



HAZ AREA

LIGHTING

FOR HAZARDOUS AREAS

Product Brochure

HADAR
LIGHTING 

Engineering Solutions
Design to Manufacture

An A-Belco Group Company



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page.	27,28	HDN 105	Portable Luminaire
	29,30	HDN 220	Fluorescent Luminaire
	31,32	HDN 227	Floodlight

Fluorescent Luminaire

HDL 100

Zone 1 Ex emb Fluorescent Luminaire

Specification:

Enclosure:

Polycarbonate

Lamp Envelope:

Polycarbonate

Reflector:

Aluminium Powder Coated

Gaskets:

Silicone

External Fasteners:

A4 Stainless Steel

T Rating:

T4

Surface Temp:

100°C



Key Features:

- Simple Installation.
- Straightforward maintenance.
- Emergency version available - 3 hour duration.
- 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.
- Electronic control gear for instant operation at lower temperatures.

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



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Protection:

II 2GD Ex emb II T4/T5 IP66/67, Ex tD A21 T100°C

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

	Certification	Ambient	Voltage Range	Certificate
HDL 100	II 2GD Ex emb II T4/T5 IP66/67	2 x 18W / 36W -30°C to +55°C T4 -30°C to +32°C T5 2 X 58W -30°C to +53°C T4 Emergency Range -15°C	110V to 254V	IEC Ex SIR 06.0026X SIRA 06 ATEX 3079X ABS 07-LD219463-PDA

Electrical Specifications:

Electrical Specification			
Lamp Options	Power consumption	Power factor	Power supply
2 x 18W	32W circuit watts at 240V – 0.14A (120V – 0.28A)	Better than 0.95	220V – 254V, 47 / 63 Hz AC / DC
2 x 36W	62W circuit watts at 240V – 0.27 A (120V – 0.54A)		110V – 130V, 47 / 63 Hz AC / DC (2 X 18W / 2 X 36W only)
2 x 58W	92W circuit watts at 240V – 0.40A (120V – 0.80A)		Emergency version as above – AC only

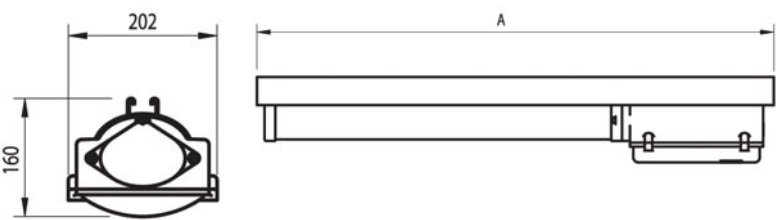
Installation:

Terminals	Up to 6mm² clamp terminals for live, live switched, neutral, earth and looping provided. Internal and external earth as standard. Screw terminals 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	236 – 2 x 18W 218 – 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) Bi-Pin as standard. Contact sales office for Single Pin.
 - 3) For Photometric Data contact the sales office.
 - 4) Brass earth continuity gland plates are available, contact sales office for more information.



Recessed Luminaire

HDL 102

Zone 1 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

Surface Temp:

75°C

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 luminaries.
- 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



Protection:

II 2GD Ex emb II T4/T5 IP64, Ex tD A21 T75°C

Certification: ATEX & IEC Ex certified by SIRA

	Certification	Ambient	Voltage Range	Certificate
HDL 102	II 2GD Ex emb II T4/T5 IP64	All ranges T4 - 40°C to + 55°C All ranges T5 - 40°C to + 40°C Emergency -15°C	110V – 254V	IEX Ex SIR 0.60027 SIRA 06 ATEX 3080

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, 47/63 Hz AC/DC 110V – 130V, 47/63 Hz AC/DC (18W/36W only) Emergency version as above – AC only
2 x 36W T8	62W Circuit Watts at 240V – 0.27A (120V – 0.28A)		
2 x 58W T8	92W Circuit Watts at 240V – 0.40A (120V – 0.80A)		
4 x 18W T8	64W Circuit Watts at 240V – 0.28A (120V – 0.56A)		
4 x 36W T8	124W Circuit Watts at 240V – 0.54A (120V – 1.08A)		

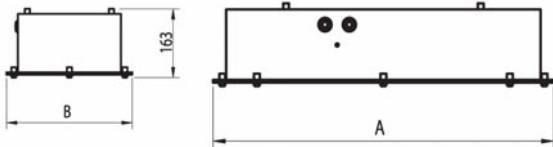
Installation:

Terminals: Up to 6mm² clamp terminals for live, live switched, neutral, earth and looping are provided. Internal and external earth as standard.
Screw terminals upon 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) Bi-Pin as standard. Contact sales office for Single Pin.
 - 3) Mild Steel as standard, contact sales office for stainless steel.
 - 4) For Photometric data contact the sales office.



LED Luminaire

HDL 103

Zone 1 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

Surface Temp:

68°C

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.
- 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 with 10° / 30° / 50° LED lenses for directional light output.
- Can be supplied in traffic light or stop/start assemblies - see data sheet.



Protection:

II 2GD Ex emb IIC T5 IP66/67, Ex tIIIC T68°C Db

Certification: ATEX & IEC Ex by SIRA

	Certification	Ambient	Voltage Range	Certificate
HDL 103	II 2GD Ex emb IIC T5	All variants -20°C to +55°C	110V to 254V AC/DC 24V AC/DC	IEC Ex SIR09.0065X SIRA09ATEX5160X

Electrical Specifications:

	Electrical Specification		
Lamp Options	Power consumption	Power factor	Power supply
6 x 1.2W LEDs	12W Max	0.95	110V – 254V 47/63Hz AC/DC or 24V AC/DC

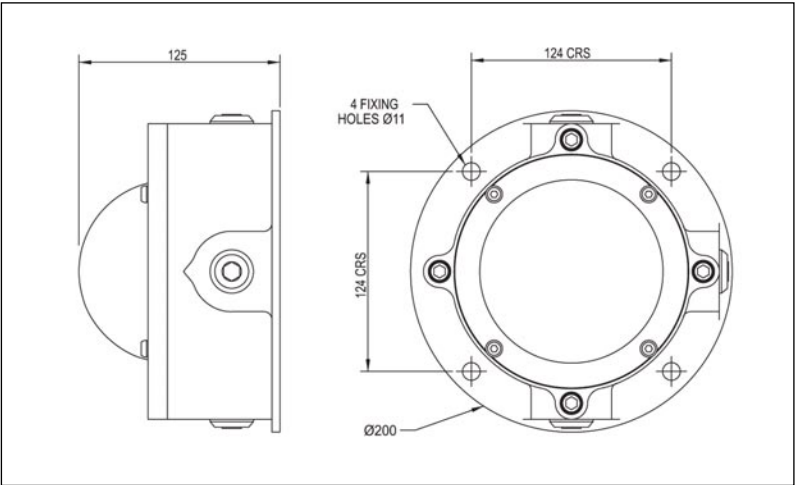
Installation:

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/DC 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 – Standard

Dimensions:



