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 petro bell projector



PETRO

8 S SYMMETRIC



S ASYMMETRIC



BELL

18 AL1/AL2



AL3/AL4



PROJECTOR

42

B1



V1



STADIO

new



FORSTREET

68

TITANIA

new

01



ORDER CODE

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GENERAL TERMS
& CONDITIONS
OF SALE

96

SALES ORGANIZATION

R SYMMETRIC



R ASYMMETRIC



PC1/PC2



PC3



PC4



new

PC5



new

E1



P1



K1



R1



R2



02



03



04



05



06



SYMBOLS

12 V

Napätie

Lamp Voltage

Lamp Elektrische Spannung

220 V
50 Hz

Napätie

Lamp Voltage

Lamp Elektrische Spannung

230 V
50 Hz

Napätie

Lamp Voltage

Lamp Elektrische Spannung

240 V
50 Hz

Napätie

Lamp Voltage

Lamp Elektrische Spannung

220-240V
50-60Hz

Napätie

Lamp Voltage

Lamp Elektrische Spannung

T5
G5

Svetelný zdroj T5, Pätica G5

Lamp T5, Lampholder G5

Lampen T5, Lampenhalter G5

T8
G13

Svetelný zdroj T8, Pätica G13

Lamp T8, Lampholder G13

Lampen T8, Lampenhalter G13

TC-S
G23

Svetelný zdroj TC-S, Pätica G23

Lamp TC-S, Lampholder G23

Lampen TC-S, Lampenhalter G23

TC-SE
2G7

Svetelný zdroj TC-SE, Pätica 2G7

Lamp TC-SE, Lampholder 2G7

Lampen TC-SE, Lampenhalter 2G7

TC-L
2G11

Svetelný zdroj TC-L, Pätica 2G11

Lamp TC-L, Lampholder 2G11

Lampen TC-L, Lampenhalter 2G11

TC-D
G24d

Svetelný zdroj TC-D, Pätica G24d

Lamp TC-D, Lampholder G24d

Lampen TC-D, Lampenhalter G24d

TC-DEL
G24q

Svetelný zdroj TC-DEL, Pätica G24q

Lamp TC-DEL, Lampholder G24q

Lampen TC-DEL, Lampenhalter G24q

TC-T
GX24d

Svetelný zdroj TC-T, Pätica GX24d

Lamp TC-T, Lampholder GX24d

Lampen TC-T, Lampenhalter GX24d

TC-TEL
GX24q

Svetelný zdroj TC-TEL, Pätica GX24q

Lamp TC-TEL, Lampholder GX24q

Lampen TC-TEL, Lampenhalter GX24q

T-R
G10q

Svetelný zdroj T-R, Pätica G10q

Lamp T-R, Lampholder G10q

Lampen T-R, Lampenhalter G10q

T-R
2GX13

Svetelný zdroj T-R, Pätica 2GX13

Lamp T-R, Lampholder 2GX13

Lampen T-R, Lampenhalter 2GX13

TC-DD
G10q

Svetelný zdroj TC-DD, Pätica G10q

Lamp TC-DD, Lampholder G10q

Lampen TC-DD, Lampenhalter G10q

TC-DD
GR8

Svetelný zdroj TC-DD, Pätica GR8

Lamp TC-DD, Lampholder GR8

Lampen TC-DD, Lampenhalter GR8

HI
E27

Svetelný zdroj HI, Pätica E27

Lamp HI, Lampholder E27

Lampen HI, Lampenhalter E27

HI
E40

Svetelný zdroj HI, Pätica E40

Lamp HI, Lampholder E40

Lampen HI, Lampenhalter E40

HS
E27

Svetelný zdroj HS, Pätica E27

Lamp HS, Lampholder E27

Lampen HS, Lampenhalter E27

HS
E40

Svetelný zdroj HS, Pätica E40

Lamp HS, Lampholder E40

Lampen HS, Lampenhalter E40

HI
RX7s

Svetelný zdroj HI, Pätica RX7s

Lamp HI, Lampholder RX7s

Lampen HI, Lampenhalter RX7s

HS
RX7s

Svetelný zdroj HS, Pätica RX7s

Lamp HS, Lampholder RX7s

Lampen HS, Lampenhalter RX7s

HI
G12

Svetelný zdroj HI, Pätica G12

Lamp HI, Lampholder G12

Lampen HI, Lampenhalter G12

QR111
G53

Svetelný zdroj QR111, Pätica G53

Lamp QR111, Lampholder G53

Lampen QR111, Lampenhalter G53

A60
E27

Svetelný zdroj A60, Pätica E27

Lamp A60, Lampholder E27

Lampen A60, Lampenhalter E27



Svetelný zdroj IT, Päťica E27

Lamp IT, Lampholder E27

Lampen IT, Lampenhalter E27



Svetelný zdroj TC-F, Päťica 2G10

Lamp TC-F, Lampholder 2G10

Lampen TC-F, Lampenhalter 2G10



Svetelný zdroj ENDURA

Lamp ENDURA

Lampen ENDURA



Tlmivka

Magnetic ballast

Magnetische Vorschaltgerät



Tlmivka, trieda B2

Magnetic ballast, class B2

Magnetische Vorschaltgerät, B2



Tlmivka, trieda B1

Magnetic ballast, class B1

Magnetische Vorschaltgerät, B1



Elektronický predradník

Electronic ballast

Elektronische Vorschaltgerät



Elektronický predradník, trieda A2

Electronic ballast, class A2

Elektronische Vorschaltgerät, A2



Stmievateľný elektronický predradník

Dimmable electronic ballast

Elektronische Dimmer - Vorschaltgerät



Stmievateľný elektronický predradník - DALI

Dimmable electronic ballast - DALI

Elektronische Dimmer - Vorschaltgerät - DALI



Magnetický transformátor

Magnetic transformer

Magnetische Transformator



Elektronický transformátor

Electronic transformer

Elektronische Transformator



Stmievateľný transformátor

Dimmable electronic transformer

Elektronische Dimmer - Transformator



Stmievateľný transformátor - DALI

Dimmable electronic transformer - DALI

Elektronische Dimmer - Transformator - DALI



Núdzová jednotka

Emergency unit

Notlicht-Ausführung



Svietidlo je možné montovať na normálne horľavý povrch

Fixture which can be installed on normally flammable surfaces

Haltenrung für Montage an normal entflammaren Oberflächen

Svietidlá spĺňajúce EN 60598-2-24

Luminaire fulfil to EN 60598-2-24

Leuchte erfüllt EN 60598-2-24



Svietidlo triedy III

Class III luminaire

Klasse III Leuchte



Ochrana proti mechanickým nárazom

Impact resistance

Schutzarten gegen äussere mechanische Beanspruchungen

Krytie IP XX



Protection degree IP XX

Schutzart IP XX

PETRO

PETRO

Prachotesné a vodeodolné svietidlo pre rôzne typy svetelných zdrojov je vhodné do priemyselných priestorov, skladov, výrobných alebo športových hál. Svojou konštrukciou umožňujú montáž na strop ako prisadené (PETRO S), alebo ako vstavané do podhládov (PETRO R).

KONŠTRUKCIA

Teleso svietidla: 0,8mm hrubý plech, povrchovo upravený elektrostaticky nanášanou práškovou farbou - základný odtieň RAL 9003 (signálna biela, lesklá).

Kryt svietidla: číre kalené sklo, opieskované v časti prekrývajúcej elektrickú výzbroj

Reflektor: hliníkový reflektor - symetrický alebo asymetrický

Inštaláčna doska: pozinkovaný plech

Verzia R je vybavená upínacím mechanizmom, ktorý umožňuje jednoduchú montáž do podhládu. Krytie svietidla IP65 zabezpečuje silikónové tesnenie pod sklom. Sklo je k telesu svietidla prichytené štyrmi skrutkami a zaistené dvomi lankami pre jednoduchšiu údržbu svietidla. Všetky elektrické komponenty sú umiestnené na inštaláčnej doske svietidla.

ELEKTRICKÁ VÝBAVA

Svietidlo môže byť vybavené:

- konvenčným magnetickým predradníkom so zapaľovačom, svietidlo je štandardne kompenzované
- elektronickým predradníkom

Ostatné komponenty:

- svetelné zdroje: sodíkové výbojky HST/HSE, metal - halogenidové výbojky HIT/HIE, bezelektrodové indukčné výbojky, kompaktné žiarivky TC-F (svetelné zdroje je nutné objednať zvlášť)
- vnútorné vodiče so spletaným medeným jadrom prierezu 0,75 mm² v silikónovej izolácii (teplotná odolnosť do 130°C)
- keramická objímka
- keramická trojpólová svorkovnica umožňuje pripojiť vodiče do prierezu max. 2,5 mm²
- jeden otvor pre vstup napájacieho kábla s prechodkou PG 13,5
- svietidlo je na požiadanie možné vybaviť núdzovými jednotkami s autonómnou prevádzkou 1 alebo 3 hodiny (len pre zdroj TC-F)

PRÍSLUŠENSTVO

- konektory WIELAND s krytím IP65
- prídavná žiarovka s prepínacím zariadením na prekrytie času potrebného k znovuzápalu výbojky resp. nábehu plného svetelného toku výbojky (do výkonu 250W) - viac informácií na strane 40/41, v kapitole OPTICS
- ochranná drôtená mreža
- bezpečnostný zapaľovač

PETRO

Dust-resistant and waterproof luminaire for various types of light sources is suitable for industrial environments, stores, production or sport halls. Their construction allows installation to ceiling (PETRO S) or a built-in installation (PETRO R).

CONSTRUCTION

Body: 0,8 mm thick metal sheet, finished with electrostatic powder coating – basic shade RAL 9003 (signal white, glossy).

Luminaire cover: pure hardened glass, sandblasted part above electrical equipment

Reflector: aluminium reflector – symmetrical or asymmetrical

Installation plate: zinc-coated sheet steel

Version R is equipped with a fastening mechanism which allows easy installation into ceiling. IP65 luminaire protection is provided by silicone sealing under the glass. The glass is attached to the body of the luminaire using four screws and secured by two wires for simple maintenance. All electronic components are situated on the installation plate of the luminaire.

WIRING

Lighting fixtures can be equipped with:

- conventional magnetic control gear with an ignitor, standardly compensated
- electronic control gear

Other components:

- lamps: sodium discharge lamps HST/HSE, metal-halide discharge lamps HIT/HIE, electrode-less induction lamps, compact fluorescent lamps TC-F (light sources must be ordered separately)
- flexible copper internal conductors, silicon insulated (heat resistant up to 130°C) with 0.75 mm² cross-section
- ceramic lampholder
- ceramic three-pole terminal allows to connect conductors up to 2.5 mm² cross-section
- one hole for the power cable with PG 13,5 grommet
- emergency version of lighting fixtures with autonomous operation 1 or 3 hours is available on request (TC-F source only)

ACCESSORIES

- WIELAND connectors with IP65 protection
- additional fluorescent lamp with switching device to cover the time needed to reignite the discharge lamp or wait for full luminous flux of the discharge lamp (up to 250W) – for more information see the page 40/41, in section OPTICS
- safety wire grate
- safety ignitor

PETRO

Eine staubdichte und wasserbeständige Leuchte für verschieden Typen der Lichtquellen ist in die Industrieräumen, Lagerhäuser, Produktions- oder Sporthallen geeignet. Mit ihrer Konstruktion ermöglicht sie die Montage auf die Decke als Anbauleuchte (PETRO S) oder als Einbauleuchte in die Untersichten (PETRO R).

KONSTRUKTION

Leuchtenkörper: Blech mit der Dicke von 0,8 mm, Oberflächenbehandlung mit einer elektrostatisch beschichteten Pulverfarbe - Grundton RAL 9003 (signalweiß, glänzend).

Leuchendeckel: klares Hartglas, das im die elektrische Ausrüstung verdeckenden Teil sandgestrahlt ist

Reflektor: Aluminiumreflektor – symmetrischer oder asymmetrischer

Installationsplatte: verzinktes Blech

Die Ausführung R ist mit einem Spannmechanismus ausgerüstet, der eine einfache Montage in die Untersicht ermöglicht. Die Schutzart der Leuchte IP65 sichert die Silikonichtung unter dem Glas. Das Glas ist zum Leuchtenkörper mit vier Schrauben befestigt und mit zwei Seilen für einfachere Wartung der Leuchte gesichert. Alle elektrische Komponenten sind auf der Installationsplatte der Leuchte angebracht.

ELEKTRISCHE AUSRÜSTUNG

Die Leuchten können ausgerüstet sein:

- mit konventionellen magnetischen Vorschaltgeräte mit einem Zündergeräte, die Leuchte ist standardmäßig kompensiert
- mit einem elektronischen Vorschaltgeräte

Andere Komponenten:

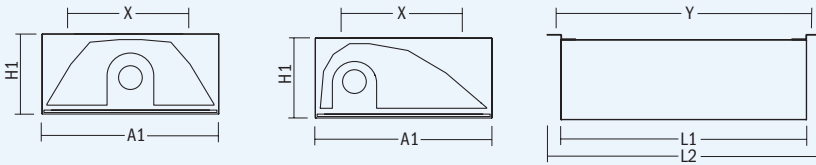
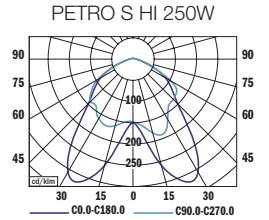
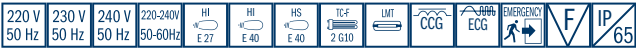
- Lichtquellen: Natriumlampen HST/HSE, Metall-Halogenidlampen HIT/HIE, elektrodenlose induktive Entladungslampen, kompakte Leuchtstofflampen TC-F (es ist notwendig die Lichtquellen extra zu bestellen)
- die Innenleiter mit einem versplissenen Kupferkern mit einem Durchschnitt von 0,75 mm² in einer Silikonisolierung (Wärmewiderstand bis zu 130°C)
- keramische Fassung
- eine keramische dreipolige Klemmleiste ermöglicht die Leiter in einen Durchschnitt von max. 2,5 mm² anzuschließen
- eine Öffnung für den Eingang des Speisekabels mit der Durchführung PG 13,5
- es ist möglich die Leuchte auf Wunsch mit Noteinheiten mit einem unabhängigen Betrieb von 1 oder 3 Stunden auszurüsten (nur für die Quelle TC-F)

ZUBEHÖR

- Verbindungsstecker WIELAND mit Schutzart IP65
- eine zusätzliche Glühlampe mit Umschaltvorrichtung für Überbrückung der Zeit, die zur Wiederezündung der Entladungslampe bzw. zum Anlauf des vollen Lichtstromes der Entladungslampe (bis zur Leistung von 250 W) notwendig ist – mehr Informationen am Seite 40/41, in OPTICS Anlage
- Drahtschutzgitter
- Sicherheits Zündgeräte

PETRO

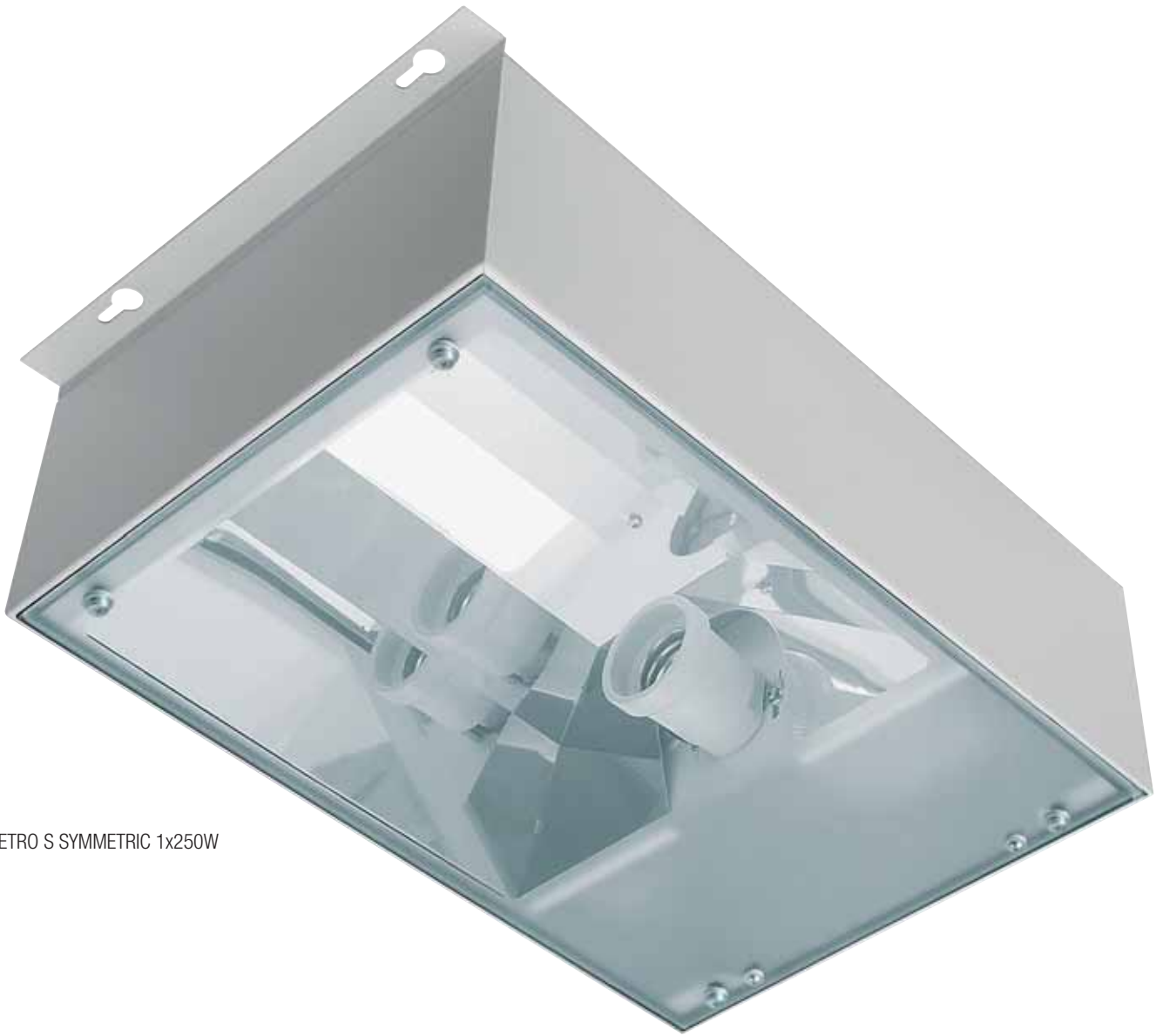
S SYMMETRIC/ASYMMETRIC HI/HS/TC-F/LMT



	OPTIC		POWER	LAMP	DIMENSIONS				FIXING	
	SYMMETRIC	ASYMMETRIC			A1	L1	L2	H1	X	Y
Petro S	•	•	150	HI	360	500	560	173	240	532
Petro S	•	•	250	HI	360	500	560	173	240	532
Petro S	•	•	400	HI	360	500	560	173	240	532
Petro S	•	•	150	HS	360	500	560	173	240	532
Petro S	•	•	250	HS	360	500	560	173	240	532
Petro S	•	•	400	HS	360	500	560	173	240	532
Petro S	•	•	600	HS	360	500	560	173	240	532
Petro S	•		36	TC-F	360	500	560	173	240	532
Petro S	•		70	LMT	360	530	590	173	240	563
Petro S	•		100	LMT	360	530	590	173	240	563
Petro S	•		150	LMT	360	530	590	173	240	563

INSTALLATION





PETRO S SYMMETRIC 1x250W

SAFETY GRATE



SYMMETRIC



ASYMMETRIC

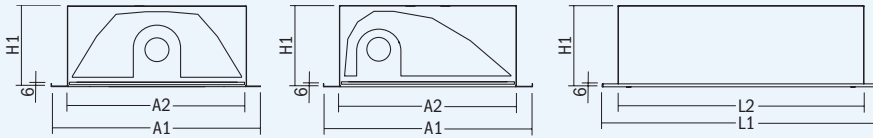
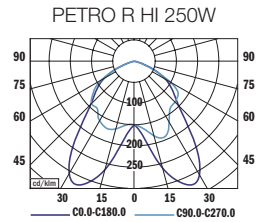
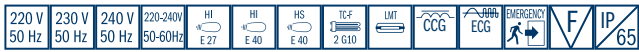


ELECTRONIC SWITCHING DEVICE



PETRO

R SYMMETRIC/ASYMMETRIC HI/HS/TC-F/LMT



	OPTIC		POWER	LAMP	DIMENSIONS					HOLE	
	SYMMETRIC	ASYMMETRIC			A1	A2	L1	L2	H1	O1	O2
Petro R	•	•	150	HI	425	360	565	500	165	370	510
Petro R	•	•	250	HI	425	360	565	500	165	370	510
Petro R	•	•	400	HI	425	360	565	500	165	370	510
Petro R	•	•	150	HS	425	360	565	500	165	370	510
Petro R	•	•	250	HS	425	360	565	500	165	370	510
Petro R	•	•	400	HS	425	360	565	500	165	370	510
Petro R	•	•	600	HS	425	360	565	500	165	370	510
Petro R	•		36	TC-F	425	360	565	500	165	370	510
Petro R	•		70	LMT	425	360	595	530	165	370	540
Petro R	•		100	LMT	425	360	595	530	165	370	540
Petro R	•		150	LMT	425	360	595	530	165	370	540

