HAZ AREA

LIGHTING
FOR HAZARDOUS AREAS

Product Brochure

HADAR
L I G H T I N G

Engineering Solutions
Design to Manufacture

The Hadar Lighting Range

Designed and manufactured in the UK by A-Belco Hazardous Area, the portfolio of products comprises:

- Fluorescent
- Bulkhead
- LED
- Recessed
- Wellglass

Suitable for use in any environment where an explosive atmosphere may exist, the range of luminaires within the Hadar Lighting portfolio are certified to Zone 1, Ex e, Ex d, and Zone 2 EEx n.

Launched in 2005, a high degree of engineering expertise, project knowledge, experience and investment in the Hadar Lighting range is reflected through the high specification construction of the luminaires.

The innovative, modular and low maintenance designs incorporate the latest technologies, ensuring a comprehensive lighting product offering. The Ex e products feature the "End of Life" (EoL) protection circuit ballast according to DIN EN 61347-2-3 and IEC 60079-7 Ed.4.

Working alongside our network of UK and global distributors we offer competitive export bid packages for a wide range of projects. From design to manufacture, we excel in quality, price, delivery and after sales support.

Contents

Fluorescent Luminaire

Zone 1 and 21 Ex emb Fluorescent Luminaire

Specification:

Enclosure:
Polycarbonate

Lamp Envelope:
Polycarbonate

Reflector:
Aluminium Powder Coated

Gaskets:
Silicone

External Fasteners:
A4 Stainless Steel

T Rating:
T4

Key Features:

- Simple Installation.
- Straightforward one tool maintenance (5mm Allen Key).
- Rugged construction
- Easily relamped with detachable lamp envelope.
- Mains isolation not required when relamping.
- Short gaskets for proven ingress protection.
- Mounting in any attitude.
- Features a reflector compatible with Unistrut or equivalent channel support systems and accessories.
- Pole mounting version available.
- Continuous monitoring of fluorescent lamps ensures safe end of life shutdown by electronic ballast in accordance with HSE safety notice 8/05.
- Overvoltage protection 320V for 1 minute.
- High frequency electronic control gear for instant operation at lower temperatures.
- Emergency version available maintained or non-maintained - 3 hour duration.

Incorporates the new "End of Life" (Eol) protection circuit ballast according to DIN EN 61347-2-3 and IEC 60079 Ed.4 Annex H

Engineering Solutions
Design to Manufacture

HADAR
L I G H T I N G

Protection:

Ⓔⓧ II 2 G D Ex emb II T4/T5, Ex tD A21 IP66/67 T100°C

Certification: ATEX & IECEx certified by SIRA; ABS approved for marine use

	Certification	Ambient		Voltage Range	Certificate
HDL 100	Ⓔⓧ II 2 G D Ex emb II T4/T5, Ex tD A21 IP66/67 T100°C	2 x 18W / 36W 2 X 58W Emergency Range	-30°C to +55°C T4 -30°C to +32°C T5 -30°C to +53°C T4 -15°C	110V to 254V	IECEx SIR 06.0026X SIRA 06ATEX3079X ABS 07-LD219463-1-PDA

Electrical Specifications:

	Electrical Specification			
Lamp Options	Power consumption		Power factor	Power supply
2 x 18W Standard	32W circuit watts at 240V – O.14A (120V – 0.28A)		Better	220V – 254V, 50 / 60 Hz AC / DC
2 x 18W Emergency	36W circuit watts at 240V – O.16A (120V – 0.32A)		than	110V – 130V, 50 / 60 Hz AC / DC (2 X 18W / 2 X 36W only)
2 x 36W Standard	62W circuit watts at 240V – 0.27 A (120V – 0.54A)		0.95	Emergency version as above – AC only
2 x 36W Emergency	68W circuit watts at 240V – 0.30 A (120V – 0.60A)			
2 x 58W Standard	92W circuit watts at 240V – 0.40A			
2 x 58W Emergency	96W circuit watts at 240V – 0.42A			

Installation:

Terminals	4mm² clamp terminals as standard for live, live switched, neutral, earth and looping provided. Internal and external earth as standard. 6mm² and screw terminals available on request.
Cable Entries	2 x M20. Pole mount fittings supplied with 1 x M20 (other entries upon request). Locknuts supplied and Gland Plates available, (see below).
Suspension	The aluminium reflector incorporates a channel which is compatible with Unistrut (or equivalent) fixings and accessories and allows the installer to select variable fixing centres. Technical booklet with various mounting options available upon request.
Installation	Installation document AL10086 supplied.

Ordering Matrix:

Field	Options
Product	HDL 100
Version	S – Non Emergency E - Emergency
Fittings	L – Loop In / Loop Out P – Pole Mount
Voltage	H – High Voltage (220V – 254V) M – Medium Voltage (110V – 130V)
Cable Entries	0 – M20 Entries 5 – M25 Entries
Lamp Options	218 – 2 x 18W 236 – 2 x 36W 258 – 2 x 58W

Dimensions:

	A	Weight
2 x 18W	970mm	4kg
2 x 36 W	1580mm	5.8kg
2 x 58W	1880mm	6.8kg

Notes:
1) Final Product Code should be in the format: HDL100SPH0218
2) Photometric Data available from the website or contact sales office.
3) Brass earth continuity gland plates are available, contact sales office for more information.

Data is correct at time of print, but is subject to change due to continual product improvement.

Recessed Luminaire

Zone 1 and 21 Ex emb Recessed Luminaire

Specification:

Enclosure:
Steel Powder Coated
or Stainless Steel

Diffuser Frame:
As above

Diffuser:
Toughened Prismatic Glass

Gasket:
Silicone

External Fasteners:
A4 Stainless Steel

T Rating:
T4/T5 Gas and Dust

Key Features:

- Exposed 'T' / Concealed 'T' Modular ceiling type.
- Plasterboard Non-modular ceiling type.
- Plank ceiling type 300mm wide.
- Mild steel painted as standard (stainless steel also available).
- 2 x 18 W, 4 x 18W, 2 x 36W, 4 x 36W, 2 x 58W.
- Emergency version available - 3 hour duration.
- For 2 x 18W Compact Fluorescent Luminaire see – HDL 108.
- Ease of maintenance and installation.
- Wide range of lamp options.
- High frequency electronic control gear.
- Quick lamp start and flicker free operation control gear.
- High ambient areas.
- Can be installed in new or existing ceilings.
- Lightweight and robust construction.
- Cable entries can be positioned to suit customer requirements.
- Overvoltage protection 320V for 1 minute.

- Standard/Emergency gear trays interchangeable between luminaires.
- Continuous monitoring of fluorescent lamps ensures safe end of life shutdown by electronic ballast in accordance with HSE safety notice 8/05.
- Optional mains isolation/battery isolation microswitch available.

Incorporates the new 'End of Life' (EoL) protection circuit ballast according to DIN EN 61347-2-3 AND IEC 60079-7 Ed 4 Annex H

Engineering Solutions
Design to Manufacture

HADAR LIGHTING

Protection:
(Ex) II 2 G D Ex emb II T4/T5, Ex tD A21 IP64 T75°C

Certification: ATEX & IECEx certified by SIRA

	Certification	Ambient	Voltage Range	Certificate
HDL 102	(Ex) II 2 G D Ex emb II T4/T5, Ex tD A21 IP64 T75°C	All ranges T4 - 40°C to + 55°C All ranges T5 - 40°C to + 40°C Emergency -15°C	110V – 254V	IECEx SIR 0.60027 SIRA 06ATEX3080

Electrical Specifications:

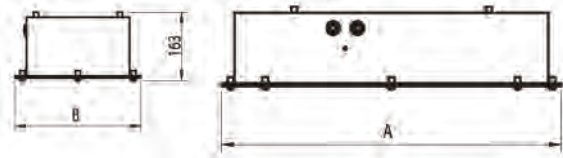|	Electrical Specification		
Lamp Options	Power consumption	Power factor	Power supply
2 x 18W T8	32W Circuit Watts at 240V – 0.14A (120V – 0.28A)	Better than 0.95	220V – 254V, 50/60 Hz AC/DC 110V – 130V, 50/60 Hz AC/DC (18W/36W only) Emergency version as above – AC only
2 x 18W T8 Emergency	36W Circuit Watts at 240V – 0.16A (120V – 0.32A)		
2 x 36W T8	62W Circuit Watts at 240V – 0.27A (120V – 0.54A)		
2 x 36W T8 Emergency	68W Circuit Watts at 240V – 0.30A (120V – 0.60A)		
2 x 58W T8	92W Circuit Watts at 240V – 0.40A		
2 x 58W T8 Emergency	96W Circuit Watts at 240V – 0.42A		
4 x 18W T8	64W Circuit Watts at 240V – 0.28A (120V – 0.56A)		
4 x 18W T8 Emergency	68W Circuit Watts at 240V – 0.30A (120V – 0.60A)		
4 x 36W T8	124W Circuit Watts at 240V – 0.54A (120V – 1.08A)		
4 x 36W T8 Emergency	130W Circuit Watts at 240V – 0.57A (120V – 1.14A)		

Installation:

Terminals: 4mm² clamp terminals as standard for live, live switched, neutral, earth and looping provided. Internal and external earth as standard.
6mm² and screw terminals available on request.
Cable Entries: To suit individual customer requirements.
Suspension: To suit individual customer requirements.
Installation: Installation document AL10089 supplied.

Ordering Matrix:

Field	Options
Product	HDL102
Version	S – Non Emergency E - Emergency
Fittings	A – Exposed 'T' B – Concealed 'T' C – Non Modular D – Plank
Voltage	H – High Voltage (220V – 254V) M – Medium Voltage (110V – 130V)
Cable Entries	0 – M20 Entries 5 – M25 Entries
Lamp Options	218 – 2 x 18W 236 – 2 x 36W 258 – 2 x 58W 418 – 4 x 18W 436 – 4 x 36W

Dimensions:

Dimensions for non modular range of recessibles for modular range dimensions contact the sales dept.

	A	B	Weight
2 x 18W	700mm	299mm	10kg
2 x 36W	1310mm	299mm	16kg
2 x 58W	1610mm	299mm	18kg
4 x 18W	700mm	599mm	15kg
4 x 36W	1310mm	599mm	18kg

Notes:
1) Final Product Code should be in the format: HDL102SCH0218.
2) Mild Steel as standard, contact sales office for stainless steel.
3) Photometric Data available from the website or contact sales office.

Data is correct at time of print, but is subject to change due to continual product improvement.

A-BELCO
GROUP OF COMPANIES

Specification:

Main Body:
Marine Grade Aluminium

Clear Lens:
Polycarbonate

Gaskets:
Silicone/Rubber

External Fasteners:
A4 Stainless Steel

T Rating:
T5

Weight:
3.0kg

Key Features:

- Available in Green (Helidecks), Red (Obstruction) or White (general lighting) other colours also available.
- Customer can select constant light output or flashing upon installation.
- Conforms to ICAO annex 14 volume II and CAP437 for Helideck perimeter lighting and CAP168 for Obstruction lighting.
- LED technology will give a predicted working life of 10 years +.
- Utilises 6 off 1.2W LEDS.
- Low power consumption.
- Easy installation and low maintenance.
- Rugged construction – resistant to vibration.
- Instant light output.
- 360° coverage.
- Independently photometrically tested.
- All units supplied with 3 cable entries.
- IP66 and IP67

- Optional wire guard available for extra protection.
- Can be supplied in traffic light or stop/start assemblies - see HDL153 data sheet.

Engineering Solutions
Design to Manufacture

HADAR
L I G H T I N G

Protection:
⟨Ex⟩ II 2 G D Ex emb IIC T5 Gb, Ex t IIIC T68ºC Db IP66/67

Certification: ATEX, IECEx, ABS & CSA certified.

