



TECHNICAL SUBMITTAL APPROVAL FORM					
Subcontractor / Supplier: Lorne Stewart Works Package: F301			Project: Centre Point		
Tech Sub Ref No: F301-TS-188		Rev: 1	Date: 25/02/17		
Title:	Type <i>XB Light Fitting</i>				
Floor/ Location:	Centre Point Tower Halo to Exterior Piloti Lighting				
Specification Reference:	Speirs and Major Lighting Schedule 3553-LP-001 Refers Grontmij Electrical Services Technical Specification Rev 09 refers				
Other:					
<p>Submittal Notes: RMA Queries: Fittings to Piloti columns on grid 3F &4F are part of the ER's, final decision on whether they are install or not should not influence tech sub approval. C&P Queries: LED technology has advanced since original specification, with some lines being discontinued, references will not match S&M Queries: Sample issued for approval. Sweco Queries: Driver type identified. Exact location of drivers to be agreed with architect. Drivers are compatible with lighting control system. NOTE: Status A required for procurement purposes, fixing details and exact location of Drivers to be agreed on site prior to install.</p>					
Signed:		On behalf of:	ARCHITECT	Date:	
Status:	A B C (circle one)				
Comment:					
Signed:		On behalf of:	GMJ	Date:	
Status:	A B C (circle one)				
Comment:					
Signed:		On behalf of:	CMT (GMJ)	Date:	
Status:	A B C (circle one)				
Comment:					
Signed:		On behalf of:	CMT (CPI/RMA)	Date:	
Status:	A B C (circle one)				
Comment:					
Signed:		On behalf of:	MPX	Date:	
FINAL STATUS:	A B C (circle one)				



1 - Technical Submission Front Page

Trade Contractor:	Lorne Stewart	From:	C Clarke
Trade Contractor Sub No:	671373M	Date:	07-02-17

Approval of the following equipment is required:

Equipment:	Lighting	Make :	LED Linear
Equipment References:	XB	Areas Used:	CPT Exterior Piloti
Description:	Centre Point Tower External Halo lighting to Piloti		
Planned On Site Date:	June 2017	Fully Compliant:	Yes See notes below.

Attached detail documents:

(Tick if included and Insert references within boxes identifying supporting documentation included within this submission)

Description	Tick	Doc Ref	Description	Tick	Doc Ref
<i>Technical submission front sheet</i>	✓		<i>Interfaces and Dependencies Schedule</i>	✓	
<i>Specifications & Non Compliance Schedule</i>	✓		<i>Builders Work Requirements</i>	N/A	
<i>Certified Performance Levels</i>	✓		<i>O&M Information</i>	N/A	
<i>Manufacturers Information</i>	✓		<i>List of recommended spares</i>	✓	
<i>Manufacturers Drawings</i>	✓		<i>Other</i>	N/A	

Signed by Trade Contractor:	<i>Cornelius Clarke</i>
Date:	25/02/2017

Approval (Note that approval and status of all technical submissions is to be given through the Aconex process. This section is included for cases where it is expedient to provide a paper sign off of the front sheet however in all such cases the consultant must attach this form to the TS on Aconex)

2 – Specification & Non- Compliance Schedule

Fitting as specified by Speirs and Major Light Fitting Schedule 3553-LP-001 Rev 07.
LED Tape increased from HD10 to HD15 to achieve specified light output..

3 – Manufacturers Information

See data sheets attached

Fitting will delivered to site pre-assembled and sealed.

Fittings will be made to various lengths to suite Piloti as follows

16 lengths of 3894mm

8 lengths of 2081.5mm

24 lengths of 894mm

12 lengths of 519mm

4- Manufacturers Drawings

See data sheets attached

5 - Interfaces and Dependencies Schedules

Interface Required	Detail	Provided By	Final Connection By
Power	230V supply	Lorne Stewart appointed sub-contractor	Lorne Stewart appointed sub-contractor
Control	Lighting control System	Lorne Stewart appointed sub-contractor	Lorne Stewart appointed sub-contractor
Installation	Route for containment and location of drivers to be agreed.	By MPX	Lorne Stewart appointed sub-contractor
Installation	Access required to top of Piloti	By MPX	Lorne Stewart appointed sub-contractor

6 - Builders Work Requirements

Hole may be required through concrete slab depending on route agreed.