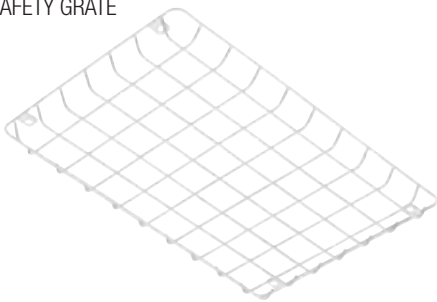
INSTALLATION



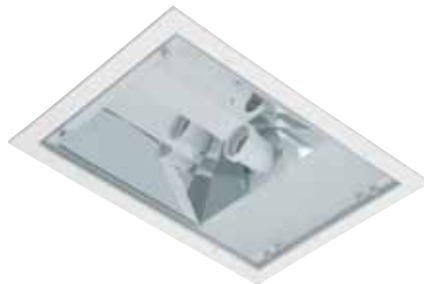


PETRO R 250W

SAFETY GRATE



SYMMETRIC

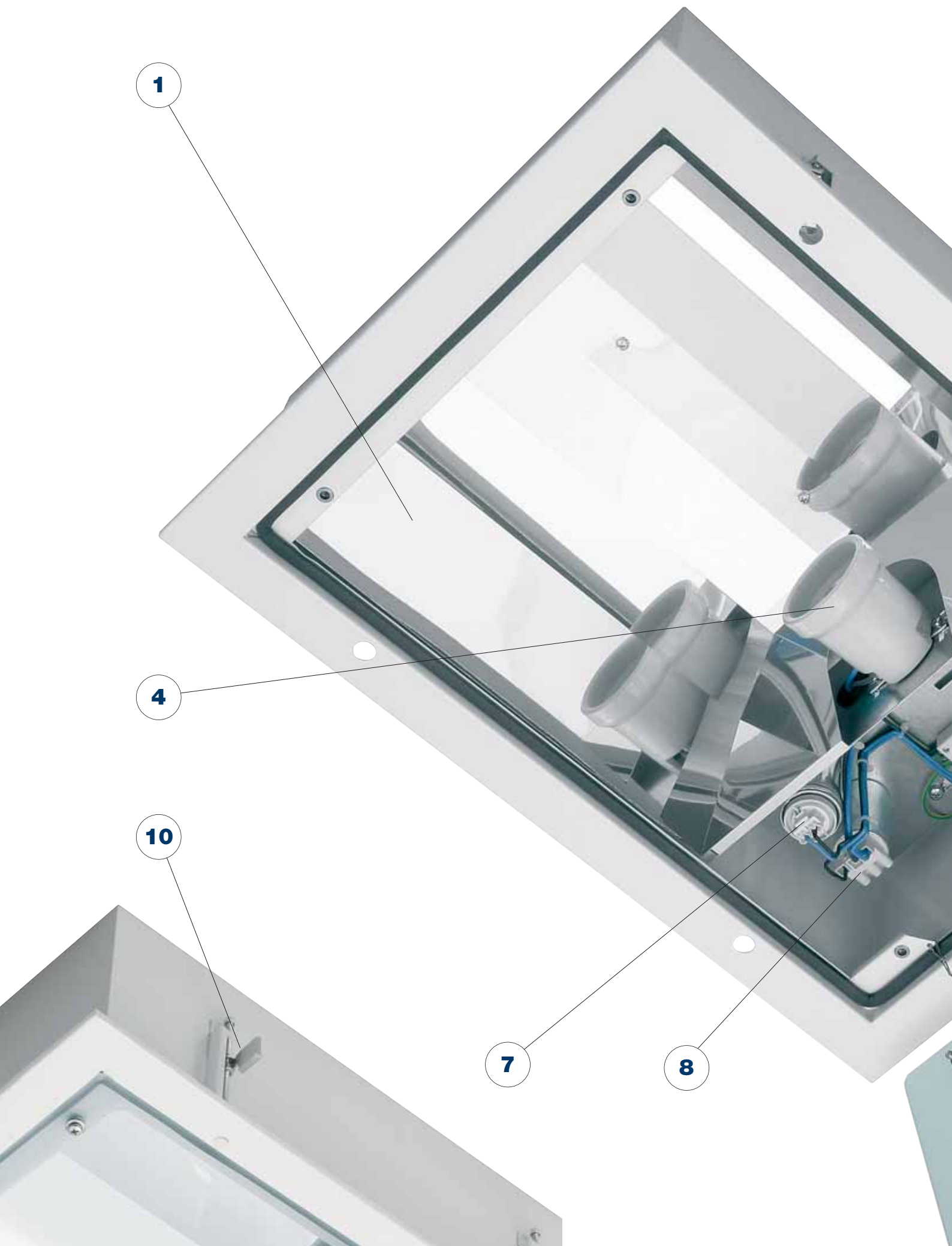


ASYMMETRIC



ELECTRONIC SWITCHING DEVICE





1

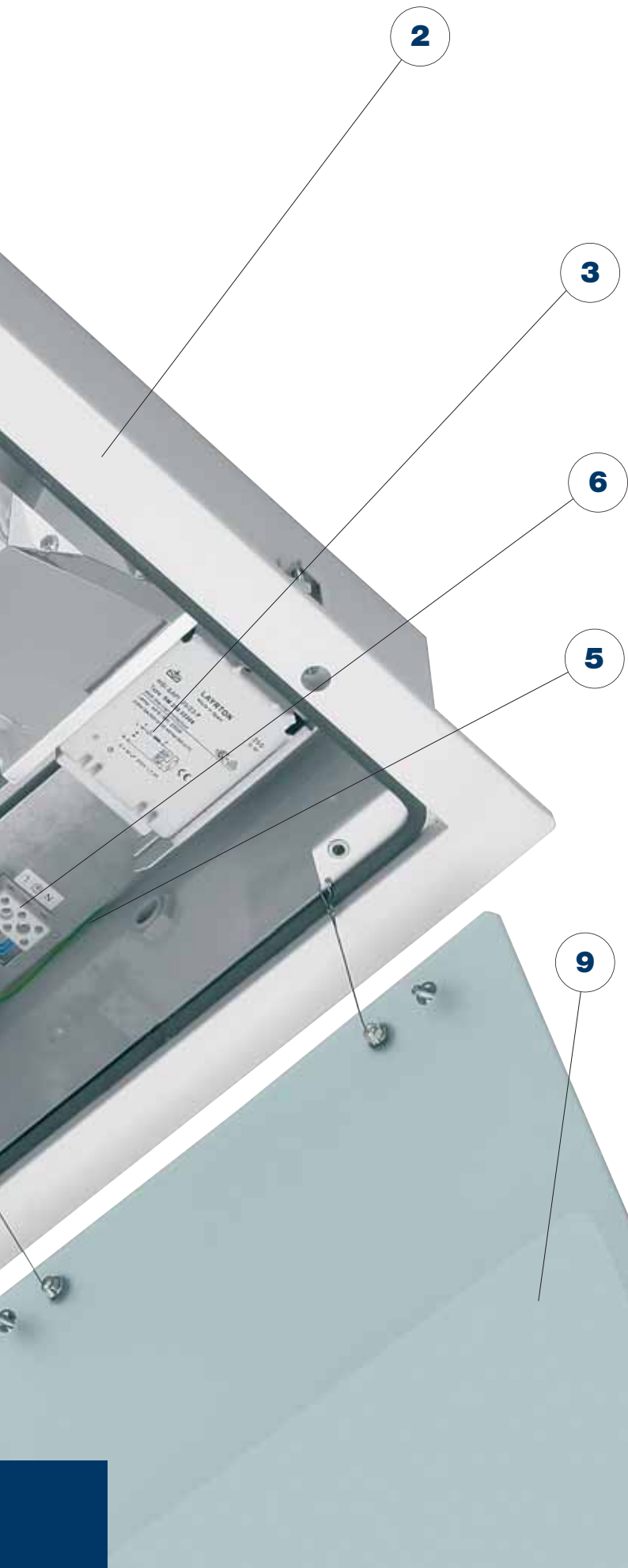
4

10

7

8

PETRO



R SYMMETRIC HI CONVENTIONAL CONTROL GEAR

- 1** Reflektor
Reflector
Reflektor
- 2** Teleso svietidla
Body
Leuchtenkörper
- 3** Tlmivka
Magnetic ballast
Magnetische Vorschaltgeräte
- 4** Objímka
Lampholder
Lampenhalter
- 5** Vodič
Cable
Kabel
- 6** Svorkovnica
Terminal block
Anschlussklemme
- 7** Kondenzátor
Capacitor
Kondensatoren
- 8** Zapaľovač
Ignitor
Zündgeräte
- 9** Tvrdené sklo
Toughened glass
Sicherheitsglas
- 10** Držiak telesa
Body holder
Körperhalter



bell

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Previdentivno vozilo



BELL

AL

BELL AL

KONŠTRUKCIA

Teleso svietidla (BELL AL1/AL2): hliníkový odliatok, povrchovo upravený elektrostaticky nanášanou čiernou práškovou farbou. Krytie boxu IP65.

Reflektor (BELL AL1/AL2): rotačne symetrický hliníkový reflektor, dve verzie

Teleso svietidla (BELL AL3/AL4): čierny polyamid spevnený skleneným vláknom. Krytie boxu IP65.

Reflektor (BELL AL3/AL4): rotačne symetrický hliníkový reflektor, dve verzie

Kryt svietidla: číre kalené sklo

Inštalácia doska: pozinkovaný plech

Krytie optickej časti IP65 je zabezpečené prídavným sklom s gumeným tesnením. Sklo je k reflektoru uchytené pomocou troch klipsov a zaistené reťazkou pre jednoduchšiu údržbu svietidla. Všetky elektrické komponenty sú umiestnené na inštaláčnej doske vnútri svietidla. Na vrchu svietidla je držiak pre závesnú montáž.

Bližší popis jednotlivých typov optiky je uvedený na strane 40/41, v kapitole OPTICS.

ELEKTRICKÁ VÝBAVA

Svietidlo môže byť vybavené:

- konvenčným magnetickým predradníkom so zapaľovačom, svietidlo je štandardne kompenzované
- elektronickým predradníkom

Ostatné komponenty:

- svetelné zdroje: sodíkové výbojky HST/HSE, metal - halogenidové výbojky HIT/HIE (svetelné zdroje je nutné objednať zvlášť)
- vnútorné vodiče so spletaným medeným jadrom prierezu 0,75 mm² v silikónovej izolácii (teplotná odolnosť do 130°C)
- polohovateľná keramická objímka (viac informácií v technickej prílohe)
- skrutkovácia trojpólová svorkovnica umožňuje pripojiť vodiče do prierezu max. 2,5 mm²
- jeden otvor pre vstup napájacieho kábla s prechodkou PG 13,5

PRÍSLUŠENSTVO

- konektory WIELAND s krytím IP65
- prídavná žiarovka s prepínacím zariadením na prekrytie času potrebného k znovuzápalu výbojky resp. nábehu plného svetelného toku výbojky (do výkonu 250W) - viac informácií v technickej prílohe
- ochranná drôtená mreža
- bezpečnostný zapaľovač
- reťazový záves

BELL AL

CONSTRUCTION

Luminaire housing (BELL AL1/AL2): aluminium casting, finished with electrostatic black powder coating. IP65 box protection.

Reflector (BELL AL1/AL2): rotational symmetric aluminium reflector, two versions

Luminaire housing (BELL AL3/AL4): fibreglass-reinforced black polyamide IP65 box covering.

Reflector (BELL AL3/AL4): rotational symmetric aluminium reflector, two versions

Luminaire housing: pure hardened glass

Installation plate: galvanised sheet steel

IP65 optical part protection is ensured by using of additional glass with rubber sealing. The glass is attached to the reflector using three clips and secured with a chain for easier maintenance of the luminaire. All electronic components are situated on the installation plate inside the luminaire. The top of the luminaire has a pendant installation holder.

Further description of individual optic types is listed on the page 40/41, in section OPTICS.

WIRING

Lighting fixtures can be equipped with:

- conventional magnetic control gear with an ignitor, standardly compensated
- electronic control gear

Other components:

- lamps: sodium discharge lamps HST/HSE, metal-halide discharge lamps HIT/HIE (light sources must be ordered separately)
- flexible copper internal conductors, silicon insulated (heat resistant up to 130°C) with 0.75 mm² cross-section
- adjustable ceramic lampholder (for more information see the technical appendix)
- screwable three-pole terminal allows to connect conductors up to 2.5 mm² cross-section
- one hole for the power cable with PG 13,5 grommet

ACCESSORIES

- WIELAND connectors with IP65 protection
- additional incandescent lamp with switching device to cover the time needed to reignite the discharge lamp or wait for full luminous flux of the discharge lamp (up to 250W) – for more information see the technical appendix
- safety wire grate
- safety ignitor
- chain suspension

BELL AL

KONSTRUKTION

Leuchtenkörper (BELL AL1/AL2): Aluminiumguß, Oberflächenbehandlung mit einer elektrostatisch beschichteten schwarzen Pulverfarbe. Schutzart der Box IP65.

Reflektor (BELL AL1/AL2): rotationssymmetrischer Aluminiumreflektor, zwei Ausführungen

Leuchtenkörper (BELL AL3/AL4): mit Glasfaser verfestigtes schwarzes Polyamid. Schutzart der Box IP65.

Reflektor (BELL AL3/AL4): rotationssymmetrischer Aluminiumreflektor, zwei Ausführungen

Leuchtendeckel (BELL AL3/AL4): klares Hartglas

Installationsplatte: verzinktes Blech

Die Schutzart des optischen Teils IP65 ist mit zusätzlichem Glas mit Gummidichtung gesichert. Das Glas ist zum Reflektor mittels drei Clips befestigt und mit einer Kette für einfachere Wartung der Leuchte gesichert. Alle elektrische Komponenten sind auf der Installationsplatte innerhalb der Leuchte angebracht. Auf der Oberfläche der Leuchte ist ein Halter für Hängemontage.

Nähere Beschreibung von einzelnen Optiktypen ist am Seite 40/41 in OPTICS Anlage angeführt.

ELEKTRISCHE AUSRÜSTUNG

Die Leuchte kann ausgerüstet sein:

- mit einem konventionellen magnetischen Vorschaltgeräte mit Zündgeräte, die Leuchte ist standardmäßig kompensiert
- mit einem elektronischen Vorschaltgeräte

Andere Komponenten:

- Lichtquellen: Natriumlampen HST/HSE, Metall-Halogenidlampen HIT/HIE (es ist notwendig die Lichtquellen extra zu bestellen)
- die Innenleiter mit einem versplissenen Kupferkern mit einem Durchmesser von 0,75 mm² in einer Silikonisolierung (Wärmewiderstand bis zu 130°C)
- eine positionierbare keramische Fassung (mehr Informationen in technischer Anlage)
- eine dreipolige Schraubklemmleiste ermöglicht die Leiter in einen Durchmesser von max. 2,5 mm² anzuschließen
- eine Öffnung für den Eingang des Speisekabels mit Durchführung PG 13,5

ZUBEHÖR

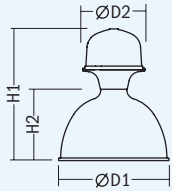
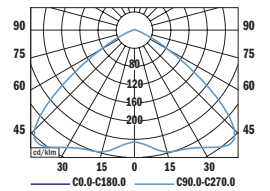
- Verbindungsstecker WIELAND mit Schutzart IP65
- eine zusätzliche Glühlampe mit Umschaltvorrichtung für Überbrückung der Zeit, die zur Wiederzündung der Entladungsröhre bzw. zum Anlauf des vollen Lichtstromes der Entladungsröhre (bis zur Leistung von 250 W) notwendig ist – mehr Informationen in technischer Anlage
- Drahtschutzgitter
- Sicherheitszünder
- Kettenaufhängung

BELL

AL1/AL2 HI/HS

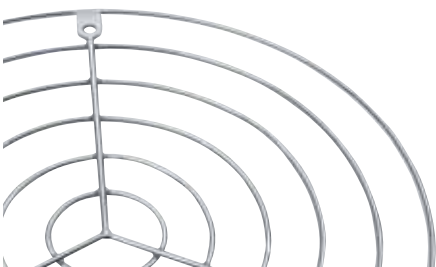
220 V 50 Hz	230 V 50 Hz	240 V 50 Hz	220-240V 50-60Hz	HI E 27	HI E 40	HS E 40	IT E 27	CCG	ECG	F	IP 23	IP 65
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BELL AL1 250W HI-WIDE



	OPTIC		POWER	LAMP	DIMENSIONS			
	AL 1	AL 2			D1	D2	H1	H2
Bell AI	•	•	150	HI	480	280	580	290
Bell AI	•	•	250	HI	480	280	580	290
Bell AI	•	•	400	HI	480	280	580	290
Bell AI	•	•	150	HS	480	280	580	290
Bell AI	•	•	250	HS	480	280	580	290
Bell AI	•	•	400	HS	480	280	580	290

BELL AL1 250W



AL1



AL2



IP 23



IP 65

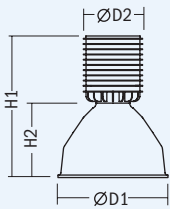
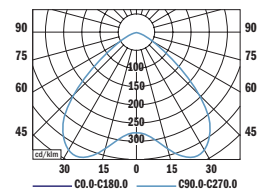


BELL

AL3/AL4 HI/HS

220 V 50 Hz	230 V 50 Hz	240 V 50 Hz	220-240V 50-60Hz	HI E 27	HI E 40	HS E 40	IT E 27	CCG	ECG	F	IP 23	IP 65
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BELL AL4 250W HI-WIDE



	OPTIC		POWER	LAMP	DIMENSIONS			
	AL 3	AL 4			D1	D2	H1	H2
Bell AI	•	•	150	HI	480	268	600	310
Bell AI	•	•	250	HI	480	268	600	310
Bell AI	•	•	400	HI	480	268	600	310
Bell AI	•	•	150	HS	480	268	600	310
Bell AI	•	•	250	HS	480	268	600	310
Bell AI	•	•	400	HS	480	268	600	310

BELL AL3 250W



AL3



AL4



IP 23



IP 65



BELL

PC

BELL PC

KONŠTRUKCIA

Teleso svietidla (BELL PC1/PC2): kombinácia perforovaného plechu a hliníkových odliatkov

Teleso svietidla (BELL PC3/PC4/PC5): hliníkové odliatky

Reflektor: priehľadný polykarbonát

Kryt reflektora (BELL PC2/PC4/PC5): priehľadný polykarbonát

Kryt reflektora (BELL PC3): číre kalené sklo

Inštaláčna doska: pozinkovaný plech

Všetky elektrické komponenty sú umiestnené na inštaláčnej doske vnútri svietidla. Na vrchu svietidla je držiak pre závesnú montáž. Bližší popis jednotlivých typov optiky a elektrického príslušenstva je uvedený na strane 40/41, v kapitole OPTICS.

ELEKTRICKÁ VÝBAVA

Svietidlo môže byť vybavené:

- konvenčným magnetickým predradníkom so zapaľovačom, svietidlo je štandardne kompenzované
- elektronickým predradníkom

Ostatné komponenty:

- svetelné zdroje: sodíkové výbojky HST/HSE, metal - halogenidové výbojky HIT/HIE, kompaktné žiarivky TC-TEL (svetelné zdroje je nutné objednať zvlášť)
- výbojkové verzie používajú vnútorné vodiče so spletaným medeným jadrom prierezu 0,75 mm² v silikónovej izolácii (teplotná odolnosť do 130°C)
- verzie s kompaktnými žiarivkami používajú vnútorné vodiče s pevným medeným jadrom prierezu 0,5 mm² v PVC izolácii (teplotná odolnosť do 90°C)
- skrutkovacia trojpólová svorkovnica umožňuje pripojiť vodiče do prierezu max. 2,5 mm²

PRÍSLUŠENSTVO

- spodný kryt reflektora (okrem verzie PC1)
- bezpečnostný zapaľovač
- reťazový záves pre verzie PC3/PC4/PC5 (štandard pre verzie PC1/PC2)

BELL PC

CONSTRUCTION

Luminaire housing (BELL PC1/PC2): combination of perforated sheet steel and aluminium casting

Luminaire housing (BELL PC3/PC4/PC5): aluminium casting

Reflector: transparent polycarbonate

Reflector housing (BELL PC3/PC4/PC5): transparent polycarbonate

Reflector housing (BELL PC3): pure hardened glass

Installation plate: galvanised sheet steel

All electronic components are situated on the installation plate inside the luminaire. The top of the luminaire has a pendant installation holder. Further description of optics and electrical accessories is listed on the page 40/41, in section OPTICS.

WIRING

Lighting fixtures can be equipped with:

- conventional magnetic control gear with an ignitor, standardly compensated
- electronic control gear

Other components:

- lamps: sodium discharge lamps HST/HSE, metal-halide discharge lamps HIT/HIE, compact fluorescent lamps TC-TEL (light sources must be ordered separately)
- discharge lamp versions use flexible copper internal conductors, silicon insulated (heat resistant up to 130°C) with 0.75 mm² cross-section
- compact fluorescent lamp versions use solid copper internal conductors, PVC insulated (heat resistant up to 90°C) with 0.5 mm² cross-section
- screwable three-pole terminal allows to connect conductors up to 2.5 mm² cross-section

ACCESSORIES

- bottom reflector cover (except version PC1)
- safety ignitor
- chain suspension for versions PC3/PC4/PC5 (standard for versions PC1/PC2)

BELL PC

KONSTRUKTION

Leuchtenkörper (BELL PC1/PC2): Kombination des Lochblechs und Aluminiumgüsse

Leuchtenkörper (BELL PC3/PC4/PC5): Aluminiumgüsse

Reflektor: durchsichtiges Polykarbonat

Reflektordeckel (BELL PC2/PC4/PC5): durchsichtiges Polykarbonat

Reflektordeckel (BELL PC3): klares Hartglas

Installationsplatte: verzinktes Blech

Alle elektrische Komponenten sind auf der Installationsplatte innerhalb der Leuchte angebracht. Auf der Oberfläche der Leuchte ist ein Halter für Hängemontage.

