

PROTECTA X LED LUMINAIRE

...... The Next Generation in Hazardous Area LED Lighting





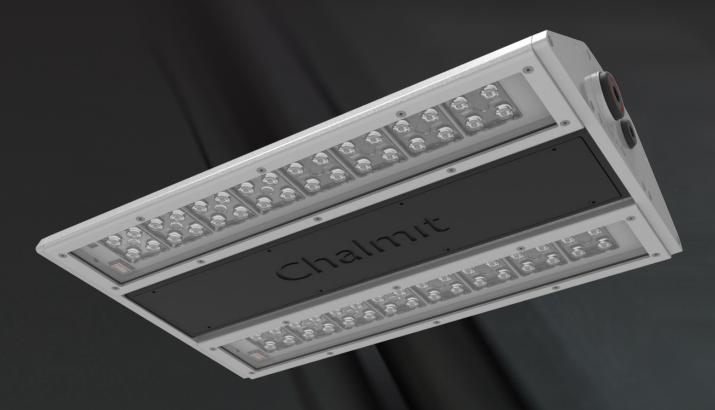
www.XSeriesLED.com

PRO X





Introducing the next generation in linear luminaires... **Protecta** X



The product of hundreds of hours of study with customers, multiple designs and numerous prototypes, the Protecta X is our largest ever investment in product development.

Focusing on the benefits of LED technology and how it could be negatively impacted through installation in a linear Enclosure, our team sought to optimise LED performance in two main ways. Firstly, improving lumen output and secondly, extending the luminaire lifespan. The Protecta X is the result of our work.

Be prepared to break the linear mould.

Meet The Team

Our world-class team have worked tirelessly throughout the design and development of the Protecta X to provide a luminaire that will delight our end users.

Paolo Camillo

With over 10 years' experience as a designer, Paolo's area of specialism is Mechanical Engineering. During this project, he has been committed to optimising the lifespan of the product.

Michael Truswell

Specialising in Mechanical Engineering and LED Product Design, Michael has been responsible for improving the lumen output of the Protecta X and making it easy for end users to install.

Ken Eddleston

Ken has over ten years of experience in lighting design. As Lighting Product Manager, he is responsible for supporting every aspect of this project from concept to completion.

James Ellerker

Beginning his career in manufacturing, our Project Manager, James, used his vast experience to ensure that the Protecta X development process followed a detailed timeline!

Breaking the Linear Mould

For over 50 years, traditional 2ft and 4ft linear luminaires have dominated low level lighting applications in hazardous and industrial areas. The linear shape of the enclosures has been dictated by the length of the conventional fluorescent lamps they housed, for example, 18W lamps in a 2ft linear.

That same shape is still commonly in use now, but why? The most obvious answer is that is how a linear should look. By retrofitting some LEDS into a traditional enclosure, users will be able to easily reap all the benefits of LED, right? The truth is, they won't. To get the most out of LED technology, the LED array must be placed at the centre of the design, not installed within an old enclosure.

That's where the Protecta X comes in.





- Longest Lifespan
- Revolutionary Design
- Optimised Lumen Output

Small but Powerful

Optimised lumen output

The Protecta X incorporates specialised optics over the LED chips to ensure that it delivers the performance of a 4ft linear in a smaller, lightweight product. The optics control the light to ensure a targeted bright, white output with minimal wasted spill light.

The luminaire's optics are available in a variety of distinct distributions, allowing it to illuminate a variety of typical site applications from handrails to bay lighting. A higher, more focused output means fewer luminaires on site, reducing installation and inspection times.

Market Leading Efficacy

Ensuring the lowest lifetime cost

Effective thermal management techniques, combined with the use of highly efficient LEDs and optics, all contribute to a market-leading efficacy of \geq 135lm/W and provides up to 50% energy savings compared to traditional fluorescent fixtures. Therefore, the Protecta X offers the lowest lifetime cost for our end users.



Effortless Installation



- Easy Installation & Maintenance
- 120,000 hour System Life
- Market-Leading Lumen Output
- 50% Energy Savings vs Fluorescent Luminaires



We know that every extra minute our end users spend on the installation and maintenance of luminaires is a waste, not just of time, but of money.

That's why the Protecta X incorporates a variety of features to ensure the lowest lifetime cost on the market. From the X's innovative battery stick, to its market-leading efficacy and our Sealed for Life option which utilises the Hawke RCG cable gland, the Protecta X is built to make our end users lives easier.

