

IGS-EL-004(0)

1372

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National Iranian Gas Co.

مدیریت پژوهش و فناوری

Research and Technology Management

امور تدوین استانداردها

Standardization Division

IGS

Iranian Gas Standards

Specification for :

مشخصات فنی :

Lighting Fittings

چراغهای برقی

APPROVED

FOREWORD

This standard is intended to be mainly used by **NIGC** and contractors and has been prepared on interpretation of recognized standards , technical documents , knowledge ,backgrounds and experiences in gas industries at national and international levels.

Iranian Gas Standards (**IGS**) are prepared , reviewed and ammended by technical standard committees within NIGC Standardization Div. and submitted to the **NIGC's "STANDARDS COUNCIL"** for approval .

IGS Standards are subject to revision , amendment or withdrawal , if required , thus the latest edition of **IGS** shall be checked/inquired by **NIGC** users .

This standard must not be modified or altered by the end users within **NIGC** and her contractors. Any deviation from normative references and/or well known manufacturers specifications must be reported to Standardization div.

Any comments from concerned parties on **NIGC** distributed **IGS** are welcome to technical standards committees and will receive serious attention and consideration should a revision to standards is recommended .

GENERAL DEFINITIONS :

Throughout this standard the following definitions , where applicable , should be followed :

1- "**STANDARDIZATION DIV.**" has been organized to deal with all aspects of industrial standards in NIGC . Therefore , all queries for clarification or amendments are requested to be directed to the mentioned div.

2- "**COMPANY** " : refers to national iranian gas company .

3- "**SUPLIER**" : refers to a firm who will supply the service , equipment or material to igs specification whether as the prime producer or manufacturer or a trading firm .

4- "**SHALL**" : is used where a provision is mandatory.

5- "**SHOULD**" : is used where a provision is advised only.

6- "**MAY**" : is used where a provision is completely discretionary.

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پیشگفتار

- ۱- این استاندارد/دستورالعمل بمنظور استفاده اختصاصی در شرکت ملی گاز ایران و شرکتهای فرعی وابسته تهیه شده است.
- ۲- شرکت ملی گاز ایران در مورد نیازهای عمومی از استانداردهای وزارت نفت (IPS) و در مورد نیازهای اختصاصی از استانداردهای اختصاصی خود (IGS) استفاده می نماید.
- ۳- استانداردهای شرکت ملی گاز ایران (IGS) توسط کمیته های تخصصی استاندارد متشکل از کارشناسان بخش های مختلف و یا مشاور تهیه می شود و توسط شورای استاندارد (منتخب هیئت مدیره شرکت ملی گاز ایران) به تصویب میرسند.
- ۴- در تنظیم متن استانداردهای (IGS) از کلیه منابع شناخته شده استاندارد، اطلاعات فنی - تخصصی مربوط به صنایع گاز دنیا، مشخصات فنی تولیدات سازندگان معتبر جهانی و نیز از نتیجه تحقیقات و تجربیات کارشناسان و متخصصان داخلی بر حسب مورد استفاده می شود. همچنین بمنظور استفاده هر چه بیشتر از تولیدات داخلی قابلیت های سازندگان داخلی نیز مورد توجه قرار میگیرد.
- ۵- استانداردها از طریق پایگاه اینترنتی شرکت *ویالوج فشرده (CD) در اختیار واحدها و کاربران قرار می گیرد .
- ۶- استانداردها بطور متوسط هر ۵ سال یکبار و یادر صورت ضرورت زودتر، مورد بازنگری و بروزرسانی قرار میگیرند. بنابراین کاربران باید همیشه آخرین نگارش را مورد استفاده قرار دهند.
- ۷- هرگونه نظر و یا پیشنهاد اصلاح در مورد استانداردها مورد استقبال و بررسی قرار خواهد گرفت و در صورت تأیید، استاندارد مربوطه نیز مورد تجدیدنظر قرار خواهد گرفت .

تعاریف عمومی

در متن استانداردهای (IGS) از تعاریف و اصطلاحات زیر استفاده میشود.

- ۱- "شرکت" (COMPANY): منظور از شرکت "شرکت ملی گاز ایران" و یا شرکتهای فرعی وابسته میباشد.
- ۲- "فروشنده" (SUPPLIER/VENDOR): به فرد یا موسسه ای اطلاق میگردد که تعهدی رانسبت به شرکت تقبل نموده است.
- ۳- "خریدار" (PURCHASER): منظور از خریدار "شرکت ملی گاز ایران" و یا شرکتهای فرعی وابسته میباشد.
- ۴- "SHALL": در مواردی بکاربرده میشود که انجام خواسته مورد نظر اجباری است
- ۵- "SHOULD": در مواردی بکاربرده میشود که انجام خواسته مورد نظر ترجیحی و درعین حال اختیاری است
- ۶- "MAY": در مواردی بکاربرده میشود که انجام کار به شکل مورد بحث نیز قابل قبول میباشد

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LIGHTING FITTINGS

FOREWORD

THIS STANDARD IS INTENDED TO BE MAINLY USED BY N.I.G.C AND HAS BEEN PREPARED ON INTERPRETION OF RECOGNIZED STANDARDS , TECHNICAL DOCUMENTS , KNOWLEDGE , BACKGROUNDS AND EXPERIENCES IN GAS INDUSTRIES AT NATIONAL & INTERNATIONAL LEVELS .