Nähere Beschreibung von Optiktypen und Elektrische Ausrüstung ist am Seite 40/41 in OPTICS Anlage angeführt.

ELEKTRISCHE AUSTRÜSTUNG

Die Leuchte kann ausgerüstet sein:

- mit einem konventionellen magnetischen Vorschaltgeräte mit Zündgeräte, die Leuchte ist standardmäßig kompensiert
- mit einem elektronischen Vorschaltgeräte

Andere Komponenten:

- Lichtquellen: Natriumlampen HST/HSE, Metall-Halide lampen HIT/HIE, kompakte Leuchtstofflampen TC-TEL (es ist notwendig die Lichtquellen extra zu bestellen)
- die Ausführungen mit Entladungsröhren verwenden die Innenleiter mit einem versplissenen Kupferkern mit einem Durchmesser von 0,75 mm² in einer Silikonisolierung (Wärmewiderstand bis zu 130°C)
- die Ausführungen mit kompakten Leuchtstoffröhren verwenden die Innenleiter mit einem festen Kupferkern mit einem Durchmesser von 0,7 mm² in einer PVC-Isolierung (Wärmewiderstand bis zu 90°C)
- eine dreipolige Schraubklemmleiste ermöglicht die Leiter in einen Durchmesser von max. 2,5 mm² anzuschließen

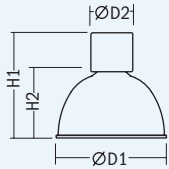
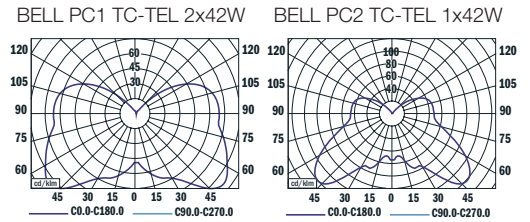
ZUBEHÖR

- Unterdeckel des Reflektors (außer der Ausführung PC1)
- Sicherheits Zündgeräte
- Kettenaufhängung für Ausführungen PC3/PC4/PC5 (Standard für Ausführung PC1/PC2)

BELL

PC1/PC2 HI/HS/TC-TEL

220 V 50 Hz	230 V 50 Hz	240 V 50 Hz	220-240V 50-60Hz	HI E 27	HI E 40	HS E 27	HS E 40	TC-TEL G24q	CCG	ECG	ECG EE-A2	ECG EE-A1	ECG EE-A1	ECG EE-A1	ECG EE-A1	F	IP 20
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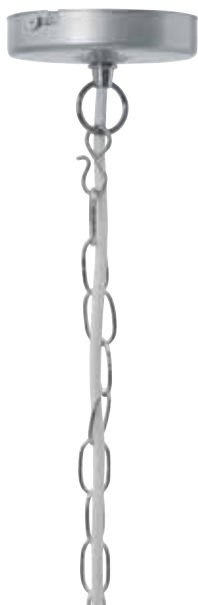


	POWER	LAMP	DIMENSIONS			
			D1	D2	H1	H2
Bell PC 1	70	HI	365	178	425	260
Bell PC 1	150	HI	365	178	425	260
Bell PC 1	70	HS	365	178	425	260
Bell PC 1	150	HS	365	178	425	260
Bell PC 1	42	TC-TEL	365	178	425	260
Bell PC 1	57	TC-TEL	365	178	425	260
Bell PC 2	150	HI	410	178	455	290
Bell PC 2	250	HI	410	178	455	290
Bell PC 2	150	HS	410	178	455	290
Bell PC 2	250	HS	410	178	455	290
Bell PC 2	42	TC-TEL	410	178	455	290
Bell PC 2	57	TC-TEL	410	178	455	290
Bell PC 2	70	TC-TEL	410	178	455	290
Bell PC 2	2x42	TC-TEL	410	178	455	290
Bell PC 2	120	TC-TEL	410	178	455	290

BELL PC1



SUSPENSION



HI, HS

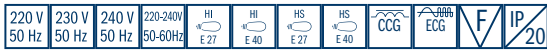


TC-TEL

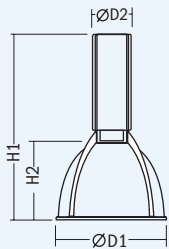
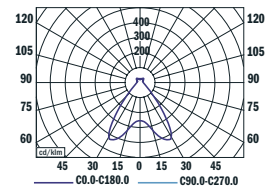


BELL

PC3 HI/HS



BELL PC3 HI 150W COATED



	POWER	LAMP	DIMENSIONS			
			D1	D2	H1	H2
Bell PC 3	70	HI	450	180	680	310
Bell PC 3	150	HI	450	180	680	310
Bell PC 3	250	HI	450	180	680	310
Bell PC 3	70	HS	450	180	680	310
Bell PC 3	150	HS	450	180	680	310
Bell PC 3	250	HS	450	180	680	310

BELL PC3 150W

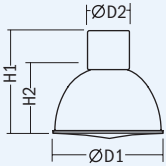
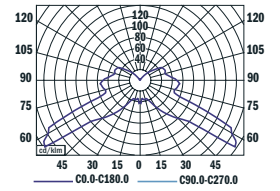


BELL

PC4 HI/HS/TC-TEL

220 V 50 Hz	230 V 50 Hz	240 V 50 Hz	220-240V 50-60Hz	HI E 27	HS E 27	HS E 40	TC-TEL GX24q	CCG	ECG	ECG EE-A2	ECG EE-A1	ECG EE-A1	ECG EE-A1	ECG EE-A1	ECG EE-A1	F	IP 20	IP 40
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BELL PC4 HI 1x70W CLEAR



	POWER	LAMP	DIMENSIONS			
			D1	D2	H1	H2
Bell PC 4	1x42	TC-TEL	330	140	370	210
Bell PC 4	2x42	TC-TEL	330	140	370	210
Bell PC 4	1x70	HI	330	140	370	210
Bell PC 4	1x100	HI	330	140	370	210
Bell PC 4	1x70	HS	330	140	370	210
Bell PC 4	1x100	HS	330	140	370	210

BELL PC4

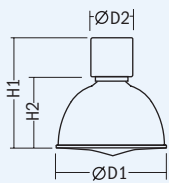
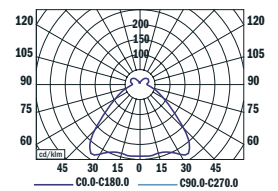


BELL

PC5 HI/HS/TC-TEL

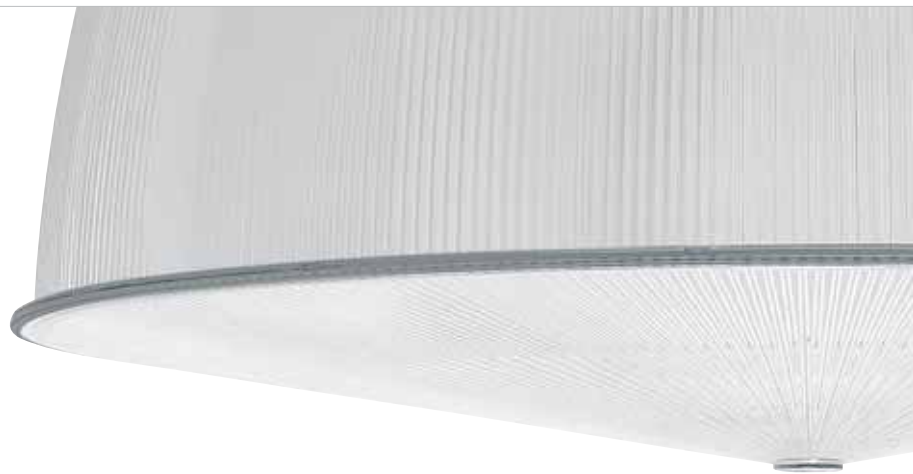
220 V 50 Hz	230 V 50 Hz	240 V 50 Hz	220-240V 50-60Hz	HI E 27	HI E 40	HS E 27	HS E 40	TC-TEL GX24q	CCG	ECG	ECG E2-A2	F	IP 20
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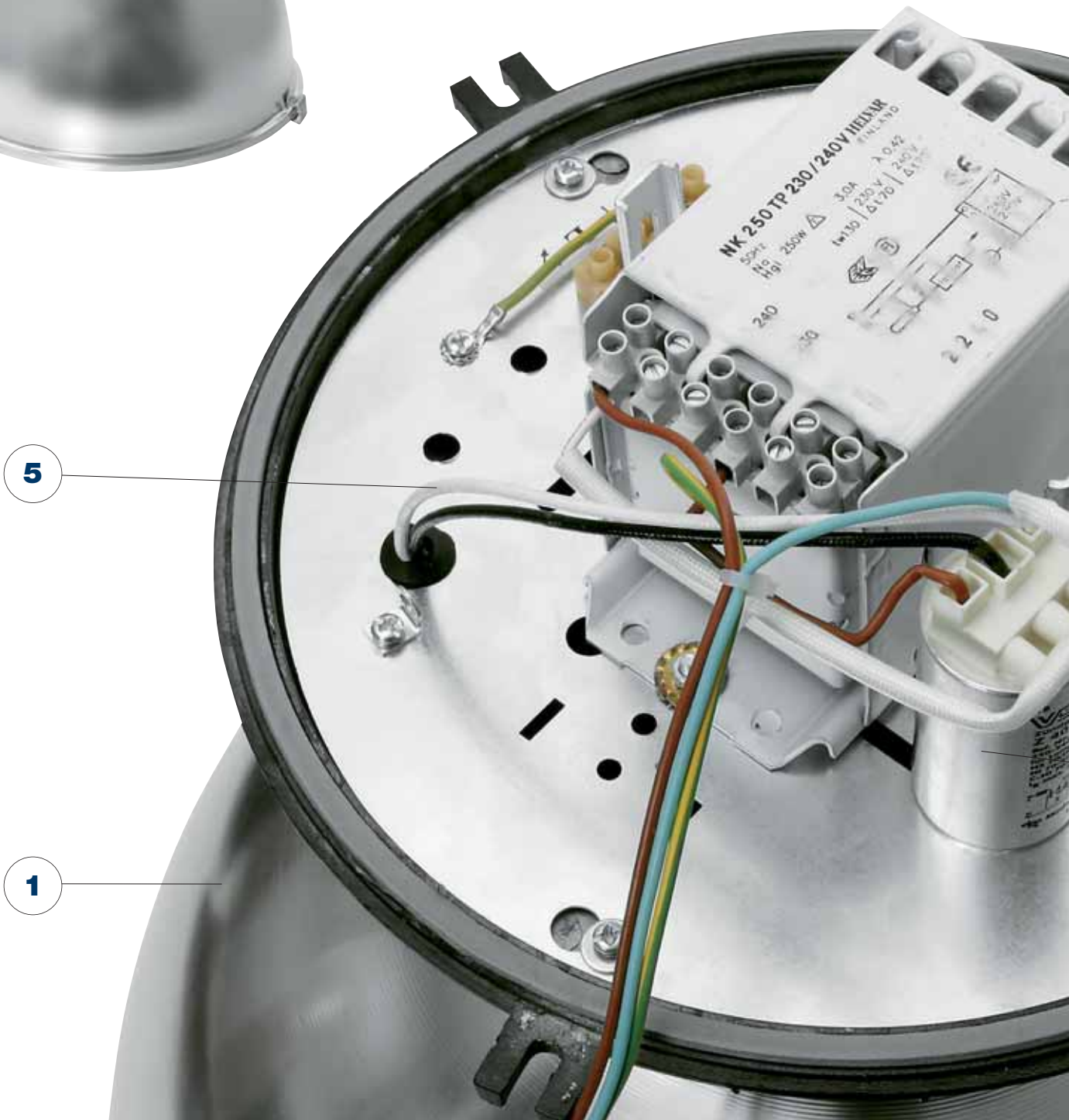
BELL PC5 HI 250W COATED



	POWER	LAMP	DIMENSIONS			
			D1	D2	H1	H2
Bell PC 5	70	TC-TEL	570	170	600	440
Bell PC 5	120	TC-TEL	570	170	600	440
Bell PC 5	150	HI	570	170	600	440
Bell PC 5	250	HI	570	170	600	440
Bell PC 5	150	HS	570	170	600	440
Bell PC 5	250	HS	570	170	600	440

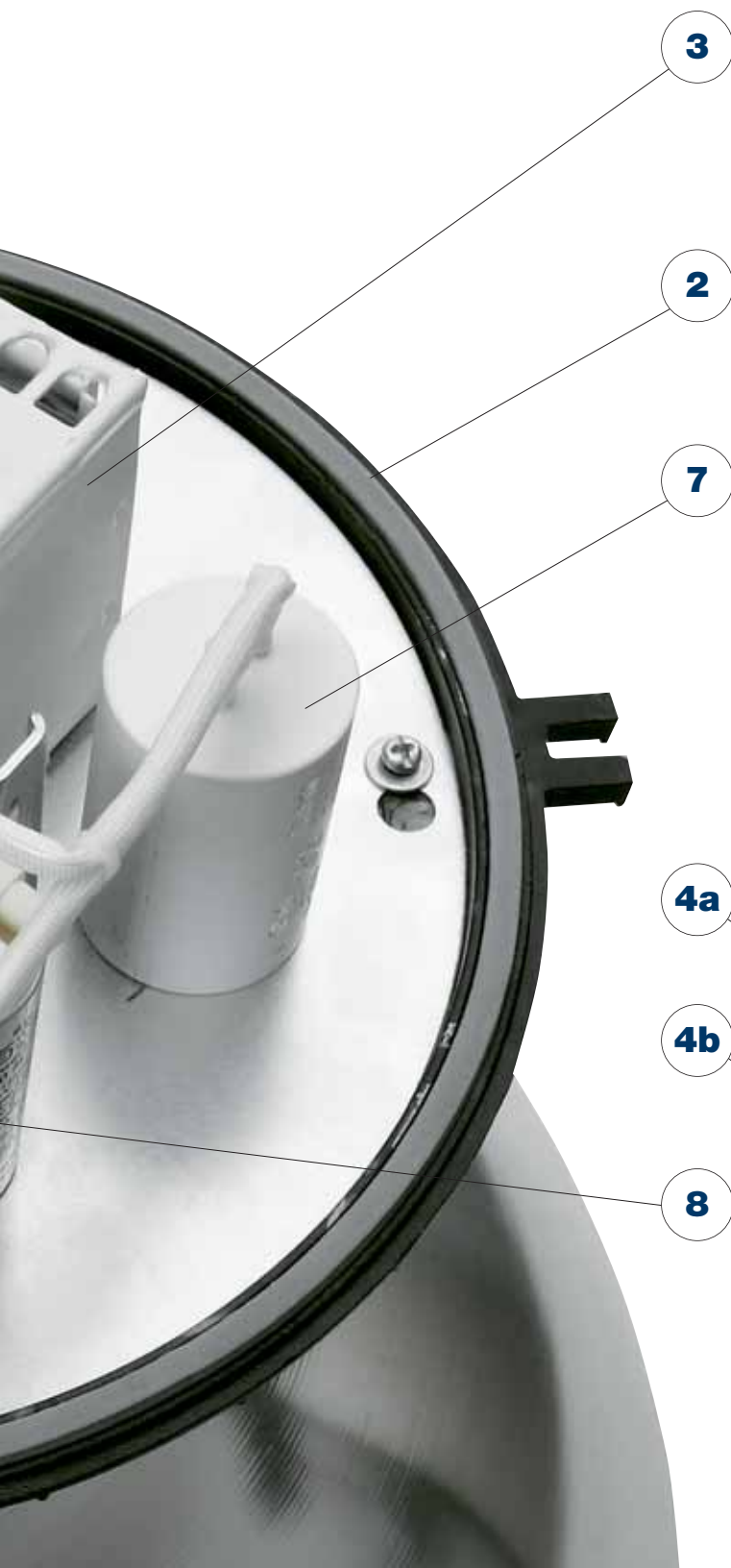
BELL PC5





5

1



AL1 CONVENTIONAL CONTROL GEAR

- 1** Reflektor
Reflector
Reflektor
- 2** Box s elektroinštaláciou
Gear box
Vorschaltgerätegehäuse
- 3** Tlmivka
Magnetic ballast
Magnetische Vorschaltgeräte
- 4** Objímka
Lampholder
Lampenhalter
- 5** Objímka pomocnej žiarovky
Lamholder auxiliary lamp
Lampenhalter Hilfslampe
- 6** Vodič
Cable
Kabel
- 7** Svorkovnica
Terminal block
Anschlussklemme
- 8** Kondenzátor
Capacitor
Kondensatoren
- 9** Zapalovač
Ignitor
Zündgeräte
- 10** Ochranné sklo
Safety glass
Sicherheitsglas
- 11** Ochranná mriežka
Safety grate
Stahlschutzgitter



OPTICS

PETRO/BELL

Ideálne montované do výšok presahujúcich 5 metrov sú schopné tieto priemyselné svietidlá zabezpečiť vynikajúce hlavné osvetlenie pre efektívnu a bezpečnú prácu. Vysokotlaké výbojky používané v týchto svietidlách ponúkajú vyšší merný výkon a rovnakú životnosť ako žiarivkové osvetlenie, s farebným podaním porovnateľným so žiarivkovým. Pri polycarbonátových verziách PC1, PC2, PC4 a PC5 si zákazníci môžu vybrať medzi výkonnými metal-halogenidovými výbojkami alebo úspornými a vysoko efektívnymi kompaktnými žiarivkami - varianty 42, 57, 70 alebo 120 W. Osadené týmito svetelnými zdrojmi sú svietidlá vhodné aj pre použitie v supermarketoch, obchodných priestoroch, prezentačných miestnostiach, vstupných priestoroch a na mnohých ďalších miestach. Elektronické predradníky dovoľujú stmievanie žiariviek a zabezpečujú pre ne dlhú životnosť a vysoký svetelný tok.

Optická časť svietidiel Bell môže byť tvorená buď dvoma typmi hliníkových reflektorov alebo priesvitným polycarbonátovým difúzorom. Štandardne sú svietidlá dodávané s otvorenými reflektormi, pre zvýšenie krytia optickej časti je možné objednať si krycie sklo. Bell AL1 a AL2 sú vybavené vodotesnou a prachotesnou elektrickou skriňou z tlakovo liateho hliníka s kompletne zapojeným predradným príslušenstvom svetelného zdroja. Bell AL3 a AL4 majú túto elektrickú skriňu zo samozhášavého polyméru spevneného optickým vláknom. Pre použitie svietidla v extrémne vysokých teplotách okolitého prostredia (až do 55°C) je možné objednať si Bell so špeciálnou skriňou pre elektrické komponenty, oddelenou od svietidla.

U všetkých svietidiel BELL AL sa posúvaním objímky svetelného zdroja vnútri reflektora dá meniť charakter krivky svetivosti. Vďaka možnosti zmeny polohy výbojky (pre užší alebo širší vyžarovací uhol svietidla) a použitia rôznych svetelných zdrojov nachádzajú tieto svietidlá široké možnosti uplatnenia v rôznych aplikáciách. Týmto spôsobom si môžu sami zákazníci veľmi jednoducho prispôbiť charakteristiku svietidla svojim potrebám.

Tento typ svietidiel môže byť na želanie dodaný s nainštalovaným elektronickým prepínacím zariadením. V prípade výpadku elektrickej energie musí výbojka asi 15 minút chladnúť, aby sa znovu rozsvietila. Takže ihneď po obnovení elektrického prúdu v obvode zopne elektronické zariadenie pomocnú žiarovku, ktorá bude svietiť až pokiaľ nezačne fungovať hlavná výbojka, aby sa predišlo prerušeniu dávky svetla. Treba si uvedomiť, že elektronický prepínač nie je núdzová jednotka slúžiaca ako náhradný zdroj v prípade výpadku elektriny – zabezpečí však určitú úroveň osvetlenia, pokiaľ znovu nezačne fungovať hlavné osvetlenie.

Ideally suited to mounting heights over 5 metres the high bay luminaire provides excellent general lighting to enable task to be carried out effectively and safely. High-intensity discharge (HID) lamps used in these luminaires can offer better efficiency and longer life than fluorescent lighting, with color quality comparable to fluorescent lighting. By polycarbonate versions PC1, PC2, PC4 and PC5 customers can choose between powerful metal-halide lamp or economy and high efficiency compact fluorescent lamp - variants 42, 57, 70 or 120 W. The luminaires with these lamps are also suitable for supermarkets, shop lighting, showrooms, entrance areas, halls and many other places. Electronic ballasts allow dimming of lamps and provide long life and high lumen output for used lamps.

Optical part of Bell range consists of two types of aluminium reflectors or transparent polycarbonate diffuser. The fittings are basically provided with open front, anyway for higher protection of optical part it is possible to order clear glass as accessories. Bell AL1 and AL2 are equipped with a die-casting aluminium waterproof and dustproof electrical box with a pre-wired control gear. Bell AL3 and AL4 has this electrical box made of self-extinguishing fibre glass reinforced technopolymer. For extra high ambient temperatures (up to 55°C) is Bell available also with a special separate electrical gear box.

By all Bell AL range it is possible to change characteristic of light distribution curve by an adjusting lamp holder inside the reflector. With different position of lamp holder (for narrow or wide-beam light distribution) and different lamping, the luminaires can be used for a variety of applications. In this way the customers themselves can easily change emitting characteristic of the luminaire.

This type of luminaires can be supplied with an installed electronic switching device on request. In the event of electricity blackout, the discharge lamps has to cool down about 15 minutes to light up again. So when power is restored again, electronic device turns on the auxiliary lamp until the main discharge lamp starts to work, to prevent interruption of the light supply. Note please, that this is not an emergency unit, it only provides some light till the main lamp starts to work again.