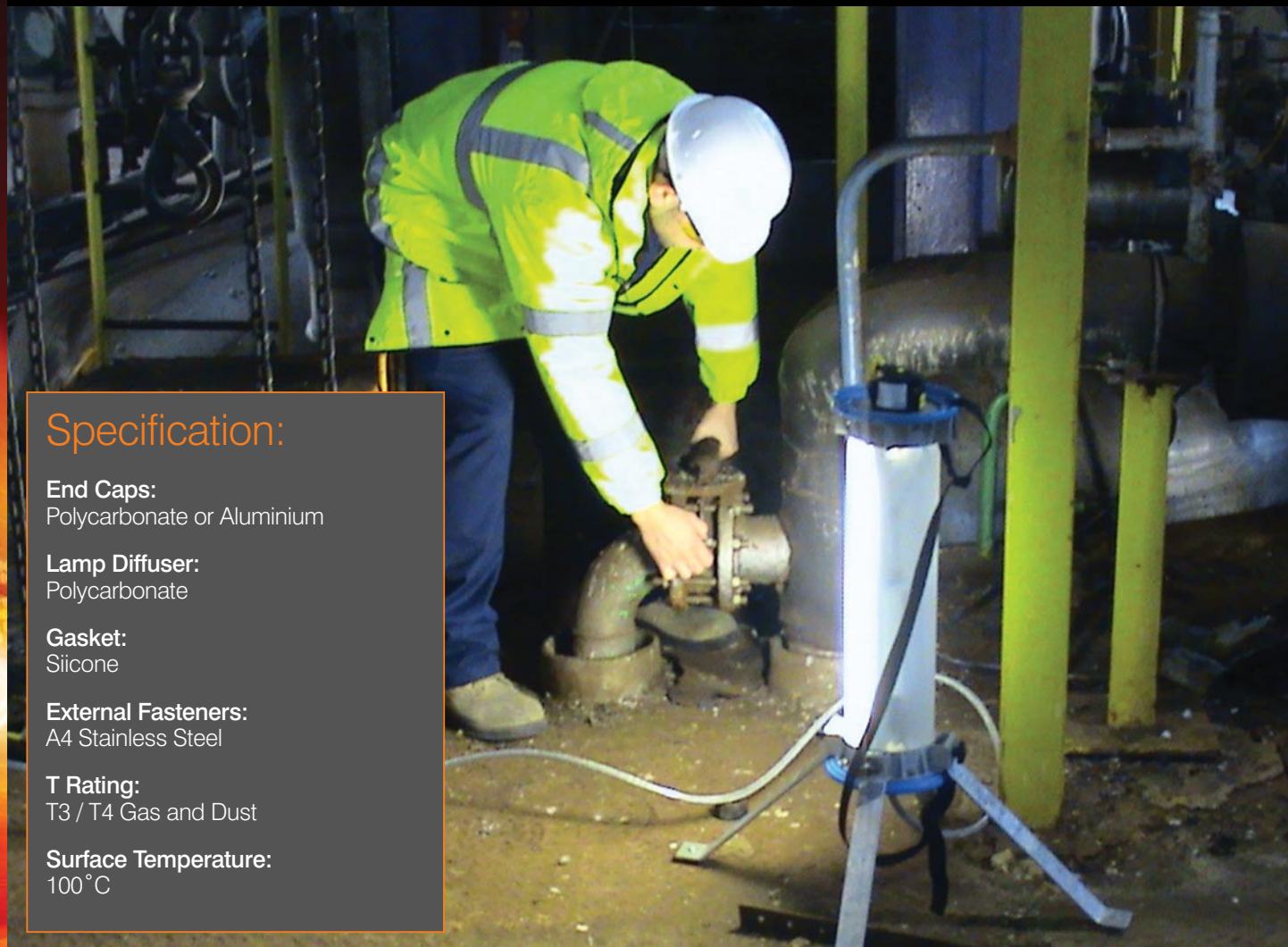
Notes:
1) Typical ordering reference HDL103HG0000.
2) For Photometric Data contact the sales office.



Portable Luminaire

HDL 105

Zone 1 Ex emb Portable - Temporary - Permanent - Linkable Luminaire



Specification:

End Caps:

Polycarbonate or Aluminium

Lamp Diffuser:

Polycarbonate

Gasket:

Silicone

External Fasteners:

A4 Stainless Steel

T Rating:

T3 / T4 Gas and Dust

Surface Temperature:

100°C

Key Features:

- 2 x 18W, 2 x 36W, 2 x 55W, 4 x 18W, 4 x 36W and 4 x 55W Compact Fluorescent Lamp.
- 2 x 18W, 2 x 36W, 2 x 58W T8 Fluorescent Lamp, Bi Pin or Single Pin.
- Wide voltage range (24V to 254V).
- Can be supplied with direct cable entries or fitted with plugs/sockets to allow luminaires to be instantly linked in series (plug and play). Emergency versions available for all variants (dependant on socket option) - 3 hour duration.
- IP68 rated (no socket fitted).
- Aluminium or polycarbonate and caps.
- Rugged construction.
- Easily relamped - uses standard compact fluorescent lamp / T8 lamp.
- Short gaskets for proven ingress protection.
- Mounting in any attitude.
- Features mounting points compatible with Unistrut support systems and accessories.
- Can be supplied with pre-fitted cable, plug and mounted socket (eg. ATX, Stahl, Ceag).
- Hanging/carrying strap supplied as standard.
- Electronic control gear for instant operation and reduced running costs.
- 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 (110V and 240V only).
- High frequency electronic ballast suitable for operation at low temperatures.
- Portable versions are supplied with an antistatic protective coating.
- Industrial variant available.
- Can be supplied with SY, H07RNF, or ships cable.
- Available with a variety of accessories, mounting stands, tripods etc.
- Replaceable, protective films available for use in paint shop applications.

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Protection:

II 2GD Ex emb II T3 / T4 IP66/67/68 (30 minutes at 3m depth). Ex tD A21 T100°C.

Certification: ATEX & IEC Ex certified by SIRA

	Certification	Ambient	Voltage Range	Certificate
HDL 105	Cable Gland option II 2GD Ex emb II T3/T4 IP66/67/68 Plug and Socket option II 2GD Ex embd IIC T3/T4 IP66	4 x CFL -20°C to +35°C T3 2 x CFL -20°C to +44°C T3 2 x T8 -20°C to +53°C T4 Emergency Range -15°C	24V - 28V AC/DC 42V - 54V AC/DC 110V - 130V AC/DC 220V - 254V AC/DC	IEC Ex SIR 07.0020 SIRA 07 ATEX 3032

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

Electrical Specifications:

Electrical Specification			
Lamp Options	Typical power consumption	Power factor	Available power supplies
2 x 18W	32W	Better than 0.95	220V - 254V 47/63 Hz AC/DC (all variants) 110V - 130V 47/63 Hz AC/DC (18W & 36W only) 24V - 28V AC/DC (36W only) 42V - 54V AC/DC (36W only)
2 x 36W	62W		
2 x 55/58W	92W		
4 x 18W	64W		
4 x 36W	124W		
4 x 55W	184W		

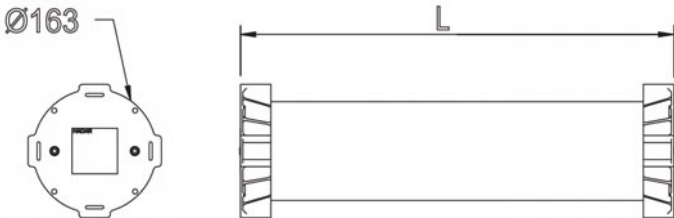
Installation:

Terminals: Up to 4mm² screwed terminals for live, live switched, neutral, earth and looping are provided. Internal earth as standard.
Suspension / Mounting: Each aluminium or polycarbonate end cap incorporates 4 channels which are compatible with Unistrut (or equivalent) fixings and accessories, supplied with suitable suspension / carrying strap. M6 clearance holes allow mounting plates to be attached to provide free standing luminaires. Tripod, floor stand and other various accessories are available.
Installation: Installation document AL10171.

