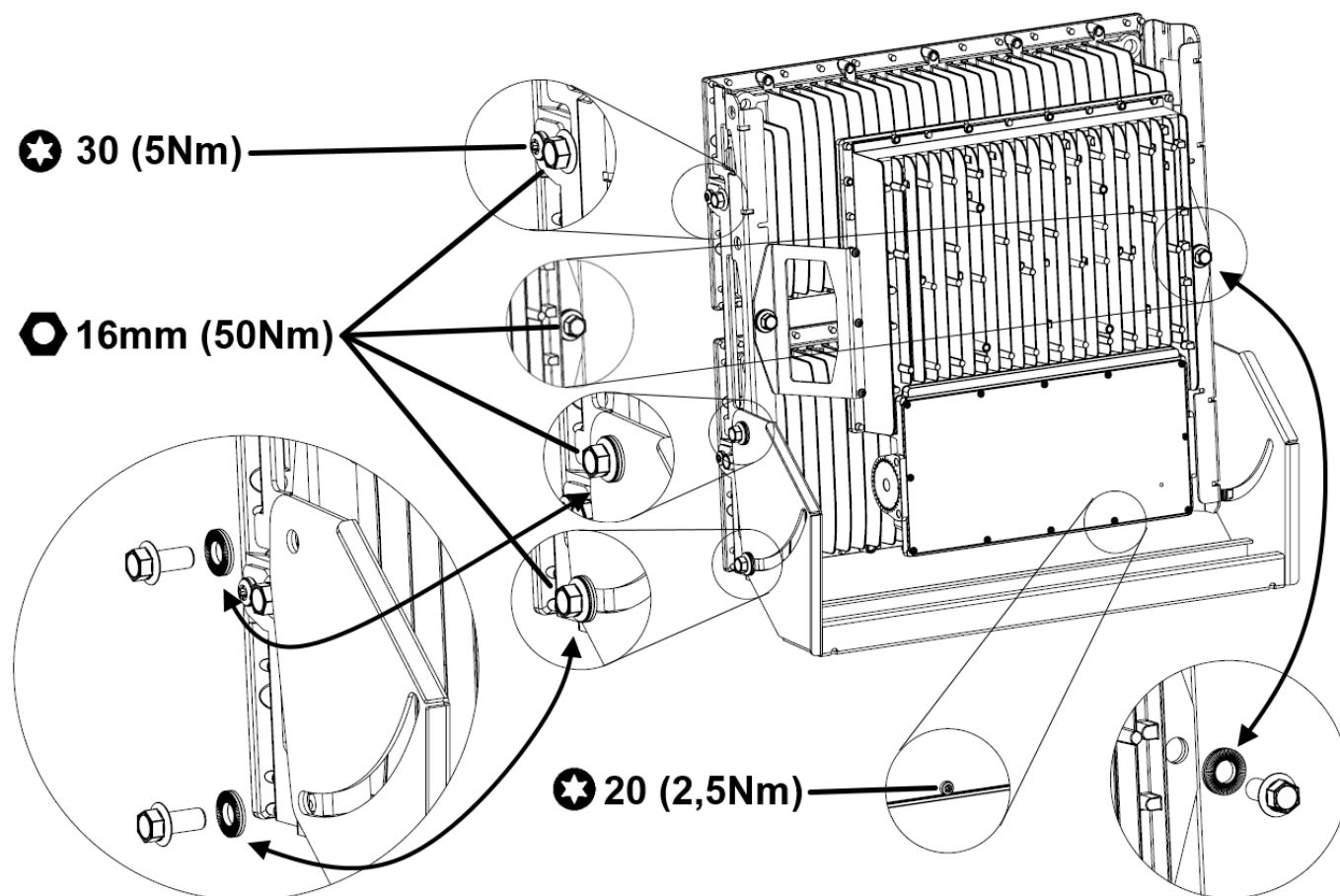


Fixation Bracket detail



Use M20 bolt and washer – Tighten to **100Nm** (Recommended washer according to DIN9021)
 or use 2 pieces M12 bolts with washers – Tighten to **50Nm**.