>Keeping it Cool

Thermal management for a luminaire that lasts longer

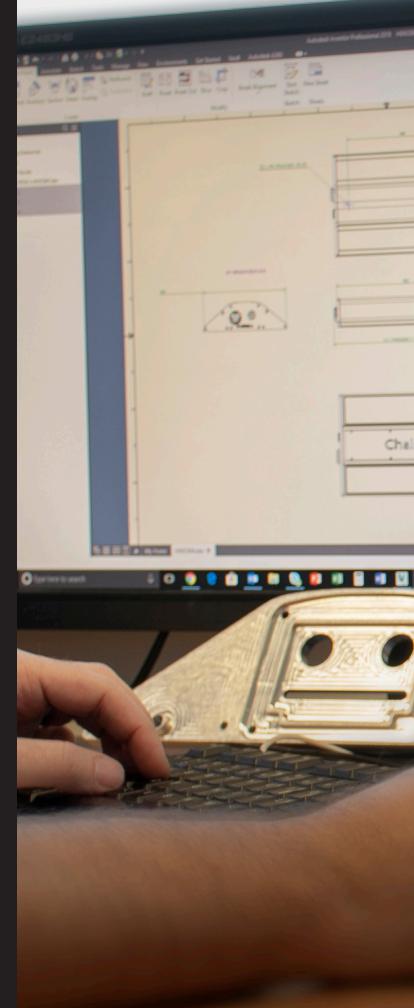
In theory, the Protecta X has a maintenance free lifespan of 120,000 hours at 25°C ambient. However, it can be difficult to ensure that the lifespan is achieved as the single biggest factor in defining product life is temperature. The Protecta X's design incorporates a variety of techniques to keep the luminaire cool so that it achieves the expected lifespan of the LEDs and driver it houses.

Separate LED's and Driver

In a traditional linear, the LEDs and driver are housed in the same GRP enclosure, causing heat to build up and shorten the life of both components. The Protecta X design separates the driver and LED enclosures, allowing a flow of air between them to efficiently dissipate the heat generated. The small air gap between the wings and central body also prevents the collection of dust and particulates and allows water run-off to keep the thermals as low as possible.

Marine Grade Aluminium Construction

The poor conductive properties of plastic mean that in a linear enclosure, heat just gets trapped. The Protecta X's marine grade aluminium construction ensures that heat has a direct route from inside the enclosure via an efficient conductor.



Putting the customer at the Centre

Before the Protecta X concept was created, our team carried out an extensive voice of the customer survey. Feedback told us that battery maintenance on battery-backed Emergency products can be problematic and installation of Cable and Glands in linear luminaires is difficult and time consuming. We tailored our design concepts to address and resolve these issues.

Innovative Battery Stick

The Emergency Protecta X is powered by an innovative "Hot Swappable" battery stick, meaning that the battery can be easily slotted in and out of the side of the luminaire while it is still energised and without needing to access/open the driver enclosure. Customers also benefit from having the option to purchase the battery stick at a later date when they're ready to commission the luminaire and after it has been installed on site.

> Front Access Panel

The front access panel means there's no need to take the enclosure apart to install wiring–just take off the front panel, wire and go!

Single Wing Option

The Protecta X is available in double wing (05L & 07L) or single wing (02L) versions. The single wing is ideal for handrail mounting offering a focused output to minimise wasted spill light and easy access for installation and maintenance. Double wing versions are more suited to overhead mounting and, when used in conjunction with appropriate optics, will minimise number of luminaires required to achieve desired lighting levels.

SFL Sealed for Life

The Protecta X SFL option utilises the plug 'n' play benefits of Hawke's Rapid Connection Gland (RCG) resulting in a complete product that offers further flexibility, ease of installation, easy maintenance and market leading OpEx savings.



PROTECTA X

Ex eb LED Linear

The next generation in LED linear luminaires, the Protecta X's revolutionary design puts LED at the centre to provide the performance of a 4ft linear in a lightweight and slimline package. With a robust enclosure and excellent IP, the Protecta X is suitable for use in the world's most arduous environments. Expected useful life to 70% of the initial lumens (L70) is >200,000 hours at 25°C, with an incredible 90,000 maintenance free hours at 60°C. For a luminaire with the longest life, the highest output and market-leading efficacy, choose the Protecta X.