7 - O&M Information

To be issued as part of our contractual obligation during the term of the contract.

8 – List of Recommended spares

Spares fitting will be supplied at PC as detailed within Specifications and ER's if required.

9 - Other

N/A



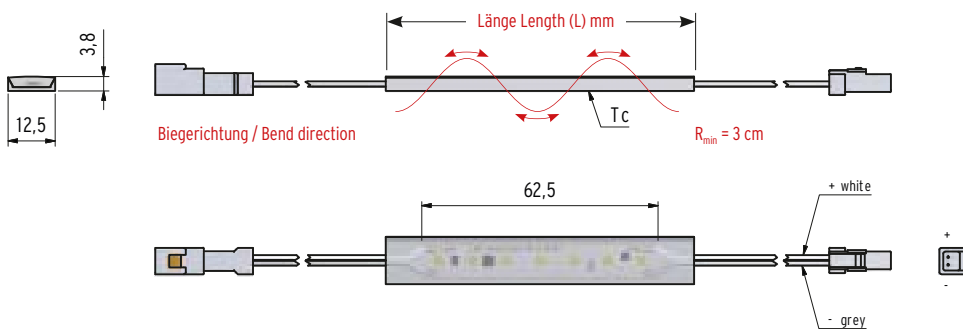
VarioLED™ Flex HYDRA HD White IP67



Wasser- und UV-geschützte flexible lineare LED Leuchte in bis zu 5 m Länge im Polyurethanverguss mit weißem Boden und mit 200 mm IP67 Mini Steckverbinder an beiden Enden.

Water & UV resistant flexible linear LED luminaire in up to 5 m length in polyurethane encapsulation with white casing and with 200 mm IP67 mini connectors on both ends.

Abmessungen & verfügbare Längen Dimensions & available lengths



$L = N \times 62,5 + 19$; $L_{min} = 1 \times 62,5 + 19 = 81,5$ mm; HD6/HD10 $\triangle L_{max} = 5.019$ mm; HD15 $\triangle L_{max} = 4.019$ mm
(HD6/HD10 $\triangle N = 1... 80$, HD15 $\triangle N = 1... 64$)

Tc-Punkt: Gesamte Rückseite des vergossenen LED Bands
Tc-point: Entire encapsulated flexboard rear side

Elektrische & Optische Betriebsdaten Electrical & output data

Farbtemperatur Color temperature ²		HD6	HD10	HD15		
		lumen/meter (lm/m) ¹				
● W820	2500 K	410	680	1090		
● W822	2900 K	470	780	1250		
● W825	3300 K	530	890	1430		
● W827	W927	3800 K	3600 K	480	800	1510
● W830	W930	4300 K	4300 K	490	810	1600
● W835	W935	5100 K	4900 K	500	830	1690
● W840	W940	6100 K	6600 K	510	860	1720
● W850	9600 K	710	1180	1880		

Es gelten die selben Daten wie für VarioLED™ Flex HYDRA HD mit folgenden Ausnahmen: 30% Lichtverlust und Farbverschiebung im Vergleich zum nicht vergossenen LED Strip.
Same data as for VarioLED™ Flex HYDRA HD apply, except: 30% light loss and color shift compared to non encapsulated LED strip.

Bitte sprechen Sie uns an für kundenspezifische Anpassungen, wie z. B. Kabellängen und Stecker.

Please ask for custom specific adaptations like cable length and plugs.

¹ Die angegebenen Daten sind typische Werte. Aufgrund von Produktionstoleranzen und der Toleranzen der elektrischen Bauteile können die Werte der elektrischen Leistung und des Lichtstroms um bis zu 10% nach oben oder unten abweichen.

¹ The given data are typical values. Due to tolerances of the production process and the electrical components, values for light output and electrical power can vary up to 10%.

² Bei IP67 Produkten können Toleranzen bei der Farbtemperatur auftreten. Nähere Erläuterung dazu finden Sie auf Seite 476.

² In case of IP67 products, tolerances in the color temperature can occur. For further explanation, please see page 476.