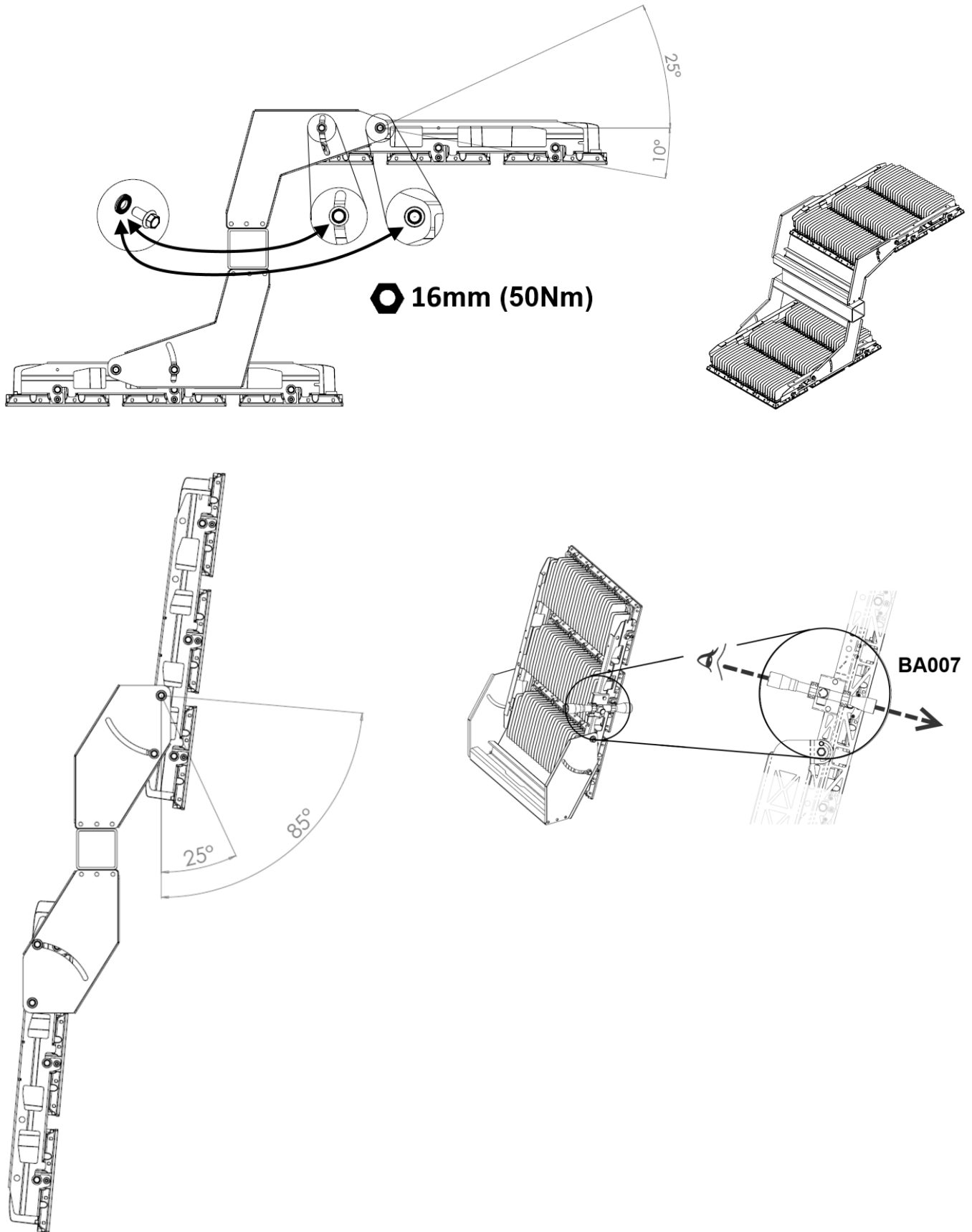
Installation – Mounting



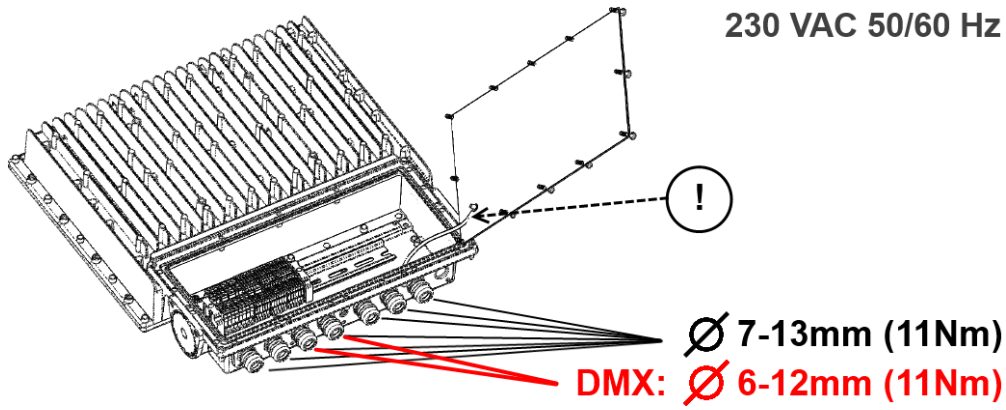
Adjusting luminaire angle

- I. After finding the right alignment
- II. Tighten aim locking bolts