Mounting Options

Ceiling. Wall. Suspended. Pole. Handrail

Standard Specification

Protecta X Ex eb LED Linear

Type of Protection	Ex db eb (Flameproof, Increased Safety) Ex tb (Dust Protected Enclosure)		
ATEX Classification	Group II Category 2 GD		
Area Classification	Zone 1 and 21 areas to EN 60079-10-1 and EN 60079-10-2		
Certificate	EU Type Examination Certificate CML18ATEX3358X IECEx Certificate of Conformity IECEx CML 18.0167X UK Type Examination Certificate CML 21UKEX1506X		
Coding	Ex db eb IIB+H2 T5 Gb Ex tb IIIC T85°C Db IP6X		
Enclosure	Marine grade aluminium body with polycarbonate diffuser. Driver enclosure with epoxy powder finish (RAL 9005)		
Geartray	Aluminium		
Entry	4 x M20 cable entries - 2 at each end [3xM20 on Emergency with hot-swappable battery stick]		
Termination	3 core 4mm ² max conductor [4 core on Emergency] with looping one end and 16A rating through wiri		
Installation	2 x M8 mounting points located on the rear of the body		
Control Gear	Electronic Driver		
Optical Distribution	Wide beam		
Colour Temperature (CCT)	5000K (Cool White)		
Colour Rendering Index (Ra)	>80		
Maintenance	Front access panel with Torx screws		
LED Lifetime @ 60°C Ambient	L70 > 200,000hrs		
System Life @ Ambient	120,000hrs @ 25°C; 90,000hrs @ 60°C [excluding battery]		
Battery	Hot-Swappable Ni-MH (6V) battery stick - externally accessed [/EM version only]		
Emergency Duration90 mins (02L = 50% output; 05L = 25% output, 07L = 20% output) [ASL/ASW Asymmetric versions - 3hours only]			
Impact Protection	IK10		
Ingress Protection	IP66/67 to EN 60529		
Surge Protection	4kV		
Electrical Supply	110-277V AC, 50/60Hz 127-250V DC		

Features

- Highly Energy Efficient >135lm/W
- Front access cover with screwless mains terminals for easy termination
- Battery management and automatic self test
- Multiple beam distributions available
- >90,000 maintenance free hours at 60°C
- Externally accessible battery stick for ease of maintenance

Std. Cat No.	Delivered Output	Power Consumption	Tclass	T°C (Dust)	Ambient °C	Weight
PRXB/02L/LE	2696 lm	16W	T5	85	-40 to +60	7.1kg
PRXB/05L/LE	5230 lm	35W	T5	85	-40 to +60	9.1kg
PRXB/07L/LE	7474 lm	51W	T5	85	-40 to +55	9.3kg
PRXB/02L/LE/EM	2696 lm	19W	T5	85	-25 to +60	7.6kg
PRXB/05L/LE/EM	5230 lm	38W	T5	85	-25 to +60	9.6kg
PRXB/07L/LE/EM	7474 lm	53W	T5	85	-25 to +55	9.8kg

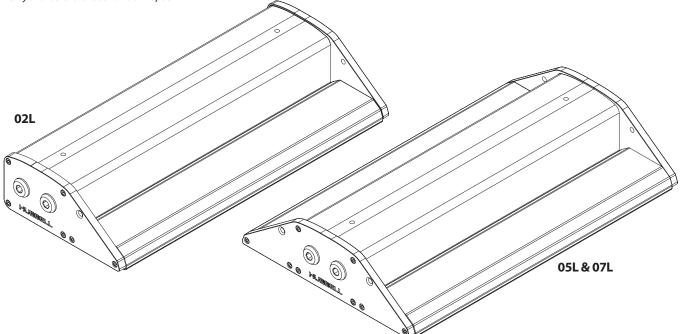
Options - Suffix to Catalogue No.

/M25	M25 cable entries	/3H	3 hour battery duration (02L = 25% output; 05L = 12.5% output) [Standard on ASW or ASL versions]
/LBE	Looping both sides [Non Emergency only]	/4K	4000K (Neutral White) LED Strips
/EL	Extra live termination facility (to match emergency circuit) [Non Emergency only, Not available with /SC]	/SC	Screwed connection terminal block (up to 6mm ² conductors) [Non Emergency only]
/EMI	Internal battery pack [replace /EM with /EMI]	/BNI	Batteries not included [Emergency version only]
/NST	Non Self Test [Emergency version only]	/DM	DALI2 Dimmable driver. For 05L and 07L Non Emergency Only
/ASL	Asymmetric along length optic	/M	Medium beam optic
/ASW	Asymmetric along width optic [05L version only]	/BP	Nickel plated brass plugs
		/OD	Opal diffuser (max. 30% reduction in output)