	Certification	Ambient	Voltage Range	Certificate
HDL 103	⟨Ex⟩ II 2 G D Ex emb IIC T5 Gb, Ex t IIIC T68ºC Db IP66/67 Class I, Div 2 Groups ABCD Class II, Div 1 & 2 Groups EFG	All variants -20ºC to +55ºC	100V to 254V AC 24V AC/DC	IECEx SIR 09.0065X SIRA 09ATEX5160X ABS 12-LD818639-PDA CSA 257871

Electrical Specifications:

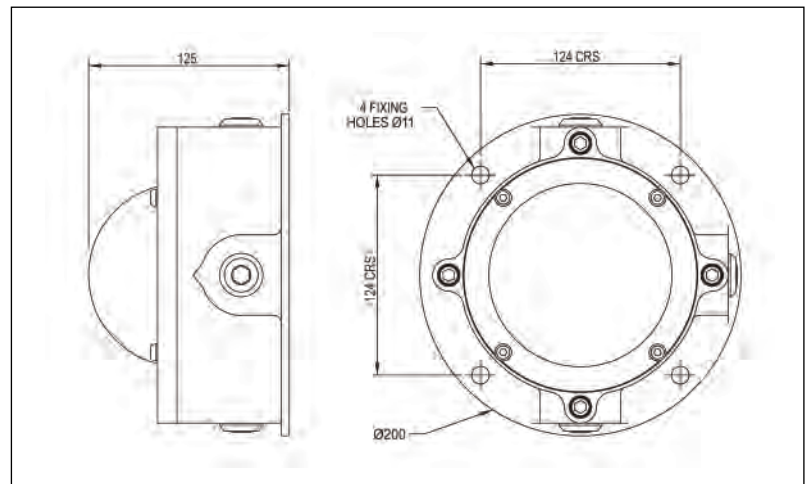|	Electrical Specification		
Lamp Options	Power consumption	Power factor	Power supply
6 x 1.2W LEDs	12W Max	0.95	100V – 254V 50/60Hz AC or 24V AC/DC

Installation:

Terminals: Up to 4mm² screwed terminals for live, neutral, earth and looping are provided. Internal and external earth is standard.
Cable Entries: 3 x M20, two fitted with approved stopper plug, other entries available on request.
Suspension: Via 4 external mounting points.
Installation: Installation document AL10557 supplied.

Ordering Matrix:

Field	Options
Product	HDL103
Voltage	H – 100-254V AC L – 24V AC/DC
Version*	G – Green LED'S R – Red LED'S W – White LED'S
Fittings	0 – No wire guard 1 – Wire guard fitted
Cable Entries	0 – M20 5 – M25
Other Options	00 – Red 00 – White 02– Green

*Other colour options available

Dimensions:

Notes:
1) Typical ordering reference HDL103HG0002.
2) Photometric Data available from the website or contact sales office.

A-BELCO
GROUP OF COMPANIES

Modular LED Luminaire

Zone 1 and 21 / Class I, Div 2 / Class II, Div 1 and 2 Ex emb LED Modular Floodlight / Bulkhead

Specification:

Main Body:
Marine Grade Aluminium

Diffuser:
Polycarbonate

Gaskets:
Silicone

External Fasteners:
A4 Stainless Steel

Stirrup Bracket:
316 Stainless Steel

T Rating:
T4 (T6 version also available)

Weight:
6.0kg per module

Key Features:

- Modular construction allows the modules to be supplied interlinked with each other to provide greater light output.
- Can be used as a single unit – small floodlight or bulkhead or linked together to replicate a large 250W/400W floodlight.
- Each module utilises 48 off 1.2W LED's
- Integrated power supply.
- Low power consumption.
- Rugged construction – resistant to vibration.
- Independently photometrically tested.
- All units supplied with 2 cable entries. Additional entries available on request.
- IP66 and IP67.
- Optional wire guard available for extra protection.
- Infra red variants available (for use with security cameras).
- Narrow, Medium, Wide and Extra Wide beam light output available.
- Multiple mounting options available.
- Emergency version available - see data sheet HDL106E.

In comparison to typical Ex d floodlights:
- 60% less weight.
- 50% less power consumption.
- One man installation.
- LED technology will give a predicted lamp life of 10 years+.
- No light pollution.
- Instant start and restrike.
- No light degradation at low temperatures.
- Penetrating white light.
- Photocell option available.
- No flamepaths to maintain.
- Low cost of installation, operation and maintenance.

Engineering Solutions
Design to Manufacture

HADAR LIGHTING

Protection:
⟨Ex⟩ II 2 G D Ex emb IIC T4 Gb, Ex t IIIC T103°C Db IP66/67

Certification: ATEX, IECEx, ABS & CSA certified.

	Certification	Ambient	Voltage Range	Certificate
HDL106S	⟨Ex⟩ II 2 G D Ex emb IIC T4 Gb, Ex t IIIC T103°C Db IP66/67 Class I, Div 2 Groups ABCD Class II, Div 1 & 2 Groups EFG	-20°C to +50°C	110V to 240V AC input 24V AC/DC* *Not available on 24 LED versions.	IECEx SIR 09.0064X SIRA 09ATEX5159X ABS 11-LD801943-PDA CSA 2578781

Electrical Specifications:

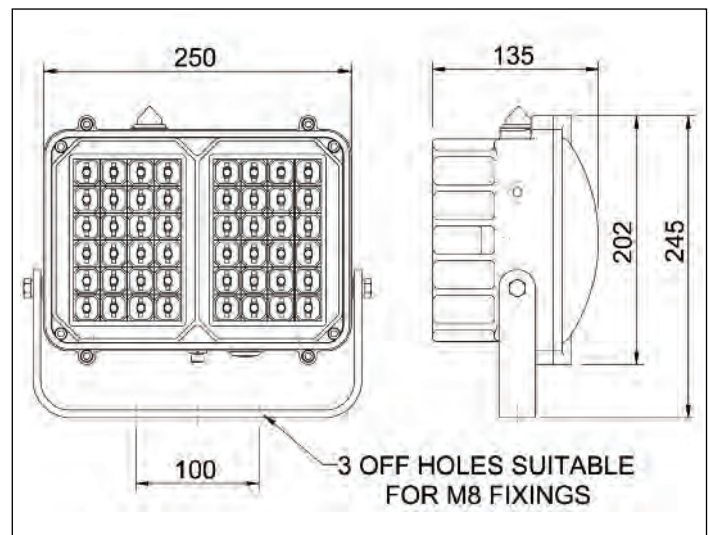|	Electrical Specification			
Lamp Options	Power consumption	Power factor	Available power supplies	
24 x 1.2W LED's	30W		110V – 240V 50/60Hz AC only	
48 x 1.2W LED's	60W	0.95	or	
96 x 1.2W LED's	120W		24V AC/DC	
144 x 1.2W LED's	180W			

Installation:

Terminals: Up to 4mm² terminals for live, neutral, earth and looping are provided. Internal and external earth as standard.
Cable Entries: 2 x M20, one fitted with approved stopper plug, other entries available on request.
Suspension: Via stirrup bracket, other mounting accessories available. Stainless steel eyebolt for safety chain included as standard.
Installation: Installation document AL10578 supplied.

Ordering Matrix:

Field	Options
Product	HDL106S
Version (LEDs)	0 – 24 LEDs 1 – 48 LEDs 2 – 96 LEDs 3 – 144 LEDs
Voltage	H – 110 - 240V AC only L – 24V AC/DC
Beam Pattern	N – Narrow M – Medium W – Wide X – Extra wide
Mount*	H – Horizontal mount (single module version only) V – Vertical mount (twin/triple module version only) C – Ceiling mount
Light	W – Cool White light X – Warm White light Other colours available on request
Cable Entries	0 – M20 5 – M25
Other Options	04 – Colour RAL 7035 (Grey) 09 – Colour RAL 7035 (Grey) c/w Photocell

Mount refers to positioning of module on stirrup bracket, please refer to the below photographs.

Dimensions:

250   135

3 OFF HOLES SUITABLE FOR M8 FIXINGS

100   202   245

Weight:
24 and 48 LED Luminaire: 6kg
96 LED Luminaire: 12kg
144 LED Luminaire: 18kg

Notes:
1) Typical ordering reference HDL106S1HMHW004.
2) Photometric Data available from the website or contact sales office.

Horizontal mount

Vertical mount

Data is correct at time of print, but is subject to change due to continual product improvement.
Zone 2 and Industrial versions available, please refer to the website or contact sales office for further details.

A-BELCO
GROUP OF COMPANIES

Emergency Modular LED Luminaire

HDL 106E

Zone 1 and 21 Ex emb LED Modular Floodlight / Bulkhead Luminaire

Specification:

Main Body:
Marine Grade Aluminium

Diffuser:
Polycarbonate

Gaskets:
Silicone

External Fasteners:
A4 Stainless Steel

Stirrup Bracket:
316 Stainless Steel

T Rating:
T4

Weight:
9.0kg per module

Key Features:

- Battery backup power provides 3 hours at 50% illumination, 90 minutes at full illumination.
- Modular construction allows the modules to be supplied interlinked with each other to provide greater light output.
- Can be used as a single unit – small floodlight or bulkhead or linked together to replicate a large 250W/400W floodlight.
- Can be supplied in multiple configurations of standard or emergency modules.
- Each module utilises 48 off 1.2W LED's
- Integrated power supply.
- Low power consumption.
- Rugged construction – resistant to vibration.
- Independently photometrically tested.
- All units supplied with 2 cable entries as standard. Additional entries available on request.
- IP66 and IP67.

- Optional wire guard available for extra protection.
- Narrow, Medium, Wide and Extra Wide beam light output available.

In comparison to typical Ex d floodlights:
- 70% less weight.
- 50% less power consumption.
- One man installation.
- LED technology will give a predicted lamp life of 10 years+.
- No light pollution.
- Instant start and restrike.
- No light degradation at low temperatures.
- Penetrating white light.
- Photocell option available.
- No flamepaths to maintain.
- Low cost of installation, operation and maintenance.

Engineering Solutions
Design to Manufacture

HADAR
L I G H T I N G

Protection:
Ⓔⓧ II 2 G D Ex emb IIC T4 Gb, Ex t IIIC T103ºC Db IP66/67

Certification: ATEX, IECEx & ABS certified.

	Certification	Ambient	Voltage Range	Certificate
HDL106E	Ⓔⓧ II 2 G D Ex emb IIC T4 Gb, Ex t IIIC T103ºC Db IP66/67	-20ºC to +50ºC	110V to 240V AC input	IECEx SIR 09.0064X SIRA 09ATEX5159X ABS 11-LD801943-PDA

Electrical Specifications:

	Electrical Specification			
Lamp Options	Power consumption		Power factor	Available power supplies
48 x 1.2W LED's	70W			
96 x 1.2W LED's	140W		0.95	110V – 240V 50/60Hz AC only
144 x 1.2W LED's	210W			

Installation:

Terminals: Up to 4mm² terminals for live, neutral, earth and looping are provided. Internal and external earth as standard.
Cable Entries: 2 x M20, one fitted with approved stopper plug, other entries available on request.
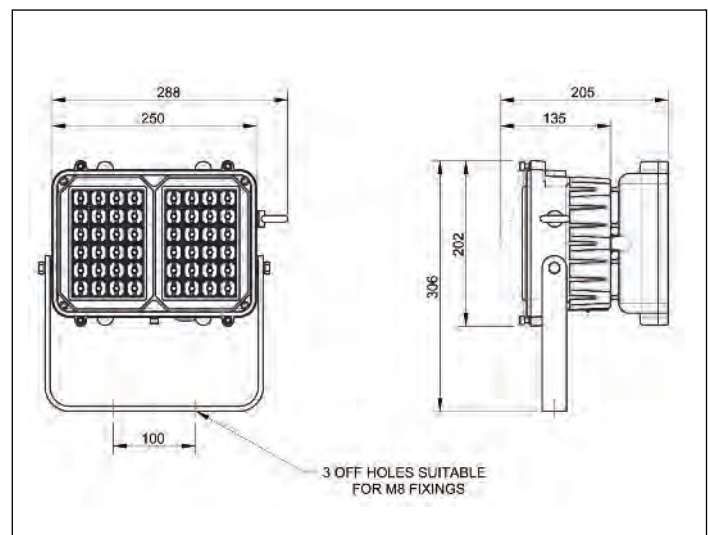**Suspension:** Via stirrup bracket, other mounting accessories available. Stainless steel eyebolt for safety chain included as standard.
Installation: Installation document AL10698 supplied.

Ordering Matrix:

Field	Options
Product	HDL106
Version (LEDs)	E – Emergency (48 LEDs) ES – Emergency/Standard (96 LEDs) SES – Standard/Emergency/Standard (144 LEDs) (All combinations available)
Beam Pattern (add per module)	N – Narrow M – Medium W – Wide X – Extra Wide
Light	W – Cool White light X – Warm White light Other colours available on request.
Cable Entries	0 – M20 5 – M25
Casting Colour	04 – Colour RAL 7035 (Grey)
Other Options	H – Horizontal (available on single units only)

Dimensions:

288
250
205
135
202
306
100
3 OFF HOLES SUITABLE FOR M8 FIXINGS

Weight:
48 LED Luminaire: 9kg
96 LED Luminaire: 15-18kg
144 LED Luminaire: 21-27kg

Notes:
1) Typical ordering reference HDL106EEEMMMW004.
2) Photometric Data available from the website or contact sales office.