Bestellnummer Order code

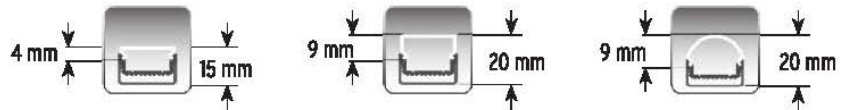
	Flex tape	Variant	Color rendering	Color temperature	Length	Ingress protection
Ihre Bestellnummer Your order code	VarioLED Flex HYDRA	HD __	W _	__	__ _ _	IP67
Bestellnummer Beispiel Order code example	VarioLED Flex HYDRA	HD6	W9	27	1144	IP67

Zubehör Accessories

erforderlich required	optional optional
Konverter Power supply unit z. B. e. g. Art.-# 16000154	Buchse Female connector z. B. e. g. Art.-# 15000142
3M Klebeband 3M Adhesive tape Art.-# 18200035	Transparenter Montageclip Transparent mounting clip Art.-# 13000115

Details siehe Seite 338 ff. Details on page 338 ff.

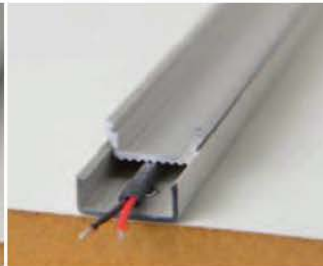
VarioContour 005



Schraube einführen
Insert screw



Schraube eindrehen
Screw-in



Zuleitung durch den Kabelkanal

Conduct cabling through the channel



Aufstecken des VarioContour 005

Click in VarioContour 005



Montage mit selbstklebender Rückseite
Mounting with self-adhesive rear side



Akzentbeleuchtung
Mood lighting



Zugentlastung sicherstellen
Strain relieve



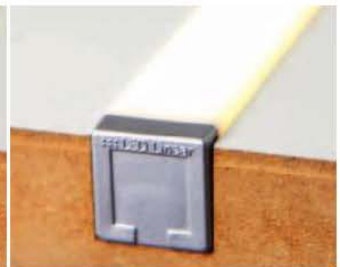
Endkappe anbringen
Fix end cap



Optionale Montage in der Nut
Optional mounting in a groove



Schöner Abschluss durch Endkappen
Nice finish with end caps



8 mm x 19,5 mm

Bezeichnung Description	VarioContour 005 Base Profile
Artikelnummer Art.-No.	10000038
Einheit Unit	meter (m)
Min. VPE Min. OQ	30

AL Profil mit Haltenut für Abdeckungen (L x H x B) 2.000 mm x 8 mm x 19,5 mm
Aluminum profile with groove for various covers (L x H x W) 2,000 mm x 8 mm x 19.5 mm

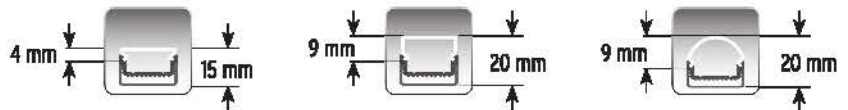


8 mm x 19,5 mm

Bezeichnung Description	VarioContour 002/004/005 Mounting Profile
Artikelnummer Art.-No.	10000039
Einheit Unit	meter (m)
Min. VPE Min. OQ	30

AL Montageprofil für VarioContour 002/004/005 (L x H x B) 2.000 mm x 8 mm x 19,5 mm
Aluminum mounting profile for VarioContour 002/004/005 (L x H x W) 2,000 mm x 8 mm x 19.5 mm

VarioContour 005



9 mm x 19,5 mm

Bezeichnung Description VarioCover 002/004/005 Opal R

Artikelnummer Art.-No. 12000011

Einheit Unit meter (m)

Min. VPE Min. OQ 30

Runde, opale Abdeckung für VarioContour 002/004/005 (L x H x B) 2.000 mm x 9 mm x 19,5 mm
Round opal cover for VarioContour 002/004/005 (L x H x W) 2,000 mm x 9 mm x 19.5 mm



9 mm x 19,5 mm

Bezeichnung Description VarioCover 002/004/005 Opal H²

Artikelnummer Art.-No. 12000012

Einheit Unit meter (m)