Accessories order separately

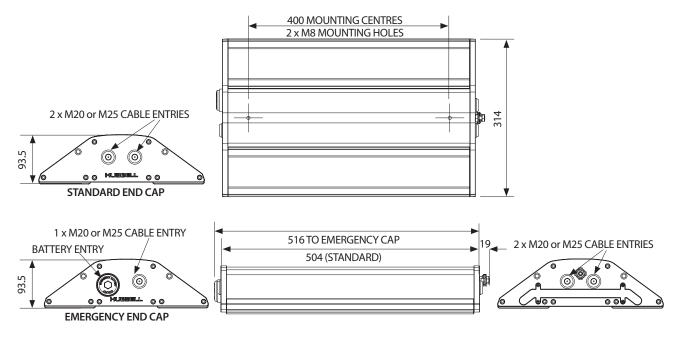
	Order Code
Pole mounting bracket assembly (38-42mm diameter poles)	SPOL4-100001
Pole mounting bracket assembly (48-52mm diameter poles)	SPOL4-100002
Pole mounting bracket assembly (58-62mm diameter poles)	SPOL4-100003
Hook type ceiling bracket assembly	SPRO4-0005
Flush mounted wall bracket assembly	SPRO4-0006
Ceiling bracket assembly	SPRO4-0002
Standard wall mounting outreach bracket (use with SPOL4-100001)	NPRO4-0008
Eyebolt mounting assembly*	SPRO5-0005
Protecta 4ft adaptor bracket	SPRO5-0006

*Only available for the 05L and 07L option.

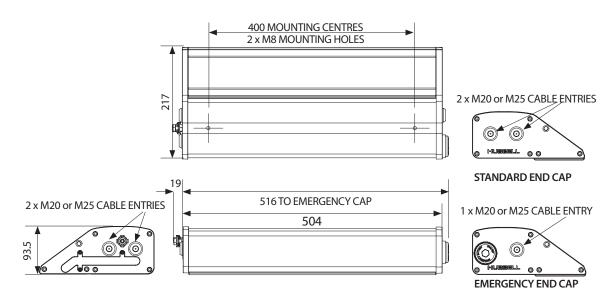


Dimensioned Drawings

PROTECTA X - 05L & 07L



PROTECTA X - 02L





More than a Cable Gland

The ultimate hybrid of Cable Gland and Connector makes Hawke's RCG the perfect partner to Chalmit LED luminaires.

The 501/RCG (Rapid Connection Gland) combines the features of Hawke's market leading Cable Gland range with the plug and play benefits of a connector.

The Rapid Connection Gland provides rapid termination and disconnection in a costeffective package, reducing ownership expenses by decreasing the time it takes to carry out essential inspection, maintenance and repair.



The RCG Coupler provides the means to extend an existing cable without the need to use a junction box, or a more permanent splice kit. Combining two RCG cable glands and a simple termination system makes upgrading installations fast and easy.

View Hawke's full range of products at **www.hubbell.com/hawke**





The Protecta X is now available with Sealed For Life (SFL) option to further enhance the user benefits. By utilising Hawke's RCG cable gland, these two revolutionary products combine to offer features and benefits like no other lighting product.

Protecta X SFL takes OpEx benefits to a new level. This option allows field cables to be prepared in advance of luminaire installation, eliminating the need for historically difficult wiring installation on-site. Plug'n'Play design allows for a flexible approach to area lighting whilst minimising installation time.

SFL construction also restricts access to the luminaire housing removing requirements for elements of the Ex-inspection. Together with our innovative hot-swappable battery technology Protecta X SFL offers market leading cost savings for installation and maintenance teams.