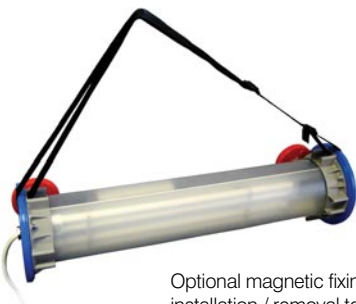
Ordering Matrix:

Field	Options
Product Version	HDL105 S - Standard E - Emergency
End Caps	A - Aluminium P - Polycarbonate
Voltage	H - High Voltage 220 - 254V M - Medium Voltage 110 - 130V L - Low Voltage 42 - 54V E - Extra low Voltage 24 - 28V
Cable Entries	00 - Refer to notes
Lamp Options	218 - 2x 18W 236 - 2x 36W 258 - 2 x 55/58W 418 - 4 x 18W 436 - 4 x 36W 458 - 4 X 55W
Options	C - Compact B - Bi Pin T8 S - Single Pin T8

Dimensions:

	
Lamp	Typical Length mm
2 x 18W	399
2 x 36W	552
2 x 55W	676
4 x 18W	588
4 x 36W	782
4 x 55W	906

Notes:
1) Typical ordering reference: HDL105SAL00218C
2) For Photometric Data contact the sales office.
3) Cable entries - over 5000 combinations (M20 / M25 entries, plug, socket and cable variants). Contact technical department.



Optional magnetic fixing brackets allow ease of installation / removal to steel structures.



Transformer

HDL 105T

Zone 1 Ex ed Transformer



Specification:

Enclosure / Skid:

A4 Stainless Steel

Gasket:

One Piece Polyurethane

Operating Temperature:

-20°C to +40°C

Door Fixings:

Hinged Removable Door
with Captive Fastening Screws

Earth Screws:

M10 Internal and External Brass Earth
Stud Assembly M6 Stud on the Door

Key Features:

- 316L stainless steel enclosure and skid.
- Feed through terminals.
- Input and output fuse holder
- 400VA, 110V or 240V input, 24V or 48V output.
- Entry devices – 2 cable glands or input sockets / plugs.
- Output devices – 2 to 4 cable glands or output sockets / plugs.
- Comes mounted on a stainless steel skid.
- Related Lighting Product: HDL 105 Ex em Portable.



Protection:
II 2GD Ex ed IIC T4 IP66

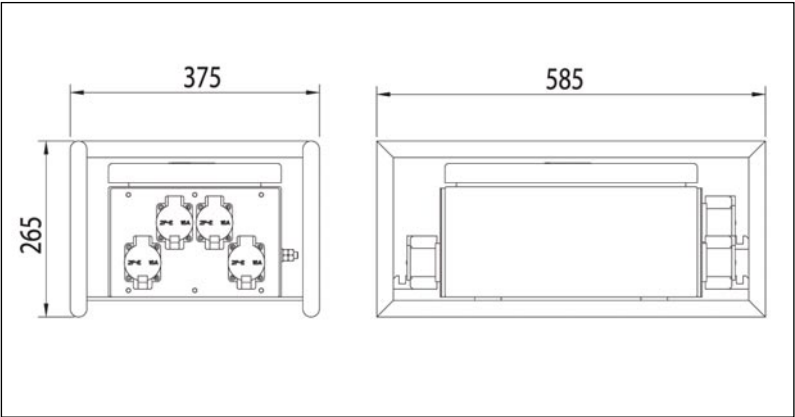
Certification: ATEX aproved by SIRA

	Certification	Ambient	Voltage Range	Certificate
HDL 105T	350VA: II 2GD Ex ed IIC T4	-20°C to +40°C	110V or 240V input	SIRA 07 ATEX 3277X
	400VA: II 2GD Ex ed IIC T4	-20°C to +30°C	24V or 48V output	

Ordering Matrix:

Field	Options
Product	HDL105T
Voltage	11 – 110V 23 – 230V 24 – 240V
Frequency	5 – 50Hz 6 – 60Hz
Outlet Options	00 – 4 x 16A socket outlets 01 – 2 x 16A socket outlets
Inlet Options	00 – 2 x M20 clearance holes 01 – 1 x M20 clearance holes

Dimensions:



- Notes:
- 1) Final Product Code should be in one format: HDL105T2350000
 - 2) For non-standard variations contact the sales office.
 - 3) Product can be supplied as 'plug and play' with trailing cable and approved plugs already fitted.



Modular LED Luminaire

HDL 106

Zone 1 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

Surface Temp:

103°C

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.
- IP66 and IP67.
- Optional wired guard available for extra protection.
- Infra red variants available (for use with security cameras).
- Wide, medium and narrow beam light output available.
- Multiple mounting options available.
- Emergency variant available soon.
- Optional PE Photocell 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.



Protection:

II 2GD Ex emb II T4 Gb IP66/67, Ex t IIIC T103°C Db

Certification: ATEX & IEC Ex by SIRA

	Certification	Ambient	Voltage Range	Certificate
HDL106	ATEX & IEC Ex by SIRA	-20°C to +50°C (-40°C certification pending)	100V to 254V AC input 24V AC/DC	IEC Ex SIR09.0064X SIRA 09ATEX5159X

Electrical Specifications:

Electrical Specification			
Lamp Options	Power consumption	Power factor	Available power supplies
48 x 1.2W LED's	60W Max	0.95	100V – 254V 47/63Hz AC only or 24V AC/DC
96 x 1.2W LED's	120W Max		
144 x 1.2W LED's	180W Max		

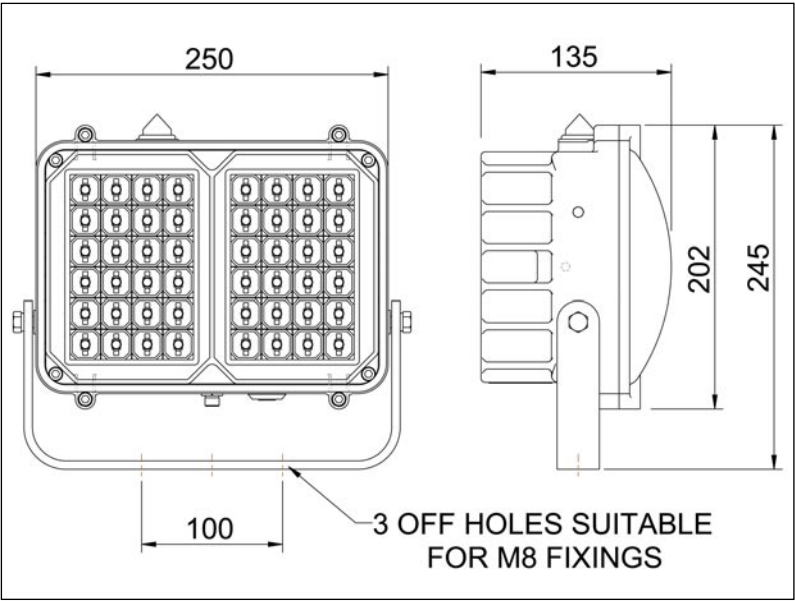
Installation:

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 AL10578 supplied.