IRANIAN GAS STANDARDS (IGS) ARE PREPARED , REVIEWED AND AMENDED BY TECHNICAL STANDARD COMMITTEES WITHIN NIGC RESEARCH AND STANDARDIZATION DIV. AND SUBMITTED TO THE “ SUPREME STANDARD COMMITTEE OF NIGC “ FOR APPROVAL .

IRANIAN GAS STANDARDS (IGS) ARE SUBJECT TO REVISION , AMENDMENT OR WITHDRAWAL , IF REQUIRED , THUS THE LATEST EDITION OF IGS SHALL BE CHECKED / INQUIRED BY NIGC USERS .

ANY COMMENTS FROM CONCERNED PARTIES ON NIGC DISTRIBUTED IGS ARE WELCOME TO TECHNICAL STANDARDS COMMITTEES AND WILL RECEIVE SERIOUS ATTENTION AND CONSIDERATION SHOULD A REVISION TO STANDARDS IS RECOMMENDED .

GENERAL DEFINITIONS :

THROUGHOUT THIS STANDARD THE FOLLOWING DEFINITIONS , WHERE APPLICABLE , SHOULD BE FOLLOWED :

“ RESEARCH & STANDARDIZATION DIV . “ HAS BEEN ORGANIZED TO DEAL WITH ALL ASPECTS OF INDUSTRIAL STANDARDS IN NIGC . THEREFORE , ALL QUERIES FOR CLARIFICATION OR AMENDMENTS ARE REQUESTED TO BE DIRECTED TO THE MENTIONED DIV. -۱

“ COMPANY “ : REFERS TO NATIONAL IRANIAN GAS COMPANY -۲

“ SUPPLIER “ : REFERS TO A FIRM WHO WILL SUPPLY THE SERVICE , EQUIPMENT OR MATERIAL TO IGS SPECIFICATION WHETHER AS THE PRIME PRODUCER OR MANUFACTURER OR A TRADING FIRM . -۳

1- DOMESTIC/ COMMERCIAL LIGHTING FITTING:

1-1 Fitting for filament lamps

1-1-1 Lighting fitting, domestic , for filament lamps , pendant type (decorative) ,220-230 volts , to IEC 598-2-1 , with heat resistant wire and porcelain terminal and earthing terminal.

Body: non- corrosive metallic (preferably aluminium) with satin silver external finish.

Globe: smoked white hard Glass type , to be fixed by screws to the body .

Shape : any , preferably cylindrical type .

Cap : E 27 , porcelain , to IEC 61-2 .

Suspension Tube : non – corrosive metallic C/W suspension loop and plate / cover.

Dimension : any

Note : not to be ordered for store stock.



MESC NO.	UNIT	DESCRIPTION
-	No.	Suitable for up to 1x 100 W lamps.

1-1-2 Lighting fitting , domestic , for filament lamps ceiling mounting 220/230 Volts to IEC 598-2-1 with heat resistant wire and porcelain wire terminal and earthing terminal .

Body: non- corrosive mettalic (preferably aluminium) with satin silver external finish.

Globe: white crystal hard Glass to be fixed by screws to the body.

Shape : any , preferably round.

Cap : E 27 , porcelain , to IEC 61-2 .

Dimension : approx. 250 mm diameter.



MESC NO.	UNIT	DESCRIPTION
69.50.02	No.	Suitable for up to 1 x 100 W GLS lamps

1-1-3 Lighting fitting domestic indoor use for filament lamps wall mounting 220/230 volts to IEC 598-2-1 , with heat resistant wire and porcelain wire terminal and earthing terminal .

Body: non- corrosive mettalic (preferably aluminium) with satin silver external finish.

Globe: white crystal hard Glass to be fixed by screws to the body.

Shape : any , preferably cylindrical.

Cap : E 27 , porcelain , to IEC 61-2 .

Dimension : approx .110 mm diameter.



MESC NO.	UNIT	DESCRIPTION
69.50.04.217	No.	Suitable for up to 1x100 W GLS lamps.

1-1-4 Lighting fitting , domestic , for use in moisture atmospheres (I.E , bathrooms) , for filament lamps ceiling mounting , 220/230 volts , to IEC 598-2-1 , with heat resistant wire and porcelain wire terminal , splash proof , with a protection of not less than IP54 .