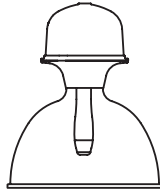
Die für Montagehöhen von über fünf Metern ideal geeignete Hallenleuchte Bell ergibt eine sehr gute allgemeine Beleuchtung und ermöglicht eine effiziente und sichere Ausführung der Arbeiten. Die hierbei verwendeten Hochdrucklampen (HID-Lampen) haben im Vergleich zu Leuchtstofflampen eine höhere Lichtausbeute und eine längere Lebensdauer. Die Farbqualität beider Lampentypen ist vergleichbar. Bei den Polycarbonat-Modellen PC1, PC2, PC4 und PC5 kann zwischen einer leistungsstarken Halogen-Metaldampf Lampe und einer Hochleistungs-Kompaktleuchtstofflampe in den Varianten 42, 57, 70 oder 120 Watt gewählt werden. Mit diesen Lampen eignen sich die Leuchten auch für Supermärkte, Verkaufsräume, Ausstellungsräume, Eingangsbereiche, Hallen und viele andere Bereiche. Das elektronische Vorschaltgerät ermöglicht das Dimmen von Lampen und gewährleistet eine lange Lebensdauer und eine hohe Lichtausbeute der Lampen.

Die Optikauswahl der Bell-Leuchten umfasst zwei Typen von Aluminiumreflektoren und einen transparenten Streuschirm aus Polycarbonat. Diese Elemente sind an der Unterseite offen, zum zusätzlichen Schutz der Optik ist eine Klarglasabdeckung als optionales Zubehör erhältlich. Die Bell AL1 und AL2 besitzen ein wasser- und staubdichtes Gerätegehäuse aus Aluminiumdruckguss mit anschlussfertigem Vorschaltgerät. Bei der AL3 und AL4 ist dieses Gehäuse aus selbstverlöschendem, glasfaserverstärktem Technopolymer hergestellt. Für extrem hohe Umgebungstemperaturen (bis 55°C) ist die Bell auch mit einem separaten Vorschaltgerätegehäuse lieferbar.

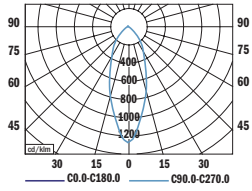
Dieser Leuchtentyp kann auf Wunsch mit einem elektronischen Schaltsystem versehen werden. Im Fall eines Stromausfalls müssen Entladungslampen ungefähr 15 Minuten abkühlen, bevor sie wieder funktionsbereit sind. Wenn nun die Stromversorgung wieder hergestellt ist, wird durch die elektronische Schaltung die Hilfslampe eingeschaltet, bis die Hauptlampe wieder zu leuchten beginnt, und dadurch eine Unterbrechung der Lichtversorgung verhindert. Es ist zu beachten, dass hierbei bis zur Vollfunktion der Hauptlampe nur eine reduzierte Beleuchtung gegeben ist.

Bei allen Leuchten des Typs Bell AL kann die Charakteristik der Lichtverteilungskurve durch Justieren der Lampenfassung im Reflektor verändert werden. In unterschiedlicher Einstellung der Lampenfassung (eng- oder breitstrahlende Lichtverteilung) und mit unterschiedlicher Lampenbestückung eignen sich die Bell-Leuchten für eine Vielzahl von Anwendungen, wobei die Ausstrahlungscharakteristik vom Anwender selber einfach verändert werden kann.

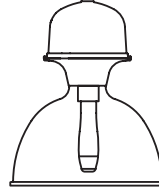
BELL AL1 DEEP



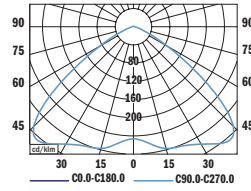
BELL AL 1
250W
HI DEEP
(DIFFUSE LAMP)



BELL AL1 WIDE



BELL AL 1
250W
HI WIDE
(DIFFUSE LAMP)



efficiency 85%

Glare Evaluation According to UGR

p-ceiling	70	70	50	50	30	70	70	50	50	30		
p-walls	50	30	50	30	30	70	30	50	30	30		
p-floor	20	20	20	20	20	20	20	20	20	20		
Room size	X	Y	Viewing direction at right angles to lamp axis				Viewing direction parallel to lamp axis					
2H	2H	17.8	18.6	18.0	18.8	19.0	17.8	18.6	18.0	18.8	19.0	
	3H	17.6	18.4	17.9	18.6	18.8	17.6	18.4	17.9	18.6	18.8	
	4H	17.6	18.2	17.9	18.5	18.8	17.6	18.2	17.9	18.5	18.8	
	6H	17.5	18.1	17.8	18.4	18.7	17.5	18.1	17.8	18.4	18.7	
	8H	17.5	18.0	17.8	18.3	18.6	17.5	18.0	17.8	18.3	18.6	
	12H	17.4	18.0	17.8	18.3	18.6	17.4	18.0	17.8	18.3	18.6	
4H	2H	17.6	18.3	17.9	18.5	18.8	17.6	18.3	17.9	18.5	18.8	
	3H	17.5	18.0	17.8	18.3	18.6	17.5	18.0	17.8	18.3	18.6	
	4H	17.4	17.9	17.8	18.2	18.6	17.4	17.9	17.8	18.2	18.6	
	6H	17.3	17.7	17.7	18.1	18.5	17.3	17.7	17.7	18.1	18.5	
	8H	17.3	17.6	17.7	18.0	18.4	17.3	17.6	17.7	18.0	18.4	
	12H	17.2	17.6	17.7	18.0	18.4	17.2	17.6	17.7	18.0	18.4	
8H	4H	17.3	17.6	17.7	18.0	18.4	17.3	17.6	17.7	18.0	18.4	
	6H	17.2	17.5	17.6	17.9	18.3	17.2	17.5	17.6	17.9	18.3	
	8H	17.2	17.4	17.6	17.8	18.3	17.2	17.4	17.6	17.8	18.3	
	12H	17.1	17.3	17.6	17.8	18.3	17.1	17.4	17.6	17.8	18.3	
	12H	4H	17.2	17.6	17.7	18.0	18.4	17.2	17.6	17.7	18.0	18.4
		6H	17.2	17.4	17.6	17.8	18.3	17.2	17.4	17.6	17.8	18.3
8H		17.1	17.3	17.6	17.8	18.3	17.1	17.3	17.6	17.8	18.3	

variation of observer position for the luminaire distances S

S=	1.0H	+0.2/-6.4	+0.2/-6.4
	1.5H	+4.2/-14.8	+4.2/-14.8
	2.0H	+6.2/-23.3	+6.2/-23.3
Standart table		BK00	BK00
CorrectionSummand		-1.5	
corrected glare indices for 5852lm total flux			

Glare Evaluation According to UGR

p-ceiling	70	70	50	50	30	70	70	50	50	30		
p-walls	50	30	50	30	30	70	30	50	30	30		
p-floor	20	20	20	20	20	20	20	20	20	20		
Room size	X	Y	Viewing direction at right angles to lamp axis				Viewing direction parallel to lamp axis					
2H	2H	24.0	25.2	24.3	25.1	25.6	24.0	25.2	24.3	25.4	25.6	
	3H	24.0	25.0	24.3	25.3	25.5	24.0	25.0	24.3	25.3	25.5	
	4H	23.9	24.9	24.2	25.1	25.4	23.9	24.9	24.2	25.1	25.4	
	6H	23.8	24.7	24.2	25.0	25.3	23.8	24.7	24.2	25.0	25.3	
	8H	23.8	24.6	24.1	24.9	25.3	23.8	24.6	24.1	24.9	25.3	
	12H	23.8	24.6	24.1	24.9	25.2	23.8	24.6	24.1	24.9	25.2	
4H	2H	24.0	25.0	24.4	25.3	25.6	24.0	25.0	24.4	25.3	25.6	
	3H	24.0	24.8	24.4	25.2	25.5	24.0	24.8	24.4	25.2	25.5	
	4H	24.0	24.7	24.4	25.0	25.4	24.0	24.7	24.4	25.0	25.4	
	6H	23.9	24.5	24.3	24.9	25.3	23.9	24.5	24.3	24.9	25.3	
	8H	23.9	24.4	24.3	24.8	25.2	23.9	24.4	24.3	24.8	25.2	
	12H	23.9	24.3	24.3	24.7	25.2	23.9	24.3	24.3	24.7	25.2	
8H	4H	23.9	24.4	24.3	24.8	25.2	23.9	24.4	24.3	24.8	25.2	
	6H	23.8	24.2	24.3	24.7	25.1	23.8	24.2	24.3	24.7	25.1	
	8H	23.8	24.2	24.2	24.6	25.1	23.8	24.2	24.2	24.6	25.0	
	12H	23.7	24.1	24.2	24.5	25.0	23.7	24.1	24.2	24.5	25.0	
	12H	4H	23.8	24.3	24.3	24.7	25.2	23.8	24.3	24.3	24.7	25.2
		6H	23.8	24.2	24.2	24.6	25.1	23.8	24.2	24.2	24.6	25.1
8H		23.7	24.1	24.2	24.5	25.0	23.7	24.1	24.2	24.5	25.0	

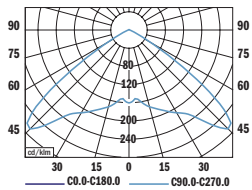
variation of observer position for the luminaire distances S

S=	1.0H	+0.1/-1.2	+0.1/-1.2
	1.5H	+0.2/-4.8	+2.0/-4.8
	2.0H	+3.8/-9.3	+3.8/-9.3
Standart table		BK00	BK00
CorrectionSummand		5.1	
corrected glare indices for 5852lm total flux			

CLEAR LAMP



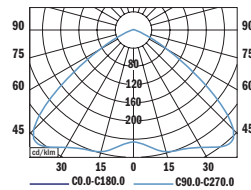
BELL AL 1
250W
HI WIDE
(CLEAR LAMP)



DIFFUSE LAMP



BELL AL 1
250W
HI WIDE
(DIFFUSE LAMP)









otvorenje od
09:00 - 04:00

MAX

ISTROBANKA 7

PROJECTOR

PROJECTOR

Rozličné typy výbojkových svietidiel so širokým uplatnením v interiéroch alebo exteriéroch. Výber z rôznych typov reflektorov – od úzkožiariach, cez symetrické širokožiariče až po asymetrické reflektory. Všetky s vysokým stupňom krytia IP65.

KONŠTRUKCIA

Teleso svietidla: tlakovo liaty hliník, povrchovo upravený elektrostaticky nanášanou čiernou práškovou farbou

Reflektor: dva typy hliníku v závislosti od typu - leštená alebo tepaná povrchová úprava

Kryt reflektora: tvrdené bezpečnostné sklo

Krytie svietidla IP65 zabezpečuje silikónové tesnenie pod sklom. Uchytenie pomocou konzoly s montážnymi otvormi, nastaviteľný sklon svietidla.

ELEKTRICKÁ VÝBAVA

Svietidlo môže byť vybavené:

- konvenčným magnetickým predradníkom so zapalovačom, svietidlo je štandardne kompenzované
- elektronickým predradníkom

Ostatné komponenty:

- svetelné zdroje: sodíkové výbojky HST/HST-DE/HSE, metal - halogenidové výbojky HIT/HIT-DE/HIE (svetelné zdroje je nutné objednať zvlášť)
- vnútorné vodiče so spletaným medeným jadrom prierezu 0,75 mm² v silikónovej izolácii (teplotná odolnosť do 130°C)
- keramické objímky
- trojpólová svorkovnica umožňuje pripojiť vodiče do prierezu max. 2,5 mm²
- otvor s prechodkou pre vstup napájacieho kábla

PRÍSLUŠENSTVO

- bezpečnostný zapalovač

PROJECTOR

Various types of discharge lamp luminaires with various uses inside or outside. Selection of different reflector types – from narrow beam reflectors to symmetrical to asymmetrical reflectors. All of them with a high degree of protection IP65.

CONSTRUCTION

Body: die cast aluminium, finished with electrostatic black powder coating

Reflector: two types of aluminium reflectors depending on type – polished or hammered surface

Reflector cover: hardened safety glass

IP65 luminaire cover is provided by silicone sealing under the glass. Attachment using a console with installation openings, adjustable tilt of the luminaire.

WIRING

Lighting fixtures can be equipped with:

- conventional magnetic control gear with an ignitor, standardly compensated
- electronic control gear

Other components:

- lamps: sodium discharge lamps HST/HST-DE/HSE, metal-halide discharge lamps HIT/HIT-DE/HIE (light sources must be ordered separately)
- flexible copper internal conductors, silicon insulated (heat resistant up to 130°C) with 0.75 mm² cross-section
- ceramic lamp holders
- three-pole terminal allows to connect conductors up to 2.5 mm² cross-section
- opening with grommet for the power cable

ACCESSORIES

- safety ignitor

PROJECTOR

Verschiedene Typen der Entladungsröhren-Leuchten mit breiter Anwendung im Interieur oder Exterieur. Auswahl aus vielen Typen der Reflektoren – von schmalstrahlenden, breitstrahlenden bis zu asymmetrischen Reflektoren. Alle mit hoher Schutzart IP65.

KONSTRUKTION

Leuchtenkörper: druckgegossenes Aluminium Oberflächenbehandlung mit einer elektrostatisch beschichteten schwarzen Pulverfarbe

Reflektor: zwei Typen des Aluminiums in Abhängigkeit vom Typ – polierte oder Hammerschlag Oberflächenbehandlung

Reflektordeckel: oberflächengehärtetes Sicherheitsglas

Die Schutzart der Leuchte IP65 sichert die Silikondichtung unter dem Glas. Die Befestigung mittels einer Konsole mit Montageöffnungen, einstellbare Neigung der Leuchte.

ELEKTRISCHE AUSRÜSTUNG

Die Leuchte kann ausgerüstet sein:

- mit einem konventionellen magnetischen Vorschaltgeräte mit Zündgeräte, die Leuchte ist standardmäßig kompensiert
- mit einem elektronischen Vorschalter

Andere Komponenten:

- Lichtquellen: Natriumlampen HST/HSE-DE/HSE, Metall-Halogenidlampen HIT/HIE-DE/HIE (es ist notwendig die Lichtquellen extra zu bestellen)
- die Innenleiter mit einem versplissenen Kupferkern mit einem Durchmesser von 0,75 mm² in einer Silikonisolierung (Wärmewiderstand bis zu 130°C)
- keramische Fassung
- eine dreipolige Klemmleiste ermöglicht die Leiter in einen Durchmesser von max. 2,5 mm² anzuschließen
- eine Öffnung mit der Durchführung für den Eingang des Speisekabels

ZUBEHÖR

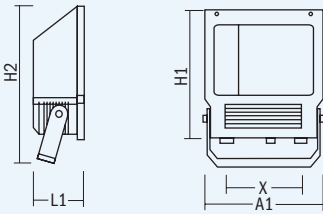
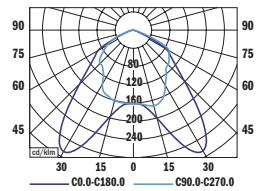
- Sicherheits zündgeräte

PROJECTOR

B1 SYMMETRIC HI/HS

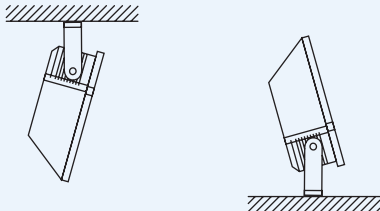
220 V 50 Hz	230 V 50 Hz	240 V 50 Hz	220-240V 50-60Hz	HI E 40	HS E 40	CCG	ECG	F	IP 65
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PROJECTOR B1 HS 150W



	OPTIC SYMMETRIC	POWER	LAMP	DIMENSIONS				FIXING X
				A1	L1	H1	H2	
Projector B1	•	150	HI	330	160	370	440	100
Projector B1	•	250	HI	430	190	450	560	80
Projector B1	•	400	HI	430	190	450	560	80
Projector B1	•	150	HS	330	160	370	440	100
Projector B1	•	250	HS	430	190	450	560	80
Projector B1	•	400	HS	430	190	450	560	80

INSTALLATION





PROJECTOR B1

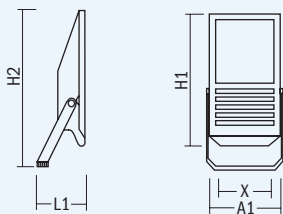
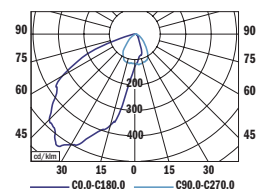


PROJECTOR

V1 ASYMMETRIC HI/HS

220 V 50 Hz	230 V 50 Hz	240 V 50 Hz	220-240V 50-60Hz	HI RX7s	HS RX7s	HI E 40	HS E 40	CCG	ECG	F	IP 65
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PROJECTOR V1 HI 70W



	OPTIC ASYMMETRIC	POWER	LAMP	DIMENSIONS			FIXING H2	X
				A1	L1	H1		
Projector V1	•	70	HI	235	90	360	440	100
Projector V1	•	150	HI	235	90	360	440	100
Projector V1	•	70	HS	235	90	360	440	100
Projector V1	•	150	HS	235	90	360	440	100
Projector V1	•	250	HI	395	145	585	695	210
Projector V1	•	400	HI	395	145	585	695	210
Projector V1	•	250	HS	395	145	585	695	210
Projector V1	•	400	HS	395	145	585	695	210

INSTALLATION



PROJECTOR V1

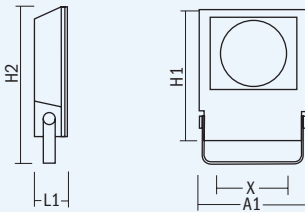
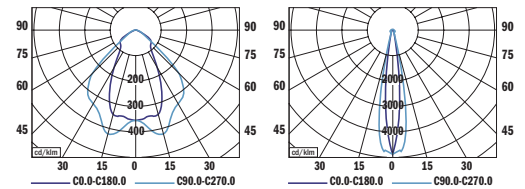


PROJECTOR

E1 SYMMETRIC/SPOT HI/HS

220 V 50 Hz	230 V 50 Hz	240 V 50 Hz	220-240V 50-60Hz	HI RX7s	HS RX7s	CCG	ECG	F	IP 65
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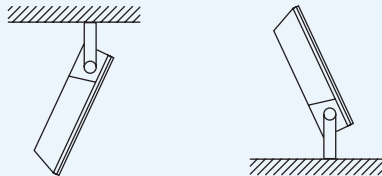
PROJECTOR E1 SYMMETRIC HI 70W PROJECTOR E1 SPOT HI 70W



	OPTIC		POWER	LAMP	DIMENSIONS				FIXING X
	SYMMETRIC	SPOT			A1	L1	H1	H2	
Projector E1	•	•	70	HI	223	92	275	350	70
Projector E1	•	•	150	HI	223	92	275	350	70
Projector E1	•	•	70	HS	223	92	275	350	70
Projector E1	•	•	150	HS	223	92	275	350	70

Electronic ballast up to 70W only.