*Data is correct at time of print, but is subject to change due to continual product improvement.
Zone 2 and Industrial versions available, please refer to the website or contact sales office for further details.*

A-BELCO
GROUP OF COMPANIES

Bulkhead Luminaire

Zone 1 and Zone 21 Ex emb Bulkhead / Fire Exit Recessed Luminaire

Specification:

Enclosure:
Steel Powder Coated
or Stainless Steel

Diffuser Frame:
As above

Diffuser:
Toughened Prismatic Glass

Gasket:
Silicone

External Fasteners:
A4 Stainless Steel

T Rating:
T3/T4 Gas and Dust

Key Features:

- 2 x 18W Compact fluorescent lamp for mains operation.
- Ideal for exit signs, wall or ceiling mounted.
- Visible Glass area 300mm x 150mm -(standard size for fire exit signage).
- Mild Steel painted as standard (Stainless steel also available).
- Simple installation.
- Straightforward maintenance.
- Recessed or surface mounting.
- For Standard Ex emb Recessed Luminaire see data sheet HDL 102.
- Lightweight and robust construction.
- Mounting in any attitude.
- Low profile.
- Continuous monitoring of fluorescent lamps ensures safe end of life shutdown by electronic ballast in accordance with HSE safety notice 8/05.
- Overvoltage protection 320V for 1 minute.

- Quick lamp start and flicker free operation control gear.
- Cable entries in any face or rear.
- Can be supplied with signage or facility for end user to fit own.
- Other warning signage can be used.

Engineering Solutions
Design to Manufacture

HADAR LIGHTING

Protection:
⟨Ex⟩ II 2 G D Ex emb II T3/T4, Ex tD A21 IP64 T90ºC

Certification: ATEX & IECEx Certified by SIRA

	Certification	Ambient		Voltage Range	Certificate
HDL108	⟨Ex⟩ II 2 G D Ex emb II T3/T4, Ex tD A21 IP64 T90ºC	Standard Range	-40ºC to +55ºC T3 -40ºC to +35ºC T4	110V to 254V	IECEx SIR 06.0027 SIRA 06ATEX3080
		Emergency Range	-15ºC to +55ºC T3 -15ºC to +35ºC T4		

Emergency Version: Standard emergency – one fluorescent lamp remains at a reduced output. Can be operated, maintained or non maintained.

Fire Exit Sign: Visible glass area 300mm x 150mm (standard size for fire exit signage). Wall or ceiling mounted. Can be supplied with signage or facility for end user to fit own. Other warning signage can be used.

Electrical Specifications:

	Electrical Specification		
Lamp Options	Power consumption	Power factor	Available power supplies
2 x 18W CFL STD	32W circuit watts at 240V – 0.14A (120V – 0.28A)	Better than 0.95	220V – 254V, 50/60 Hz AC/DC 110V – 130V, 50/60 Hz AC/DC Emergency version as above – AC only
2 x 18W CFL EM	36W circuit watts at 240V – 0.15A (120V – 0.30A)		

Installation:

Terminals: 4mm² clamp terminals as standard for live, live switched, neutral, earth and looping provided. Internal and external earth as standard. 6mm² and screw terminals available on request.
Cable Entries: To suit individual customer requirements.
Suspension: Via internal mounting holes.
Installation: Installation document AL10091 supplied.

Ordering Matrix:

Field	Options
Product	HDL108
Version	S – Non Emergency E – Emergency
Fittings	R – Recessed S – Surface Mount
Voltage	H – High Voltage (220V – 254V) M – Medium Voltage (110V – 130V)
Cable Entries	0 – M20 Entries 5 – M25 Entries
Lamp Options	218 – 2 x 18W

Dimensions:

(Surface Mount Variant)

Lamp	Weight
2 x 18W Std	3kg
2 x 18W Emergency	3.5kg

Notes:
1) Final Product Code should be in the format: HDL108SRH0218
2) Please specify any signage required at point of ordering. Exit sign pack AL10275.
3) Mild Steel as standard, contact the Sales Office for Stainless Steel.
4) Photometric Data available from the website or contact sales office.

Data is correct at time of print, but is subject to change due to continual product improvement.

A-BELCO
GROUP OF COMPANIES

Bulkhead Luminaire

Zone 1 and 21 Ex emb Bulkhead / Fire Exit Luminaire / GRP Polycarbonate

Specification:

GRP Enclosure:
Polycarbonate diffuser

Mounting Bracket:
Aluminium or Zinc Plated Steel

Gasket:
Silicone

External Fasteners:
A4 Stainless Steel

T Rating:
T3 Gas and Dust

Key Features:

- 2 x 18W Compact fluorescent lamp for mains operation or emergency option.
- Ideal for exit signs – wall or ceiling mounted.
- Simple installation.
- Straightforward one tool maintenance (5mm Allen Key).
- Emergency version available - 3 hour duration.
- Various colour diffusers available
- Lightweight and robust construction.
- Short gaskets for proven ingress protection.
- Mounting in any attitude.
- Optional mounting bracket compatible with Unistrut (or equivalent) support systems and accessories.
- Low profile.

- Continuous monitoring of fluorescent lamps ensures safe end of life shutdown by electronic ballast in accordance with HSE safety notice 8/05.
- Overvoltage protection 320V for 1 minute.
- Quick lamp start and flicker free operation with high frequency control gear.
- Supplied complete with lamps.
- Uses standard compact fluorescent lamps.
- Bulkhead fitting interchangeable with spares of Hadar HDL100 Ex emb Fluorescent Luminaire.

Incorporates the new "End of Life" (EoL) protection circuit ballast - according to DIN EN 61347-2-3 and IEC 60079-7 Ed.4 Annex H.

Engineering Solutions
Design to Manufacture

HADAR LIGHTING

Protection:
Ex II 2 G D Ex emb II T3, Ex tD A21 IP66/67 T100ºC

Certification: ATEX & IECEx by SIRA

	Certification	Ambient	Voltage Range	Certificate
HDL 109	Ex II 2 G D Ex emb II T3, Ex tD A21 IP66/67 T100ºC	Standard Range -20ºC to +40ºC Emergency Range -15ºC to +40ºC	110V to 254V	IECEx SIR 06.0026X SIRA 06ATEX 3079X

Emergency Version: Standard emergency – one fluorescent lamp remains at a reduced output. Can be operated, maintained or non maintained.

Fire Exit Sign: Wall or ceiling mounted. Can be supplied with signage or facility for end user to fit own. Other warning signage can be used.

Electrical Specifications:

	Electrical Specification			
Lamp Options	Power consumption	Power factor	Available power supplies	
2 x 18W CFL STD	32W circuit watts at 240V – 0.14A (120V – 0.28A)	Better than 0.95	220V – 254V, 50/60 Hz AC/DC 110V – 130V, 50/60 Hz AC/DC Emergency version as above – AC only	
2 x 18W CFL EM	36W circuit watts at 240V – 0.15A (120V – 0.3A)			

Installation:

Terminals: 4mm² clamp terminals as standard for live, live switched, neutral, earth and looping provided. Internal and external earth as standard. 6mm² and screw terminals available on request.
Cable Entries: 2 x M20. Pole mount fittings supplied with 1 x M20. Other entries available on request.
Suspension: Via bracket supplied or Unistrut reflector. Option of Unistrut, bracket or pole mounting.
Installation: Installation document AL10090 supplied.

Ordering Matrix:

Field	Options
Product	HDL109
Version	S – Non Emergency E – Emergency
Fittings	U – Loop In/Out (Unistrut) L – Loop In/Loop Out (Bracket) P – Pole Mount
Voltage	H – High Voltage (220V – 254V) M – Medium Voltage (110V – 130V)
Cable Entries	0 – M20 Entries 5 – M25 Entries
Lamp Options	218 – 2 x 18W

Supplied with lamps.

Dimensions:

285 CRS
262 CRS
250
143
202

SUITABLE FOR M6 FIXINGS

Lamp	Weight
2 x 18W	2.5kg
2 x 18W Emergency	3kg

Notes:
1) Final Product Code should be in the format: HDL109SUH0218
2) Photometric Data available from the website or contact sales office.
3) Brass earth continuity gland plates are available, contact sales office for more information.
4) Please specify any signage required at point of ordering. Exit sign pack AL10275.

Data is correct at time of print, but is subject to change due to continual product improvement.

A-BELCO
GROUP OF COMPANIES

Wellglass

Zone 1 and 21 Ex de Wellglass

Specification:

Main Body:
Marine Grade Aluminium

Lamp Glass:
Toughened Glass

External Fasteners:
A4 Stainless Steel

T Rating:
T3/T4

External Reflector:
Aluminium

Key Features:

- Simple Installation.
- Straightforward maintenance.
- Integral control gear – easily removed.
- Wide choice of voltage and lamp options.
- Ex e terminal chamber.
- Internal flamepaths eliminating risk of corrosion and costly damage.
- Control gear and associated components housed in separate easily removed assembly
- The unique innovative design allows luminaires to be easily converted from Zone 1 to Zone 2.
- Suitable for use with elliptical or tubular lamps.
- Zone 2 variants available, see HDL 223/224.
- Optional external reflector – ideal for warehousing.

Engineering Solutions
Design to Manufacture

HADAR LIGHTING

Protection:
Ex II 2 G D Ex de IIC T4 Gb (pendant), or T3 Gb (universal), Ex tb IIIC 130ºC Db IP67 (pendant), or T175ºC Db IP67 (universal).

Certification: ATEX & IECEx certified by SIRA

	Certification	Ambient	Voltage Range	Certificate
HDL 113 HDL 114	Ex II 2 G D Ex de IIC T3/T4 IP67	-20ºC to see table below	See table below	IECEx SIR 09.0046 SIRA 09ATEX1100

Electrical Specifications:

Electrical Specification					Electrical Specification				
Lamp Options	Lamp holder	Power factor	Power consumption	Ambient	Lamp Options	Lamp holder	Power factor	Power consumption	Ambient
50W MBF	E27	0.85	55W	55ºC	50W SON	E27	0.85	55W	55ºC
80W MBF	E27	0.85	90W	55ºC	70W SON	E27	0.85	80W	55ºC
125W MBF	E27	0.85	140W	55ºC	150W SON	E40	0.85	170W	55ºC
250W MBF	E40	0.85	280W	45ºC	250W SON	E40	0.85	275W	45ºC
400W MBF	E40	0.85	440W	45ºC	400W SON	E40	0.85	440W	45ºC
					70W MBI	E27	0.85	80W	55ºC
					100W MBI	E27	0.85	115W	55ºC
					150W MBI	E27	0.85	170W	55ºC
					250W MBI	E40	0.85	280W	45ºC
					400W MBI	E40	0.85	440W	45ºC
					500W (Max) GLS*	E40	0.85	500W	45ºC

*HDL113 - 300W (Max) GLS

Installation:

Terminals: 4mm² clamp terminals as standard for live, live switched, neutral, earth and looping provided. Internal and external earth as standard. 6mm² and screw terminals available on request.
Cable Entries: 2 x M20. Other entries available on request.
Suspension: Via stirrup bracket supplied. See drawings below.
Installation: Installation document AL10332 supplied.

Ordering Matrix:

Field	Options
Product	HDL 113 HDL 114
Version	S – Gas and dust (Zone 1 and 21) D – Dust (Zone 21 only)
Voltage	22 – 220V 23 – 230V 24 – 240V 25 – 250V
Frequency	5 – 50Hz 6 – 60Hz
Cable Entries	00 – 2 x M20 05 – 2 x M25
Lamp Options	50 - 50W 70 - 70W 80 - 80W 100 - 100W 125 - 125W 150 - 150W 250 - 250W 300 - 300W (GLS) 400 - 400W 500-500W (GLS)
Options	M – MBF Mercury H – MBI Metal Halide E – SON High Pressure Sodium G – GLS

Dimensions:

HDL114 WITH EXTERNAL REFLECTOR — 473mm, Ø475

HDL114 — 447mm

HDL113 — 342mm

332mm, 160mm, 3 HOLES Ø13

Type	Description	Weight	Voltage
HDL 113	50W to 150W SON, MBI, MBF, GLS 300W	13kg	220V, 230V, 240V, 250V 50/60Hz
HDL 114	150W to 400W SON, MBI, MBF, GLS 300W	18kg	220V, 230V, 240V, 250V 50/60Hz

Notes:
1) Final Product Code should be in the format: HDL113S24500400E
2) Photometric Data available from the website or contact sales office.
3) External reflector item no. ALA90086 suitable for HDL114. Item no. ALA90086A suitable for HDL113.