Body : Non- metallic porcelain or heat resistant (up to 90° C) , white plastic , or equivalent .

Globe : smoked white hard Glass type, with screwed neck.

Shape : any prefereably round.

Cap : E27 porcelain to IEC 61-2 .

Dimension : approx. 250 mm diameter.



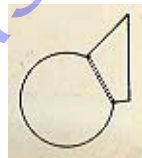
MESC NO.	UNIT	DESCRIPTION
	No.	Suitable for up to 1 x 100 W GLS lamps.

1-1-5 Lighting fitting , domestic , for use in moisture atmospheres (I.E , bathrooms) , or outdoor use , for filament lamps wall mounting , 220/230 volts to IEC 598 –2-1 , with heat resistant wire and porcelain wire terminal , splash proof , with a protection degree of not less than IP-54 .

Body : Non- metallic porcelain or heat resistant (up to 70° C) , white plastic , or equivalent .

Globe : smoked white hard Glass type

Sub HD-1: screwed neck globe preferably round , shape , approx. dimension 250 mm diameter, E27 Porcelain cap To IEC 61-2 .



MESC NO.	UNIT	DESCRIPTION
69.50.04.432.1	No.	Suitable for up to 1x 100 W GLS lamps

Sub HD-2 : fixing screws for globe and body , rectangular shape (suitable for basin) , E14 porcelain cap to IEC 61-2 , approx.

Dimension 160 mm x 400 mm

MESC NO.	UNIT	DESCRIPTION
69.50.04	No.	Suitable for up to 2 x 40 W GLS lamps

1-2-1 Lighting fitting for flourescent lamps , domestic , indoor use , IP 20, to IEC 598 or BS 4533 , surface mounting , small cross

section batten type , 220/230 volts, 50HZ , C/W prewired ballast to IEC 82 , starter IEC 155 , P.F correction capacitor to IEC 566 provided with earthing screw , without lamp.

Body : white stove enameled sheet steel , with closing ends.

Lampholder : medium BI-PIN G13 cap.



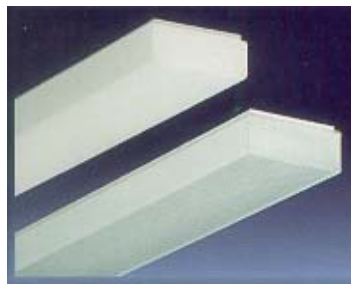
MESC NO.	UNIT	DESCRIPTION
69.52.02	No.	1 x 40 watts 1200 mm
69.52.02	No.	2 x 40 watts 1200 mm

1-2-2 Lighting fitting for fluorescent lamps , domestic , indoor use , IP 20, to IEC 598 or BS 4533 , surface mounting , englosed type , 220/230 volts ,50 HZ , C/W prewired ballast to IEC 82 , starter to IEC 155 , and P.F.correction capacitor to IEC 566 provided with earthing screw , without lamp .

Body : sheet- steel interior white and exterior black stoved enamel .

Diffuser: white opal heat resistant plastic.

Lampholder: medium B1-PIN G13 cap.



MESC NO.	UNIT	DESCRIPTION	APPROX. DIM
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69.52.02	No.	1 X 40 watts	100x1280mm
69.52.02	No.	2 x 40 watts	200 x 1280 mm
69.52.02	No.	3 x 40 watts	300 x 1280 mm
69.52.02	No.	1 x 32 watts circular	400 x 400 mm
69.52.02	No.	1 x 32+1 x 40 watts circular	500 x 500 mm

2- INDUSTRIAL LIGHTING FITTING

2-1 Fitting for filament lamps.

2-1-1 lighting fitting , industrial for filament

lamps , indoor use , IP22 ceiling mounting , to IEC 598 or BS 4533,220-230 volts , without lamp , provided with heat resistant wire and porcelain wire terminal and earthing screw.

Body : vitreous enameled heavy gauge sheet steel , dispersive reflector, interior white and exterior black , top inlet socket screwed 20 mm.

Shape : preferably round.

Lampholder : edison screw brass porcelain, to IEC 61-2 .

Mounting : suitable for , both conduit and chain connection.



MESC NO.	Lamp watts	lampholder	APPROX. REFLECTOR DIM
69.55.02.034	200	E-27	400-410 mm
69.55.02.034	300/500	E-40	450-470 mm

2-1-2 lighting fitting , industrial for filament lamps , outdoor use , weather proof , IP54 , C/W heat resistant Gasket. Wall / Ceiling mounting , to IEC 598 and/or BS 4533 , 220-230 volts , without lamp , provided with heat resistant wire and porcelain wire terminal and earthing screw , and side entries of 20 mm ET , C/W one plug .

Body : non- corrosive metal.

Globe : prismatic hard Glass type C/W non-corrosive wire guard.

Shape : bulkhead , with captive screws.