Ordering Matrix:

Field	Options
Product	HDL106
Version	S – Standard E – Emergency
Version (LEDs)	1 – 48 LEDs 2 – 96 LEDs 3 – 144 LEDs
Voltage	H – 100 - 254V AC only L – 24V AC/DC
Beam Pattern	W – Wide M – Medium N – Narrow
Mount	H – Horizontal mount V – Vertical mount C – Ceiling mount
Light	W – White light R – Infra red light Y – Yellow light
Cable Entries	0 – M20 5 – M25
Other Options	00 – Colour RAL7040 (Grey) 01 – Colour RAL9004 (Black) 02 – Colour RAL9002 (Grey white) 03 – Colour RAL1018 (Yellow)

Dimensions:



Notes:
1) Typical ordering reference HDL106S1HMHW000.
2) For Photometric Data contact the sales office.



Horizontal mount



Vertical mount

Bulkhead Luminaire

HDL 108

Zone 1 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

Surface Temp:

90°C



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 em 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.



Protection:

II 2GD Ex emb II T3/T4 IP64, Ex tD A21 T90°C

Certification: ATEX & IEC Ex Certified by SIRA

	Certification	Ambient	Voltage Range	Certificate
HDL108	II 2GD Ex emb II T3/T4 IP64	Standard Range -40°C to +55°C T3 -40°C to +35°C T4 Emergency Range -15°C to +55°C T3 -15°C to +35°C T4	110V to 254V	IEC Ex SIR 06.0027 SIRA 06 ATEX 3080

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, 47/63 Hz AC/DC 110V – 130V, 47/63 Hz AC/DC Emergency version as above – AC only
2 x 18W CFL EM	36W circuit watts at 240V – 0.15A (120V – 0.3A)		

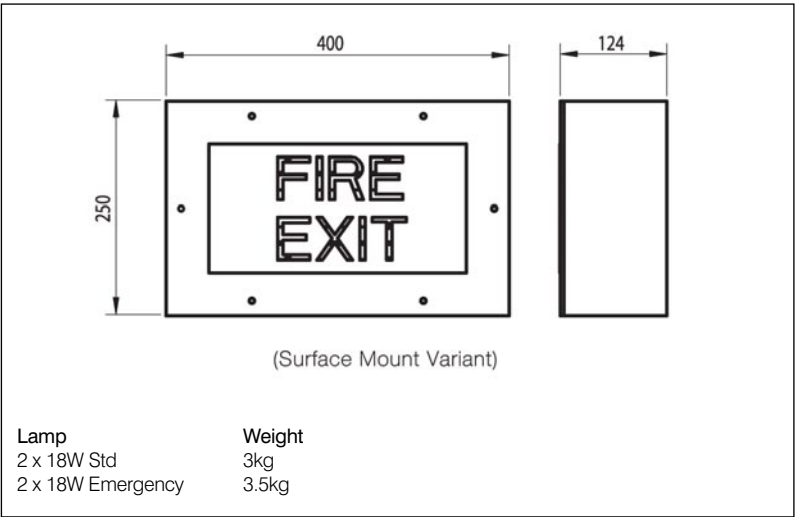
Installation:

Terminals: Up to 6mm² clamp terminals for live, live switched, neutral, earth and looping are provided. Internal and external earth, as standard, Screw terminals upon 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:



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



Bulkhead Luminaire

HDL 109

Zone 1 Ex emb Bulkhead – Fire Exit Luminaire – Plastic



Specification:

Enclosure:

Polycarbonate

Mounting Bracket:

Aluminium or Zinc Plated Steel

Gasket:

Silicone

External Fasteners:

A4 Stainless Steel

T Rating:

T3 Gas and Dust

Surface Temp:

100°C

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 maintenance.
- 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 control gear.
- Supplied complete with lamps.
- Uses standard compact fluorescent lamps.
- Bulkhead fitting interchangeable with spares of Hadar HDL100 Exe 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.

Protection:

II 2GD Ex emb II T3 IP66/67, Ex Td A21 T100°C

Certification: ATEX & IEC Ex Pending by SIRA

	Certification	Ambient	Voltage Range	Certificate
HDL 109	II 2GD Ex emb II T3 IP66/67	Standard Range -20°C to +40°C Emergency Range -15°C to +40°C	110V to 254V	IEC Ex SIR060026X SIRA 06 ATEX 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 down. 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, 47/63 Hz AC/DC
2 x 18W CFL EM	36W circuit watts at 240V – 0.15A (120V – 0.3A)		110V – 130V, 47/63 Hz AC/DC Emergency version as above – AC only

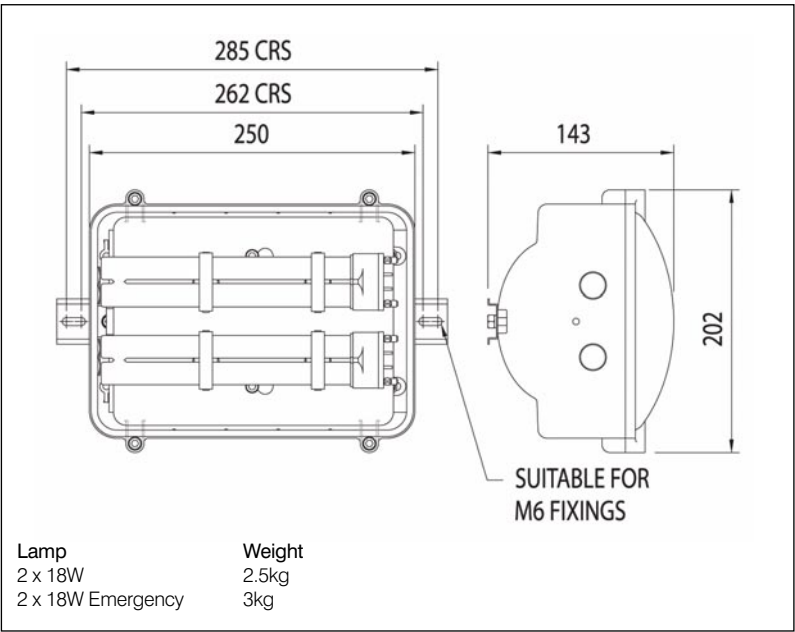
Installation:

Terminals: Up to 6mm² clamp terminals for live, live switched, neutral, earth and looping are provided. Internal and external earth, as standard, Screw terminals upon 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 Version	HDL109 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

Dimensions:



Notes:
1) Final Product Code should be in the format: HDL109SUH0218
2) For Photometric Data contact the Sales Office.
3) Brass earth continuity gland plates are available, contact sales office for more information.