A-BELCO GROUP OF COMPANIES

Floodlight

Zone 1 Ex de Floodlight

Specification:

Main Body:
Marine Grade Aluminium

Lamp Glass:
Toughened Soda Lime

External Fasteners:
A4 Stainless Steel

T Rating:
T2 and T3

Key Features:

- 150W, 250W and 400W E40 tubular discharge lamps.
- 500W max tungsten halogen lamp.
- Simple Installation.
- Straightforward maintenance.
- Integral control gear.
- Wide choice of voltage options.
- Marine grade aluminium.
- Lightweight.
- Robust.
- Ex e junction box.
- Suitable for use with standard and twin arc lamps.
- Wide beam reflector.

Engineering Solutions
Design to Manufacture

HADAR LIGHTING

Protection:

Ⓔⓧ II 2 G Ex de IIB T2/T3 IP56

Certification: ATEX & IECEx Certified by SIRA

	Certification	Ambient	Voltage Range	Certificate
HDL 117	Ⓔⓧ II 2 G Ex de IIB T2/T3 IP56	150W -20ºC to +40ºC T3 250W -20ºC to +40ºC T3 400W -20ºC to +40ºC T3 (220V) 400W -20ºC to +40ºC T2 (230V, 240V) 500W -20ºC to +40ºC T2	220V, 230V, 240V 50Hz or 60Hz	IECEx SIR 07.0023 SIRA 07ATEX1059

Electrical Specifications:

	Electrical Specification			
Lamp Options	Power consumption	Power factor	Power Supply	
150W	170W	0.85	220V, 230V, 240V, 50/60 Hz	
250W	280W			
400W	435W			
500W	500W			

Installation:

Terminals: Exe terminal chamber with terminal block suitable for looping 6mm² cable.
Cable Entries: 2 x M20. Other entries available on request
Suspension: Steel mounting bracket. See dimensions below for fixing centres.
Installation: Installation document AL10204 supplied.

Ordering Matrix:

Field	Options
Product	HDL 117S
Voltage	22 – 220V 23 – 230V 24 – 240V
Frequency	5 – 50Hz 6 – 60Hz
Cable Entries	00 – 2 x M20 05 – 2 x M25
Lamp Options	150 – 150W 250 – 250W 400 – 400W 500 – 500W (Tungsten Halogen Only)
Options	E – SON High Pressure Sodium / MBI Metal Halide T – Tungsten Halogen (Single End E40 Cap)

Dimensions:

Lamp	Weight
Discharge	20kg
GLS / TH	15kg

Notes:
1) Final Product Code should be in the format: HDL117S24500400E
2) Photometric Data available from website or contact sales office.

Data is correct at time of print, but is subject to change due to continual product improvement.

A-BELCO GROUP OF COMPANIES

LED Traffic Light

Zone 1 and Zone 21 Ex emb Traffic Light / Status Indicator Light

Specification:

External Metalwork/Sunshields:
316 SS Painted Matt Black

External Junction Box:
316 SS Painted Matt Black

Weight:
2 Lamp: 7kg
3 Lamp: 10kg

Lamp Body:
Marine Grade Aluminium

Lamp Lens:
Polycarbonate

Lamp Gaskets:
Silicone/Rubber

External Fasteners:
A4 Stainless Steel

T Rating:
T5

Key Features:

- Available in single, twin or triple lamp options.
- Colour combinations can include:- Red, Amber, Green, White & Yellow.
- Sunshields supplied as standard.
- Horizontal or vertical mounting options available.
- Direct Mount or Adjustable Pole Mount available.
- Bespoke / Individual Lamp identification labelling available.
- Customer can select constant light output or flashing upon installation.
- LED technology will give a predicted working life of 10 years +.
- Each individual lamp utilises 6 off 1.2W LEDS.
- Low power consumption.
- Easy installation and low maintenance.
- Rugged construction – resistant to vibration.
- Instant light output.
- All units supplied with 2 cable entries.
- IP66 and IP67

- Optional wire guard available for extra protection.
- Can be supplied with 10º / 30º / 50º LED lenses for directional light output.

Engineering Solutions
Design to Manufacture

HADAR
LIGHTING

Protection:
Ⓔx Ⅱ 2 G D Ex emb IIC T5 Gb, Ex t IIIC T68ºC Db IP66/67

Certification: ATEX & IECEx by SIRA

	Certification	Ambient	Voltage Range	Certificate
HDL 153	Ⓔx Ⅱ 2 G D Ex emb IIC T5 Gb, Ex t IIIC T68ºC Db IP66/67	All variants -20ºC to +55ºC	100V to 254V AC 24V AC/DC	IECEx SIR 09.0065X SIRA 09ATEX5160X SIRA 03ATEX3386

Electrical Specification (per individual lamp):

	Electrical Specification		
Lamp Options	Power consumption	Power factor	Power supply
6 x 1.2W LEDs	12W Max	0.95	100V – 254V 50/60Hz AC or 24V AC/DC

Installation:

Terminals: Up to 4mm² screwed terminals for L1, L2, L3, neutral, earth and looping are provided. Internal and external earth is standard.
Cable Entries: 2 x M20, one fitted with approved stopper plug, other entries available on request.
Suspension: Via 2 external mounting point. Adjustable pole mount kit also available:- ALA90091.
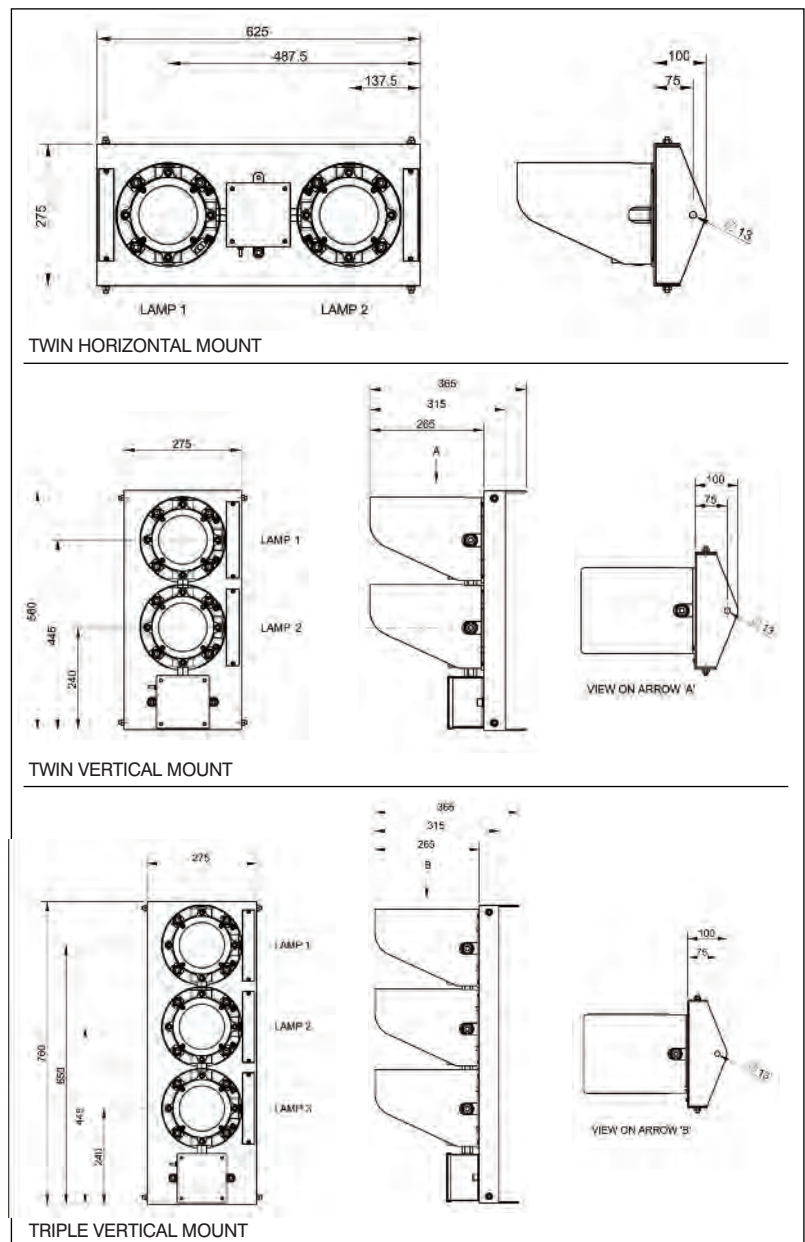**Installation:** Installation document AL10649 supplied.

Ordering Matrix:

Field	Options
Product	HDL153
Voltage	H – 100-254V AC L – 24V AC/DC
Mounting	H – Horizontal V – Vertical
Combination	1 – Single 2 – Twin 3 – Triple
Lamp 1	R – Red A – Amber G – Green W – White Y – Yellow N – n/a
Lamp 2	R – Red A – Amber G – Green W – White Y – Yellow N – n/a
Lamp 3	R – Red A – Amber G – Green W – White Y – Yellow N – n/a
Fittings	0 – No wire guard 1 – Wire guard fitted
Cable Entries	0 – M20 5 – M25
Other Options	0 – Standard

Notes:
1) Typical ordering reference: HDL153HH3GAR000.
2) Photometric Data available from the website or contact sales office.

Dimensions:

TWIN HORIZONTAL MOUNT

TWIN VERTICAL MOUNT

TRIPLE VERTICAL MOUNT

Data is correct at time of print, but is subject to change due to continual product improvement.

A-BELCO GROUP OF COMPANIES

LED Luminaire

Zone 2 and 22 Ex emb LED Helideck / Obstruction / Bulkhead Luminaire

Specification:

Main Body:
Marine Grade Aluminium

Clear Lens:
Polycarbonate

Gaskets:
Silicone/Rubber

External Fasteners:
A4 Stainless Steel

T Rating:
T5

Weight:
3.0kg

Key Features:

- Available in Green (Helidecks), Red (Obstruction)
  or White (general lighting) other colours also available.
- Customer can select constant light output or flashing upon installation.
- Conforms to ICAO annex 14 volume II and CAP437 for Helideck
  perimeter lighting and CAP168 for Obstruction lighting.
- LED technology will give a predicted working life of 10 years +.
- Utilises 6 off 1.2W LEDS.
- Low power consumption.
- Easy installatio--n and low maintenance.
- Rugged construction – resistant to vibration.
- Instant light output.
- 360º coverage.
- Independently photometrically tested.
- All units supplied with 3 cable entries.
- IP66 and IP67

- Optional wire guard available for extra protection.
- Can be supplied in traffic light or stop/start assemblies

Engineering Solutions
Design to Manufacture

HADAR L I G H T I N G

Hadar Lighting, Jubilee Industrial Estate, Ashington
Northumberland, NE63 8UG United Kingdom

T: +44 (0) 1670 814 877
F: +44 (0) 1670 858 638

enquiries@hadar-lighting.com   www.hadar-lighting.com

Protection:
Ex II 3 G D Ex emb IIC T5 Gc, Ex tb IIIC T68ºC Dc IP66/67

Certification: ATEX and ABS certified.