Lampholder : E 27, porcelain, to IEC 61-2



MESC NO.	LAMP (WATTS)	DIMENSION (LX WX H)
69.55.01.102	100/150	230 X 110 X 15

2-1-3 lighting fitting , industrial for filament lamps , outdoor use , weather proof , IP 54 C/W heat resistant Gasket Ceiling / Pendant type , to IEC 598 and/or BS 4533 , 220-230 volts , without lamp , provided with heat resistant wire and porcelain wire terminal and earthing screw , and single top entry of 20 mm ET .

Body : non- corrosive metal.

Globe : clear / prismatic hard glass C/W non- corrosive wire Guard.

Shape : well Glass , with captive screws.

Lampholder : E27 porcelain to IEC 61 -2 .



MESC NO.	LAMP (WATTS)	APPROX. DIMENSION
69.55.01	100/150	225 MM DIA X 220 MM HEIGHT

2-1-4 Lighting fitting industrial for filament lamp , flameproof / explosion proof suitable for zone 1 area , ex d , to IEC 79-1 and IEC 79-10 , group II.A gases to IEC 79 –12 , minimum temperature class of T2 to IEC 79-8 , pendant type maximum ambient temperature +50° C , protection degree IP 65,220-230 volts, without lamp , provided with heat resistant wire and porcelain wire terminal and earthing screw , acceptable certificate shall be attached.

Entry : two 20 mm top direct entries (metric thread) , one with plug.

Body : non-corrosive metal.

Globe : clear/prismatic hard Glass C/W non corrosive wire guard .

Shape : well glass type.

Lampholder : E27 (EX) porcelain , to IEC 238 and IEC 79-1 .



MESC NO.	LAMP (WATTS)	APPROX. DIMENSION
69.55.22.	150/200 W	300 mm dia x 400 mm height

2.1-5

LIGHTNING FITTING INDUSTRIAL FOR FILAMENT LAMP , EXPLOSION PROTECTED SUITABLE FOR ZONE 1 AREA EXd , GROUP II A GASES MIN. TEMP. CLASS T2 MAX. AMBIENT TEMP. + 50°C , PROTECTION DEGREE IP65 , 220 – 230 V. WITHOUT LAMP PROVIDED WITH HEAT RESISTANT WIRE , WIRE TERMINAL & EARTHING SCREW .

STANDARD : IEC 79 OR BS 5501 .

APPROVED AGENCIES FOR CERTIFICATION : BASEEFA (UK) , PTB (GERMANY)

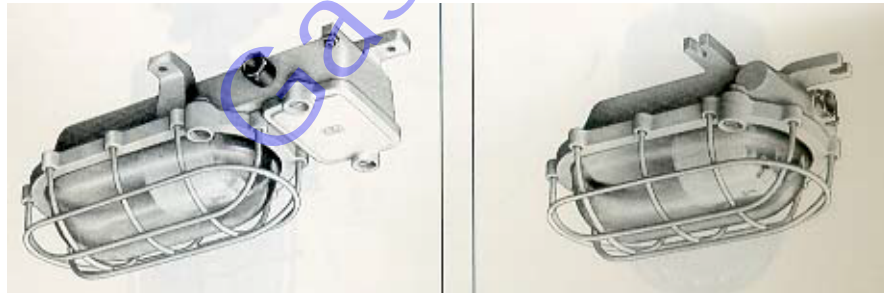
LCIE (FRANCE , U.L. (USA) , F.M. (USA) , CSA (CANADA) , CESI (ITALY) ENTRY : 2 x 20 MM DIRECT ENTRIES (METRIC THREAD) ONE WITH PLUG .

BODY : CORROSION RESISTANT METAL .

GLOBE : CLEAR/PRISMATIC HARD GLASS C/W NONCORROSIVE WIRE GUARD .

MOUNTING : WALL MOUNTED TYPE (BULKHEAD) .

LAMPHOLDER : E27 .



MESC NO.	LAMP (WATTS)	APPROX. DIMENSION
69.55.22.	150/200 W	300 mm dia x 400 mm height

2-2-1 Lighting fitting , industrial , high- bay , for mercury vapor discharge lamps , indoor use , IP22 , pendant type , class I luminaires to IEC 598-1 and/or BS 4533 part 101 , 220 –230 volts, 50HZ , without lamp , provided with heat resistant wire and porcelain screw type terminal and earthing screw , C/W built- in

control gear to IEC 262 and P.F. correction capacitor to IEC 566 ,
and one M20 ET top entry , suitable for a maximum temperature of
50°C and maximum relative humidity of 90% .

Body : non-corrosive metal with internal reflector finish , with
ventilated feature and light – grey external finish.

Shape : round , wide angle.

Lampholder : E40 porcelain to IEC 61-2 .

Mounting : suitable for , both , conduit or chain connection.