INSTALLATION





PROJECTOR E1

SPOT

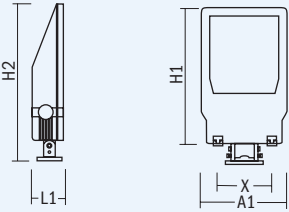
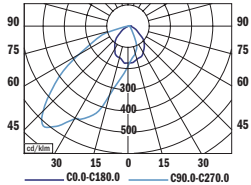


PROJECTOR

P1 ASYMMETRIC HI/HS

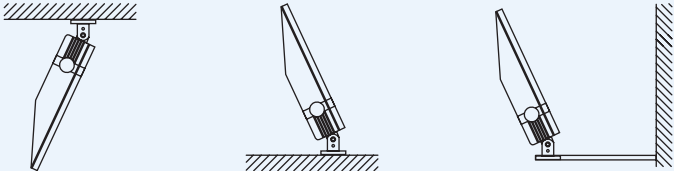
220 V 50 Hz	230 V 50 Hz	240 V 50 Hz	220-240V 50-60Hz	HI RX7s	HS RX7s	CCG	ECG	F	IP 65
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PROJECTOR P1 ASYMMETRIC HI
150W



	OPTIC ASYMMETRIC	POWER	LAMP	DIMENSIONS			FIXING H2	X
				A1	L1	H1		
Projector P1	•	70	HI	235	80	365	440	100
Projector P1	•	150	HI	235	80	365	440	100
Projector P1	•	70	HS	235	80	365	440	100
Projector P1	•	150	HS	235	80	365	440	100

INSTALLATION



PROJECTOR P1



P1-B



P1-A

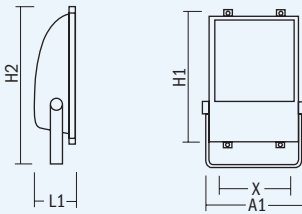
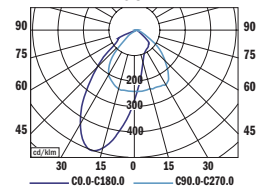


PROJECTOR

K1 ASYMMETRIC HI/HS

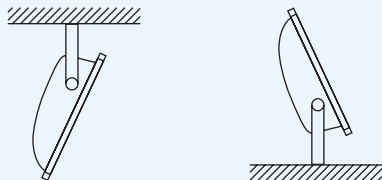
220 V 50 Hz	230 V 50 Hz	240 V 50 Hz	HI E 40	HS E 40	CCG	F	IP 65
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PROJECTOR K1 ASYMMETRIC HI
250W



	OPTIC ASYMMETRIC	POWER	LAMP	DIMENSIONS				FIXING X
				A1	L1	H1	H2	
Projector K1	•	250	HI	375	160	485	510	145
Projector K1	•	250	HS	375	160	485	510	145

INSTALLATION



PROJECTOR K1

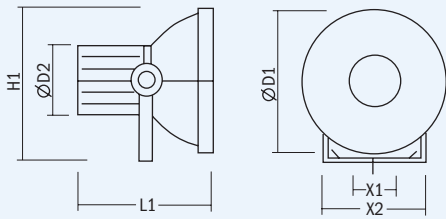
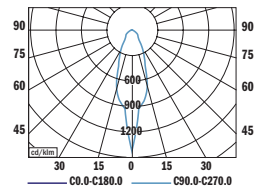


PROJECTOR

R1 SPOT HI/HS

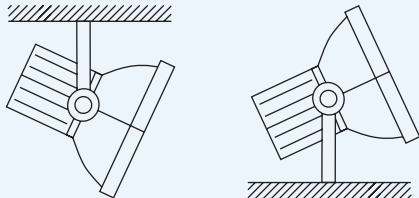
220 V 50 Hz	230 V 50 Hz	240 V 50 Hz	220-240V 50-60Hz	HI E 40	HS E 40	CCG	ECG	F	IP 65
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PROJECTOR R1 HI 400W



	OPTIC SPOT	POWER	LAMP	DIMENSIONS				FIXING	
				D1	D2	L1	H1	X1	X2
Projector R1	•	150	HI	490	225	478	510	220	100
Projector R1	•	250	HI	490	225	478	510	220	100
Projector R1	•	400	HI	490	225	478	510	220	100
Projector R1	•	150	HS	490	225	478	510	220	100
Projector R1	•	250	HS	490	225	478	510	220	100
Projector R1	•	400	HS	490	225	478	510	220	100

INSTALLATION





PROJECTOR R1

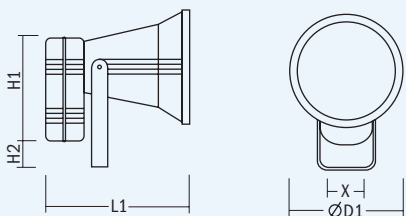
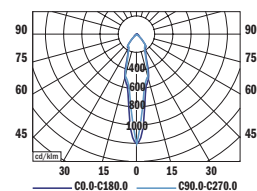


PROJECTOR

R2 SPOT HI

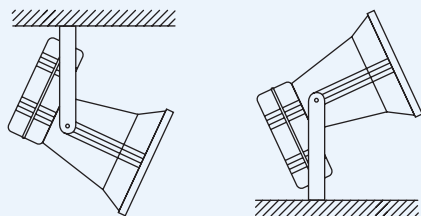
220 V 50 Hz	230 V 50 Hz	240 V 50 Hz	220-240V 50-60Hz	G 12	CCG	ECG	F	IP 65
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PROJECTOR R2 HI 150W



	OPTIC SPOT	POWER	LAMP	DIMENSIONS				FIXING X
				D1	L1	H1	H2	
Projector R2	•	70	HI	175	270	210	70	82
Projector R2	•	150	HI	175	270	210	70	82

INSTALLATION





PROJECTOR R2



PROJECTOR

STADIO

STADIO

Projektor Stadio je vysokoúčinný projektor pre vonkajšie použitie s rotačne symetrickým reflektorom, určený pre 1000W alebo 2000W metal-halogenidové výbojky. Je vhodný pre osvetľovanie futbalových ihrísk, športovísk alebo rozľahlých priestranstiev.

KONŠTRUKCIA

Teleso svietidla: tlakovo liaty hliník, s rebrami pre lepšie chladenie, povrchovo upravený elektrostaticky nanášanou čiernou práškovou farbou
Reflektor: rotačne symetrický reflektor s úzkou vyžarovacou charakteristikou, leštený hliník, vnútorný deflektor pre lepšie využitie unikajúceho svetelného toku

Kryt reflektora: tvrdené bezpečnostné sklo, 4 mm hrubé, odolné voči vysokým teplotám a mechanickým nárazom, ochranná drôtená mriežka

Predradný box: hliníková zliatina, povrchová úprava elektrostaticky nanášanou čiernou práškovou farbou, tri kovové káblové prechodky PG 13,5 pre napájacie káble, inštalačná doska pre elektrické príslušenstvo vo vnútri

Standardný sériový zapaľovač je umiestnený v samostatnom boxe priamo na telese svietidla.

Krytie svietidla IP65 zabezpečuje silikónové tesnenie pod sklom. Sklo je k telesu svietidla prichytené šiestimi skrutkami z nehrdzavejúcej ocele. Veľmi ľahký prístup zozadu svietidla uľahčuje údržbu a výmenu svetelného zdroja. Kovový štítok na boku svietidla s vyznačenou uhlovou stupnicou uľahčuje smerovanie svetelného toku do požadovaného priestoru.

Uchytenie svietidla je riešené dvomi fixačnými bodmi – jedna diera na pevné pripojenie má priemer 18 mm, druhá medzera široká 14 mm umožňuje natáčanie svietidla do strán (viď obrázok uchytenie).

ELEKTRICKÁ VÝBAVA

Svietidlo je napájané zo samostatného boxu s predradným príslušenstvom (predradný box je nutné objednať zvlášť). Box je vybavený tlmičkou pre napájanie 230V/50Hz alebo 400V/50Hz a kompenzačným kondenzátorom.

Ostatné komponenty:

- svetelné zdroje: metal-halogenidové výbojky HIT-DE (svetelné zdroje je nutné objednať zvlášť)
- keramické päťce pre káblový typ výbojky
- vnútorné vodiče so spletaným medeným jadrom prierezu 2,5 mm² v silikónovej izolácii (teplotná odolnosť do 130°C)
- keramická svorkovnica umožňuje pripojiť vodiče do prierezu max. 4 mm²

PRÍSLUŠENSTVO

- zapaľovač pre horúci znovuzápal (možnosť opätovného znovuzápalu horúcej výbojky bez potreby jej vychladnutia)
- bezpečnostný zapaľovač

STADIO

The Stadio projector is a high-efficient projector for external use with a rotational symmetrical reflector, designed for 1000W or 2000W metal-halide discharge lamps. It is suitable for illumination of football stadiums, sports arenas or large areas.

CONSTRUCTION

Body: die cast aluminium with ribs for better cooling, finished with electrostatic black powder coating

Reflector: rotational symmetrical reflector with narrow beam characteristics, polished aluminium, internal deflector for better use of the luminous flux

Reflector cover: hardened safety glass, 4 mm thick, resistant to high temperatures and mechanical shocks, protective wire grid

Gear box: aluminium alloy, finished with electrostatic black powder coating, three metal cable grommets PG 13,5 for power cables, installation plate for electrical accessories inside

Standard serial ignitor is situated in an independent box directly in the body.

IP65 luminaire protection is ensured by silicone sealing under the glass. Glass is attached to the body using six stainless steel screws. Very easy access from behind of the luminaire makes maintenance and light source replacement easier. A metal plate on the side with marked angle scale enables to direct the light beam to desired direction.

Attachment of the luminaire is done using two points of fixation - one hole for solid attachment has 18 mm in circumference, the other 14 mm opening enables to tilt the luminaire to sides (see the Attachment figure).

WIRING

The lighting fittings are powered from an independent box with control gear accessories (the box must be ordered separately). The box is equipped with a magnetic ballast for 230V/50Hz or 400V/50Hz power source and a compensation capacitor.

Other components:

- lamps: metal-halide discharge lamps HIT-DE (light sources must be ordered separately)
- ceramic screw caps for cable-type discharge lamps
- flexible copper internal conductors, silicon insulated (heat resistant up to 130°C) with 2.5 mm² cross-section
- ceramic terminal allows to connect conductors up to 4 mm² cross-section

ACCESSORIES

- ignitor for hot restrike (possibility of reignition of a hot discharge lamp without the need to cool it)
- safety ignitor

STADIO

Der Lichtwerfer Stadio ist ein hochwirksamer Lichtwerfer für Außenanwendung mit einem rotationssymmetrischen Reflektor, der für Metall-Halogenidlampen von 1000 W oder 2000 W bestimmt ist. Er ist zur Beleuchtung der Fußballplätze, Sportfelder oder geräumige Plätze geeignet.

KONSTRUKTION

Leuchtenkörper: druckgegossenes Aluminium, mit Rippen für bessere Kühlung, Oberflächenbehandlung mit einer elektrostatisch beschichteten schwarzen Pulverfarbe Reflektor: ein rotationssymmetrischer Reflektor mit schmaler Strahlungscharakteristik, poliertes Aluminium, ein innerer Deflektor für bessere Ausnutzung des ausströmenden Lichtstroms

Reflektrodeckel: oberflächengehärtetes Sicherheitsglas mit der Dicke von 4 mm, gegen hohe Temperaturen und mechanische Stöße beständig, Drahtschutzgitter

Vorschaltbox: Aluminiumlegierung, Oberflächenbehandlung mit einer elektrostatisch beschichteten schwarzen Pulverfarbe, drei Metallkabeldurchführungen PG 13,5 für Speisekabel, Installationsplatte für elektrisches Zubehör drinnen
Der serienmäßige Standard Zündergeräte ist in einer Einzelbox direkt auf der Leuchtenkörper angebracht.

Die Schutzart der Leuchte IP65 sichert die Silikondichtung unter dem Glas. Das Glas ist zum Leuchtenkörper mit sechs Schrauben aus rostfreiem Stahl befestigt. Ein sehr einfacher Zugang von hinten der Leuchte erleichtert die Wartung und den Austausch der Lichtquelle. Das Metallschild auf der Seite der Leuchte mit ausgezeichneter Winkelskala erleichtert die Richtung des Lichtstromes in erwünschten Raum. Die Befestigung der Leuchte ist durch zwei Fixationspunkte gelöst – eine Öffnung für einen festen Anschluß hat einen Durchmesser von 18 mm, die zweite Lücke mit der Breite von 14 mm ermöglicht die Drehung der Leuchte in die Seiten (siehe Abb. Befestigung).

ELEKTRISCHE AUSRÜSTUNG

Die Leuchte ist aus einer Einzelbox mit Vorschaltzubehör gespeist (es ist notwendig die Vorschaltbox extra zu bestellen). Die Box ist mit einer Drossel für Einspeisung 230 V/50 Hz oder 400 V/50 Hz und mit einem Kompensationskondensator ausgerüstet.

Andere Komponenten:

- Lichtquellen: Metall-Halogenidlampen HIT/HIE (es ist notwendig die Lichtquellen extra zu bestellen)
- keramische Sockel für den Kabeltyp der Entladungsröhre
- die Innenleiter mit einem versplissenen Kupferkern mit einem Durchschnitt von 2,5 mm² in einer Silikonisolierung (Wärmewiderstand bis zu 130°C)
- eine keramische Klemmleiste ermöglicht die Leiter in einen Durchschnitt von max. 4 mm² anzuschließen

ZUBEHÖR

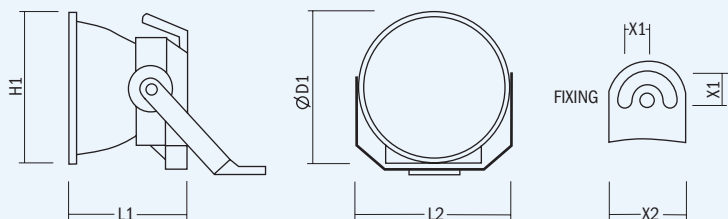
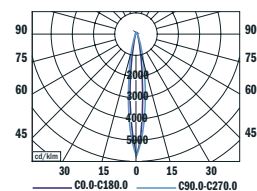
- Zünder für heiße Wiederezündung (die Möglichkeit der Wiederezündung der heißen Entladungsröhre ohne Bedarf ihrer Abkühlung)
- Sicherheits Zündergeräte

PROJECTOR

STADIO HQI-TS

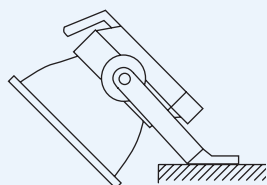


PROJECTOR STADIO HQI-TS 2000W



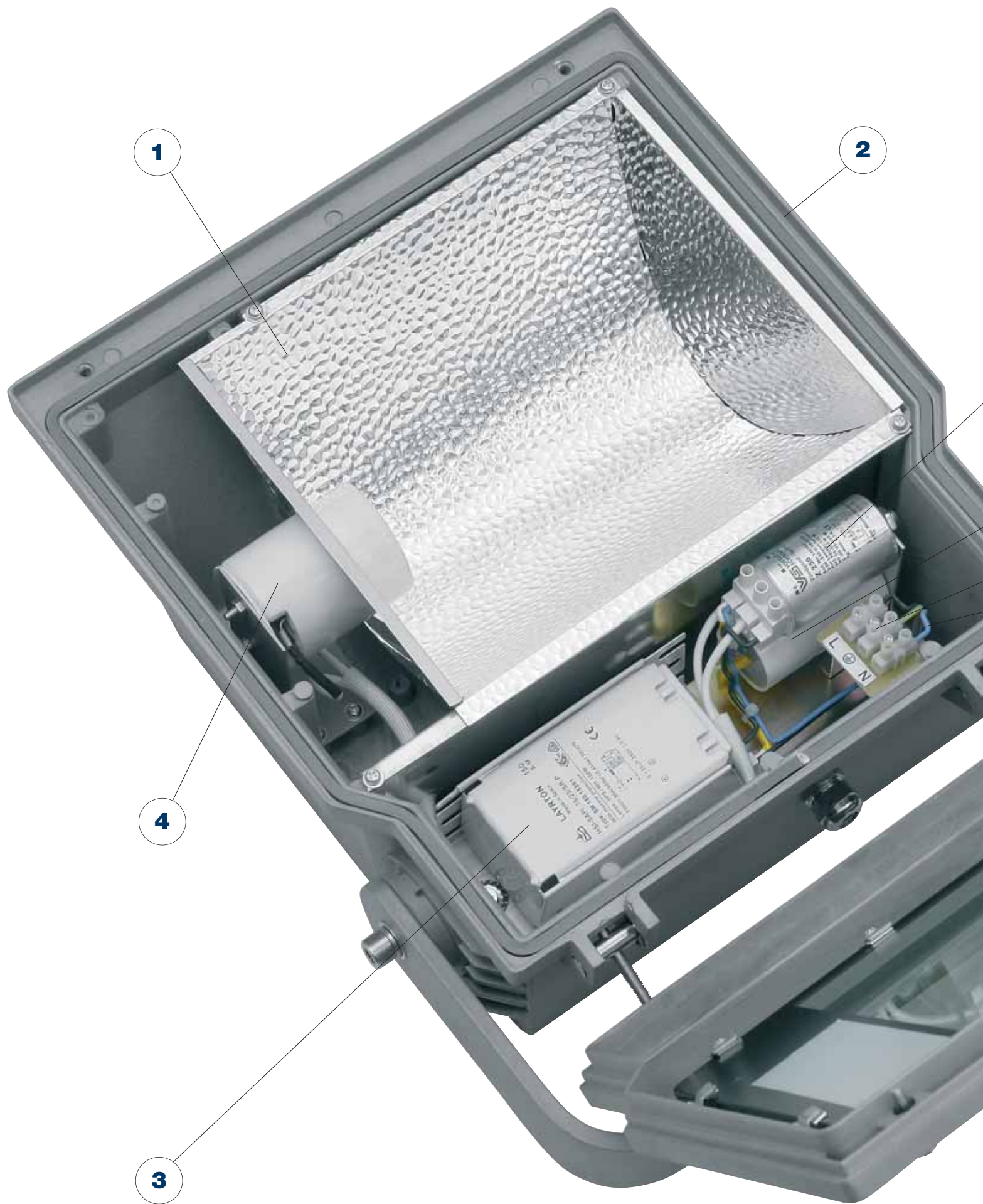
	POWER	LAMP	DIMENSIONS				FIXING	
			D1	L1	L2	H1	X1	X2
Projector Stadio	1000 W	Osram HQI-TS	300	442	450	450	39	130
Projector Stadio	2000 W	Osram HQI-TS	300	442	450	450	39	130

INSTALLATION



PROJECTOR STADIO





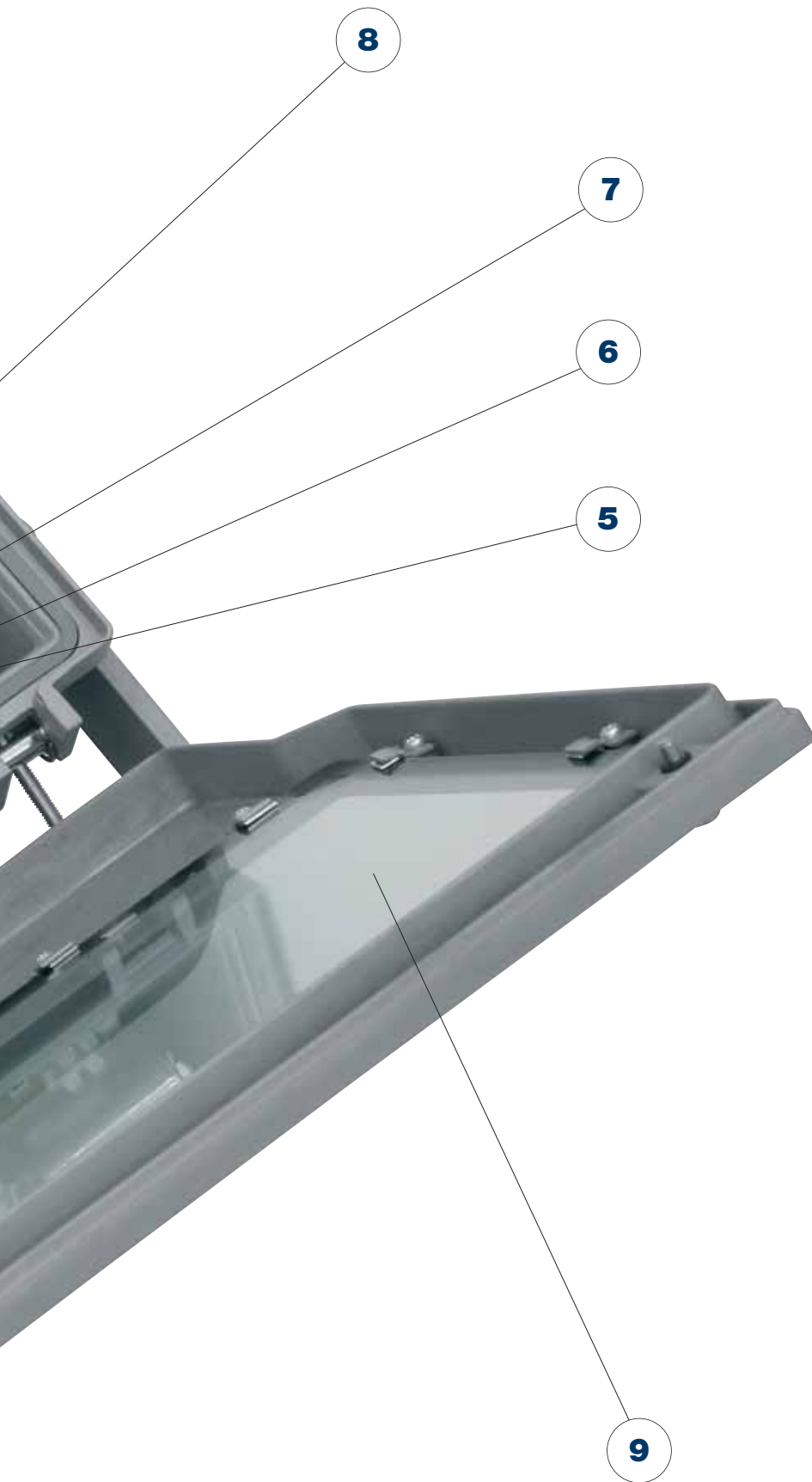
1

2

4

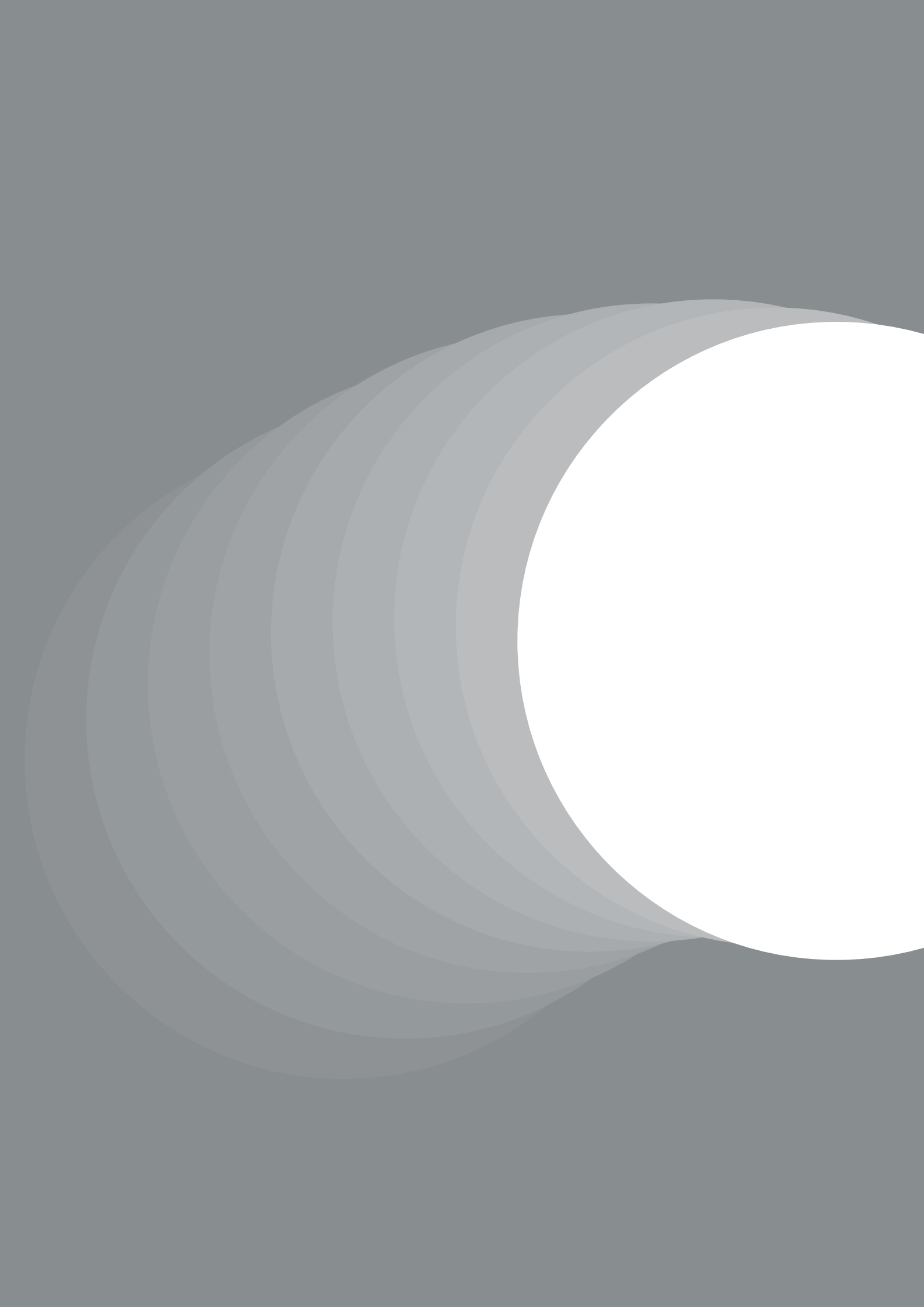
3

PROJECTOR



B1 **CONVENTIONAL CONTROL** **GEAR**

- 1** Reflektor
Reflector
Reflektor
- 2** Teleso svetidla
Body
Leuchtenkörper
- 3** Tlmivka
Magnetic ballast
Magnetische Vorschaltgeräte
- 4** Objímka
Lampholder
Lampenhalter
- 5** Vodič
Cable
Kabel
- 6** Svorkovnica
Terminal block
Anschlussklemme
- 7** Kondenzátor
Capacitor
Kondensatoren
- 8** Zapaľovač
Ignitor
Zündgeräte
- 9** Tvrdené sklo
Toughened glass
Sicherheitsglas







FORSTREET

TITANIA

FORSTREET TITANIA

Svietidlá Forstreet sú výbojkové svietidlá určené na osvetlenie komunikácií, parkov, peších zón, parkovísk. Konštrukcia svietidla z tejto rady umožňuje svietidlo umiestniť na výložník alebo na stĺp.