	Certification	Ambient	Voltage Range	Certificate
HDL 203	Ex II 3 G D Ex emb IIC T5 Gc, Ex tb IIIC T68ºC Dc IP66/67	All variants -20ºC to +55ºC	100V to 254V AC 24V AC/DC	SIRA 11ATEX4313X ABS 12-LD818639-PDA

Electrical Specifications:

	Electrical Specification		
Lamp Options	Power consumption	Power factor	Power supply
6 x 1.2W LEDs	12W Max	0.95	100V – 254V 50/60Hz AC or 24V AC/DC

Installation:

Terminals: Up to 4mm² screwed terminals for live, neutral, earth and looping are provided. Internal and external earth is standard.
Cable Entries: 3 x M20, two fitted with approved stopper plug, other entries available on request.
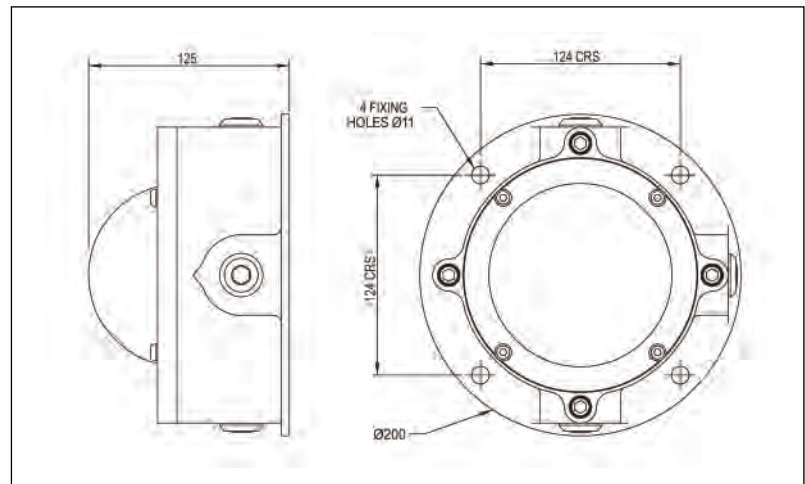**Suspension:** Via 4 external mounting points.
Installation: Installation document AL10752 supplied.

Ordering Matrix:

Field	Options
Product	HDL203
Voltage	H – 100-254V AC L – 24V AC/DC
Version*	G – Green LED'S R – Red LED'S W – White LED'S
Fittings	0 – No wire guard 1 – Wire guard fitted
Cable Entries	0 – M20 5 – M25
Other Options	00 – Red 00 – White 02 – Green

*Other colour options available

Dimensions:

Notes:
1) Typical ordering reference HDL203HG0002.
2) Photometric Data available from the website or contact sales office.

A-BELCO
GROUP OF COMPANIES

Modular LED Luminaire

Zone 2 and 22 Ex emb LED Modular Floodlight / Bulkhead Luminaire

Specification:

Main Body:
Marine Grade Aluminium

Diffuser:
Polycarbonate

Gaskets:
Silicone

External Fasteners:
A4 Stainless Steel

Stirrup Bracket:
316 Stainless Steel

T Rating:
T4

Weight:
6.0kg per module

Key Features:

- Modular construction allows the modules to be supplied interlinked with each other to provide greater light output.
- Can be used as a single unit – small floodlight or bulkhead or linked together to replicate a large 250W/400W floodlight.
- Each module utilises 48 off 1.2W LED's
- Integrated power supply.
- Low power consumption.
- Rugged construction – resistant to vibration.
- Independently photometrically tested.
- All units supplied with 2 cable entries as standard. Additional entries available on request.
- IP66 and IP67.
- Emergency version available. See data sheet HDL206E.
- Optional wire guard available for extra protection.
- Narrow, Medium, Wide and Extra Wide beam light output available.

In comparison to typical Ex d floodlights:
- 60% less weight.
- 50% less power consumption.
- One man installation.
- LED technology will give a predicted lamp life of 10 years+.
- No light pollution.
- Instant start and restrike.
- No light degradation at low temperatures.
- Penetrating white light.
- Photocell option available.
- No flamepaths to maintain.
- Low cost of installation, operation and maintenance.

Engineering Solutions
Design to Manufacture

HADAR LIGHTING

Protection:

⟨Ex⟩ II 3 G D Ex emb IIC T4 Gc, Ex tb IIIC T103ºC Dc IP66/67

Certification: ATEX and ABS certified.

	Certification	Ambient	Voltage Range	Certificate
HDL206S	⟨Ex⟩ II 3 G D Ex emb IIC T4 Gc, Ex t IIIC T103ºC Db IP66/67	-20ºC to +50ºC	110V to 240V AC input 24V AC/DC* *Not available on 24 LED version	SIRA 11ATEX4314X ABS 11-LD801943-PDA

Electrical Specifications:

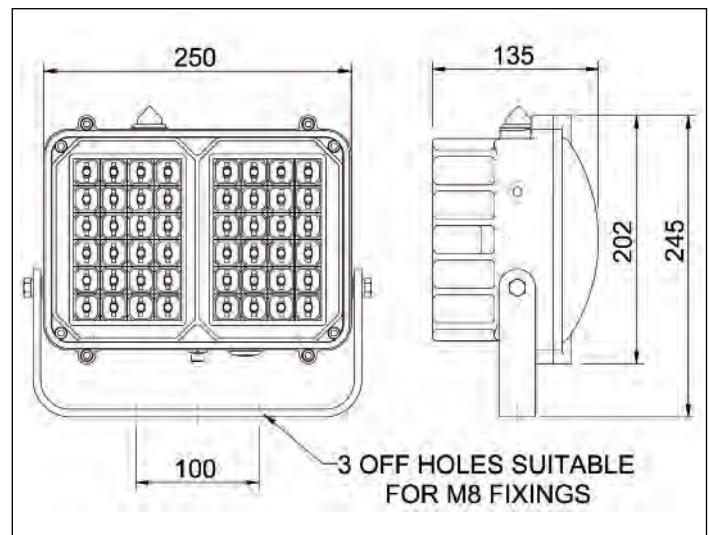|	Electrical Specification		
Lamp Options	Power consumption	Power factor	Available power supplies
24 x 1.2W LED's	30W Max		110V – 240V 50/60Hz AC only
48 x 1.2W LED's	60W Max	0.95	or
96 x 1.2W LED's	120W Max		24V AC/DC
144 x 1.2W LED's	180W Max		

Installation:

Terminals: Up to 4mm² terminals for live, neutral, earth and looping are provided. Internal and external earth as standard.
Cable Entries: 2 x M20, one fitted with approved stopper plug, other entries available on request.
Suspension: Via stirrup bracket, other mounting accessories available. Stainless steel eyebolt for safety chain included as standard.
Installation: Installation document supplied.

Ordering Matrix:

Field	Options
Product	HDL206S
Version (LEDs)	0 – 24 LEDs 1 – 48 LEDs 2 – 96 LEDs 3 – 144 LEDs
Voltage	H – 110 - 240V AC only L – 24V AC/DC
Beam Pattern	N – Narrow M – Medium W – Wide X – Extra wide
Mount*	H – Horizontal mount (single module version only) V – Vertical mount (twin/triple module version only) C – Ceiling mount
Light	W – Cool White light X – Warm White light Other colours available on request
Cable Entries	0 – M20 5 – M25
Other Options	04 – Colour RAL 7035 (Grey) 09 – Colour RAL 7035 (Grey) c/w Photocell

*Mount refers to positioning of module on stirrup bracket, please refer to the below photographs.

Dimensions:

250   135
100   202   245

3 OFF HOLES SUITABLE FOR M8 FIXINGS

Weight:
24 and 48 LED Luminaire: 6kg
96 LED Luminaire: 12kg
144 LED Luminaire: 18kg

Notes:
1) Typical ordering reference HDL206S1HMHW004.
2) Photometric Data available from the website or contact sales office.

Horizontal mount

Vertical mount

Data is correct at time of print, but is subject to change due to continual product improvement.
Zone 1 and Industrial versions available, please refer to the website or contact sales office for further details.

A-BELCO
GROUP OF COMPANIES

Emergency Modular LED Luminaire

Zone 2 and 22 Ex emb LED Modular Floodlight / Bulkhead Luminaire

Specification:

Main Body:
Marine Grade Aluminium

Diffuser:
Polycarbonate

Gaskets:
Silicone

External Fasteners:
A4 Stainless Steel

Stirrup Bracket:
316 Stainless Steel

T Rating:
T4

Weight:
9.0kg per module

Key Features:

- Battery backup power provides 3 hours at 50% illumination, 90 minutes at full illumination.
- Modular construction allows the modules to be supplied interlinked with each other to provide greater light output.
- Can be used as a single unit – small floodlight or bulkhead or linked together to replicate a large 250W/400W floodlight.
- Can be supplied in multiple configurations of standard or emergency modules.
- Each module utilises 48 off 1.2W LED's
- Integrated power supply.
- Low power consumption.
- Rugged construction – resistant to vibration.
- Independently photometrically tested.
- All units supplied with 2 cable entries. Additional entries available on request.
- IP66 and IP67.

- Optional wire guard available for extra protection.
- Narrow, Medium, Wide and Extra Wide beam light output available.
- Multiple mounting options available.

In comparison to typical Ex d floodlights:
- 70% less weight.
- 50% less power consumption.
- One man installation.
- LED technology will give a predicted lamp life of 10 years+.
- No light pollution.
- Instant start and restrike.
- No light degradation at low temperatures.
- Penetrating white light.
- Photocell option available.
- No flamepaths to maintain.
- Low cost of installation, operation and maintenance.

Engineering Solutions
Design to Manufacture

HADAR
L I G H T I N G

Protection:
⟨Ex⟩ II 3 G D Ex emb IIC T4 Gc, Ex tb IIIC T103°C Dc IP66/67

Certification: ATEX and ABS certified.

	Certification	Ambient	Voltage Range	Certificate
HDL206E	⟨Ex⟩ II 3 G D Ex emb IIC T4 Gc, Ex tb IIIC T103°C Dc IP66/67	-20°C to +50°C	110V to 240V AC input	SIRA 11ATEX4314X ABS 11-LD801943-PDA

Electrical Specifications:

	Electrical Specification		
Lamp Options	Power consumption	Power factor	Available power supplies
48 x 1.2W LED's	70W		
96 x 1.2W LED's	140W	0.95	110V – 240V 50/60Hz AC only
144 x 1.2W LED's	210W		

Installation:

Terminals: Up to 4mm² terminals for live, neutral, earth and looping are provided. Internal and external earth as standard.
Cable Entries: 2 x M20, one fitted with approved stopper plug, other entries available on request.
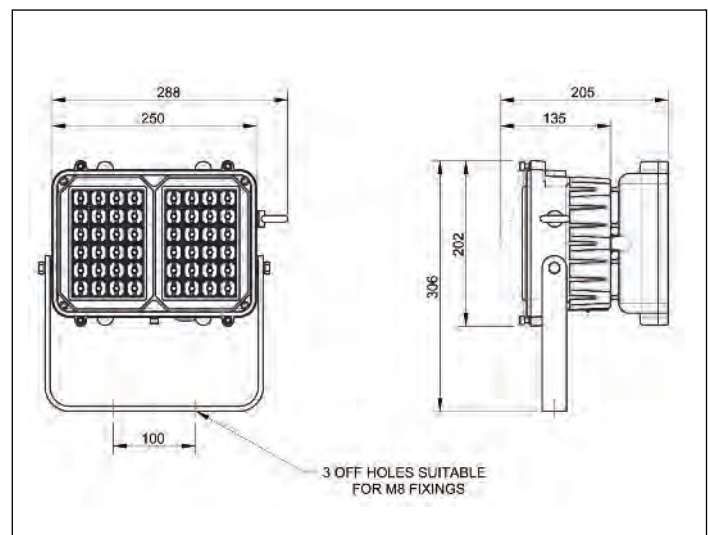**Suspension:** Via stirrup bracket, other mounting accessories available. Stainless steel eyebolt for safety chain included as standard.
Installation: Installation document supplied.

Ordering Matrix:

Field	Options
Product	HDL206
Version (LEDs)	E – Emergency (48 LEDs) ES – Emergency/Standard (96 LEDs) SES – Standard/Emergency/Standard (144 LEDs) (All combinations available)
Beam Pattern (add per module)	N – Narrow M – Medium W – Wide X – Extra Wide
Light	W – Cool White light X – Warm White light Other colours available on request.
Cable Entries	0 – M20 5 – M25
Casting Colour	04 – Colour RAL 7035 (Grey)
Other Options	H – Horizontal (available on single units only)

Dimensions:

288
250
205
135
202
306
100
3 OFF HOLES SUITABLE FOR M8 FIXINGS

Weight:
48 LED Luminaire: 9kg
96 LED Luminaire: 15-18kg
144 LED Luminaire: 21-27kg

Notes:
1) Typical ordering reference HDL206EEEMMMW004.
2) Photometric Data available from the website or contact sales office.