MESC NO.	LAMP (WATTS)	APPROX. DIMENSION
69	250	Overall dia of 50 cm
69	400	Overall dia of 50 cm

2-2-2 Lighting fitting industrial for mercury vapor discharge lamp
, indoor use , flameproof / explosion proof suitable for zone 1 area
, ex d , to IEC 79-1 and IEC 79-10 , Group IIA gases to IEC 79-12
minimum temperature class of T2 to IEC 79-8 , bulkhead type ,
maximum ambient temperature +50° C , protection degree IP65 ,
220-230 volts, 50 HZ, without lamp , provided with heat resistant
wire and porcelain wire terminal and earthing screw, C/W control
gear and P.F. correction capacitor , acceptable certificate shall be
attached.

Entry : two 20 mm side direct entries (metric thread) , one with
plug.

Body : non-corrosive metal.

Globe : clear/prismatic hard Glass C/W non corrosive guard .

Shape : Bulkhead type.

Lampholder : E27 (EX) porcelain , to IEC 238 and IEC 79-1 .

Mounting : wall / ceiling



MESC NO.	UNIT	DESCRIPTION
69	No.	80 W
69	No.	125W

2-2-3 Lighting fitting industrial for mercury vapor discharge lamp , indoor use , explosion proof suitable for zone 1 area , ex d , to IEC 79-1 and IEC 79-10 ,Group IIA gases to IEC 79-12 minimum temperature class of T2 to IEC 79-8 , well galss type , maximum ambient temperature +50° C , protection degree IP65 , 220-230 volts, 50 HZ, without lamp , provided with heat resistant wire and porcelain wire terminal and earthing screw, C/W control gear and P.F. correction capacitor ,acceptable certificate shall be attached.

Entry : two 20 mm top direct entries (metric thread) , one with plug.

Body : non-corrosive metal.

Globe : clear/prismatic hard Glass C/W non corrosive guard .

Shape : Bulkhead type.

Lampholder : E27 (EX) porcelain , to IEC 238 and IEC 79-1 .

Mounting : pendant



MESC NO.	UNIT	DESCRIPTION
69	No.	80 W

69	No.	125W
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2-3-1 **Lighting fitting , industrial , for flourscent lamp , indoor use , reflector type IP20 , pendant / ceiling mounting , to IEC 598 and / or BS 4533, 220 –230 volts, 50HZ , without lamp , provided with earthing screw, C/W prewired ballast to IEC 82 , starter to IEC 155, and P.F. correction capacitor to IEC 566.**

Entry : two 20 mm “tearout “ entry at top and one at each end side.

Body : white stove enamelled sheet steel , open-end type reflector.

Lampholder: medium BI – pin G13 lampholder and starter lampholder to IEC 400.



MESC NO.	UNIT	DESCRIPTION
69	No.	2 x 40 W, 1200 mm lamps
69	No.	3 x 40 W, 1200 mm lamps

2-3-2 **Lighting fitting , industrial , for flourscent lamp , weatherproof , IP 54 , pendant / ceiling mounting , to IEC 598 and / or BS 4533, 220 –230 volts, 50HZ , without lamp , provided with earthing screw, C/W prewired ballast to IEC 82 , starter to IEC 155, and P.F. correction capacitor to IEC 566 , to be used in ambient temperatures of max. 50°C .**

Entry : two 20 mm entry at top and one at each end side , C/W three plugs if necessary .

Body : corrosion resistant material C/W prismatic diffuser provided with synthetic sealing gasket.

Lampholder: medium BI – PIN G13 lampholder and starter lampholder to IEC 400 .

Note : this lighting fitting is suitable for use in excessive humidity, salty , and corrosive atmospheres.

MESC NO.	UNIT	DESCRIPTION
69	No.	2 x 40 W, 1200mm lamps , of metallic body
69	No.	2 x 40 W, 1200 mm lamps , of non-metallic (preferably Glass reinforced polyester, grp)body

2-3-3

LIGHTING FITTING , INDUSTRIAL FOR FLOURESCENT LAMP , EXPLOSION PROTECTED , SUITABLE FOR ZONE 1 , GROUP II A GASES , TEMP. CLASS T2 IP65 , 220 – 230 V. AND MAX. AMBIENT TEMP. + 50°C .

TWIN TUBE WITHOUT LAMP C/W BALLAST AND P.F.

CORRECTION CAPACITOR .

STANDARD : IED 79 OR BS 5501 .

APPROVED AGENCIES FOR CERTIFICATION : BASEEFA (UK) , PTB (GERMANY) LCIE (FRANCE) , U.L. (USA) , CSA (CANADA) , CESI (ITALY) , F.M. (VSA)

ENTRY : 2 x 20 MM DIRECT ENTRIES (METRIC THREAD) ONE WITH PLUG .