Mounting Options

Ceiling. Wall. Suspended. Pole. Handrail

Standard Specification

Protecta X Ex eb LED Linear

Protecta X EX eD LED LINear					
Type of Protection	Ex db eb (Flameproof, Increased Safety) Ex tb (Dust Protected Enclosure)				
ATEX Classification	Group II Category 2 GD				
Area Classification	Zone 1 and 21 areas to EN 60079-10-1 and EN 60079-10-2				
Certificate	EU Type Examination Certificate CML18ATEX3358X IECEx Certificate of Conformity IECEx CML 18.0167X UK Type Examination Certificate CML 21UKEX1506X				
Coding	Ex db eb IIC T5 Gb Ex tb IIIC T85°C Db IP6X				
Enclosure	Marine grade aluminium body with polycarbonate diffuser. Driver enclosure with epoxy powder finish (RAL 9005)				
Geartray	Aluminium				
Installation	2 x M8 mounting points located on the rear of the body				
Cable Entry & Termination	2 off M20 RCG Connectors 4 Pin type Brass Nickel Plated with End Cap, At one End & M20 Brass Nickel Plated Certified Blanking Plugs in all unused entries				
Control Gear	Electronic Driver				
Optical Distribution	Wide beam				
Colour Temperature (CCT)	5000K (Cool White)				
Colour Rendering Index (Ra)	>80 (Other colour temperatures may vary)				
LED Lifetime @ 60°C Ambient	L70 > 200,000hrs				
System Life @ Ambient	120,000hrs @ 25°C; 90,000hrs @ 60°C [excluding battery]				
Battery	Hot-Swappable Ni-MH (6V) battery stick - externally accessed [/EM version only]				
Emergency Duration	90 mins (02L = 50% output; 05L = 25% output, 07L = 20% output) [ASL Asymmetric versions - 3hours only]				
Impact Protection	IK10				
Ingress Protection	IP66/67 to EN 60529				
Surge Protection	4kV				
Electrical Supply	110-277V AC, 50/60Hz 127-250V DC				

Features

- Highly Energy Efficient >135lm/W
- ♦ >90,000 maintenance free hours at 60°C
- Battery management and automatic self test
- Multiple beam distributions available
- Externally accessible battery stick for ease of maintenance
- Pre-terminated RCGs for plug and play installation

Std. Cat No.	Delivered Output	Power Consumption	Tclass	T°C (Dust)	Ambient °C	Weight
PRXB/02L/LE/SFLL	2696 lm	16W	T5	85	-40 to +60	7.6kg
PRXB/05L/LE/SFLL	5230 lm	35W	T5	85	-40 to +60	9.6kg
PRXB/07L/LE/SFLL	7474 lm	51W	T5	85	-40 to +55	9.8kg
PRXB/02L/LE/EM/SFLL	2696 lm	19W	T5	85	-25 to +60	8.1kg
PRXB/05L/LE/EM/SFLL	5230 lm	38W	T5	85	-25 to +60	10.1kg
PRXB/07L/LE/EM/SFLL	7474 lm	53W	T5	85	-25 to +55	10.3kg

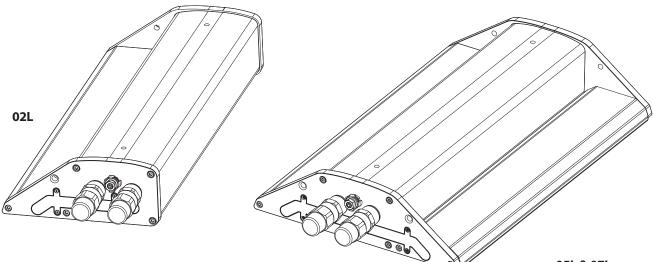
(/SFLL = Sealed for Life - Looping one end)

Options - Suf	Options - Suffix to Catalogue No.				
/3H	3 hour battery duration (02L = 25% output; 05L = 12.5% output) [Standard on ASL versions]				
/4K	4000K (Neutral White) LED Strips				
/BNI	Batteries not included [Emergency version only]				
/DM	DALI2 Dimmable driver. For 05L and 07L Non Emergency Only (6 Pin RCG's)				
/ASL	Asymmetric along length optic				
/SFLT	Sealed for life through wiring				

Accessories order separately

	Order Code
Hot Swappable Battery assembly	SPRXB-000002
Pole mounting bracket assembly (38-42mm diameter poles)	SPOL4-100001
Pole mounting bracket assembly (48-52mm diameter poles)	SPOL4-100002
Pole mounting bracket assembly (58-62mm diameter poles)	SPOL4-100003
Hook type ceiling bracket assembly	SPRO4-0005
Flush mounted wall bracket assembly	SPRO4-0006
Ceiling bracket assembly	SPRO4-0002
Standard wall mounting outreach bracket (use with SPOL4-100001)	NPRO4-0008
Eyebolt mounting assembly*	SPRO5-0005
Protecta 4ft adaptor bracket	SPR05-0006