A-BELCO
GROUP OF COMPANIES

Fluorescent Luminaire

Zone 2 and 22 EEx nA Fluorescent Luminaire / Standard or Emergency Fluorescent

Specification:

Enclosure:
Corrosion resistant Glass reinforced Polyester

Diffuser:
High Impact Polycarbonate

Retaining Clips:
Stainless Steel

Gear Tray:
Mild Steel Painted

Control Gear:
High Frequency Electronic

T Rating:
T4 Gas and Dust
58W also available in T3

Key Features:

- The Zone 2 EEx nA Fluorescent Luminaire is designed from a high specification of corrosion resistant glass, reinforced polyester body and high impact polycarbonate diffuser to give the highest protection to ATEX standards for EEx nA applications.
- The luminaire features stainless steel diffuser retaining clips and zinc steel gear tray for rapid installation and easy maintenance.
- 18W, 36W, 58W, Single or Twin
- High specification.
- Sira certified.
- Rapid installation.
- Ease of maintenance.
- High Frequency Electronic Ballast.
- High Impact GRP Base.
- High Impact Polycarbonate Diffuser.

- Loop In / Loop Out as standard.
- Through wired versions available.
- Low Smoke Zero Halogen option.
- IP65
- Emergency version available - 3 hour duration (available in twin variants only).

Engineering Solutions
Design to Manufacture

HADAR LIGHTING

Protection:
Ex II 3 G D EEx nA II T3/T4, EEx nC IIC T3/T4 IP65 T135°C/T140°C

Certification: ATEX Certified by SIRA

	Certification	Ambient	Voltage Range	Certificate
HDL 220	Standard Ex II 3 G D EEx nA II T3/T4 IP65 T135°C/T140°C	Standard Range 18W -20°C to +40°C T4 36W -20°C to +40°C T4 58W -20°C to +50°C T3 +40°C T4	220V – 240V	SIRA 03ATEX4566X
	Emergency Ex EEx nC IIC T3/T4 IP65 T135°C/T140°C	Emergency Range 18W -15°C to +40°C T4 36W -15°C to +40°C T4 58W -15°C to +50°C T4		

Emergency Version: Twin units only, 3 hour battery duration

Electrical Specifications:

Lamp Options	Electrical Specification		
	Power consumption	Power factor	Power supply
1 x 18W (600mm Luminaire)	20W	Better than 0.95	220V – 240V, 50/60 Hz AC/DC Emergency version AC only
1 x 36W (1200mm Luminaire)	38W		
1 x 58W (1500mm Luminaire)	60W		
2 x 18W (600mm Luminaire)	39W (Emergency – 49W)		
2 x 36W (1200mm Luminaire)	73W (Emergency – 83W)		
2 x 58W (1500mm Luminaire)	113W (Emergency – 132W)		

Installation:

Terminals: Suitable for up to 4.00mm² cable. 6.00mm² on request.
Cable Entries: 20mm clearance holes.
Suspension: Fixing centres - see below (optional stainless steel brackets available).
Installation: Through Wiring available (loop In/loop Out as standard) Low smoke zero halogen option available.

Ordering Matrix:

Field	Options
Product	HDL220
Version	S – Non Emergency E - Emergency
Fittings	L – Loop In/Loop Out T – Through Wired
Lamp Options	118 – 1 x 18W 136 – 1 x 36W 158 – 1 x 58W 218 – 2 x 18W 236 – 2 x 36W 258 – 2 x 58W

Accessories:

Stainless steel suspension brackets (2 per luminaire)
AL10559 Twin
AL10559A Single

Dimensions:

	L	W	H	F	C
1 x 18W Luminaires	702	116	114	500	480 x 2 clips per side
1 x 36W Luminaires	1312	116	114	800	400 x 4 clips per side
1 x 58W Luminaires	1612	116	114	1100	380 x 5 clips per side
2 x 18W Luminaires	702	186	114	500	480 x 2 clips per side
2 x 36W Luminaires	1312	186	114	800	400 x 4 clips per side
2 x 58W Luminaires	1612	186	114	1100	380 x 5 clips per side

Notes:
1) Final Product Code should be in the format: HDL220SL118
2) Photometric Data available from the website or contact sales office.
3) For weight please contact the sales office.

Data is correct at time of print, but is subject to change due to continual product improvement.

A-BELCO
GROUP OF COMPANIES

Specification:

Main Body:
Marine Grade Aluminium

Lamp Glass:
Toughened Glass

External Fasteners:
A4 Stainless Steel

T Rating:
T3 / T4

External Reflector:
Aluminium

Key Features:

- Simple installation.
- Straightforward maintenance.
- Integral control gear - easily removed.
- Wide choice of voltage and lamp options.
- Control gear and associated components housed in separate easily removed assembly.
- Suitable for use with elliptical or tubular lamps.
- Zone 1 variants available, see HDL 113/114.
- Optional external reflector - ideal for warehousing etc.

Protection:
⟨Ex⟩ II 3 G D Ex nR II T4 Gc (pendant), or T3 Gc (universal), Ex tc IIIC T130ºC Dc IP67 (pendant), or T175ºC Dc IP67 (universal).

Certification: ATEX & IECEx by SIRA

	Certification	Ambient	Voltage Range	Certificate
HDL 223 HDL 224	⟨Ex⟩ II 3 G D Ex nR II T4 Gc (pendant), or T3 Gc (universal), Ex tc IIIC T130˚C Dc IP67(pendant), or T175˚C Dc IP67(universal).	-20˚C to see table below	See table below	IECEx SIR09.0046 SIRA 09ATEX4175

Electrical Specifications:

	Electrical Specification					Electrical Specification			
Lamp Options	Lamp holder	Power factor	Power consumption	Ambient	Lamp Options	Lamp holder	Power factor	Power consumption	Ambient
50W MBF	E27	0.85	55W	55ºC	50W SON	E27	0.85	55W	55ºC
80W MBF	E27	0.85	90W	55ºC	70W SON	E27	0.85	80W	55ºC
125W MBF	E27	0.85	140W	55ºC	150W SON	E40	0.85	170W	55ºC
250W MBF	E40	0.85	280W	45ºC	250W SON	E40	0.85	275W	45ºC
400W MBF	E40	0.85	440W	45ºC	400W SON	E40	0.85	440W	45ºC
					70W MBI	E27	0.85	80W	55ºC
					100W MBI	E27	0.85	115W	55ºC
					150W MBI	E27	0.85	170W	55ºC
					250W MBI	E40	0.85	280W	45ºC
					400W MBI	E40	0.85	440W	45ºC
					500W (Max) GLS*	E40	0.85	400W	45ºC

*HDL223 - 300W (Max) GLS

Installation:

Terminals: 4mm² clamp terminals as standard for live, live switched, neutral, earth and looping provided. Internal and external earth as standard.
6mm² and screw terminals available on request.
Cable Entries: 2 x M20. Other entries available on request.
Suspension: Via stirrup bracket supplied. See drawings below.
Installation: Installation document AL10332A supplied.

Ordering Matrix:

Field	Options
Product	HDL223S HDL224S
Voltage	22 - 220V 23 - 230V 24 - 240V 25 - 250V
Frequency	5 - 50Hz 6 - 60Hz
Cable Entries	00 - 2 x M20 05 - 2 X M25
Lamp Options	50 - 50W 70 - 70W 80 - 80W 100 - 100W 125 - 125W 150 - 150W 250 - 250W 400 - 400W 500 - 500W
Options	M - MBF Mercury H - MBI Metal Halide E - SON High Pressure Sodium G - GLS

Dimensions:

Type	Description	Weight	Voltage
HDL 223	50W to 150W SON, MBI, MBF, GLS	13kg	220V, 230V, 240V, 250V 50/60Hz
HDL 224	150W to 400W SON, MBI, MBF, GLS	18kg	220V, 230V, 240V, 250V 50/60Hz

Notes:
1) Final Product Code should be in format: HDL223S24500400E
2) Photometric Data available from the website or contact sales office.
3) External reflector item no. ALA90086 suitable for HDL224. Item no. ALA90086A suitable for HDL223

A-BELCO GROUP OF COMPANIES

Floodlight

Zone 2 and 22 EEx nR Floodlight

Specification:

Body:
Painted Marine Grade
Aluminium Alloy

Front:
Hinged Front Cover

Diffuser:
Toughened Glass 4mm

Reflector:
Symmetrical Dimpled Anodised
Polished Aluminium

Stirrup Bracket:
Painted Steel

Key Features:

- The HDL 227 marine grade aluminium alloy floodlight with high performance photometrics is designed to withstand highly corrosive and Zone 2 hazardous area environments.
- The EEx nR restricted breathing floodlight is constructed from a compact and lightweight design and is suitable for use with 150W, 250W and 400W high pressure sodium or metal halide tubular E40 lamps.
- High performance photometrics
- Restricted breathing.
- SIRA certified.
- Lightweight design.
- High pressure sodium/metal halide.
- Marine Grade Alloy Body.
- Hinged Front Cover.
- Toughened Glass.

- Compact & Lightweight Design.
- Loop-In and Loop-Out as standard.
- Stirrup Bracket, Painted Steel.
- All external fasteners stainless steel.
- IP65

Engineering Solutions
Design to Manufacture

HADAR LIGHTING

Hadar Lighting, Jubilee Industrial Estate, Ashington
Northumberland, NE63 8UG United Kingdom

T: +44 (0) 1670 814 877
F: +44 (0) 1670 858 638

enquiries@hadar-lighting.com   www.hadar-lighting.com

Protection:
ⒺⓍ II 3 G D EEx nR II T2/T3 IP65

Certification: ATEX Certified by SIRA

	Certification	Ambient	Voltage Range	Certificate
HDL 227	ⒺⓍ II 3 G D EEx nR II T2/T3 IP65	-40ºC to +56ºC	220/230/240V	SIRA 04ATEX4061

Electrical Specifications:

	Electrical Specification		
Lamp Options	Power consumption	Power factor	Power supply
150W	168W	Better	
250W	280W	than	220/230/240 50Hz and 60 Hz Other voltages and frequencies available on request
400W	433W	0.95	

Installation:

Terminals: Suitable for up to 4.00mm² cable.
Cable Entries: 2 x M20 (other cable entries available upon request).
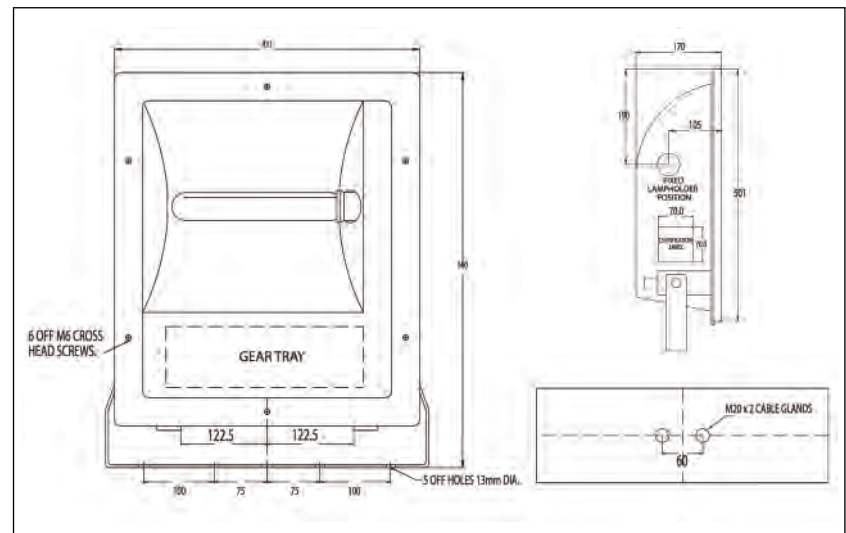**Suspension:** See dimensional diagram.

Ambients / Mounting Attitudes:

W	Attitude Point	PFC	NO PFC
150W	0º	-40ºC to +40ºC	-40ºC to +56ºC
T3	30º	-40ºC to +38ºC	-40ºC to +56ºC
	45º	-40ºC to +37ºC	-40ºC to +56ºC
	60º	-40ºC to +35ºC	-40ºC to +56ºC
	90º	-40ºC to +31ºC	-40ºC to +45ºC
250W	0º	-40ºC to +40ºC	-40ºC to +56ºC
T3	30º	-40ºC to +38ºC	-40ºC to +56ºC
	45º	-40ºC to +37ºC	-40ºC to +56ºC
	60º	-40ºC to +35ºC	-40ºC to +56ºC
	90º	-40ºC to +31ºC	-40ºC to +45ºC
400W	0º	-40ºC to +35ºC	-40ºC to +35ºC
T2	30º	-40ºC to +35ºC	-40ºC to +35ºC
	45º	-40ºC to +30ºC	-40ºC to +35ºC
	60º	-40ºC to +25ºC	-40ºC to +25ºC
	90º	-40ºC to +25ºC	-40ºC to +25ºC

Ordering Matrix:

Field	Options
Product	HDL 227S
Voltage	22 – 220V 23 – 230V 24 – 240V
Frequency	5 – 50Hz 6 – 60Hz
Cable Entries	00 – 2 x M20 05 – 2 x M25
Lamp Options	150 – 150W 250 – 250W 400 – 400W
Options	E - SON High Pressure Sodium/MBI Metal Halide T – Tungsten Halogen (E40 Cap)

Dimensions:

6 OFF M6 CROSS HEAD SCREWS.
GEAR TRAY
122.5 122.5
100 75 75 100
5 OFF HOLES 13mm DIA.
FIXED LAMPHOLDER POSITION
70.0
M20 x 2 CABLE GLANDS
60

Notes:
1) Final Product Code should be in the format: HDL227S22500250E
2) Photometric Data available from the website or contact sales office.