Min. VPE Min. OQ 30

Eckige, hohe, opale Abdeckung für VarioContour 002/004/005 (L x H x B) 2.000 mm x 9 mm x 19,5 mm
High square opal cover for VarioContour 002/004/005 (L x H x W) 2,000 mm x 9 mm x 19.5 mm



4 mm x 19,5 mm

Bezeichnung Description VarioCover 002/004/005 Opal L²

Artikelnummer Art.-No. 12000013

Einheit Unit meter (m)

Min. VPE Min. OQ 30

Eckige, flache, opale Abdeckung für VarioContour 002/004/005 (L x H x B) 2.000 mm x 4 mm x 19,5 mm
Low flat opal cover for VarioContour 002/004/005 (L x H x W) 2,000 mm x 4 mm x 19.5 mm



9 mm x 19,5 mm

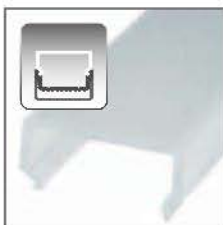
Bezeichnung Description VarioCover 002/004/005 Diffuse R

Artikelnummer Art.-No. 12000014

Einheit Unit meter (m)

Min. VPE Min. OQ 30

Runde, diffuse Abdeckung für VarioContour 002/004/005 (L x H x B) 2.000 mm x 9 mm x 19,5 mm
Round diffuse cover for VarioContour 002/004/005 (L x H x W) 2,000 mm x 9 mm x 19.5 mm



9 mm x 19,5 mm

Bezeichnung Description VarioCover 002/004/005 Diffuse H²

Artikelnummer Art.-No. 12000015

Einheit Unit meter (m)

Min. VPE Min. OQ 30

Eckige, hohe, diffuse Abdeckung für VarioContour 002/004/005 (L x H x B) 2.000 mm x 9 mm x 19,5 mm
High square diffuse cover for VarioContour 002/004/005 (L x H x W) 2,000 mm x 9 mm x 19.5 mm



4 mm x 19,5 mm

Bezeichnung Description VarioCover 002/004/005 Diffuse L²

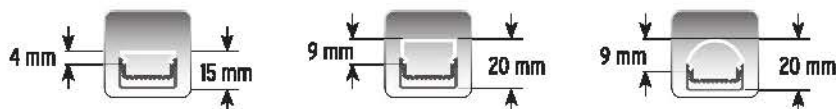
Artikelnummer Art.-No. 12000016

Einheit Unit meter (m)

Min. VPE Min. OQ 30

Eckige, flache, diffuse Abdeckung für VarioContour 002/004/005 (L x H x B) 2.000 mm x 4 mm x 19,5 mm
Low flat diffuse cover for VarioContour 002/004/005 (L x H x W) 2,000 mm x 4 mm x 19.5 mm

VarioContour 005



9 mm x 19,5 mm

Bezeichnung Description	VarioCover 002/004/005 Clear R
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Artikelnummer Art.-No.	12000017
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Einheit Unit	meter (m)
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Min. VPE Min. OQ	30
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Runde, klare Abdeckung für VarioContour 002/004/005 (L x H x B) 2.000 mm x 9 mm x 19,5 mm
Round clear cover for VarioContour 002/004/005 (L x H x W) 2,000 mm x 9 mm x 19,5 mm



9 mm x 19,5 mm

Bezeichnung Description	VarioCover 002/004/005 Clear H²
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Artikelnummer Art.-No.	12000018
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Einheit Unit	meter (m)
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Min. VPE Min. OQ	30
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Eckige, hohe, klare Abdeckung für VarioContour 002/004/005 (L x H x B) 2.000 mm x 9 mm x 19,5 mm
High square clear cover for VarioContour 002/004/005 (L x H x W) 2,000 mm x 9 mm x 19,5 mm



4 mm x 19,5 mm

Bezeichnung Description	VarioCover 002/004/005 Clear L²
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Artikelnummer Art.-No.	12000019
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Einheit Unit	meter (m)
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Min. VPE Min. OQ	30
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Eckige, flache, klare Abdeckung für VarioContour 002/004/005 (L x H x B) 2.000 mm x 4 mm x 19,5 mm
Low flat clear cover for VarioContour 002/004/005 (L x H x W) 2,000 mm x 4 mm x 19,5 mm