Wellglass

Zone 1 Ex de Wellglass

HDL 113 Small Wellglass
HDL 114 Large Wellglass



Specification:

Main Body:
Marine Grade Aluminium

Lamp Glass:
Toughened Glass

External Fasteners:
A4 Stainless Steel

T Rating:
T3/T4

Surface Temp:
175°C

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 luminaries to be easily converted from Zone 1 to Zone 2 and vice versa.
- Lamp types and wattages can also be easily changed by new easily removed control gear assembly.
- Suitable for use with elliptical or tubular lamps.
- Zone 2 variants available.
- Optional external reflector – ideal for warehousing.
- QL lamp variants available.

Protection:

II 2GD Ex de IIC T4 Gb (pendant), or T3 Gb (universal) IP66/67, Ex tb IIIC 130°C Db (pendant), or 175°C Db (universal).

Certification: ATEX & IEC Ex SIRA

	Certification	Ambient	Voltage Range	Certificate
HDL 113 HDL 114	II 2GD Ex de IIC T3/T4 IP66/67	-20°C to see table below	See table below	IEC Ex SIR09.0046 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
55W QL	N/A	0.95	60W	55°C	50W SON	E27	0.85	55W	55°C
85W QL	N/A	0.95	95W	55°C	70W SON	E27	0.85	80W	55°C
165W QL	N/A	0.95	182W	45°C	150W SON	E40	0.85	170W	55°C
50W MBF	E27	0.85	55W	55°C	250W SON	E40	0.85	275W	45°C
80W MBF	E27	0.85	90W	55°C	400W SON	E40	0.85	440W	45°C
125W MBF	E27	0.85	140W	55°C	70W MBI	E27	0.85	80W	55°C
250W MBF	E40	0.85	280W	45°C	100W MBI	E27	0.85	115W	55°C
400W MBF	E40	0.85	440W	45°C	150W MBI	E27	0.85	170W	55°C
					250W MBI	E40	0.85	280W	45°C
					400W MBI	E40	0.85	440W	45°C
					400W (Max) GLS	E40	0.85	400W	45°C

Installation:

Terminals: Up to 6mm² clamp terminals for live, live switched, neutral, earth and looping are provided. Internal and external earth as standard.
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 113S HDL 114S HDL 133S HDL 134S
Voltage	11 – 110V (Only QL available in 110V) 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	55 - 55W 85 - 85W 165 - 165W 50 - 50W 55 - 55W 70 - 70W 80 - 80W 100 - 100W 125 - 125W 150 - 150W 250 - 250W 400 - 400W
Options	Q – QL Lamp M – MBF Mercury H – MBI Metal Halide E – SON High Pressure Sodium G – GLS

Dimensions:

<div><div><div>HDL134 HDL114 WITH EXTERNAL REFLECTOR</div></div><div><div>HDL134 HDL114</div></div><div><div>HDL133 HDL113</div></div></div>			
Type	Description	Weight	Voltage
HDL 133	55W & 85W QL Lamps	10kg	110V to 130V 220V to 240V 50/60Hz AC/DC
HDL 134	165W QL Lamps	15kg	220V to 240V 50/60Hz AC/DC
HDL 113	50W to 150W SON, MBI, MBF, GLS	13kg	220V, 230V, 240V, 250V 50/60Hz
HDL 114	150W to 400W SON, MBI, MBF, GLS	18kg	220V, 230V, 240V, 250V 50/60Hz
Notes: 1) Final Product Code should be in the format: HDL113S24500400E 2) For Photometric Data contact the Sales Office. 3) External reflector item no. AL10174			

Floodlight

Zone 1 Ex de Floodlight

HDL 117



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 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 twin arc lamps.
- Wide beam reflector.



Protection:
II 2GD Ex de IIB T2/T3 IP56

Certification: ATEX & IEC Ex Certified by SIRA

	Certification	Ambient	Voltage Range	Certificate
HDL 117	II 2GD Ex de IIB T2/T3 IP56	150W -20°C to +40°C T3 250W -20°C to +40°C T3 400W -20°C to +40°C T3 (110V, 120V, 220V) 400W -20°C to +40°C T2 (230V, 240V) 500W -20°C to +40°C T2	220V, 230V, 240V 50Hz or 60Hz	IEC Ex SIR 07.0023 SIRA 07 ATEX 1059

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		

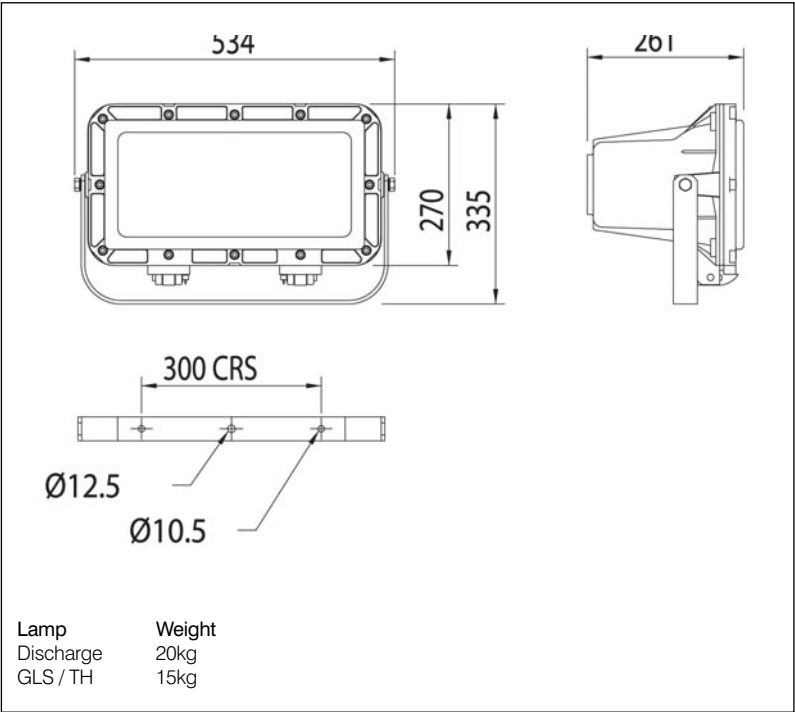
Installation:

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
Options	H - MBI Metal Halide E – SON High Pressure Sodium T – Tungsten Halogen

Dimensions:



Notes:
1) Final Product Code should be in the format: HDL117S24500400E
2) For Photometric Data contact the Sales Office.



Fluorescent Luminaire

HDL 220

Zone 2 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

Surface Temp:

140°C

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.
- IP66
- Emergency version available - 3 hour duration (available in twin variants only).