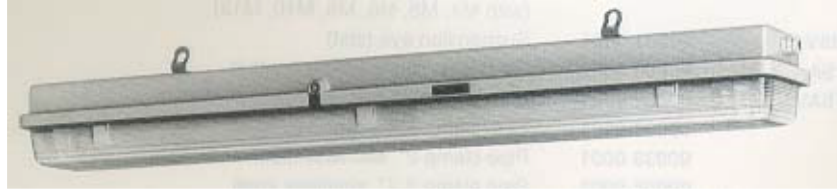
BODY : COROSSION RESISTANT METAL OR PLASTICS MATERIAL .

COVER : CLEAR AND IMPACT RESISTANT MATERIAL .

LAMPHOLDER : BI – PIN G13 .

MOUNTING : CEILING MOUNTED TYPE .

NOTE :

ALL
FOR

MESC NO.	LAMP (WATTTS)
69	2x40 W tublar lamps of nominal length of 1200 mm

3-

STREET AND FLOOD LIGHTING FITTINGS.

3-1-1 Lighting fitting , post top (park lighting fitting) , IP 43 , to IEC 598-2-3 (1979) , 220-230 volts, without lamp , provided with heat resistant wire and porcelain wire terminal , and earthing screw. Range of mounting height and maximum projected area shall be additionally marked on the fitting.

Body : non- corrosive metall.

Globe : spherical , of clear hard glass

Lampholder : E27 , porcelain to IEC 61-2 .



MESC No.	UNIT	DESCRIPTION	APPROX. DIMENSION
69	No.	150 W	Overall dia . of 300 mm

3-1-2 Floodlighting fitting , for filament lamps , outdoor use , IP 54, pole mounting to IEC 598-2-5 (1979) , 220 –230 volts, without lamp , provided with heat resistant wire and porcelain wire

terminal and earthing screw, C/W mounting bracket , universally adjustable.

Rang of mounting height and maximum projected area shall be additionally marked on the fitting.

Entry : one 20 mm bottom entry .

Body : non- corrosive metall C/W clear / prismatic hard glass cover , and internal reflective finish.

Shape: circular , wide angle.

Lampholder: E 40 , porcelain to IEC 61-2



MESC No.	UNIT	DESCRIPTION
69	NO.	500 W
69	No.	1000W

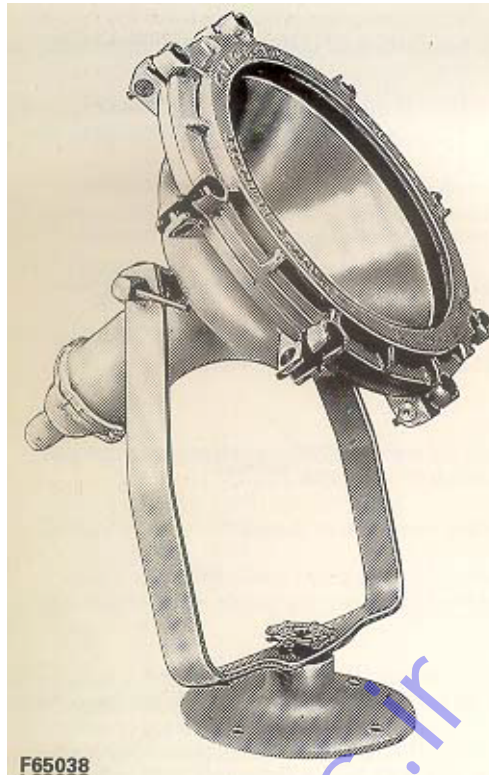
3-1-3 Floodlighting fitting , for filament lamps , outdoor use , flameproof/ explosion proof suitable for zone 1 area , ex d , to IEC 79-1 and IEC 79-10 ,Group IIA gases to IEC 79-12 minimum temperature class of T2 to IEC 79-8 ambient temperature +50° C , protection degree IP 54,220-230 volts , without lamp , with universal operating , provided with heat resistant wire and porcelain wire terminal and earthing screw, C/W base mounting bracket universally adjustable , acceptable certificate shall be attached.

Entry : one 20 mm , bottom entry , C/W flame proof cable gland.

Body : non- corrosive metall , C/W clear hard , heat and pressure resistant glass.

Shape : circular, wide angle.

Lampholder: E40 (EX) porcelain.