- III. Tighten the main axle bolts

Recommended adjustment range



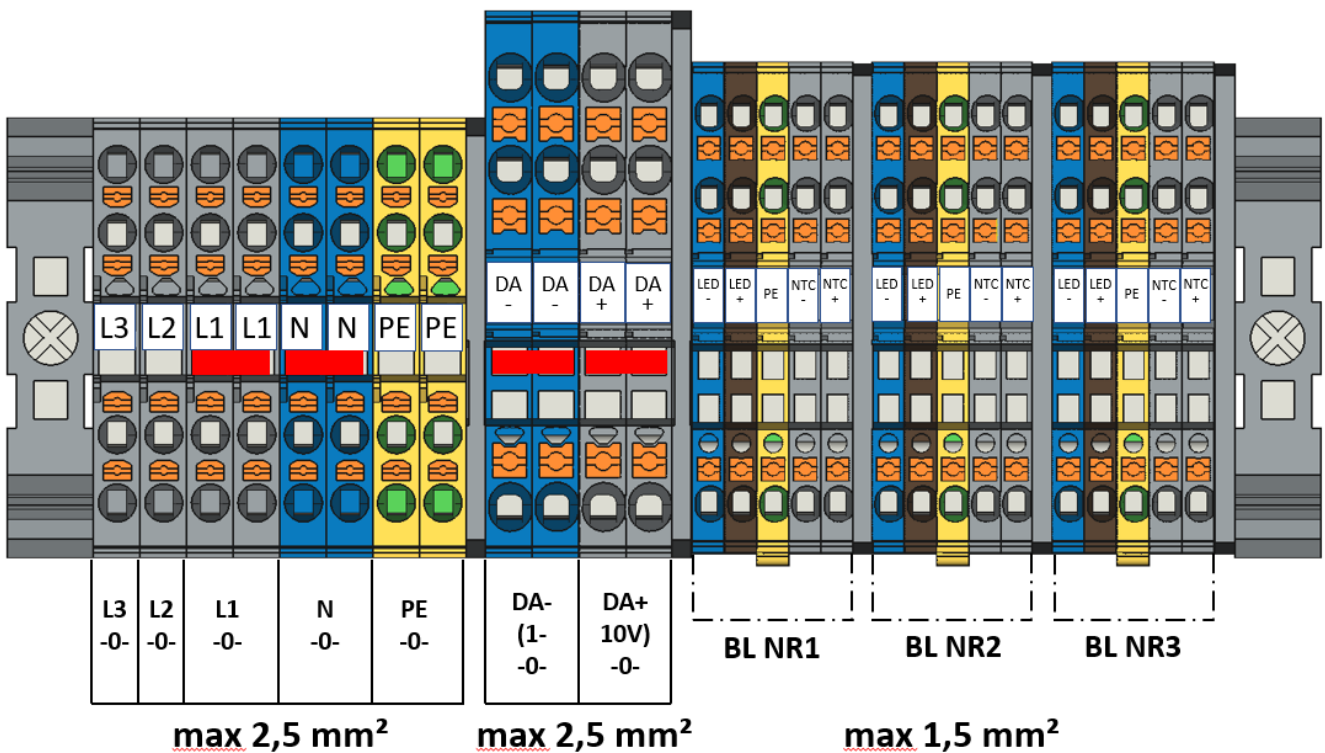
Installation – Electrical connections



BL light unit standard cable wire colors:

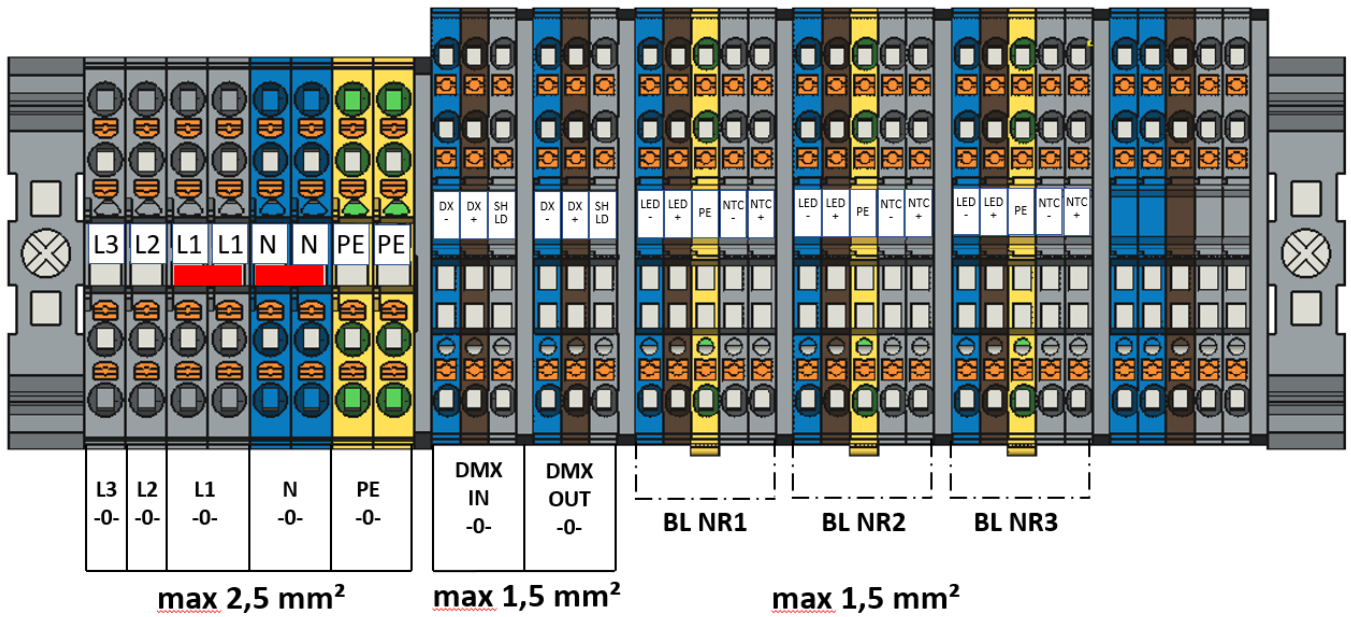
	EN		FI	SE	DE
LED+	BN	BROWN	RU	BR	BR
LED-	BU	BLUE	SI	BL	BL
NTC+	WH	WHITE	VA	VT	WS
NTC-	BK	BLACK	MU	SV	SW
PE	GN-YE	GREEN-YELLOW	KE-VI	GR-GU	GN-GE

DALI and 1-10V electrical connections



- EN: Control circuit must be provided with cable which is insulated according the mains voltage.
- FI: Ohjauspiirissä on käytettävä verkkojännitteen mukaan eristettyjä johtimia.
- SE: Styrkrets måste ha kabel som är isolerad enligt nätspänningen.
- DE: Der Steuerkreis muss mit einem Kabel versehen sein, die entsprechend der Netzspannung isoliert ist.