19,5 mm x 19,4 mm x 6 mm

Bezeichnung Description	VarioCap 005 silver R
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Artikelnummer Art.-No.	11000019
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Einheit Unit	Stück/piece (pc)
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Min. VPE Min. OQ	10
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Kunststoffendkappen silber lackiert für VarioContour 005 R (L x H x B) 19,5 mm x 19,4 mm x 6 mm
Silver coated plastic end caps for VarioContour 005 R (L x H x W) 19,5 mm x 19,4 mm x 6 mm



19,75 mm x 19,4 mm x 6 mm

Bezeichnung Description	VarioCap 005 silver H²
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Artikelnummer Art.-No.	11000020
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Einheit Unit	Stück/piece (pc)
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Min. VPE Min. OQ	10
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Kunststoffendkappen silber lackiert für VarioContour 005 H² (L x H x B) 19,75 mm x 19,4 mm x 6 mm
Silver coated plastic end caps for VarioContour 005 H² (L x H x W) 19,75 mm x 19,4 mm x 6 mm



14,7 mm x 19,4 mm x 6 mm

Bezeichnung Description	VarioCap 005 silver L²
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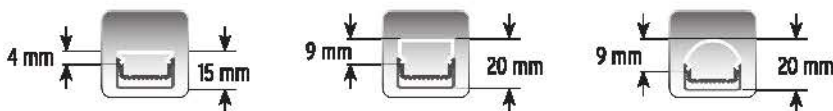
Artikelnummer Art.-No.	11000021
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Einheit Unit	Stück/piece (pc)
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Min. VPE Min. OQ	10
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Kunststoffendkappen silber lackiert für VarioContour 005 L² (L x H x B) 14,7 mm x 19,4 mm x 6 mm
Silver coated plastic end caps for VarioContour 005 L² (L x H x W) 14,7 mm x 19,4 mm x 6 mm

VarioContour 005



20 mm x 8 mm x 19,5 mm

Bezeichnung Description	VarioClip 002/004/005 20 mm
Artikelnummer Art.-No.	10000040
Einheit Unit	Stück/piece (pc)
Min. VPE Min. OQ	10

AL Halteklammer für VarioContour 002/004/005 (L x H x B) 20 mm x 8 mm x 19,5 mm
 Aluminum mounting clip for VarioContour 002/004/005 (L x H x W) 20 mm x 8 mm x 19.5 mm

NEW



8 mm x 19,4 mm x 29,7 mm

Bezeichnung Description	VarioClip 002/004/005 Plastic*
Artikelnummer Art.-No.	13000032
Einheit Unit	Stück/piece (pc)
Min. VPE Min. OQ	10

Halteklammer aus Kunststoff für VarioContour 002/004/005 (L x H x B) 8 mm x 19,4 mm x 29,7 mm
 Plastic mounting clip for VarioContour 002/004/005 (L x H x W) 8 mm x 19.4 mm x 29.7 mm

* Keine Verwendung in Verbindung mit Montageprofil * No use in connection with mounting profile

Neun innovative Varianten eines Profils Nine innovative options of one profile



VarioCover 005 Clearl H²
 VarioCover 005 Clearl H²

VarioCover 005 Diffuse H²
 VarioCover 005 Diffuse H²

VarioCover 005 Opal H²
 VarioCover 005 Opal H²

VarioCover 005 Clear L²
 VarioCover 005 Clear L²



VarioCover 005 Diffuse L²
 VarioCover 005 Diffuse L²

VarioCover 005 Opal L²
 VarioCover 005 Opal L²

VarioCover 005 Clear R
 VarioCover 005 Clear R

VarioCover 005 Diffuse R
 VarioCover 005 Diffuse R



VarioCover 005 Opal R
 VarioCover 005 Opal R

VarioCover 005 Opal R
 VarioCover 005 Opal R

VarioCover 005 Opal R
 VarioCover 005 Opal R

VarioCover 005 Opal R
 VarioCover 005 Opal R



**Colour
is our nature**

4x2A DMX/DALI Full-Colour Dimmable LED Drivers

Input characteristics

Input voltage AC	120-250V (ENEC approved) 120-277V (UL approved)
Input voltage DC	120-275V
Input current	1.05A max @ 120V/60Hz 0.5A max @ 230V/50Hz 0.45A max @ 277V/60Hz
Input frequency	50-60Hz
Power factor	>0.94
THD	<10%
Inrush current	35A 240µs @ 120V/60Hz 67A 240µs @ 230V/50Hz 75A 240µs @ 277V/60Hz
Surge protection	3kV (L to N), 4kV (L/N to GND)
Standby power	<0.5W