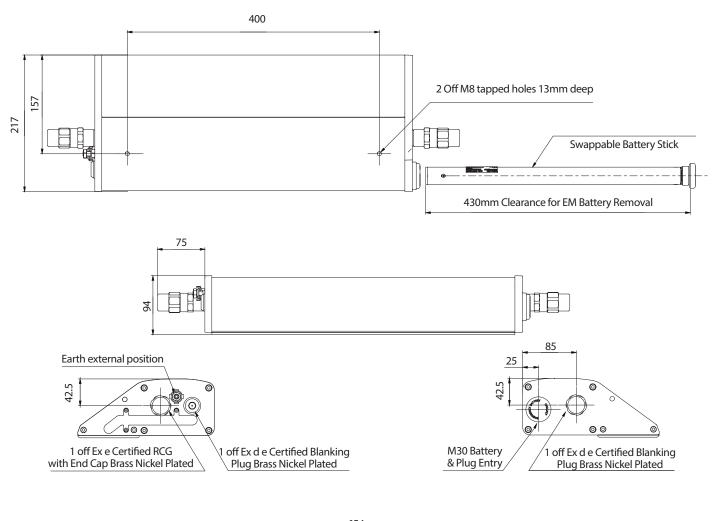
*Only available for the 05L and 07L option.

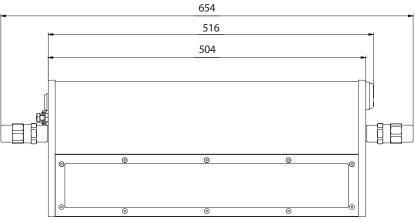


05L & 07L

Dimensioned Drawings

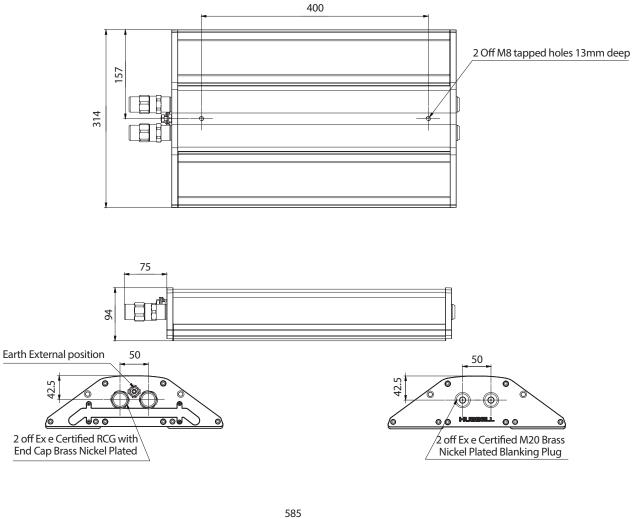
PRXB/02L/LE/EM/SFLT

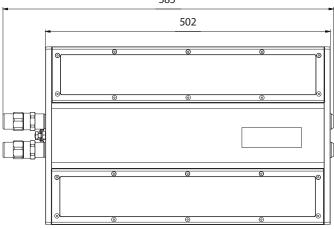




Dimensioned Drawings

PRXB/05L/LE/SFLL & PRXB/07L/LE/SFLL







PROTECTA X LED Linear

The next generation in LED linear luminaires, the Protecta X's revolutionary design puts LED at the centre to provide the performance of a 4ft linear in a lightweight and slimline package. Offering a robust enclosure, excellent IP and a variety of features to make installation and maintenance effortless, the Protecta X is ideal for industrial environments. Expected useful life to 70% of the initial lumens (L70) is >200,000 hours at 25°C, with an incredible 90,000 maintenance free hours at 60°C. For a luminaire with the longest life, the highest output and market-leading efficacy, choose the **Protecta X**.



Ceiling. Wall. Suspended. Pole. Handrail

Standard Specification

CE R

International Approvals

Protecta X LED Linear				
Enclosure	Marine grade aluminium body with polycarbonate diffuser. Driver enclosure with epoxy powder finish (RAL 9005)			
Geartray	Aluminium			
Entry	4 x M20 cable entries - 2 at each end [3 cable entries on Emergency with battery stick]			
Termination	3 core 4mm ² max conductor [4 core on Emergency] with looping one end and 16A rating through wiring			
Installation	2 x M8 mounting points located on the rear of the body			
Control Gear	Electronic Driver			
Optical Distribution	Wide beam			
Colour Temperature (CCT)	5000K (Cool White)			
Colour Rendering Index (Ra)	>70 (>80 option available)			
Maintenance	Front access panel with Torx screws			
LED Lifetime @ 60°C Ambient	L70 > 200,000hrs			
System Life @ Ambient	120,000hrs @ 25°C; 90,000hrs @ 60°C [excluding battery]			
Battery	Hot-Swappable Ni-MH (6V) battery stick - externally accessed [/EM version only]			
Emergency Duration	90 mins (02L = 50% output; 05L = 25% output) [ASL/ASW Asymmetric versions - 3hours only]			
Impact Protection	IK10			
Ingress Protection	IP66/67 to EN 60529			
Surge Protection	4kV			
Electrical Supply	110-277V AC, 50/60Hz 127-250V DC			