A-BELCO
GROUP OF COMPANIES

LED Luminaire

Industrial LED Helideck / Obstruction / Bulkhead Luminaire

Specification:

Main Body:
Marine Grade Aluminium

Clear Lens:
Polycarbonate

Gaskets:
Silicone/Rubber

External Fasteners:
A4 Stainless Steel

Weight:
3.0kg

Key Features:

- Available in Green (Helidecks), Red (Obstruction) or White (general lighting) other colours also available.
- Customer can select constant light output or flashing upon installation.
- Conforms to ICAO annex 14 volume II and CAP437 for Helideck perimeter lighting and CAP168 for Obstruction lighting.
- LED technology will give a predicted working life of 10 years +.
- Utilises 6 off 1.2W LEDS.
- Low power consumption.
- Easy installation and low maintenance.
- Rugged construction – resistant to vibration.
- Instant light output.
- 360º coverage.
- Independently photometrically tested.
- All units supplied with 3 cable entries.
- IP66 and IP67

- Optional wire guard available for extra protection.
- Can be supplied in traffic light or stop/start assemblies. Please contact sales office for further information.

Engineering Solutions
Design to Manufacture

HADAR LIGHTING

Protection:
IP66/67

Electrical Specifications:

	Electrical Specification		
Lamp Options	Power consumption	Power factor	Power supply
6 x 1.2W LEDs	12W Max	0.95	100V – 254V 50/60Hz AC or 24V AC/DC

Installation:

Terminals: Up to 4mm² screwed terminals for live, neutral, earth and looping are provided. Internal and external earth is standard.
Cable Entries: 3 x M20, two fitted with stopper plug, other entries available on request.
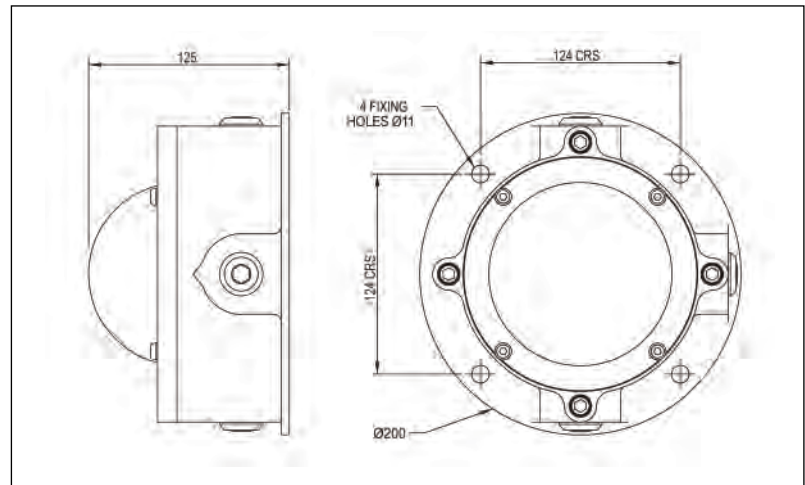**Suspension:** Via 4 external mounting points.
Installation: Installation document supplied.

Ordering Matrix:

Field	Options
Product	HDN103
Voltage	H – 100-254V AC L – 24V AC/DC
Version*	G – Green LED'S R – Red LED'S W – White LED'S
Fittings	0 – No wire guard 1 – Wire guard fitted
Cable Entries	0 – M20 5 – M25
Other Options	00 – Red 00 – White 02 – Green

*Other colour options available

Dimensions:

Notes:
1) Typical ordering reference HDN103HG0002.
2) Photometric Data available from the website or contact sales office.

A-BELCO
GROUP OF COMPANIES

Modular LED Luminaire

Industrial LED Modular Floodlight / Bulkhead Luminaire

Specification:

Main Body:
Marine Grade Aluminium

Diffuser:
Polycarbonate

Gaskets:
Silicone

External Fasteners:
A4 Stainless Steel

Stirrup Bracket:
316 Stainless Steel

Weight:
6.0kg per module

Key Features:

- Modular construction allows the modules to be supplied interlinked with each other to provide greater light output.
- Can be used as a single unit – small floodlight or bulkhead or linked together to replicate a large 250W/400W floodlight.
- Each module utilises 48 off 1.2W LED's
- Integrated power supply.
- Low power consumption.
- Rugged construction – resistant to vibration.
- Independently photometrically tested.
- All units supplied with 2 cable entries. Additional entries available on request.
- IP66 and IP67.
- Optional wired guard available for extra protection.
- Infra red variants available (for use with security cameras).
- Narrow, Medium, Wide and Extra Wide beam light output available.
- Multiple mounting options available.
- Emergency variant availble - see data sheet HDN106E.

In comparison to typical floodlights:
- 60% less weight.
- 50% less power consumption.
- One man installation.
- LED technology will give a predicted lamp life of 10 years+.
- No light pollution.
- Instant start and restrike.
- No light degradation at low temperatures.
- Penetrating white light.
- Photocell option available.
- Low cost of installation, operation and maintenance.

Engineering Solutions
Design to Manufacture

HADAR
LIGHTING

Protection:
IP66/67

Electrical Specifications:

	Electrical Specification			
Lamp Options	Power consumption	Power factor	Available power supplies	Ambient
24 x 1.2W LED's	30W Max	0.95	110V – 240V 50/60Hz AC only or 24V AC/DC *Not available on 24 LED version*	-20˚C to +50˚C
48 x 1.2W LED's	60W Max			
96 x 1.2W LED's	120W Max			
144 x 1.2W LED's	180W Max			

Installation:

Terminals: Up to 4mm² terminals for live, neutral, earth and looping are provided. Internal and external earth as standard.
Cable Entries: 2 x M20, one fitted with approved stopper plug, other entries available on request.
Suspension: Via stirrup bracket, other mounting accessories available. Stainless steel eyebolt for safety chain included as standard.
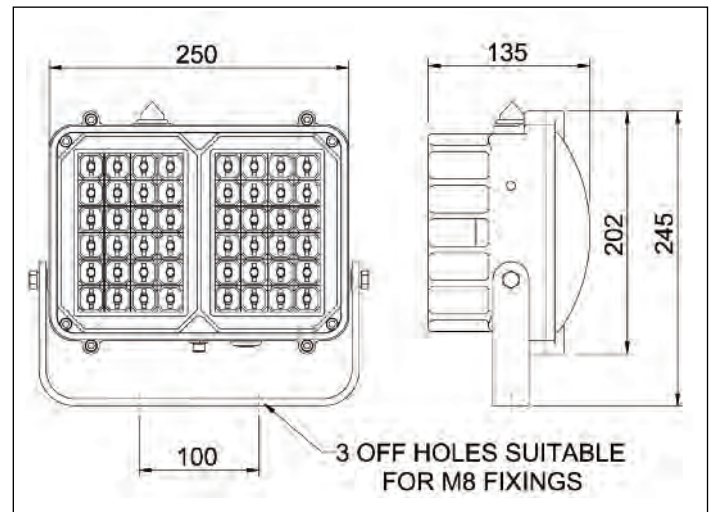**Installation:** Installation document AL10624 supplied.

Ordering Matrix:

Field	Options
Product	HDN106S
Version (LEDs)	0 – 24 LEDs 1 – 48 LEDs 2 – 96 LEDs 3 – 144 LEDs
Voltage	H – 110 - 240V AC only L – 24V AC/DC
Beam Pattern	N – Narrow M – Medium W – Wide X – Extra wide
Mount	H – Horizontal mount (single module version only) V – Vertical mount (twin/triple module version only) C – Ceiling mount
Light	W – Cool White light X – Warm White light Other colours available on request
Cable Entries	0 – M20 5 – M25
Other Options	04 – Colour RAL 7035 (Grey) 09– Colour RAL 7035 (Grey) c/w Photocell

*Mount refers to positioning of module on stirrup bracket, please refer to the below photographs.

Dimensions:

Weight:
24 and 48 LED Luminaire: 6kg
96 LED Luminaire: 12kg
144 LED Luminaire: 18kg

Notes:
1) Typical ordering reference HDN106S1HMHW004.
2) Photometric Data available from the website or contact sales office.

Horizontal mount

Vertical mount

A-BELCO
GROUP OF COMPANIES

Emergency Modular LED Luminaire

Industrial LED Modular Floodlight / Bulkhead Luminaire

Specification:

Main Body:
Marine Grade Aluminium

Diffuser:
Polycarbonate

Gaskets:
Silicone

External Fasteners:
A4 Stainless Steel

Stirrup Bracket:
316 Stainless Steel

Weight:
9.0kg per module

Key Features:

- Battery back up power provides 3 hours at 50% illumination, 90 minutes at full illumination.
- Modular construction allows the modules to be supplied interlinked with each other to provide greater light output.
- Can be used as a single unit – small floodlight or bulkhead or linked together to replicate a large 250W/400W floodlight.
- Can be supplied in multiple configurations of standard or emergency modules.
- Each module utilises 48 off 1.2W LED's
- Integrated power supply.
- Low power consumption.
- Rugged construction – resistant to vibration.
- Independently photometrically tested.
- All units supplied with 2 cable entries. Additional entries available on request.
- IP66 and IP67.

- Optional wire guard available for extra protection.
- Narrow, Medium, Wide and Extra Wide beam light output available.
- Multiple mounting options available.

In comparison to typical floodlights:
- 70% less weight.
- 50% less power consumption.
- One man installation.
- LED technology will give a predicted lamp life of 10 years+.
- No light pollution.
- Instant start and restrike.
- No light degradation at low temperatures.
- Penetrating white light.
- Photocell option available.
- Low cost of installation, operation and maintenance.

Engineering Solutions
Design to Manufacture

HADAR
L I G H T I N G

Protection:
IP66/67

Electrical Specifications:

	Electrical Specification		
Lamp Options	Power consumption	Power factor	Available power supplies
48 x 1.2W LED's	70W Max		
96 x 1.2W LED's	140W Max	0.95	110V – 240V 50/60Hz AC only
144 x 1.2W LED's	210W Max		

Installation:

Terminals: Up to 4mm² terminals for live, neutral, earth and looping are provided. Internal and external earth as standard.
Cable Entries: 2 x M20, one fitted with stopper plug, other entries available on request.
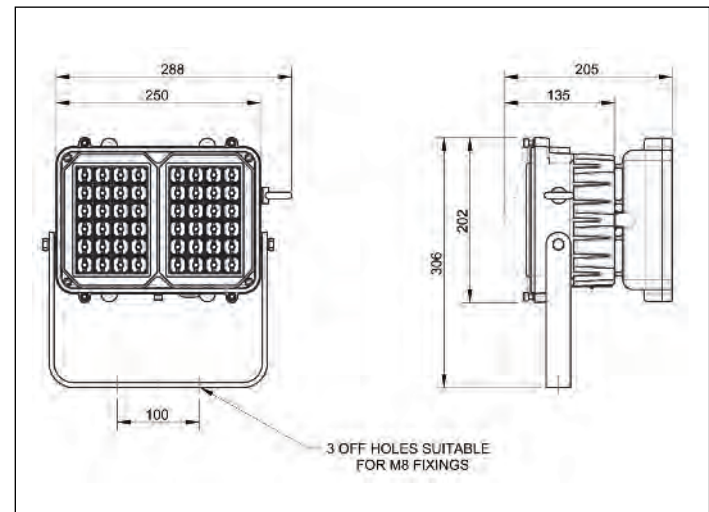**Suspension:** Via stirrup bracket, other mounting accessories available. Stainless steel eyebolt for safety chain included as standard.
Installation: Installation document AL105788 supplied.