KONŠTRUKCIA

Teleso svietidla: tlakovo liata hliníková zliatina, povrchovo upravená elektrostaticky nanášanou práškovou farbou - základný odtieň RAL 9006 (biely hliník)

Kryt svietidla: UV stabilizovaný polykarbonát, opieskovaný v časti prekrývajúcej elektrickú výzbroj

Reflektor: plastový fazetový reflektor s naparenou hliníkovou vrstvou

Difúzor je zaistený k hliníkovému telesu pomocou spony z nerezovej ocele, ktorá uzatvára obidve časti svietidla. Toto riešenie zaisťuje rýchlu inštaláciu a beznástrojovú výmenu svetelných zdrojov. Náveterná plocha svietidla je 0,068 m². Krytie IP65 zabezpečuje silikónové tesnenie v drážke telesa svietidla. Všetky elektrické komponenty sú umiestnené na inštaláčnej doske z galvanizovanej ocele. Svetidlo je určené pre montáž na výložník priemeru 42-60 mm.

ELEKTRICKÁ VÝBAVA

Svietidlo môže byť vybavené:

- konvenčným magnetickým predradníkom so zapaľovačom, svietidlo je štandardne kompenzované
- elektronickým predradníkom

Ostatné komponenty:

- svetelné zdroje: sodíkové výbojky HST/HSE, metal - halogenidové výbojky HIT/HIE (svetelné zdroje je nutné objednať zvlášť)
- vnútorné vodiče so spletaným medeným jadrom prierezu 0,75 mm² v silikónovej izolácii (teplotná odolnosť do 130°C)
- keramická objímka
- trojpólová svorkovnica umožňuje pripojiť vodiče do prierezu max. 2,5 mm²
- jeden otvor pre vstup napájacieho kábla priemeru 8-13 mm

PRÍSLUŠENSTVO

- redukcia umožňujúca inštaláciu na stĺp priemeru 60-76 mm (redukcia na driek stĺpu má uhol naklonenia 5°)
- komponenty pre redukciu menovitého príkonu sodíkových výbojok
- prepínateľný elektronický predradník (len pre sodíkové výbojky)
- bezpečnostný zapaľovač

FORSTREET TITANIA

Forstreet lighting fixtures are discharge lamp luminaires designed for illumination of roads, parks, pedestrian precincts, parking places. Construction of this type of luminaires enables it to be fixed to a boom or a mast.

CONSTRUCTION

Body: die cast aluminium alloy, finished with electrostatic powder coating – basic shade RAL 9006 (white aluminium)

Luminaire cover: UV-stabilised polycarbonate, sandblasted cover of electrical equipment

Reflector: plastic facet reflector with evaporated aluminium layer

The diffuser is attached to the aluminium body using a stainless steel clip, which encloses both parts of the luminaire. Such a solution ensures fast installation and toolless replacement of lamps. Windward surface of the luminaire is 0,068 m². IP65 cover is ensured by silicone sealing in the luminaire body groove. All electronic components are situated on a galvanised steel installation plate. The luminaire is designed for installation to a 42-60 mm thick boom.

WIRING

Lighting fixtures can be equipped with:

- conventional magnetic control gears with a ignitor, standardly compensated
- electronic control gear

Other components:

- lamps: sodium discharge lamps HST/HSE, metal-halide discharge lamps HIT/HIE (light sources must be ordered separately)
- flexible copper internal conductors, silicon insulated (heat resistant up to 130°C) with 0.75 mm² cross-section
- ceramic lamp holder
- three-pole terminal allows to connect conductors up to 2.5 mm² cross-section
- one hole for the power cable with 8-13 mm diameter

ACCESSORIES

- reduction allowing installation to masts with 60-76 mm diameter (reduction for shaft of the mast has a tilt angle of 5°)
- components for reduction of rated power of sodium discharge lamps
- switchable electronic control gear (for sodium discharge lamps only)
- safety ignitor

FORSTREET TITANIA

Die Forstreet-Leuchten sind die Entladungslampen-Leuchten, die für Beleuchtung der Straßen, Parke, Fußzonen, Parkplätze bestimmt sind. Die Konstruktion der Leuchte aus dieser Reihe ermöglicht die Leuchte auf den Ausleger oder den Mast anzubringen.

KONSTRUKTION

Leuchtenkörper: druckgegossene Aluminiumlegierung, Oberflächenbehandlung mit einer elektrostatisch beschichteten Pulverfarbe – Grundton RAL 9006 (weißes Aluminium)

Reflektordeckel: UV-stabilisiertes Polykarbonat, das in dem die elektrische Ausrüstung verdeckenden Teil sandgestrahlt ist

Reflektor: ein facettierter Kunststoffreflektor mit bedampfter Aluminiumschicht

Der Diffusor ist zum Aluminiumkörper mittels der Schnalle aus rostfreiem Stahl gesichert, die die beiden Teile der Leuchte schließt. Diese Lösung sichert eine schnelle Installation und den Austausch der Lichtquellen ohne Werkzeug. Die Windfläche der Leuchte beträgt 0,068 m². Die Schutzart IP65 sichert die Silikondichtung in der Rille des Leuchtenkörpers. Alle elektrische Komponenten sind auf der Installationsplatte aus galvanisiertem Stahl angebracht. Die Leuchte ist zur Montage auf den Ausleger mit dem Durchmesser von 42-60 mm bestimmt.

ELEKTRISCHE AUSRÜSTUNG

Die Leuchte kann ausgerüstet sein:

- mit einem konventionellen magnetischen Vorschaltgeräte mit Zündgeräte, die Leuchte ist standardmäßig kompensiert
- mit einem elektronischen Vorschaltgeräte

Andere Komponenten:

- Lichtquellen: Natriumlampen HST/HSE, Metall-Halogenidlampen HIT/HIE (es ist notwendig die Lichtquellen extra zu bestellen)
- die Innenleiter mit einem versplissenen Kupferkern mit einem Durchschnitt von 0,75 mm² in einer Silikonisolierung (Wärmewiderstand bis zu 130°C)
- keramische Fassung
- eine dreipolige Klemmleiste ermöglicht die Leiter in einen Durchschnitt von max. 2,5 mm² anzuschließen
- eine Öffnung für den Eingang des Speisekabels mit dem Durchmesser von 8-13 mm

ZUBEHÖR

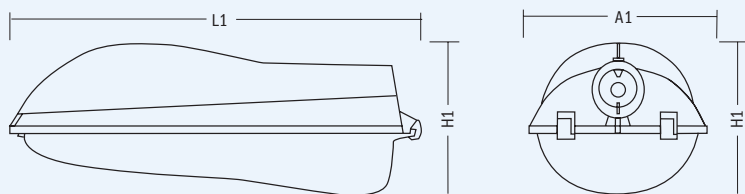
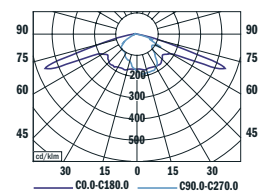
- die Reduktion, die die Installation auf den Mast mit dem Durchmesser von 60-76 mm ermöglicht (Reduktion auf den Mastschaft hat den Neigungswinkel von 5°)
- Komponenten für Reduktion des Anschlußwerts der Natriumlampen
- ein umschaltbarer elektronischer Vorschalter (nur für Natriumlampen)
- Sicherheits Zündgeräte

FORSTREET

TITANIA HI/HS

220 V 50 Hz	230 V 50 Hz	240 V 50 Hz	220-240V 50-60Hz	HI E 27	HI E 40	HS E 27	HS E 40	CCG	ECG	IP 65
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FORSTREET TITANIA HIT 150W



	POWER	LAMP	LAMPHOLDER	DIMENSIONS			WEIGHT (KG)
				A1	L1	H1	
Forstreet Titania	70	HS	E27	260	600	220	4.6
Forstreet Titania	100	HS	E40	260	600	220	6.1
Forstreet Titania	150	HS	E40	260	600	220	6.6
Forstreet Titania	70	HI	E27	260	600	220	4.6
Forstreet Titania	100	HI	E27	260	600	220	6.1
Forstreet Titania	150	HI	E27/E40	260	600	220	6.6



FORSTREET TITANIA



FORSTREET

FORSTREET

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KONŠTRUKCIA

Teleso svietidla: tlakovo liata hliníková zliatina, povrchovo upravená elektrostaticky nanášanou práškovou farbou - základný odtieň RAL 9006 (biely hliník)

Kryt svietidla: číre kalené sklo

Reflektor: anodizovaný hliník

Do všetkých svietidiel rady Forstreet je prístup po otvorení svietidla - časti sú spojené pomocou spony z nerezovej ocele. Verzie 02 a 05 majú možnosť inštalácie buď na stĺp alebo na výložník, Forstreet 02 má nastaviteľný uhol sklonu. Ostatné verzie sú určené pre pevnú montáž na výložník. Všetky elektrické komponenty sú umiestnené na inštaláčnej doske. Objímka svetelného zdroja je u každého typu horizontálne nastaviteľná, čo umožňuje optimálne umiestnenie výbojky v ohnisku reflektora.

ELEKTRICKÁ VÝBAVA

Svietidlo môže byť vybavené:

- konvenčným magnetickým predradníkom so zapalovačom, svietidlo je štandardne kompenzované
- elektronickým predradníkom

Ostatné komponenty:

- svetelné zdroje: sodíkové výbojky HST/HSE, metal - halogenidové výbojky HIT/HIE (svetelné zdroje je nutné objednať zvlášť)
- vnútorné vodiče so spletaným medeným jadrom prierezu 0,75 mm² v silikónovej izolácii (teplotná odolnosť do 130°C)
- keramická objímka
- trojpólová svorkovnica umožňuje pripojiť vodiče do prierezu max. 2,5 mm²

PRÍSLUŠENSTVO

- redukcia pre Forstreet 04 umožňujúca inštaláciu na výložník priemeru 60 mm
- komponenty pre redukciu menovitého príkonu sodíkových výbojok
- prepínateľný elektronický predradník (len pre sodíkové výbojky)
- bezpečnostný zapalovač

FORSTREET

Forstreet lighting fixtures are discharge lamp luminaries designed for illumination of roads, parks, pedestrian precincts, parking places. Construction of this type of luminaire enables it to be placed to a boom or a mast.

CONSTRUCTION

Body: die cast aluminium alloy, finished with electrostatic powder coating – basic shade RAL 9006 (white aluminium)

Luminaire cover: pure hardened glass

Reflector: anodised aluminium

All Forstreet range luminaries are accessible after opening – parts are connected using stainless steel clips. 02 and 05 versions can be installed either to masts or to booms, Forstreet 02 has an adjustable position angle. Other versions are designed for solid installation to a boom. All electric components are situated on the installation plate. The light source socket is horizontally adjustable in each type of the luminaire, which allows optimal placement of the discharge lamp in the reflector focus.

WIRING

Lighting fixtures can be equipped with:

- conventional magnetic control gear with an ignitor, standardly compensated
- electronic control gear

Other components:

- lamps: sodium discharge lamps HST/HSE, metal-halide discharge lamps HIT/HIE (light sources must be ordered separately)
- flexible copper internal conductors, silicon insulated (heat resistant up to 130°C) with 0.75 mm² cross-section
- ceramic lamp holder
- three-pole terminal allows to connect conductors up to 2.5 mm² cross-section

ACCESSORIES

- Forstreet 04 reduction allowing installation to a 60 mm wide boom.
- components for reduction of rated power of sodium discharge lamps
- switchable electronic control gear (for sodium discharge lamps only)
- safety ignitor

FORSTREET

Die Forstreet-Leuchten sind die Entladungsröhren-Leuchten, die für Beleuchtung der Straßen, Parke, Fußzonen, Parkplätze bestimmt sind. Die Konstruktion der Leuchte aus dieser Reihe ermöglicht die Leuchte auf den Ausleger oder den Mast anzubringen.

KONSTRUKTION

Leuchtenkörper: druckgegossene Aluminiumlegierung, Oberflächenbehandlung mit einer elektrostatisch beschichteten Pulverfarbe – Grundton RAL 9006 (weißes Aluminium)

Reflektordeckel: klares Hartglas

Reflektor: anodisiertes Aluminium

In alle Leuchten der Forstreet-Reihe ist der Zugang nach dem Öffnen der Leuchte möglich – die Teile sind mittels der Schnalle aus rostfreiem Stahl verbunden. Die Ausführungen 02 und 05 können entweder auf den Mast oder auf den Ausleger installiert werden, Forstreet 02 hat einen einstellbaren Neigungswinkel. Andere Ausführungen sind für feste Montage auf den Ausleger bestimmt. Alle elektrische Komponenten sind auf der Installationsplatte angebracht. Die Fassung der Lichtquelle ist bei jedem Typ horizontal einstellbar, was eine optimale Anbringung der Entladungslampe im Brennpunkt des Reflektors ermöglicht.

ELEKTRISCHE AUSRÜSTUNG

Die Leuchte kann ausgerüstet sein:

- mit einem konventionellen magnetischen Vorschaltgeräte mit Zündgeräte, die Leuchte ist standardmäßig kompensiert
- mit einem elektronischen Vorschaltgeräte

Andere Komponenten:

- Lichtquellen: Natriumlampen HST/HSE, Metall-Halogenidlampen HIT/HIE (es ist notwendig die Lichtquellen extra zu bestellen)
- die Innenleiter mit einem versplissenen Kupferkern mit einem Durchschnitt von 0,75 mm² in einer Silikonisolierung (Wärmewiderstand bis zu 130°C)
- keramische Fassung
- eine dreipolige Klemmleiste ermöglicht die Leiter in einen Durchschnitt von max. 2,5 mm² anzuschließen

ZUBEHÖR

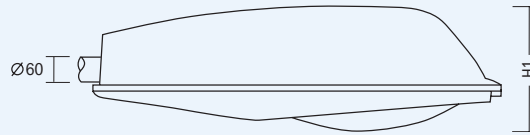
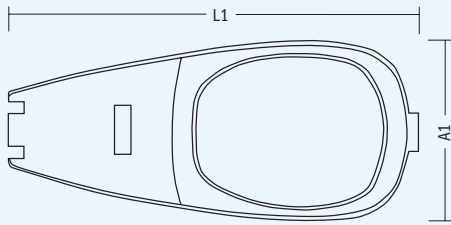
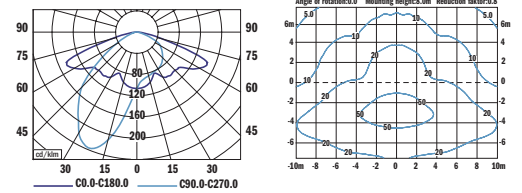
- die Reduktion für Forstreet 04, die die Installation auf den Ausleger mit dem Durchmesser von 60 mm ermöglicht
- Komponenten für Reduktion des Anschlußwerts der Natriumlampen
- ein umschaltbarer elektronischer Vorschalter (nur für Natriumlampen)
- Sicherheits Zündgeräte

FORSTREET

01 HI/HS

220 V 50 Hz	230 V 50 Hz	240 V 50 Hz	220-240V 50-60Hz	HI E 27	HI E 40	HS E 40	CCG	ECG	IP 44	IP 65
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FORSTREET 01 HS 250W



	POWER	LAMP	DIMENSIONS		
			A1	L1	H1
Forstreet 01	150	HI	378	870	246
Forstreet 01	250	HI	378	870	246
Forstreet 01	400	HI	378	870	246
Forstreet 01	150	HS	378	870	246
Forstreet 01	250	HS	378	870	246
Forstreet 01	400	HS	378	870	246



FORSTREET 01

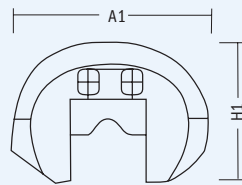
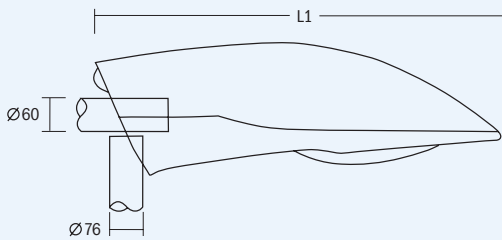
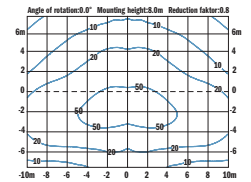
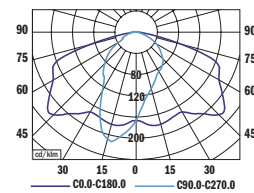


FORSTREET

02 HI/HS

220 V 50 Hz	230 V 50 Hz	240 V 50 Hz	220-240V 50-60Hz	HI E 27	HI E 40	HS E 40	CCG	ECG	IP 44	IP 65
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FORSTREET 02 HS 250W



	POWER	LAMP	DIMENSIONS		
			A1	L1	H1
Forstreet 02	150	HI	370	865	275
Forstreet 02	250	HI	370	865	275
Forstreet 02	400	HI	370	865	275
Forstreet 02	150	HS	370	865	275
Forstreet 02	250	HS	370	865	275
Forstreet 02	400	HS	370	865	275



FORSTREET 02

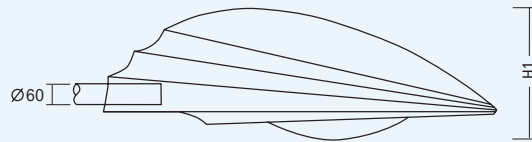
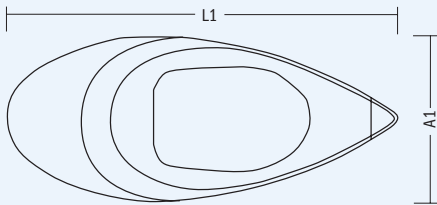
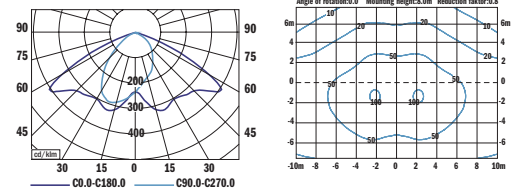


FORSTREET

03 HI/HS

220 V 50 Hz	230 V 50 Hz	240 V 50 Hz	220-240V 50-60Hz	HI E 27	HI E 40	HS E 40	CCG	ECG	IP 44	IP 65
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FORSTREET 03 HS 250W



	POWER	LAMP	DIMENSIONS		
			A1	L1	H1
Forstreet 03	150	HI	366	860	270
Forstreet 03	250	HI	366	860	270
Forstreet 03	150	HS	366	860	270
Forstreet 03	250	HS	366	860	270