Features

- Highly Energy Efficient >135lm/W
- Battery management and automatic self test
- Multiple beam distributions available
- Front access cover with screwless mains terminals for easy termination
- >90,000 maintenance free hours at 60°C
- Externally accessible battery stick for ease of maintenance

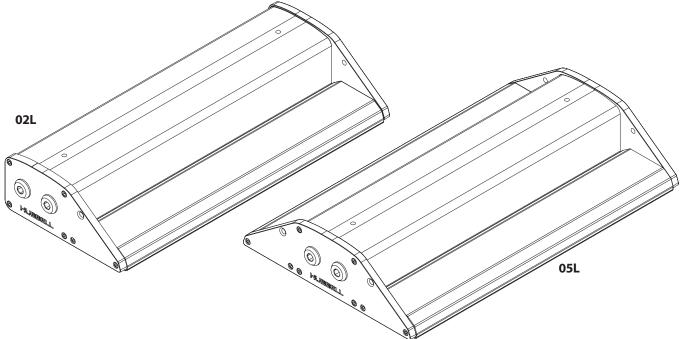
Std. Cat No.	Delivered Output	Power Consumption	Ambient °C	Weight
PRXI/02L/LE	2696 lm	16W	-40 to +60	6.8kg
PRXI/05L/LE	5230 lm	35W	-40 to +60	8.8kg
PRXI/02L/LE/EM	2696 lm	19W	-25 to +60	7.3kg
PRXI/05L/LE/EM	5230 lm	38W	-25 to +60	9.3kg

Options - Suffix to Catalogue No.					
/M25	M25 cable entries /3H		3 hour battery duration (02L = 25% output; 05L = 12.5% output) [Standard on ASW or ASL versions]		
/LBE	Looping both sides [Non Emergency only]	/4K	4000K (Neutral White) LED Strips		
/EL	Extra live termination facility (to match emergency circuit) [Non Emergency only, Not available with /SC]	/SC	Screwed connection terminal block (up to 6mm ² conductors) [Non Emergency only]		
/EMI	Internal battery pack [replace /EM with /EMI]	/BNI	Batteries not included [Emergency version only]		
/NST	Non Self Test [Emergency version only]	/DM	DALI Dimmable driver		
/ASL	Asymmetric along length optic	/M	Medium beam optic		
/ASW	Asymmetric along width optic [05L version only]	/BP	Nickel plated brass plugs		
/80	80 CRI LEDs	/OD	Opal diffuser (max. 30% reduction in output)		

Accessories order separately

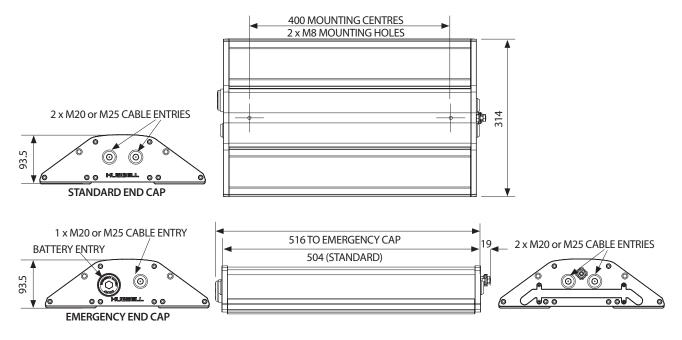
	Order Code
Pole mounting bracket assembly (38-42mm diameter poles)	SPOL4-100001
Pole mounting bracket assembly (48-52mm diameter poles)	SPOL4-100002
Pole mounting bracket assembly (58-62mm diameter poles)	SPOL4-100003
Hook type ceiling bracket assembly	SPRO4-0005
Flush mounted wall bracket assembly	SPRO4-0006
Ceiling bracket assembly	SPRO4-0002
Standard wall mounting outreach bracket (use with SPOL4-100001)	NPRO4-0008
Eyebolt mounting assembly*	SPRO5-0005
Protecta 4ft adaptor bracket	SPR05-0006

*Only available for the 05L option.