MESC NO.	UNIT	DESCRIPTION
69	No	1000 W

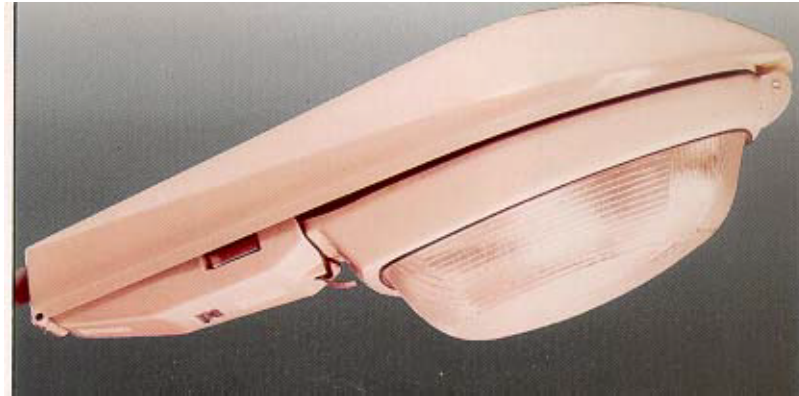
3-2-1

street lighting

street lighting fitting , for mercury vapor discharge lamps , IP 54, pole mounting , to IEC 598-2-3 , 220-230 volts, 50 HZ , without lamp , provided with heat resistant wire and porcelain screw type terminal and earthing screw , C/W built- in control Gear to IEC 262 and P.F . correction capacitor to IEC 566 , with spigot side entry . body : non-corrosive metal , with internal reflector finish.

Shape : bowl – type.

Lampholder : E40 porcelain to IEC 61-2



MESC No.	UNIT	DESCRIPTION
69	No.	250 W
69	No.	400 W

3-2-2 Floodlighting fitting, for vapor discharge lamps , outdoor use , IP 54 , base – plate mounting , to IEC 598-2-5 , 220 –230 volts , 50 HZ, without lamp, provided with heat resistant wire, and porcelain screw type terminal , and earthing screw , C/W built- in control Gear to IEC 262 (for mercury vapor lamps) and to BS 4782 (for H.P. sodium vapor lamps) and , P.F. correction capacitor to IEC 566.

Entry : 20 mm , ET cable gland.

Body : non- corrosive metal with internal reflector finish , C/W Clear hard Glass cover.

Shape : round (circular) , wide beam.

Lampholder : E40 , porcelain to IEC 61-2.

Mounting : base – plate mounting equipped with accurate horizontal and vertical adjustments.



MESC No.	UNIT	LAMPS (WATTS)
69.55.32...	No.	250 W, mercury vapor
69.55.32...	No.	400 W, mercury vapor
69.55.32...	No.	1000 W, mercury vapor
69.55.32...	No.	250 W, high pressure sodium vapor
69.55.32...	No.	400 W, high pressure sodium vapor
69.55.32...	No.	1000 W, high pressure sodium vapor

3-2-3 Floodlighting fitting, for vapor discharge lamps , outdoor use , IP 54 , base – plate mounting , to IEC 598-2-5 , 220 –230 volts , 50 HZ, without lamp, provided with heat resistant wire, and porcelain screw type terminal , and earthing screw , C/W built-in control Gear to IEC 262 (for mercury vapor lamps) and to BS 4782 (for H.P. sodium vapor lamps) and , P.F. correction capacitor to IEC 566.

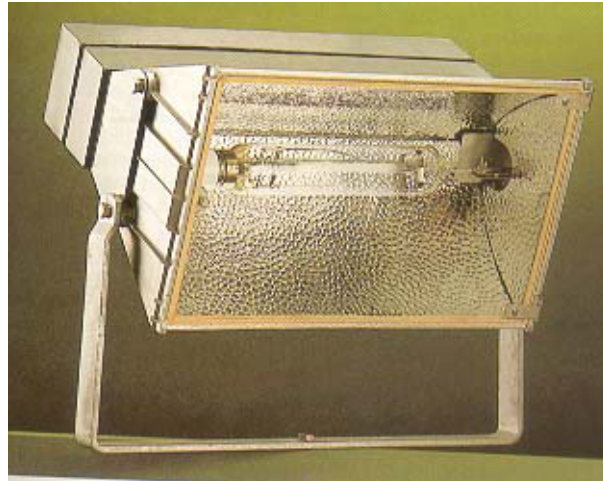
Entry : 20 mm , ET cable gland.

Body : non- corrosive metal with internal reflector finish , C/W Clear hard Glass cover.

Shape : rectangular , wide beam .

Lampholder: E 40 , porcelain to IEC 61-2 .

Mounting : base – plate mounting equipped with accurate horizontal and vertical adjustments.



MESC No.	UNIT	LAMPS (WATTS)
69.55.32...	No.	250 W, mercury vapor
69.55.32...	No.	400 W, mercury vapor
69.55.32...	No.	1000 W, mercury vapor
69.55.32...	No.	250 W , high pressure sodium vapor
69.55.32...	No.	400 W , high pressure sodium vapor
69.55.32...	No.	1000 W , high pressure sodium vapor

4-

PORTABLE LIGHTING FITTING

- 4-1 Lighting fitting , portable (hand lamp) , industrial general purpose , for tungsten filament lamps , indoor / outdoor use , IP 54 , to IEC 598-2-4 , 220-230 volts , without lamp , provided with heat resistant wire and porcelain screw type wire terminal and earthing screw, with fixing wire carriers, clips or similar devices. Equipped with both fixed (stand) supporting means and suspension hook, C/W ten meters of 3 x 2.5 sq.mm rubber insulated flexible extension cable.