Output characteristics

LED output load	RGBW @ 12V: 2.08A per output RGBW @ 24V: 1A per output RGB @ 12V: 2.76A per output RGB @ 24V: 1.33A per output For UL Class 2: RGBW @ 12V: 1.25A per output RGB @ 12V: 1.66A per output Absolute max for US: 5A common anode
LED output power	100W max
LED output voltage	12V or 24V DC (selectable via DIP switch)
LED output current	2.8A absolute max rating per output
LED outputs	4 (UL Class 2)
Control channel	4

Control characteristics

Dimming protocol	DMX and DALI
Dimming range	100%-0% (Hybrid HydraDrive)
Dimming curve	linear, logarithmic, square
Driver configuration	via 3-button user interface on driver

Product offering



LINEARdrive 100/A

P/N: LIN100A1

LINEARdrive AC, 100W, DMX/DALI, UI, 4 control channels, constant voltage, 4x 12/24V outputs, long metal/plastic



LINEARdrive 100/M

P/N: LIN100M1

LINEARdrive AC, 100W, DMX/DALI, UI, 4 control channels, constant voltage, 4x 12/24V outputs, long metal

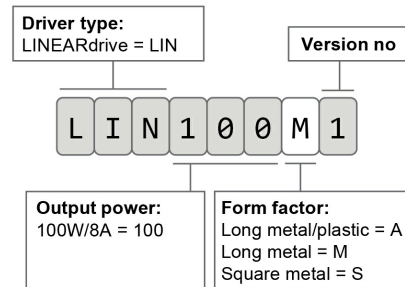


LINEARdrive 100/S

P/N: LIN100S1

LINEARdrive AC, 100W, DMX/DALI, UI, 4 control channels, constant voltage, 4x 12/24V outputs, square metal

Order number configuration



Dimensions, weight and packaging

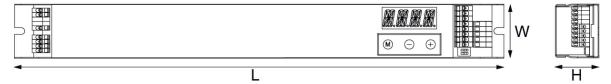
LINEARdrive 100/A

LxWxH	388x42x30mm / 15.27x1.65x1.18in
Weight	705 g / 26 oz
Drivers per carton	20 pcs



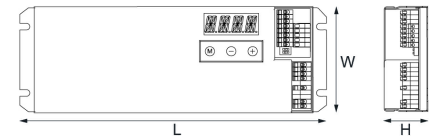
LINEARdrive 100/M

LxWxH	370x41x30mm / 14.57x1.61x1.18in
Weight	880 g / 31 oz
Drivers per carton	20 pcs



LINEARdrive 100/S

LxWxH	230x80x30mm / 9.06x3.15x1.18in
Weight	880 g / 31 oz
Drivers per carton	20 pcs



Standards and certifications

Standards compliance

EN	61347-1/-2-7/-2-13, 62384, 55015, 55022, 61000-3-2, 61547, 62386-101/102/207
FCC	47 CFR Part 15 class B
RoHS	RoHS2

Certifications



UL

Recognized Component for US and Canada (file no. E333135), according to UL1310 and UL8750. US/Canada: Class 2 output.

Wiring Specifications

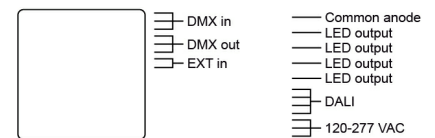
Wire type	AWG 20-16, 0.5-1.5mm ²
Wire strip length	9mm / 0.35in

Wiring diagrams

LINEARdrive 100/A 100/M



LINEARdrive 100/S



Thermal specification

T _a operating range	-40 °C ... +50 °C / -40 °F ... +122 °F
T _c max	90 °C / 194 °F (100/A) 85 °C / 185 °F (100/M, 100/S)