Protection:

Ex II 3GD EEx nA II T3/T4 IP66 T140°C

Certification: ATEX Certified by SIRA

	Certification	Ambient	Voltage Range	Certificate
HDL 220	Standard Ex II 3GD EEx nA II T3/T4/IP66 Emergency Ex II 3GD EEx nA II T3/T4/IP66	Standard Range 18W -20°C to +40°C T4 36W -20°C to +40°C T4 58W -20°C to +50°C T3 Emergency Range 18W -15°C to +40°C T4 36W -15°C to +40°C T4 58W -15°C to +50°C T4	220V – 240V	SIRA 03ATEX 4566X

Emergency Version: Twin units only, 3 hour battery duration

Electrical Specifications:

	Electrical Specification		
Lamp Options	Power consumption	Power factor	Power supply
1 x 18W (600mm Luminaire)	20W	Better than 0.95	220V – 240V, 47/63 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.

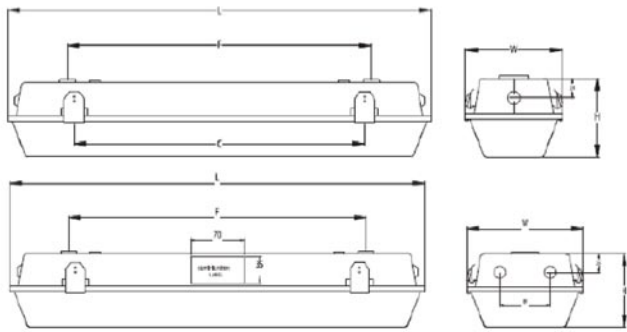
Suspension: To suit individual customer requirements.

Installation: Through Wiring available (Loop In/Loop Out as standard) Low smoke zero halogen 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

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) For Photometric Data contact the Sales Office.
- 3) For weight please contact the Sales Office.

Wellglass

Zone 2 Ex nR Wellglass

HDL 223 Small Wellglass
HDL 224 Large Wellglass

Specification:

Main Body:
Marine Grade Aluminium

Lamp Glass:
Toughened Glass

External Fasteners:
A4 Stainless Steel

T Rating:
T3 / T4

Surface Temperature:
175°C

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.
- The unique innovative design allows luminaires to be easily converted from Zone 2 to Zone 1 and vice versa.
- Lamp types and wattages can also be easily changed by new easily removed control gear assembly.
- Suitable for use with elliptical or tubular lamps.
- Zone 1 variants available.
- Optional external reflector - ideal for warehousing etc.

Protection:

II 3GD Ex nR II T4 Gc (pendant), or T3 Gc (universal) IP66/67 Ex tc IIIC T130°C Dc (pendant), or T175°C Dc (universal).

Certification: ATEX & IEC Ex by SIRA

	Certification	Ambient	Voltage Range	Certificate
HDL 223 HDL 224	II 3GD Ex nR II T3/T4 IP66/67	-20°C to see table below	See table below	IECEXSIR09.0046 SIRA09ATEX4175



Electrical Specifications:

Electrical Specification					Electrical Specification				
Lamp Options	Lamp holder	Power factor	Power consumption	Ambient	Lamp Options	Lamp holder	Power factor	Power consumption	Ambient
55W QL	N/A	0.95	60W	55°C	50W SON	E27	0.85	55W	55°C
85W QL	N/A	0.95	95W	55°C	70W SON	E27	0.85	80W	55°C
165W QL	N/A	0.95	182W	45°C	150W SON	E40	0.85	170W	55°C
50W MBF	E27	0.85	55W	55°C	250W SON	E40	0.85	275W	45°C
80W MBF	E27	0.85	90W	55°C	400W SON	E40	0.85	440W	45°C
125W MBF	E27	0.85	140W	55°C	70W MBI	E27	0.85	80W	55°C
250W MBF	E40	0.85	280W	45°C	100W MBI	E27	0.85	115W	55°C
400W MBF	E40	0.85	440W	45°C	150W MBI	E27	0.85	170W	55°C
					250W MBI	E40	0.85	280W	45°C
					400W MBI	E40	0.85	440W	45°C
					400W (Max) GLS	E40	0.85	400W	45°C

Installation:

Terminals: Up to 6mm² clamp terminals for live, live switched, neutral, earth and looping provided. Internal and external earth as standard.
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	HDL233S HDL234S HDL223S HDL224S
Voltage	11 - 110V 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	55 - 55W 85 - 85W 165 - 165W 50 - 50W 70 - 70W 80 - 80W 100 - 100W 125 - 125W 150 - 150W 250 - 250W 400 - 400W
Options	Q - QL Lamp M - MBF Mercury H - MBI Metal Halide E - SON High Pressure Sodium G - GLS

Dimensions:

<div> <div>HDL234 HDL224 WITH EXTERNAL REFLECTOR</div> <div>HDL234 HDL224</div> <div>HDL233 HDL223</div> </div>			
Type	Description	Weight	Voltage
HDL 233	55W & 85W QL Lamps	10kg	110V to 130V 220V to 240V 50/60Hz AC/DC
HDL 234	165W QL Lamps	15kg	220V to 240V 50/60Hz AC/DC
HDL 213	50W to 150W SON, MBI, MBF, GLS	13kg	220V, 230V, 240V, 250V 50/60Hz
HDL 214	150W to 400W SON, MBI, MBF, GLS	18kg	220V, 230V, 240V, 250V 50/60Hz

Notes:

- 1) Final Product Cose should be in format: HDL223S24500400E
- 2) For Photometric Data contact the sales office.
- 3) External reflector item no. AL10174



Floodlight

Zone 2 EEx nR Floodlight

HDL 227

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 lamps.
- 150W, 250W, 400W
- 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.
- IP66

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

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F: +44 (0) 1670 858 638

enquiries@hadar-lighting.co.uk

www.hadar-lighting.co.uk

Protection:

Ex II 3GD EEx nR IIT3/T2 IP66

Certification: ATEX Certified by SIRA

	Certification	Ambient	Voltage Range	Certificate
HDL 227	Ex 3GD EEx nR II T3/T2 IP66	-40°C to +56°C	220/230/240V	SIRA 03ATEX 4061

Electrical Specifications:

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

Installation:

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

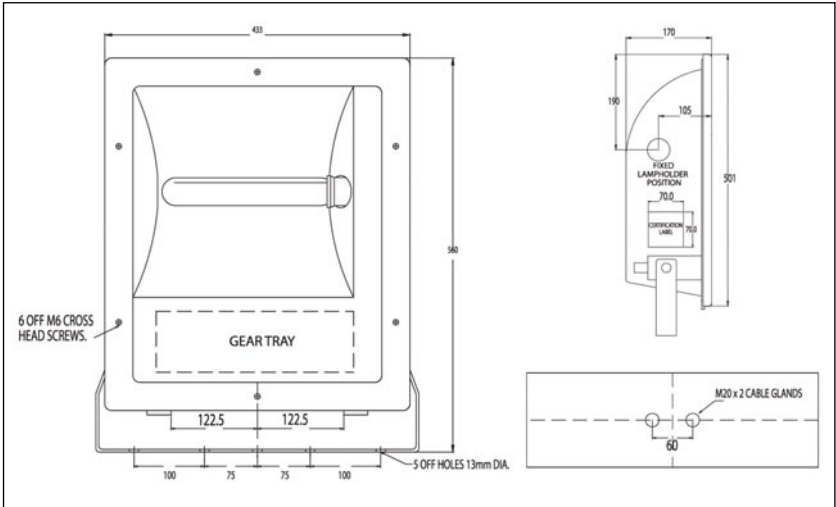
Ambients / Mounting Attitudes:

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

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	H - MBI Metal Halide E – SON High Pressure Sodium

Dimensions:



Notes:
1) Final Product Code should be in the format: HDL227S2250250E
2) For Photometric and Weight Data contact the Sales Office.