Entry : 16 mm bore water tight sleeve.

Body : oil and acid resistant rubber or equivalent.

Globe : clear hard Glass C/W galvanized steel wire guard.

Lampholder : E27 porcelain to IEC 61-2

Note : this lighting fitting shall not be used in hazardous areas.



MESC No.	UNIT	DESCRIPTION
69.68.10.002	No.	1 x 60 W GLS lamp

4-2 Lighting fitting , portable (hand lamp) , flame / explosion proof , for tungsten filament lamps, suitable for zone 1 area, EXe , to IEC 79-10 and IEC 79-7 , group II A gases to IEC 79-12 , min . temperature class of T2 to IEC 79-8 , IP65 , 220 –230 volts , without lamp, provided with heat resistant wire terminal and earthing screw , with fixing wire carriers, clips or similar devices. Equipped with both fixed (stand) supporting means, and suspension hook, C/W fifty meters of 3x2.5 SQ.mm . rubber insulated flexible extension cable rolled up on a cable drum.

Entry : 16 or 20 mm ET , with EX cable Gland.

Body : oil and acid resistant non-corrosive , metal body , with rubber collar.

Globe : Clear hard Glass C/W galvanized steel wire guard.

Lampholder: E27 (EX) porcelain to IEC 238 and IEC 79-1 .



MESC No.	UNIT	DESCRIPTION
69	No.	1 x 60 GLS lamp

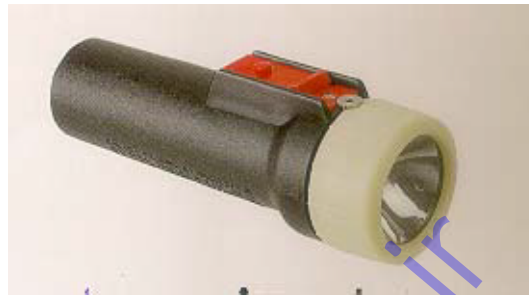
4-3 Hand torch

4-3-1 Hand torch , general purpose for tungsten filament lamps , dry battery operated , weatherproof , IP 54 to IEC 598-2-4, C/W control switch and lamp. Without cells.

Body : oil and acid resistant type , suitable for two cylindrical dry battery size 32x61 mm.

Lampholder : E10 or P13 .5s .

Note : this hand torch shall not be used in hazardous areas.



MESC No.	UNIT	DESCRIPTION
69.55.30.102	No.	3 volts

4-3-2 Hand torch , flame / explosion proof , industrial use , for tungsten filament lamps, suitable for zone 1 area , EXe . to IEC 79-10 and IEC 79-7 Group IIA gases , to IEC 79-12 , min. temperature Class of T2 to IEC 79-8, IP 65, dry battery operated, C/W control switch and lamp. Without cells.

Body : oil and acid resistant, non-corrosive material C/W impact rubber cover suitable for three cylindrical dry batteries.

Lampholder: E10 or P13.5S.



MESC No.	UNIT	DESCRIPTION
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69	No.	4.5 volts
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5-

OBSTRUCTION LIGHTING

5-1 **Obstruction lighting fitting, industrial for filament lamps, outdoor use, suitable for towers, IP54 , to ICAO regulations , IEC 598 , 220-230 volts, provided with heat resistant wire and porcelain wire terminal and earthing screw.**

Entry : PG16, complete with cable gland suitable for 13 mm dia cable .

Body : non- corrosive metal.

Globe : aviation-red omnidirectional reflector glass , resistant to thermal shock.

Lampholder : E 27 porcelain.



MESC No.	UNIT	DESCRIPTION
69.65.34..	No.	1 x 100 W

6-

starter, for tublar flourscent lamp circuits glow starter type , to IEC 155 (latest edition) , two – pin, 220-230 volts, 50 HZ , enclosure made of plastic material.



MESC No.	UNIT	DESCRIPTION
69	No.	40 to 80 watts flourscent lamps



7-SELF-BALLASTED (COMPACT) FLUORECENT LAMPS FOR GENERAL LIGHTING SERVICES ACCORDING TO STANDARD IEC 968 AND IEC 969 .

EDISON SCREWED CAP E27 .

SUITABLE FOR A.C. SUPPLY VOLTAGE OF 220 V. +/-15% , 50 HZ .

LAMPS SHALL BE CLEARLY AND DURABLY MARKED WITH :

MANUFACTURER NAME OR TRADE MARK .

RATED VOLTAGE .

RATED WATTAGE .

RATED FREQUENCY .

MESC NO:(690246 ... 2) 18 – 20 WATT (EQUAL TO 100 W.

INCANDESCENT LAMPS LIGHTING)