FORSTREET 03

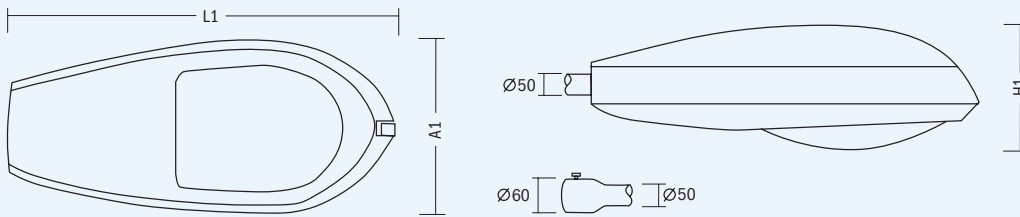
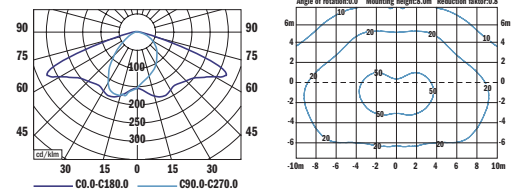


FORSTREET

04 HI/HS

220 V 50 Hz	230 V 50 Hz	240 V 50 Hz	220-240V 50-60Hz	HI E 27	HI E 40	HS E 27	HS E 40	CCG	ECG	IP44	IP65
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FORSTREET 04 HS 250W



	POWER	LAMP	DIMENSIONS		
			A1	L1	H1
Forstreet 04	70	HI	300	670	195
Forstreet 04	150	HI	300	670	195
Forstreet 04	250	HI	300	670	195
Forstreet 04	70	HS	300	670	195
Forstreet 04	150	HS	300	670	195
Forstreet 04	250	HS	300	670	195



FORSTREET 04

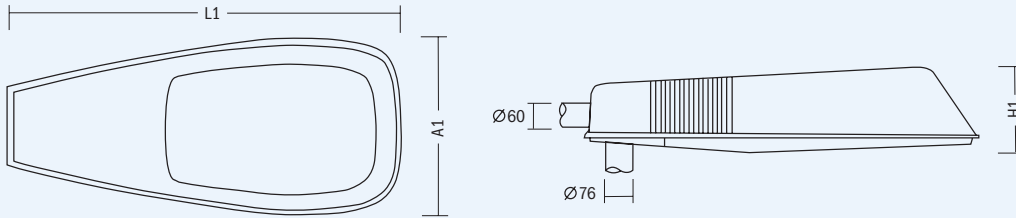
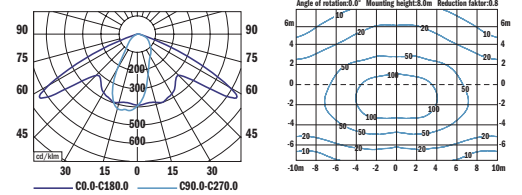


FORSTREET

05 HI/HS

220 V 50 Hz	230 V 50 Hz	240 V 50 Hz	220-240V 50-60Hz	HI E 27	HI E 40	HS E 40	CCG	ECG	IP 44	IP 65
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FORSTREET 05 HS 250W



	POWER	LAMP	DIMENSIONS		
			A1	L1	H1
Forstreet 05	150	HI	348	778	258
Forstreet 05	250	HI	348	778	258
Forstreet 05	400	HI	348	778	258
Forstreet 05	150	HS	348	778	258
Forstreet 05	250	HS	348	778	258
Forstreet 05	400	HS	348	778	258



FORSTREET 05

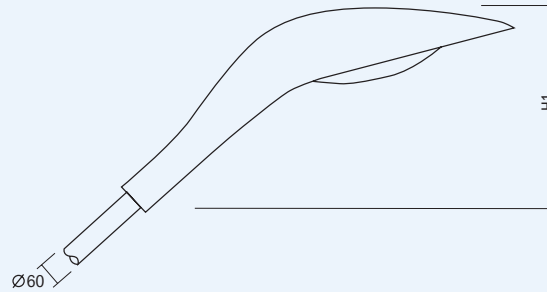
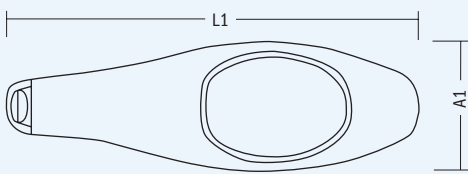
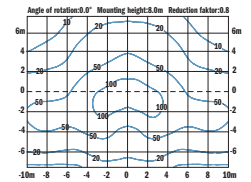
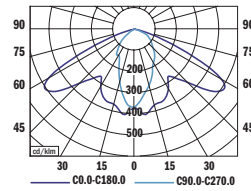


FORSTREET

06 HI/HS

220 V 50 Hz	230 V 50 Hz	240 V 50 Hz	220-240V 50-60Hz	HI E 27	HI E 40	HS E 40	CCG	ECG	IP 44	IP 65
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FORSTREET 06 HS 250W



	POWER	LAMP	DIMENSIONS		
			A1	L1	H1
Forstreet 06	150	HI	360	1010	605
Forstreet 06	250	HI	360	1010	605
Forstreet 06	150	HS	360	1010	605
Forstreet 06	250	HS	360	1010	605



FORSTREET 06





2

1a

1b

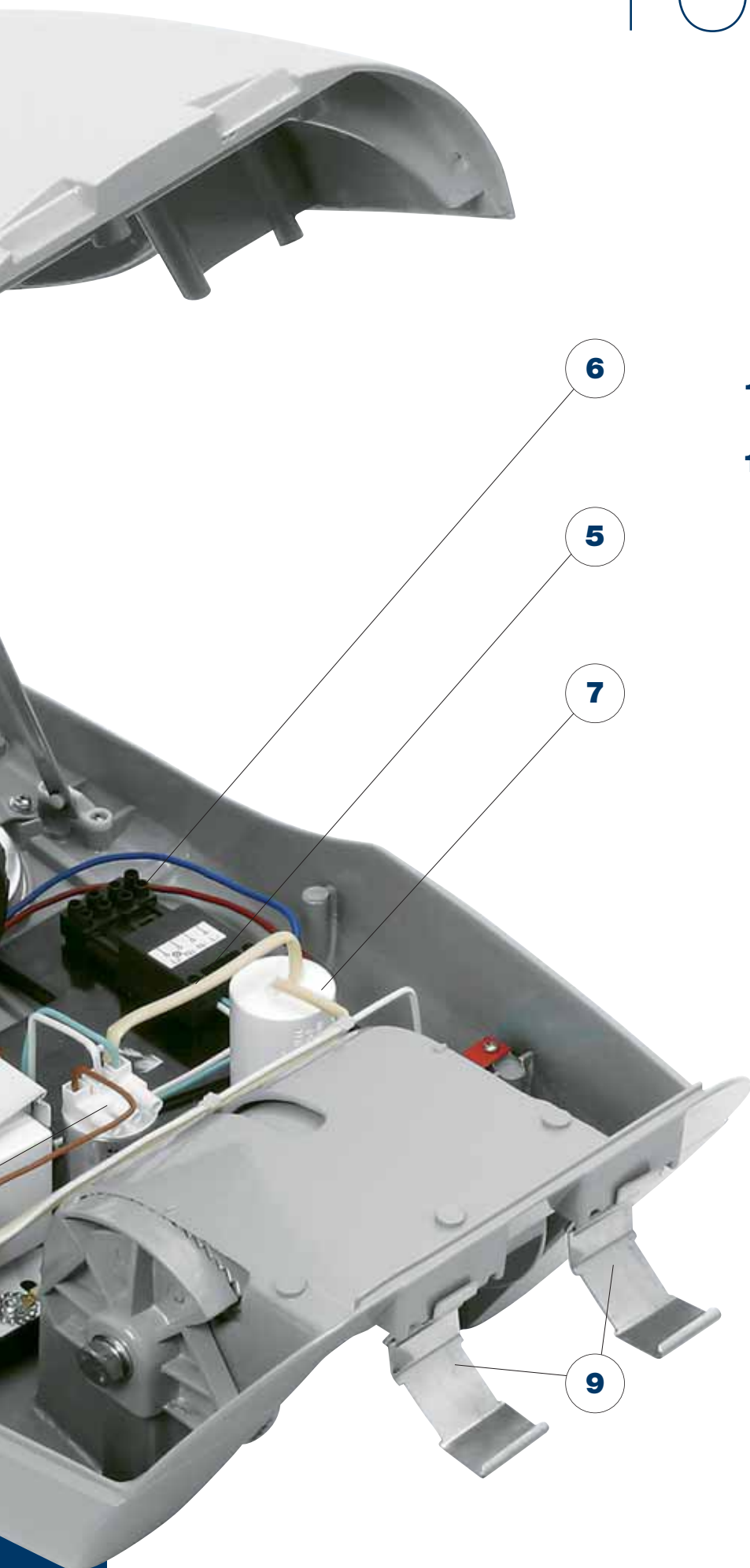
4

3

8

FORSTREET

02 CONVENTIONAL CONTROL GEAR



- 1A** Reflektor
Reflector
Reflektor
- 1B** Tvrdené sklo
Toughened glass
Sicherheitsglas
- 2** Teleso svietidla
Body
Leuchtenkörper
- 3** Timivka
Magnetic ballast
Magnetische Vorschaltgeräte
- 4** Objímka
Lampholder
Lampenhalter
- 5** Vodič
Cable
Kabel
- 6** Svorkovnica
Terminal block
Anschlussklemme
- 7** Kondenzátor
Capacitor
Kondensatoren
- 8** Zapalovač
Ignitor
Zündgeräte
- 9** Klips
Clip
Federbügel

ORDER CODE

ORDER CODE	TYPE	SPECIFICATION	ORDER CODE	TYPE	SPECIFICATION
PETRO			BELL		
PETRO S			BELL AL1		
PETRO S SYMMETRIC			BELL AL1 IP23		
P01612011K12000	PETRO S SYMMETRIC	1x150W,HI,E27,CCG,RAL 9003	B01002011K10000	BELL AL1 IP23	1x150W,E27,HI,CCG
P01612011K62000	PETRO S SYMMETRIC	1x150W,HI,E27,ECG,RAL 9003	B01002011K60000	BELL AL1 IP23	1x150W,E27,HI,ECG
P01612211K12000	PETRO S SYMMETRIC	1x150W,HS/HI,E40,CCG,RAL 9003	B01002211K10000	BELL AL1 IP23	1x150W,E40,HS/HI,CCG
P01612211K62000	PETRO S SYMMETRIC	1x150W,HS/HI,E40,CCG,RAL 9003	B01002211K60000	BELL AL1 IP23	1x150W,E40,HS/HI,ECG
P01612212K12000	PETRO S SYMMETRIC	1x250W,HS/HI,E40,CCG,RAL 9003	B01002212K10000	BELL AL1 IP23	1x250W,E40,HS/HI,CCG
P01612214A12000	PETRO S SYMMETRIC	1x400W,HS/HI,E40,CCG,RAL 9003	B01002214A10000	BELL AL1 IP23	1x400W,E40,HS/HI,CCG
PETRO S ASYMMETRIC			BELL SWITCHING DEVICE AL1 IP23		
P01622011K12000	PETRO S ASYMMETRIC	1x150W,HI,E27,CCG,RAL 9003	B0G002211K10000	BELL SWITCHING DEVICE AL1 IP23	1x150W,E40+E27,HS/HI,CCG
P01622011K62000	PETRO S ASYMMETRIC	1x150W,HI,E27,ECG,RAL 9003	B0G002212K10000	BELL SWITCHING DEVICE AL1 IP23	1x250W,E40+E27,HS/HI,CCG
P01622211K12000	PETRO S ASYMMETRIC	1x150W,HS/HI,E40,CCG,RAL 9003	BELL AL1 IP65		
P01622211K62000	PETRO S ASYMMETRIC	1x150W,HS/HI,E40,CCG,RAL 9003	B02002011K10000	BELL AL1 IP65	1x150W,E27,HI,CCG
P01622212K12000	PETRO S ASYMMETRIC	1x250W,HS/HI,E40,CCG,RAL 9003	B02002011K60000	BELL AL1 IP65	1x150W,E27,HI,ECG
P01622214A12000	PETRO S ASYMMETRIC	1x400W,HS/HI,E40,CCG,RAL 9003	B02002211K10000	BELL AL1 IP65	1x150W,E40,HS/HI,CCG
PETRO R			B02002211K60000	BELL AL1 IP65	1x150W,E40,HS/HI,ECG
PETRO R SYMMETRIC			B02002212K10000	BELL AL1 IP65	1x250W,E40,HS/HI,CCG
P02612011K12000	PETRO R SYMMETRIC	1x150W,HI,E27,CCG,RAL 9003	B02002214A10000	BELL AL1 IP65	1x400W,E40,HS/HI,CCG
P02612011K62000	PETRO R SYMMETRIC	1x150W,HI,E27,ECG,RAL 9003	BELL SWITCHING DEVICE AL1 IP65		
P02612211K12000	PETRO R SYMMETRIC	1x150W,HS/HI,E40,CCG,RAL 9003	B0H002211K10000	BELL SWITCHING DEVICE AL1 IP65	1x150W,E40+E27,HS/HI,CCG
P02612211K62000	PETRO R SYMMETRIC	1x150W,HS/HI,E40,CCG,RAL 9003	B0H002212K10000	BELL SWITCHING DEVICE AL1 IP65	1x250W,E40+E27,HS/HI,CCG
P02612212K12000	PETRO R SYMMETRIC	1x250W,HS/HI,E40,CCG,RAL 9003	BELL AL2		
P02612214A12000	PETRO R SYMMETRIC	1x400W,HS/HI,E40,CCG,RAL 9003	BELL AL2 IP23		
PETRO R ASYMMETRIC			B03002011K10000	BELL AL2 IP23	1x150W,E27,HI,CCG
P02622011K12000	PETRO R ASYMMETRIC	1x150W,HI,E27,CCG,RAL 9003	B03002011K60000	BELL AL2 IP23	1x150W,E27,HI,ECG
P02622011K62000	PETRO R ASYMMETRIC	1x150W,HS/HI,E40,CCG,RAL 9003	B03002211K10000	BELL AL2 IP23	1x150W,E40,HS/HI,CCG
P02622211K12000	PETRO R ASYMMETRIC	1x150W,HS/HI,E40,CCG,RAL 9003	B03002211K60000	BELL AL2 IP23	1x150W,E40,HS/HI,ECG
P02622211K62000	PETRO R ASYMMETRIC	1x150W,HS/HI,E40,CCG,RAL 9003	B03002212K10000	BELL AL2 IP23	1x250W,E40,HS/HI,CCG
P02622212K12000	PETRO R ASYMMETRIC	1x250W,HS/HI,E40,CCG,RAL 9003	B03002214A10000	BELL AL2 IP23	1x400W,E40,HS/HI,CCG
P02622214A12000	PETRO R ASYMMETRIC	1x400W,HS/HI,E40,CCG,RAL 9003	BELL SWITCHING DEVICE AL2 IP23		
SWITCHING DEVICE			B0I002211K10000	BELL SWITCHING DEVICE AL2 IP23	1x150W,E40+E27,HS/HI,CCG
PETRO S SYMMETRIC+SWITCH.DEVICE			B0I002212K10000	BELL SWITCHING DEVICE AL2 IP23	1x250W,E40+E27,HS/HI,CCG
P03612011K12000	PETRO S SYMMETRIC+SWITCH.DEVICE	1x150W,HI,E27,CCG,RAL 9003	BELL AL2 IP65		
P03612211K12000	PETRO S SYMMETRIC+SWITCH.DEVICE	1x150W,HS/HI,E40,CCG,RAL 9003	B04002011K10000	BELL AL2 IP65	1x150W,E27,HI,CCG
P03612212K12000	PETRO S SYMMETRIC+SWITCH.DEVICE	1x250W,HS/HI,E40,CCG,RAL 9003	B04002011K60000	BELL AL2 IP65	1x150W,E27,HI,ECG
PETRO R SYMMETRIC+SWITCH.DEVICE			B04002211K10000	BELL AL2 IP65	1x150W,E40,HS/HI,CCG
P04612011K12000	PETRO R SYMMETRIC+SWITCH.DEVICE	1x150W,HI,E27,CCG,RAL 9003	B04002211K60000	BELL AL2 IP65	1x150W,E40,HS/HI,ECG
P04612211K12000	PETRO R SYMMETRIC+SWITCH.DEVICE	1x150W,HS/HI,E40,CCG,RAL 9003	B04002212K10000	BELL AL2 IP65	1x250W,E40,HS/HI,CCG
P04612212K12000	PETRO R SYMMETRIC+SWITCH.DEVICE	1x250W,HS/HI,E40,CCG,RAL 9003	B04002214A10000	BELL AL2 IP65	1x400W,E40,HS/HI,CCG
PETRO S			BELL SWITCHING DEVICE AL2 IP65		
PETRO S SYMMETRIC TC-F			B0J002211K10000	BELL SWITCHING DEVICE AL2 IP65	1x150W,E40+E27,HS/HI,CCG
P01611113682000	PETRO S SYMMETRIC TC-F	1x36W,TC-F,ECG A2,RAL 9003	B0J002212K10000	BELL SWITCHING DEVICE AL2 IP65	1x250W,E40+E27,HS/HI,CCG
PETRO S SYMMETRIC TC-F EMERGENCY			BELL AL3		
P016111136Q2000	PETRO S SYMMETRIC TC-F EMERGENCY MAINTAINED 1h	1x36W,TC-F,ECG A2,RAL 9003	BELL AL3 IP23		
P016111136S2000	PETRO S SYMMETRIC TC-F EMERGENCY MAINTAINED 3h	1x36W,TC-F,ECG A2,RAL 9003	B05002011K10000	BELL AL3 IP23	1x150W,E27,HI,CCG
PETRO R			B05002011K60000	BELL AL3 IP23	1x150W,E27,HI,ECG
PETRO R SYMMETRIC TC-F			B05002211K10000	BELL AL3 IP23	1x150W,E40,HS/HI,CCG
P02611113682000	PETRO R SYMMETRIC TC-F	1x36W,TC-F,ECG A2,RAL 9003	B05002211K60000	BELL AL3 IP23	1x150W,E40,HS/HI,ECG
PETRO R SYMMETRIC TC-F EMERGENCY			B05002212K10000	BELL AL3 IP23	1x250W,E40,HS/HI,CCG
P026111136Q2000	PETRO R SYMMETRIC TC-F EMERGENCY MAINTAINED 1h	1x36W,TC-F,ECG A2,RAL 9003	B05002214A10000	BELL AL3 IP23	1x400W,E40,HS/HI,CCG
P026111136S2000	PETRO R SYMMETRIC TC-F EMERGENCY MAINTAINED 3h	1x36W,TC-F,ECG A2,RAL 9003	BELL AL3 IP65		
PETRO S ENDURA			B06002011K10000	BELL AL3 IP65	1x150W,E27,HI,CCG
PETRO S ENDURA			B06002011K60000	BELL AL3 IP65	1x150W,E27,HI,ECG
P01619017082000	PETRO S ENDURA	1x70W,ECG,RAL 9003	B06002211K10000	BELL AL3 IP65	1x150W,E40,HS/HI,CCG
P01619011A82000	PETRO S ENDURA	1x100W,ECG,RAL 9003	B06002211K60000	BELL AL3 IP65	1x150W,E40,HS/HI,ECG
P01619011K82000	PETRO S ENDURA	1x150W,ECG,RAL 9003	B06002212K10000	BELL AL3 IP65	1x250W,E40,HS/HI,CCG
PETRO S ENDURA			B06002214A10000	BELL AL3 IP65	1x400W,E40,HS/HI,CCG
P02619017082000	PETRO R ENDURA	1x70W,ECG,RAL 9003	BELL AL4		
P02619011A82000	PETRO R ENDURA	1x100W,ECG,RAL 9003	BELL AL4 IP23		
P02619011K82000	PETRO R ENDURA	1x150W,ECG,RAL 9003	B07002011K10000	BELL AL4 IP23	1x150W,E27,HI,CCG
ACCESSORIES			B07002011K60000	BELL AL4 IP23	1x150W,E27,HI,ECG
P0ZSG0000002000	PETRO - SAFETY GRATE	RAL 9003	B07002211K10000	BELL AL4 IP23	1x150W,E40,HS/HI,CCG
			B07002211K60000	BELL AL4 IP23	1x150W,E40,HS/HI,ECG
			B07002212K10000	BELL AL4 IP23	1x250W,E40,HS/HI,CCG
			B07002214A10000	BELL AL4 IP23	1x400W,E40,HS/HI,CCG
			BELL AL4 IP65		
			B08002011K10000	BELL AL4 IP65	1x150W,E27,HI,CCG
			B08002011K60000	BELL AL4 IP65	1x150W,E27,HI,ECG
			B08002211K10000	BELL AL4 IP65	1x150W,E40,HS/HI,CCG
			B08002211K60000	BELL AL4 IP65	1x150W,E40,HS/HI,ECG
			B08002212K10000	BELL AL4 IP65	1x250W,E40,HS/HI,CCG
			B08002214A10000	BELL AL4 IP65	1x400W,E40,HS/HI,CCG
			ACCESSORIES		
			BAZSGLAL00000000	SAFETY GLASS - BELL AL	BELL AL1,AL2,AL3,AL4
			BAZSGRAL00000000	SAFETY GRATE - BELL AL	BELL AL1,AL2,AL3,AL4
			BELL PC1		
			BELL PC1 IP20		
			B09002217010000	BELL PC1 IP20	1x70W,E27,HS/HI,CCG
			B09002217060000	BELL PC1 IP20	1x70W,E27,HS/HI,ECG
			B09002011K10000	BELL PC1 IP20	1x150W,E27,HI,CCG
			B09002011K60000	BELL PC1 IP20	1x150W,E27,HI,ECG
			B09002211K10000	BELL PC1 IP20	1x150W,E40,HS/HI,CCG
			B09002211K60000	BELL PC1 IP20	1x150W,E40,HS/HI,ECG
			B09001814280000	BELL PC1 IP20	1x42W,TC-TEL,ECG A2
			B09001815780000	BELL PC1 IP20	1x57W,TC-TEL,ECG A2
			BELL PC2		
			BELL PC2 IP20		
			B0A002011K10000	BELL PC2 IP20	1x150W,E27,HI,CCG
			B0A002011K60000	BELL PC2 IP20	1x150W,E27,HI,ECG