Portable Luminaire

HDN 105

Industrial Portable - Temporary - Permanent - Linkable Luminaire



Specification:

End Caps:

Polycarbonate or Aluminium

Lamp Diffuser:

Polycarbonate

Gasket:

Silicone

External Fasteners:

A4 Stainless Steel

Key Features:

- 2 x 18W, 2 x 36W, 2 x 55W, 4 x 18W, 4 x 36W and 4 x 55W Compact Fluorescent Lamp.
- 2 x 18W, 2 x 36W, 2 x 58W T8 Fluorescent Lamp, Bi Pin.
- Wide voltage range (24V to 254V).
- Can be supplied with direct cable entries or fitted with plugs/sockets to allow luminaires to be instantly linked in series (plug and play). Emergency versions available for all variants (dependant on socket option) - 3 hour duration.
- IP66/67/68 (30 minutes at 3m depth).
- Aluminium or polycarbonate and caps.
- Rugged construction.
- Easily relamped - uses standard compact fluorescent lamp / T8 lamp.
- Short gaskets for proven ingress protection.
- Mounting in any attitude.
- Features mounting points compatible with Unistrut support systems and accessories.
- Can be supplied with pre-fitted cable, plug and mounted socket
- Hanging/carrying strap supplied as standard.
- Electronic control gear for instant operation and reduced running costs.
- Overvoltage protection 320V for 1 minute (110V and 240V only).
- High frequency electronic ballast suitable for operation at low temperatures.
- Can be supplied with SY, H07RNF, or ships cable.
- Available with a variety of accessories, mounting stands, tripods.
- Replaceable, protective films available for use in dirty environments.

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TEL 0044 117 977 4647 FAX 0044 977 5582
WWW.THORNEANDDERRICK.CO.UK



Protection:

IP66/67/68 (30 minutes at 3m depth).

	Ambient	Voltage Range
HDN 105	4 x CFL -20°C to +35°C 2 x CFL -20°C to +44°C 2 x T8 -20°C to +53°C Emergency Range -15°C	24V - 28V AC/DC 42V - 54V AC/DC 110V - 130V AC/DC 220V - 254V AC/DC

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

Electrical Specifications:

Electrical Specification			
Lamp Options	Typical power consumption	Power factor	Available power supplies
2 x 18W	32W	Better than 0.95	220V - 254V 47/63 Hz AC/DC (all variants) 110V - 130V 47/63 Hz AC/DC (18W & 36W only) 24V - 28V AC/DC (36W only) 42V - 54V AC/DC (36W only)
2 x 36W	62W		
2 x 55/58W	92W		
4 x 18W	64W		
4 x 36W	124W		
4 x 55W	184W		

Installation:

Terminals: Up to 4mm² screwed terminals for live, live switched, neutral, earth and looping are provided. Internal earth as standard.

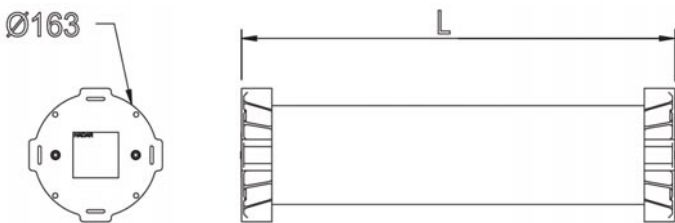
Suspension / Mounting: Each aluminium or polycarbonate end cap incorporates 4 channels which are compatible with Unistrut (or equivalent) fixings and accessories, supplied with suitable suspension / carrying strap. M6 clearance holes allow mounting plates to be attached to provide free standing luminaires. Tripod, floor stand and other various accessories are available.

Installation: Installation document AL10171.

Ordering Matrix:

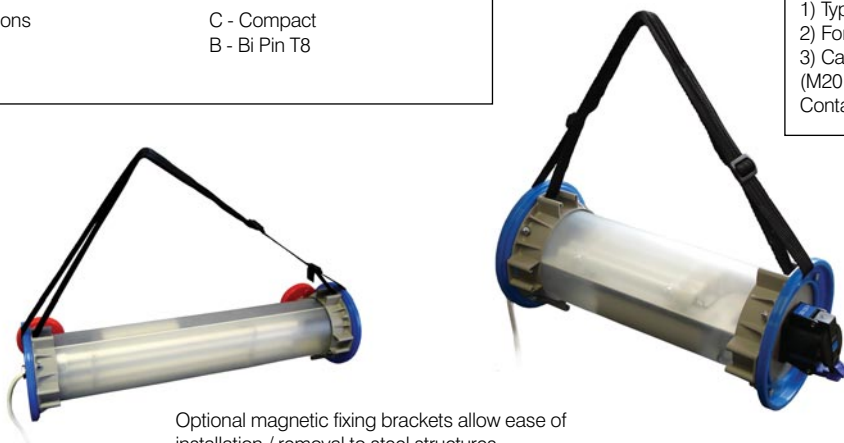
Field	Options
Product	HDN105
Version	S - Standard E - Emergency
End Caps	A - Aluminium P - Polycarbonate
Voltage	H - High Voltage 220 - 254V M - Medium Voltage 110 - 130V L - Low Voltage 42 - 54V E - Extra low Voltage 24 - 28V
Cable Entries	00 - Refer to notes
Lamp Options	218 - 2x 18W 236 - 2x 36W 258 - 2 x 55/58W 418 - 4 x 18W 436 - 4 x 36W 458 - 4 X 55w
Options	C - Compact B - Bi Pin T8

Dimensions:

	
Lamp	Typical Length mm
2 x 18W	399
2 x 36W	552
2 x 55W	676
4 x 18W	588
4 x 36W	782
4 x 55W	906

Notes:

- 1) Typical ordering reference: HDN105SAL00218C
- 2) For Photometric Data contact the sales office.
- 3) Cable entries - over 5000 combinations (M20 / M25 entries, plug, socket and cable variants). Contact technical department.