DMX electrical connections



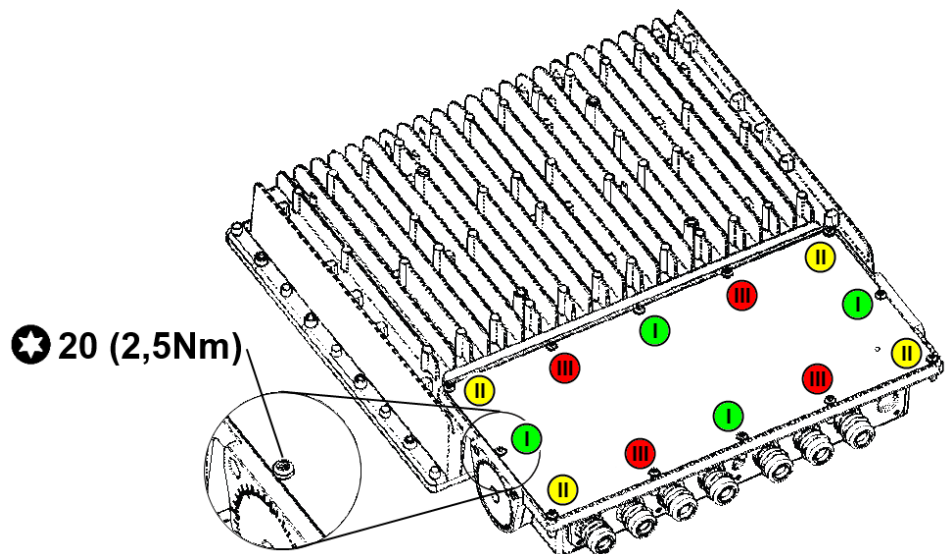
- EN: Luminaire requires 1 address. DMX-out of the last luminaire in the chain be terminated with an 110Ω end resistor.
- FI: Valaisin vie 1 osoitteen. DMX-ketjun viimeisen valaisimen DMX-lähtö on päätettävä 110Ω vastuksella.
- SE: Armaturen kräver 1 adress. DMX-avgång från den sista armaturen i kedjan avslutas med ett 110Ω ändmotstånd.
- DE: Leuchte benötigt 1 Adresse. Der DMX-Ausgang der letzten Leuchte in der Kette wird mit einem 110Ω-Abschlusswiderstand abgeschlossen.

Closing the BG Gear unit

Use correct closing order and appropriate 2,5Nm torque

- I. Begin tightening screws from the middle of sides
- II. Tighten corners next
- III. Fasten all the resulting screws

Make sure that the safety wire is not between the housing and the lid and screws for the lid are secured properly.



Notification regarding cables

- Fasten all cables to luminaire housing or bracket with zip-ties (or equivalent) to prevent movement of loose cables.
- Pay attention to sharp corners to prevent damage to cables

Circuit breaker design chart

Number of luminaires per circuit breaker BG (BGE)

			B10 A	B16 A	C10 A	C16 A	Gg10 A	Gg16 A
Bubo B1 120	500mA	0,8 A	7	14	11	18	8	14
	700mA	1,1 A	5	8	8	13	6	10
	850mA	1,3 A	4	7	6	11	5	8
	1000mA	1,5 A	4	6	6	9	4	7
	1200mA	1,9 A	3	5	4	7	3	5
	1400mA	2,2 A	2	4	4	6	3	5
Bubo B2 240	500mA	1,5 A	4	6	6	9	4	7
	700mA	2,1 A	2	4	4	6	3	5
	850mA	2,6 A	2	3	3	5	2	4
	1000mA	3,1 A	2	3	3	4	2	3
	1200mA	3,7 A	1 (1)	2 (2)	2 (2)	3 (3)	2 (1)	3 (2)
	1400mA	4,4 A	1 (1)	2 (2)	2 (1)	3 (2)	1 (1)	2 (2)
Bubo B3 360	500mA	2,3 A	2	4	3	6	3	4
	700mA	3,2 A	1	3	2	4	2	3
	850mA	3,9 A	1	2	2	3	2	2
	1000mA	4,6 A	1	2	2	3	1	2
	1200mA	5,6 A	1 (1)	1 (2)	1 (1)	2 (2)	1 (1)	2 (1)
	1400mA	6,6 A	1 (1)	1 (1)	1 (1)	2 (1)	1 (1)	1 (1)

BG Gear model**Inrush current peak****BG *x****-1**

< 4A (pulses greater than 1ms) 15A, t=170µs (10% of Ipeak)

BG *x**-2**

< 8A (pulses greater than 1ms) 30A, t=170µs (10% of Ipeak)

BG *x**-3**

< 12A (pulses greater than 1ms) 45A, t=170µs (10% of Ipeak)

BG *x****-1 is typically used with luminaire model Bubo B1

BG *x****-2 is typically used with luminaire model Bubo B2

BG *x****-3 is typically used with luminaire model Bubo B3

BGE Gear model**Inrush current peak****Model for 2 BL**

29A, t=2000µs

Model for 3 BL

40A, t=2500µs