ORDER CODE	TYPE	SPECIFICATION	ORDER CODE	TYPE	SPECIFICATION
BOA002211K10000	BELL PC2 IP20	1x150W,E40,HS/HI,CCG	PROJECTOR		
BOA002211K60000	BELL PC2 IP20	1x150W,E40,HS/HI,ECG	PROJECTOR B1		
BOA001814280000	BELL PC2 IP20	1x42W, TC-TEL, ECG A2	P11612211K18000	PROJECTOR B1 SYMMETRIC	1x150W,E40,HS/HI,CCG,RAL 9006
BOA001815780000	BELL PC2 IP20	1x57W, TC-TEL, ECG A2	P11612211K68000	PROJECTOR B1 SYMMETRIC	1x150W,E40,HS/HI,ECG,RAL 9006
BOA001817060000	BELL PC2 IP20	1x70W, TC-TEL, ECG A2	P11612212K18000	PROJECTOR B1 SYMMETRIC	1x250W,E40,HS/HI,CCG,RAL 9006
BOA001811E80000	BELL PC2 IP20	1x120W, TC-TEL, ECG A2	P11612214A18000	PROJECTOR B1 SYMMETRIC	1x400W,E40,HS/HI,CCG,RAL 9006
BOA001824280000	BELL PC2 IP20	2x42W, TC-TEL, ECG A2	PROJECTOR V1		
ACCESSORIES			P12622217018000	PROJECTOR V1 ASYMMETRIC	1x70W,RX7s,HS/HI,CCG,RAL 9006
BAZSCOPC2000000	SAFETY COVER - BELL PC2	BELL PC2	P12622217068000	PROJECTOR V1 ASYMMETRIC	1x70W,RX7s,HS/HI,ECG,RAL 9006
BELL PC3			P12622211K18000	PROJECTOR V1 ASYMMETRIC	1x150W,RX7s,HS/HI,CCG,RAL 9006
BELL PC3 IP20			P12622211K68000	PROJECTOR V1 ASYMMETRIC	1x150W,RX7s,HS/HI,ECG,RAL 9006
BOB002217010000	BELL PC3 IP20	1x70W,E27,HS/HI, CCG	P12622212K18000	PROJECTOR V1 ASYMMETRIC	1x250W,E40,HS/HI,CCG,RAL 9006
BOB002217060000	BELL PC3 IP20	1x70W,E27,HS/HI, ECG	P12622214A18000	PROJECTOR V1 ASYMMETRIC	1x400W,E40,HS/HI,CCG,RAL 9006
BOB002011K10000	BELL PC3 IP20	1x150W,E27,HI,CCG	PROJECTOR E1		
BOB002011K60000	BELL PC3 IP20	1x150W,E27,HI, ECG	P13612217018000	PROJECTOR E1 SYMMETRIC	1x70W,RX7s,HS/HI,CCG,RAL 9006
BOB002211K10000	BELL PC3 IP20	1x150W,E40,HS/HI,CCG	P13612217068000	PROJECTOR E1 SYMMETRIC	1x70W,RX7s,HS/HI,ECG,RAL 9006
BOB002211K60000	BELL PC3 IP20	1x150W,E40,HS/HI,ECG	P13612211K18000	PROJECTOR E1 SYMMETRIC	1x150W,RX7s,HS/HI,CCG,RAL 9006
BOB002212K10000	BELL PC3 IP20	1x250W,E40,HS/HI,CCG	P13612211K68000	PROJECTOR E1 SYMMETRIC	1x150W,RX7s,HS/HI,ECG,RAL 9006
ACCESSORIES			P13602217018000	PROJECTOR E1 SPOT	1x70W,RX7s,HS/HI,CCG,RAL 9006
BAZSCOPC3000000	SAFETY COVER - BELL PC3	BELL PC3	P13602217068000	PROJECTOR E1 SPOT	1x70W,RX7s,HS/HI,ECG,RAL 9006
BELL PC4			P13602211K18000	PROJECTOR E1 SPOT	1x150W,RX7s,HS/HI,CCG,RAL 9006
BELL PC4 IP20			P13602211K68000	PROJECTOR E1 SPOT	1x150W,RX7s,HS/HI,ECG,RAL 9006
BOE002217010000	BELL PC4 IP20	1x70W,E27,HS/HI, CCG	PROJECTOR P1		
BOE002217060000	BELL PC4 IP20	1x70W,E27,HS/HI, ECG	P14622217018000	PROJECTOR P1 ASYMMETRIC	1x70W,RX7s,HS/HI,CCG,RAL 9006
BOE002011A10000	BELL PC4 IP20	1x100W,E27,HI, CCG	P14622217068000	PROJECTOR P1 ASYMMETRIC	1x70W,RX7s,HS/HI,ECG,RAL 9006
BOE002011A60000	BELL PC4 IP20	1x100W,E27,HI, ECG	P14622211K18000	PROJECTOR P1 ASYMMETRIC	1x150W,RX7s,HS/HI,CCG,RAL 9006
BOE004011A10000	BELL PC4 IP20	1x100W,E40,HS, CCG	P14622211K68000	PROJECTOR P1 ASYMMETRIC	1x150W,RX7s,HS/HI,ECG,RAL 9006
BOE004011A60000	BELL PC4 IP20	1x100W,E40,HS, ECG	PROJECTOR P1-A		
BOE001814280000	BELL PC4 IP20	1x42W, TC-TEL, ECG A2	P18622217018000	PROJECTOR P1-A ASYMMETRIC	1x70W,RX7s,HS/HI,CCG,RAL 9006
BOE001824280000	BELL PC4 IP20	2x42W, TC-TEL, ECG A2	P18622217068000	PROJECTOR P1-A ASYMMETRIC	1x70W,RX7s,HS/HI,ECG,RAL 9006
BELL PC4 IP40			P18622211K18000	PROJECTOR P1-A ASYMMETRIC	1x150W,RX7s,HS/HI,CCG,RAL 9006
BOW002217010000	BELL PC4 IP40	1x70W,E27,HS/HI, CCG	P18622211K68000	PROJECTOR P1-A ASYMMETRIC	1x150W,RX7s,HS/HI,ECG,RAL 9006
BOW002217060000	BELL PC4 IP40	1x70W,E27,HS/HI, ECG	PROJECTOR P1-B		
BOW002011A10000	BELL PC4 IP40	1x100W,E27,HI, CCG	P19622217018000	PROJECTOR P1-B ASYMMETRIC	1x70W,RX7s,HS/HI,CCG,RAL 9006
BOW002011A60000	BELL PC4 IP40	1x100W,E27,HI, ECG	P19622217068000	PROJECTOR P1-B ASYMMETRIC	1x70W,RX7s,HS/HI,ECG,RAL 9006
BOW004011A10000	BELL PC4 IP40	1x100W,E40,HS, CCG	P19622211K18000	PROJECTOR P1-B ASYMMETRIC	1x150W,RX7s,HS/HI,CCG,RAL 9006
BOW004011A60000	BELL PC4 IP40	1x100W,E40,HS, ECG	P19622211K68000	PROJECTOR P1-B ASYMMETRIC	1x150W,RX7s,HS/HI,ECG,RAL 9006
BOW001814280000	BELL PC4 IP40	1x42W, TC-TEL, ECG A2	PROJECTOR K1		
BOW001824280000	BELL PC4 IP40	2x42W, TC-TEL, ECG A2	P15622212K18000	PROJECTOR K1 ASYMMETRIC	1x250W,E40,HS/HI,CCG,RAL 9006
ACCESSORIES			PROJECTOR R1		
BAZSCOPC4000000	SAFETY COVER - BELL PC4	BELL PC4	P16602211K15000	PROJECTOR R1 SPOT	1x150W,E40,HS/HI,CCG,RAL 9005
BELL PC5			P16602211K65000	PROJECTOR R1 SPOT	1x150W,E40,HS/HI,ECG,RAL 9005
BELL PC5 IP20			P16602212K15000	PROJECTOR R1 SPOT	1x250W,E40,HS/HI,CCG,RAL 9005
BOF002211K10000	BELL PC5 IP20	1x150W,E40,HS/HI,CCG	P16602214A15000	PROJECTOR R1 SPOT	1x400W,E40,HS/HI,CCG,RAL 9005
BOF002211K60000	BELL PC5 IP20	1x150W,E40,HS/HI,ECG	PROJECTOR R2		
BOF002212K10000	BELL PC5 IP20	1x250W,E40,HS/HI,CCG	P17602013518000	PROJECTOR R2 SPOT	1x35W,G12,HI,CCG,RAL 9006
BOF001817080000	BELL PC5 IP20	1x70W, TC-TEL, ECG A2	P17602013568000	PROJECTOR R2 SPOT	1x35W,G12,HI,ECG,RAL 9006
BOF001811E80000	BELL PC5 IP20	1x120W,TC-TEL,ECG A2	P17602017018000	PROJECTOR R2 SPOT	1x70W,G12,HI,CCG,RAL 9006
ACCESSORIES			P17602017068000	PROJECTOR R2 SPOT	1x70W,G12,HI,ECG,RAL 9006
BAZSCOPC5000000	SAFETY COVER - BELL PC5	BELL PC5	PROJECTOR STADIO		
			PROJECTOR STADIO HQI-TS		
			PIA462811U10000	PROJECTOR STADIO HQI-TS	1x1000(2000)W,HQI-TS
			STADIO SEPARATE GEAR BOX		
			P1J000011U10000	STADIO SEPAR BOX	1x1000W,HI,CCG
			P1J000012U10000	STADIO SEPAR BOX	1x2000W,HI,CCG

FORSTREET		
FORSTREET TITANIA		
F17002217018000	FORSTREET TITANIA	1x70W,E27,HS/HI,CCG,RAL 9006
F17002217068000	FORSTREET TITANIA	1x70W,E27,HS/HI,ECG,RAL 9006
F17002011A18000	FORSTREET TITANIA	1x100W,E27,HI,CCG,RAL 9006
F17002011A68000	FORSTREET TITANIA	1x100W,E27,HI,ECG,RAL 9006
F17004011A18000	FORSTREET TITANIA	1x100W,E40,HS,CCG,RAL 9006
F17004011A68000	FORSTREET TITANIA	1x100W,E40,HS,ECG,RAL 9006
F17002011K18000	FORSTREET TITANIA	1x150W,E27,HI,CCG,RAL 9006
F17002011K68000	FORSTREET TITANIA	1x150W,E27,HI,ECG,RAL 9006
F17002211K18000	FORSTREET TITANIA	1x150W,E40,HS/HI,CCG,RAL 9006
F17002211K68000	FORSTREET TITANIA	1x150W,E40,HS/HI,ECG,RAL 9006
FORSTREET 01		
F11002211K18000	FORSTREET 01	1x150W,E40,HS/HI,CCG,RAL 9006
F11002211K68000	FORSTREET 01	1x150W,E40,HS/HI,ECG,RAL 9006
F11002212K18000	FORSTREET 01	1x250W,E40,HS/HI,CCG,RAL 9006
F11002214A18000	FORSTREET 01	1x400W,E40,HS/HI,CCG,RAL 9006
FORSTREET 02		
F12002211K18000	FORSTREET 02	1x150W,E40,HS/HI,CCG,RAL 9006
F12002211K68000	FORSTREET 02	1x150W,E40,HS/HI,ECG,RAL 9006
F12002212K18000	FORSTREET 02	1x250W,E40,HS/HI,CCG,RAL 9006
F12002214A18000	FORSTREET 02	1x400W,E40,HS/HI,CCG,RAL 9006
FORSTREET 03		
F13002211K18000	FORSTREET 03	1x150W,E40,HS/HI,CCG,RAL 9006
F13002211K68000	FORSTREET 03	1x150W,E40,HS/HI,ECG,RAL 9006
F13002212K18000	FORSTREET 03	1x250W,E40,HS/HI,CCG,RAL 9006
F13002214A18000	FORSTREET 03	1x400W,E40,HS/HI,CCG,RAL 9006
FORSTREET 04		
F14002217018000	FORSTREET 04	1x70W,E27,HS/HI,CCG,RAL 9006
F14002217068000	FORSTREET 04	1x70W,E27,HS/HI,ECG,RAL 9006
F14002011K18000	FORSTREET 04	1x150W,E27,HI,CCG,RAL 9006
F14002011K68000	FORSTREET 04	1x150W,E27,HI,ECG,RAL 9006
F14002211K18000	FORSTREET 04	1x150W,E40,HS/HI,CCG,RAL 9006
F14002211K68000	FORSTREET 04	1x150W,E40,HS/HI,ECG,RAL 9006
F14002212K18000	FORSTREET 04	1x250W,E40,HS/HI,CCG,RAL 9006
ACCESSORIES		
F1ZRE6000008000	FORSTREET 04 - REDUCTION (60mm)	
FORSTREET 05		
F15002211K18000	FORSTREET 05	1x150W,E40,HS/HI,CCG,RAL 9006
F15002211K68000	FORSTREET 05	1x150W,E40,HS/HI,ECG,RAL 9006
F15002212K18000	FORSTREET 05	1x250W,E40,HS/HI,CCG,RAL 9006
F15002214A18000	FORSTREET 05	1x400W,E40,HS/HI,CCG,RAL 9006
FORSTREET 06		
F16002211K18000	FORSTREET 06	1x150W,E40,HS/HI,CCG,RAL 9006
F16002211K68000	FORSTREET 06	1x150W,E40,HS/HI,ECG,RAL 9006
F16002212K18000	FORSTREET 06	1x250W,E40,HS/HI,CCG,RAL 9006

GENERAL TERMS & CONDITIONS OF SALE

GENERAL TERMS & CONDITIONS OF SALE VALID FROM APRIL 2008

1. APPLICABILITY

These General Terms and Conditions of Sale shall govern all sales of products from OMS LTD. and its subsidiaries, affiliated companies, branches, other companies which belong to the same group of companies, distributors and agents (the "seller") to any buyer.

These General Terms and Conditions of Sale shall not override individual terms and conditions expressly agreed between the parties in any particular written sales contract.

The seller reserves the right to modify these General Terms and Conditions of Sale at any time.

2. SALES ORDERS

The buyer shall place written orders for the products with the seller.

Orders shall be binding on the seller only if accepted in writing by the seller. The seller may either accept or reject the buyer's order.

3. PRODUCT INFORMATION

Samples of products are submitted only as indicative of the class, size or colour of products. Any measurements of size, weight or finish of products are approximate only and may vary.

Catalogues, brochures and price lists are intended for general guidance only and do not form part of any sales contract.

The obtaining of any necessary consent for the installation of the products shall not be the responsibility of the seller.

Specially designed drawings or plans provided by the seller shall be checked for accuracy and suitability by the buyer and finally confirmed by the buyer.

4. GUARANTEE

The seller's liability for defects in the products shall be limited to the terms of this guarantee.

The guarantee covers defects in materials or workmanship. The seller shall not be liable for defects due to natural wear and tear, damage in transport, faulty use, maintenance, storage or any other circumstances beyond the seller's immediate control.

The guarantee is valid provided that the product has been used and installed according to given instructions and existing regulations. The guarantee ceases immediately if anybody other than a person authorised and approved by the seller repairs, changes or opens the product.

The guarantee is valid as follows:

- (a) For lighting fixtures with electronic ballasts OSRAM + lamp OSRAM, 60 months from date of delivery.
- (b) For lighting fixtures with electronic ballasts other manufactures or with magnetic ballasts, 36 months from date of delivery.
- (c) For construction defects (welding, painting and so on), one year from date of delivery.

All defects shall be notified to the seller in writing within 14 days from the date of delivery or, if the defect could not have been discovered through a careful inspection of the product, immediately after discovery of the defect and in no event later than the expiry of the guarantee period as specified in (a), (b) or (c) above. The seller reserves the right to make the final decision regarding claim validity.

All undertakings, warranties, conditions, liabilities and remedies relating to any qualities or defects in the products other than those expressly contained herein above are expressly excluded. In particular, any implied warranties and conditions of merchantability and fitness for a particular purpose are expressly disclaimed.

5. PRICES

The products shall be considered sold at the seller's prices and payment terms prevailing at the time of the seller's order confirmation or any other written acceptance of order.

Unless otherwise specified by the seller, all prices quoted are ex works (seller's named place, Incoterms 2000) in unit boxes.

Any applicable value-added tax, duties or other public charges paid or payable by the seller shall be added to the price and shall be paid or reimbursed by the buyer.

Firm price quotations are valid for a period of one month only from the date of quotation.

The seller reserves the right to increase any agreed prices.

6. TERMS OF PAYMENT

The seller shall, at its discretion, always be entitled to demand payment either in advance, through a Documentary Credit (D/C) or through an irrevocable Letter of Credit (L/C) confirmed by a bank acceptable to the seller. The L/C shall include partial shipments and transshipments, and be payable at sight in the seller's

country upon each partial shipment against the first presentation of documents.

Where payment is by D/C or L/C all related costs shall be at the buyer's account. Where the seller has granted the buyer a credit facility, terms of payment are thirty (30) days net from date of invoice, unless otherwise agreed in writing. The buyer agrees to settle the seller's invoice in full without any deductions or set-offs. All crediting shall be issued by the seller. If payment is made by cheque, all related costs will be debited from the buyer.

The seller reserves the right to withdraw or modify credit facilities at any time by written notice to the buyer.

7. DELAYED PAYMENT

When payment of any of the seller's invoices is overdue, the seller may suspend the contract to which the invoice relates and any other contract then subsisting between the seller and the buyer. No deliveries will take place if invoices are overdue.

Interest on overdue amounts shall accrue without notice at the statutory rate prevailing in the seller's country according to the actual banking rate in National Slovak Bank.

If the seller is required to bring legal action for collecting overdue accounts the buyer agrees to pay reasonable attorney fees and legal costs.

8. ORDER AND DELIVERY TIME OF PRODUCTS

The seller will deliver products in full packages and in minimum quantities of 5 pieces (not applicable for moduls/samples) as determined by the seller. Unless expressly stated otherwise in writing, the seller will accept. Order of a minimum amount of 6.000 EURO net .

Unless otherwise specified by the seller, the products shall be delivered ex works (seller's named place, Incoterms 2000) as stated in the seller's acceptance of order at such times as the parties agree. Any dates quoted for delivery of the products are approximate only.

The seller reserves the right to make partial shipments and to make deliveries by or through its subsidiaries, affiliated companies, branches, other companies which belong to the same group of companies, distributors and agents.

By order cancelation within 48 hours below agreed delivery date, a penalty of 30% of net order value will be charged.

9. RISK AND TITLE

The risk of loss deterioration shall pass to the buyer immediately upon delivery.

Title to and ownership of the products shall pass to the buyer only upon seller's receipt of all payments due to the seller for the products delivered.

The buyer shall not be entitled to pledge or in any way charge by way of security for any indebtedness any of the products that remain the property of the seller.

10. INDUSTRIAL PROPERTY RIGHTS

The buyer acknowledges that all trademarks, trade names, patents, industrial designs, drawings, plans and other intellectual property, whether registered or not, as well as the seller's or its suppliers' know-how, relating to the products or provided by the seller are and shall remain, the exclusive property of the seller and shall not be used, distributed, licensed, disclosed or registered by the buyer or any third party without prior written consent from the seller.

The buyer shall not use or disclose any of the seller's trade secrets or know-how relating to the products.

11. FORCE MAJEURE

The seller shall not be held liable for any failure to perform caused by reason of force majeure events or other circumstances or impediments beyond the seller's control. This shall include, but not be limited to industrial or labour disputes, riots, fires, floods, wars, embargoes, shortage of labour, raw materials, energy or means of transportation, whether affecting the seller or any subcontractor, or for circumstances caused by reason of laws, regulations, orders or acts of any government or authority.

The buyer shall not be liable for failure to take delivery of the products if the buyer is prevented from doing so by unforeseen governmental import restrictions or similar force majeure reasons.

12. GENERAL LIMITATIONS OF LIABILITY

The seller shall in no event be liable for any special, incidental, indirect or consequential losses or damages such as loss of profits, loss of contract, damage to property, loss of use, purchase in replacement, or liabilities to third parties.

The seller shall be liable for personal injury and damage to property (product liability) only if it is proved that such injury or damage was caused by the seller's gross negligence.

No action shall be brought against the seller more than one year after the cause of action has occurred and in no case later than three years after the delivery of the products.

13. INSOLVENCY

The seller shall have the right to terminate forthwith any and all sales contracts for any products that have not been delivered if the buyer becomes insolvent, bankrupt, makes arrangements with its creditors, or enters into liquidation or rearrangement of debts. In such cases also the price for all products delivered and work done shall become immediately due and payable.

14. APPLICABLE LAW

These General Terms and Conditions of Sale and all sales contracts shall be governed by and constructed in accordance with the United Nations Convention on Contracts for the International Sale of Goods (1980) and the laws of the country of the seller.

15. JURISDICTION

All disputes arising out of or in connection with these General Terms and Conditions of Sale and any sales contracts shall be submitted to the exclusive jurisdiction of the ordinary courts at the domicile of the seller.

16. WRITTEN FORM

Whenever a notice, acceptance, consent or other communication is required to be in writing according to these General Terms and Conditions of Sale, this requirement shall be considered fulfilled also when such communication is given or made by facsimile or electronic mail.