Ordering Matrix:

Field	Options
Product	HDN106
Version (LEDs)	E – Emergency (48 LEDs) ES – Emergency/Standard (96 LEDs) SES – Standard/Emergency/Standard (144 LEDs) (All combinations available)
Beam Pattern (add per module)	N – Narrow M – Medium W – Wide X – Extra Wide
Light	W – Cool White light X – Warm White light Other colours available on request.
Cable Entries	0 – M20 5 – M25
Casting Colour	04 – Colour RAL 7035 (Grey)
Other Options	H – Horizontal (available on single units only)

Dimensions:

288
250
205
135
202
306
100
3 OFF HOLES SUITABLE FOR M8 FIXINGS

Weight:
48 LED Luminaire: 9kg
96 LED Luminaire: 15-18kg
144 LED Luminaire: 21-27kg

Notes:
1) Typical ordering reference HDN106EEEMMMW004.
2) Photometric Data available from the website or contact sales office.

Data is correct at time of print, but is subject to change due to continual product improvement.
Zone 1 and Zone 2 versions available, please refer to the website or contact sales office for further details.

A-BELCO
GROUP OF COMPANIES

Fluorescent Luminaire

Industrial Luminaire / Standard or Emergency Fluorescent

Specification:

Enclosure:
Corrosion resistant Glass reinforced Polyester

Diffuser:
High Impact Polycarbonate

Retaining Clips:
Stainless Steel

Gear Tray:
Mild Steel Painted

Control Gear:
High Frequency Electronic

Key Features:

- The Industrial Fluorescent Luminaire is designed from a high specification of corrosion resistant glass, reinforced polyester body and high impact polycarbonate diffuser to give the highest protection.
- The luminaire features stainless steel diffuser retaining clips and zinc steel gear tray for rapid installation and easy maintenance.
- 18W, 36W, 58W, Single or Twin
- High specification.
- Rapid installation.
- Ease of maintenance.
- High Frequency Electronic Ballast.
- High Impact GRP Base.
- High Impact Polycarbonate Diffuser.

- Loop In / Loop Out as standard.
- Through wired versions available.
- Low Smoke Zero Halogen option.
- IP65
- Emergency version available - 3 hour duration (available in twin variants only).

Engineering Solutions
Design to Manufacture

HADAR LIGHTING

Protection:
IP65

Electrical Specifications:

	Ambient	Voltage Range
HDN 220	Standard Range 18W -20ºC to +40ºC 36W -20ºC to +40ºC 58W -20ºC to +50ºC Emergency Range 18W -15ºC to +40ºC 36W -15ºC to +40ºC 58W -15ºC to +50ºC	220V – 240V

	Electrical Specification		
Lamp Options	Power consumption	Power factor	Power supply
1 x 18W (600mm Luminaire)	20W	Better than 0.95	220V – 240V, 50/60 Hz AC/DC Emergency version AC only
1 x 36W (1200mm Luminaire)	38W		
1 x 58W (1500mm Luminaire)	60W		
2 x 18W (600mm Luminaire)	39W (Emergency – 49W)		
2 x 36W (1200mm Luminaire)	73W (Emergency – 83W)		
2 x 58W (1500mm Luminaire)	113W (Emergency – 132W)		

Emergency Version: Twin units only, 3 hour battery duration

Installation:

Terminals: Suitable for up to 4.00mm² cable. 6.00mm² on request.
Cable Entries: 20mm clearance holes.
Suspension: Fixing centres - see below (optional stainless steel brackets available).
Installation: Through Wiring available (loop In/loop Out as standard) Low smoke zero halogen option available.
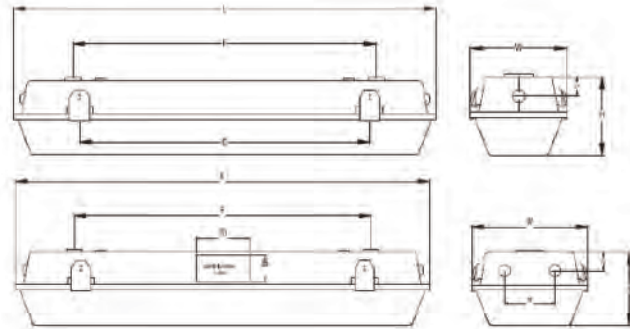
Ordering Matrix:

Field	Options
Product	HDN220
Version	S – Non Emergency E - Emergency
Fittings	L – Loop In/Loop Out T – Through Wired
Lamp Options	118 – 1 x 18W 136 – 1 x 36W 158 – 1 x 58W 218 – 2 x 18W 236 – 2 x 36W 258 – 2 x 58W

Accessories:

Stainless steel suspension brackets (2 per luminaire)
AL10559 Twin
AL10559A Single

Dimensions:

	L	W	H	F	C
1 x 18W Luminaires	702	116	114	500	480 x 2 clips per side
1 x 36W Luminaires	1312	116	114	800	400 x 4 clips per side
1 x 58W Luminaires	1612	116	114	1100	380 x 5 clips per side
2 x 18W Luminaires	702	186	114	500	480 x 2 clips per side
2 x 36W Luminaires	1312	186	114	800	400 x 4 clips per side
2 x 58W Luminaires	1612	186	114	1100	380 x 5 clips per side

Notes:
1) Final Product Code should be in the format: HDN220SL118
2) Photometric Data available from the website or contact sales office.
3) For weight please contact the Sales Office.

Data is correct at time of print, but is subject to change due to continual product improvement.

A-BELCO
GROUP OF COMPANIES

Floodlight

Industrial Floodlight

Specification:

Body:
Painted Marine Grade
Aluminium Alloy

Front:
Hinged Front Cover

Diffuser:
Toughened Glass 4mm

Reflector:
Symmetrical Dimpled Anodised
Polished Aluminium

Stirrup Bracket:
Painted Steel

Key Features:

- The HDN 227 marine grade aluminium alloy floodlight with high performance photometrics is designed to withstand highly corrosive environments.
- The HDN 227 floodlight is constructed from a compact and lightweight design and is suitable for use with 150W, 250W and 400W high pressure sodium or metal halide tubular E40 lamps.
- High performance photometrics
- Lightweight design.
- High pressure sodium/metal halide.
- Marine Grade Alloy Body.
- Hinged Front Cover.
- Toughened Glass.

- Compact & Lightweight Design.
- Loop-In and Loop-Out as standard.
- Stirrup Bracket, Painted Steel.
- All external fasteners stainless steel.
- IP65

Engineering Solutions
Design to Manufacture

HADAR LIGHTING

Protection:

IP65

Electrical Specifications:

	Ambient	Voltage Range
HDN 227	-40ºC to +45ºC	220/230/240V

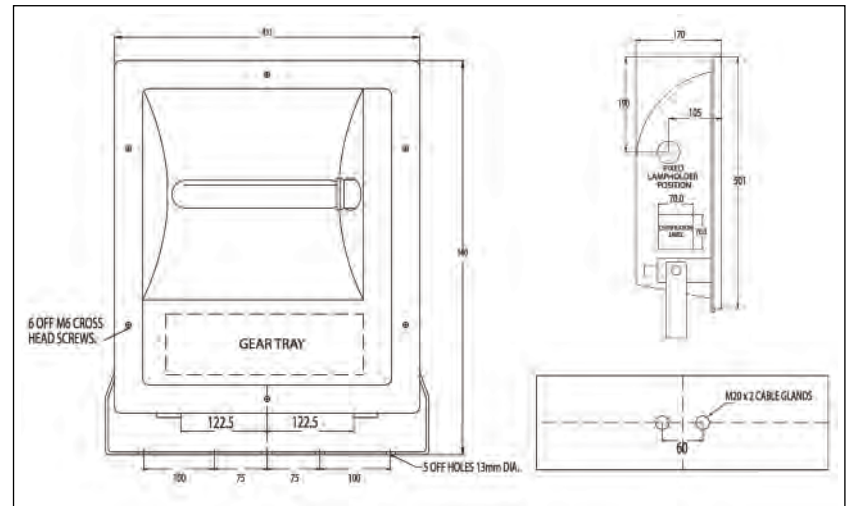|	Electrical Specification		
Lamp Options	Power consumption	Power factor	Power supply
150W	168W	Better	
250W	280W	than	220/230/240 50Hz and 60 Hz Other voltages and frequencies available on request
400W	433W	0.95	

Installation:

Terminals: Suitable for up to 4.00mm² cable.
Cable Entries: 2 x M20 (other cable entries available upon request).
Suspension: See dimensional diagram.

Ordering Matrix:

Field	Options
Product	HDN 227S
Voltage	22 – 220V 23 – 230V 24 – 240V
Frequency	5 – 50Hz 6 – 60Hz
Cable Entries	00 – 2 x M20 05 – 2 x M25
Lamp Options	150 – 150W 250 – 250W 400 – 400W
Options	E - SON High Pressure Sodium/MBI Metal Halide T – Tungsten Halogen (E40 Cap)

Dimensions:

Notes:
1) Final Product Code should be in the format: HDN227S22500250E
2) Photometric Data available from the website or contact sales office.

Data is correct at time of print, but is subject to change due to continual product improvement.

A-BELCO
GROUP OF COMPANIES

A-Belco Hazardous Area

A-Belco Hazardous Area is a specialist manufacturer of hazardous area products for the oil, gas, petro-chemical, pharmaceutical and marine industries worldwide. A division of the A-Belco Group, A-Belco Hazardous Area is an independent UK based manufacturer providing standard and bespoke offerings in the design and assembly of products for Zone Classification Areas 1, 2, 21 & 22, Gas and Dust.

The portfolio of products includes Junction Boxes, Control Panels, Control Stations, Lighting, Receptacles, Switches, Circuit Breakers, Cable Glands - all within Ex d, Ex e, Ex ia, Ex nA and Ex nR protection concepts. All products are built in conformance with the ATEX Directive to ensure complete safety. The equipment is independently certified by SIRA, CESI, GOST-R, GOST-K and AUS.

Junction Boxes

Manufactured from a range of materials including Aluminium Alloy, Stainless Steel and GRP the A-Belco range of explosion-proof Junction Boxes are suitable for use in Zone Classification Areas 1, 2, 21 & 22. The extensive range of enclosures can be used as Junction Boxes with or without terminals and to install electrical equipment such as switches, indicators, ammeters, voltmeters, section switches, remote control switches and transformers.

Drilled and threaded to individual customer requirements, optional upgrades include; internal mounting frames, air and drain valves, internal anti-condensate coating, tempered glass windows and IP kits. These robust boxes are suitable for use in any industrial processing plant where the presence of gas, vapours and flammable powders could potentially create an explosive atmosphere.

Cable Glands

Our innovative range of explosion-proof and weather-proof cable glands are used to provide a connection with electrical equipment that is housed within a flame-proof enclosure; providing a seal that will maintain the specific level of protection that is required.

Suitable for use in Zone 1, 2, 21 & 22 Hazardous Areas with all types of armoured cable, the cable glands provide a compound barrier seal around the cable conductors and an environmental seal around on the cable outer sheath. In addition the gas tight seal has been tested to prove compatible with Restricted Breathing equipment.

The cable glands allow mechanical cable retention and earth continuity via the cable armour termination. Manufactured in a range of sizes and configurations to suit individual requirements, the cable glands are available off-the-shelf at competitive prices within short lead times.

The A-Belco Group

The A-Belco Group is a diverse group of companies offering electrical and mechanical engineering excellence to a wide range of industries and markets worldwide. Through an extensive range of skills and experience, the A-Belco Group has significant engineering and design capabilities to provide a complete and bespoke first class engineered solution from design to manufacture.

The Group incorporates A-Belco Hazardous Area, A-Belco Electrical Engineering, A-Belco Industrial Connectors and MEP Solutions. The extensive product portfolio includes switchgear, electrical distribution panels, electrical accessories and innovative modular building service solutions. Formerly Reyrolle Industrial Accessories and later BALS Engineering, the Group is an established supplier to the UK energy, rail and construction markets. With over 25 years experience in the energy sector, A-Belco excel in quality, price, delivery and after sales support.

Hadar Lighting, Jubilee Industrial Estate, Ashington
Northumberland, NE63 8UG United Kingdom

T: +44 (0) 1670 814 877
F: +44 (0) 1670 858 638

enquiries@hadar-lighting.co.uk
www.hadar-lighting.co.uk

A-BELCO
GROUP OF COMPANIES