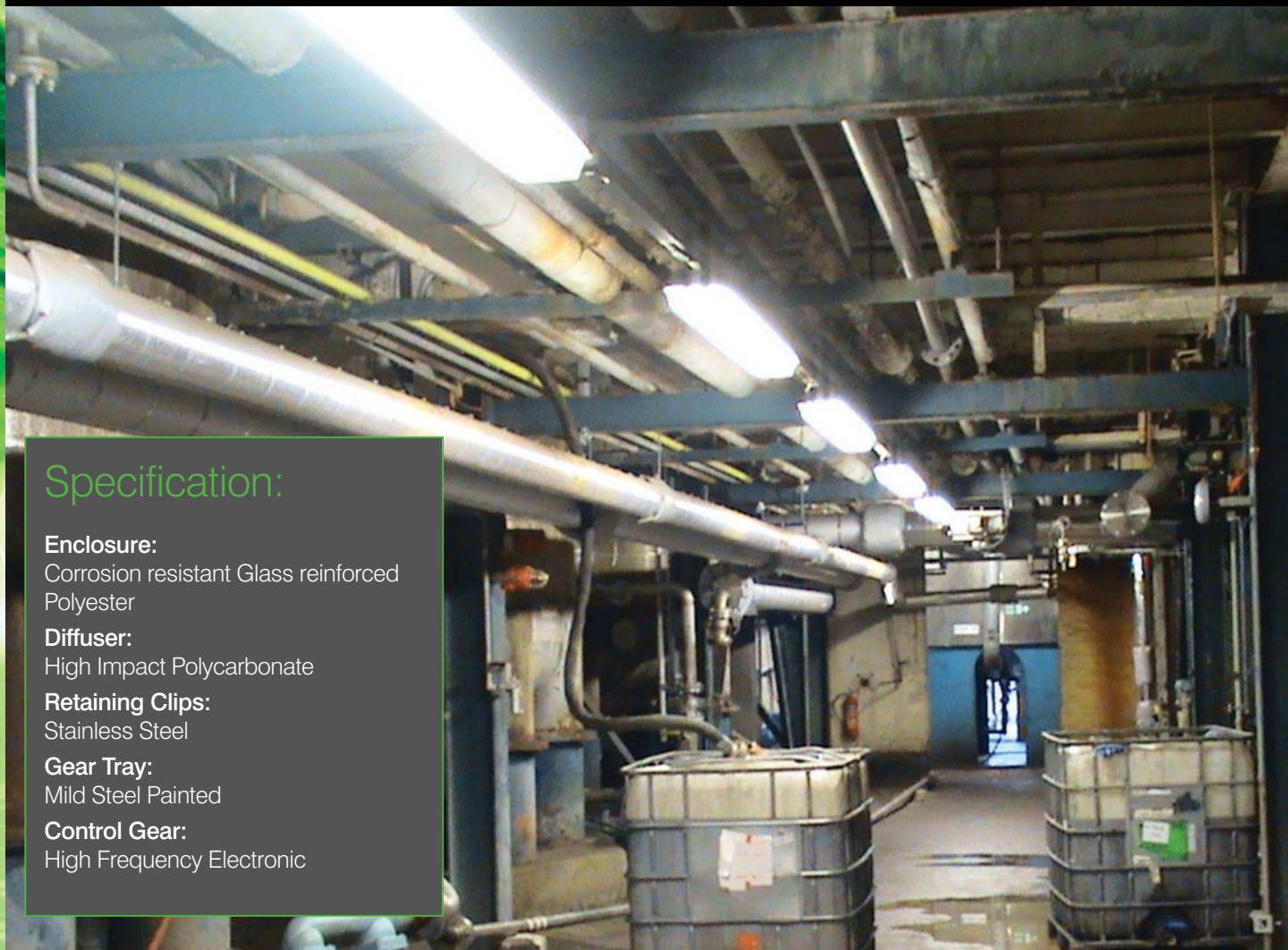


Optional magnetic fixing brackets allow ease of installation / removal to steel structures.

Fluorescent Luminaire

HDN 220

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.
- IP66
- Emergency version available - 3 hour duration (available in twin variants only).

Protection:

IP66

Certification:

	Ambient	Voltage Range
HDN 220	Standard Range 18W -20°C to +40°C T4 36W -20°C to +40°C T4 58W -20°C to +50°C T3 Emergency Range 18W -15°C to +40°C T4 36W -15°C to +40°C T4 58W -15°C to +50°C T4	220V – 240V

Emergency Version: Twin units only, 3 hour battery duration

Electrical Specifications:

	Electrical Specification		
Lamp Options	Power consumption	Power factor	Power supply
1 x 18W (600mm Luminaire)	20W	Better than 0.95	220V – 240V, 47/63 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.

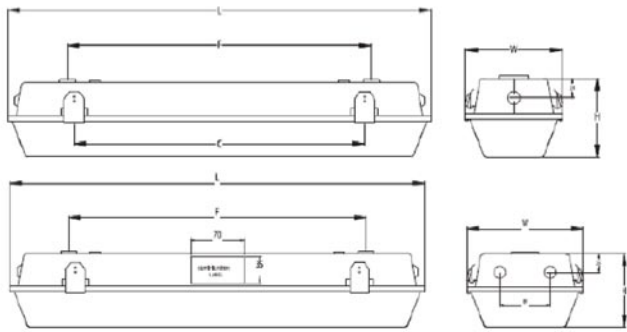
Suspension: To suit individual customer requirements.

Installation: Through Wiring available (Loop In/Loop Out as standard) Low smoke zero halogen 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

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) For Photometric Data contact the Sales Office.
- 3) For weight please contact the Sales Office.

Floodlight

Industrial Floodlight

HDN 227

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 lamps.
- 150W, 250W, 400W
- 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.
- IP66



Protection:
IP66

Certification:

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

Electrical Specifications:

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

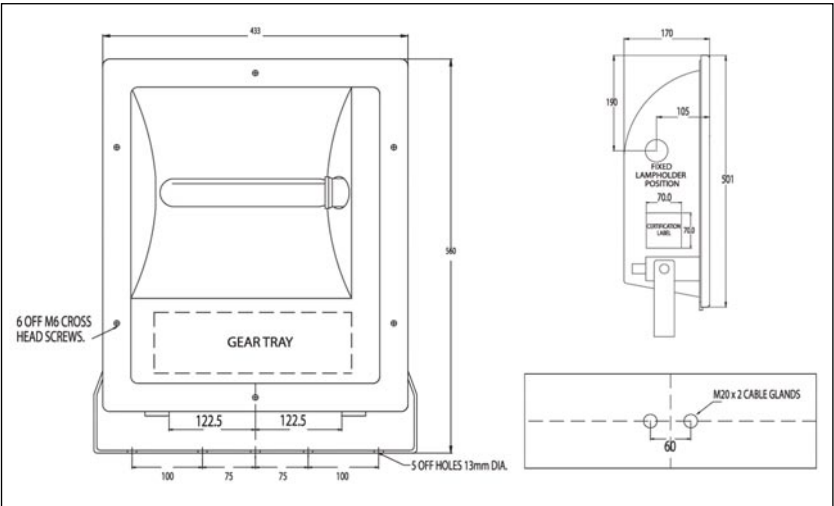
Installation:

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	H - MBI Metal Halide E - SON High Pressure Sodium

Dimensions:



Notes:
1) Final Product Code should be in the format: HDN227S2250250E
2) For Photometric and Weight Data contact the Sales Office.



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.

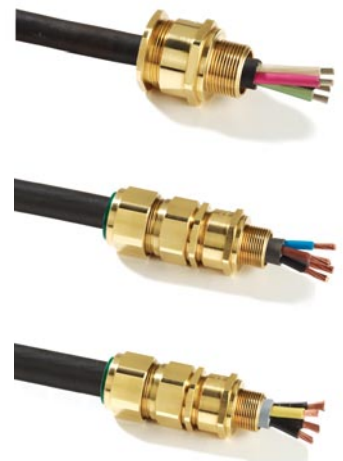


Cable Glands

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.



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A-BELCO
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