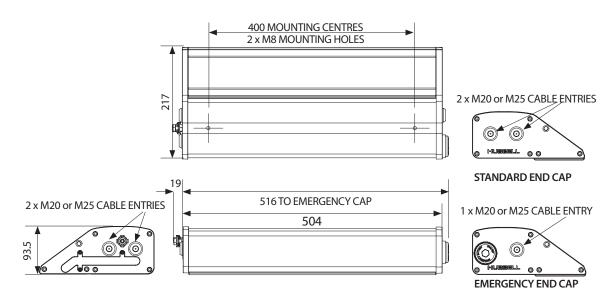


Dimensioned Drawings

PROTECTA X - 05L



PROTECTA X - 02L





SUSTAINABILITY At Hubbell

At Hubbell we are committed to reducing the environmental impact of our operations.

We are continually developing products and processes that support sustainability and offer energy efficient solutions for our customers and partners.

Our focus remains addressing and managing the risks associated with climate change and we are committed to facilitating a sustainable future.

For more information visit us at www.hubbell.com/hubbell/en/sustainability

Our ESG Goals

10% Reduction in GHG Emissions By 2025

10% Reduction in Water Consumption By 2025



Social Responsibility

Inclusion, Diversity, Equality Employee Health & Safety Community Impact Hubbell Foundation Donations



Environmental Stewardship

Environmental Performance Awareness Reduced Energy and Emissions Sustainability and Infrastructure Management Handbook



Products With Impact

Product Quality & Safety Renewable Energy & Efficiency Ethical Product Design Responsible Supply Chain

Hubbell are proud to have been named as one of 2022's most ethical companies



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The X SERIES Has Evolved A DEDICATED ENERGY SAVING LED LUMINAIRE FOR EVERY APPLICATION





Protecta X ZONE 1 and Industrial Linear LED

Evolution **X**

ZONE 1 LED Floodlight



Arran X ZONE 2 and Industrial LED Floodlight



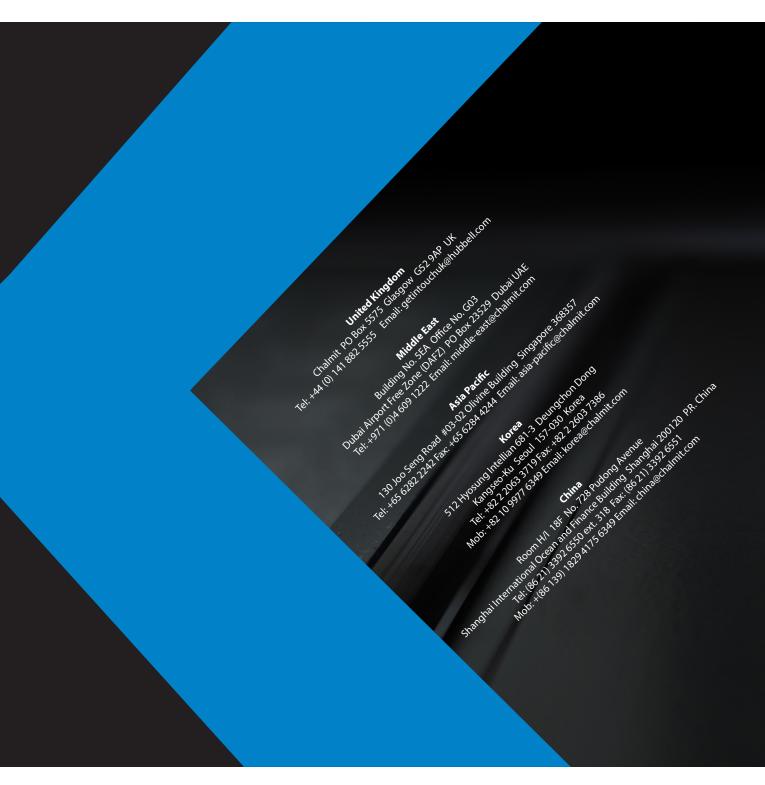
NEO X ZONE 1 LED Bulkhead

Safety, reliability, ease of installation and maintenance is at the heart of our X Series design philosophy. We utilise the latest LED chip technology, to enable us to guarantee optimum light output performance and increased service life. We understand the challenges of extreme environments and constantly push boundaries to provide real and innovative solutions.

Be the first to know about our latest X Series innovations at www.chalmit.com

XSERIES





Chalmit



A proud member of the Hubbell family.

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