



LIGHTING

C1D2 FLOOD – INTRODUCTION & LOGIC



Class I, Div. 2, Groups A,B,C,D
 Class II, Div. 1&2, Groups EFG
 Class III
 Suitable for wet locations
 Marine Rated (US Only)
 NEMA 3, 4X
 IP66

CS US File LR11713

IEC Ex Rated model (w/IEX suffix)
 Zone 2 and Zone 21 areas
 Ex nA IIC T6...T3, Gc
 Ex tb IIIC T160°C Db
 Tamb -50°C <Ta<+55°C, IP66
 IECEx Certificate CSA 14.0002X
 ATEX CML 14ATEX3087/4088

PETROBRIGHT® LED

FEATURES-SPECIFICATIONS

Applications

LED Floods are designed for installations where moisture, dirt, dust, corrosion and vibration may be present, or NEMA 3 and 4X areas where wind, water, snow or high ambients can be expected. They can be used in locations made hazardous by the presence of flammable vapors or gases or combustible dusts as defined by the NEC.

Typical applications include manufacturing plants, and certain chemical and petrochemical processing facilities, sewage treatment plants, off-shore and dockside installations, garages and storage facilities.

Compliances

- UL-8750 for LED lighting
- ANSI/UL 1598(A)
- UL-844 Standard for lighting fixtures for hazardous locations, Class I, Division 2; Class II, Divisions 1 and 2; Class III
- CSA C22.2 no. 137-M1981 electric luminaires for use in hazardous locations
- Enclosed and gasketed
- NEMA 3, 4X
- IP66
- IEX suffix Zone 2/21 to IEC 60079-0, 60079-15, 60079-31 Standards

Materials

- Body, end caps and lens frame corrosion resistant copper-free aluminum alloy with baked powder epoxy/polyester finish, electrostatically applied for complete, uniform corrosion protection
- All external hardware - stainless steel
- Thermal shock and impact resistant glass lens
- High temperature silicone gasketing
- Trunnion heavy gauge galvanized steel with painted finish

LED Flood Features and Standards

- Crisp White Light for Excellent Color Rendering - Chromaticity 5000K (CCT); approx. 70 CRI
- Energy Savings - High lumens per watt
- Long Life - to 100,000+ maintenance free hours to 70% initial lumens
- Ambient suitability -50°C to 55°C up to 125W
- Instant On - Including after power interruption
- World Voltage 120 - 277VAC 50/60Hz
- Solder-LESS LED Board Connections - Vibration Resistant
- LM80-08* Measurement of lumen maintenance for LED light sources
- LM79-08* Certified "Absolute" Photometry, including Chromaticity Color for Solid State Lighting
- L70 Values - Industry Nomenclature for Hours of use to 70% of initial Lumens - TM-21* & Calculated

Supplemental surge protection included as standard for AC models only

PATENTED LUMINAIRE DESIGN



KFL with KFS-6 Slipfitter mount on 2" pipe

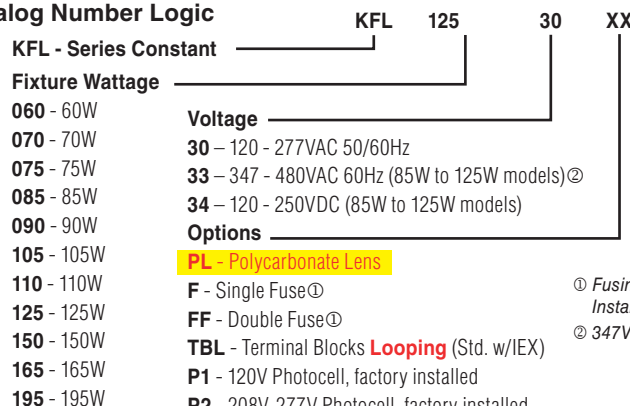


Dark Sky Visor KFL-DARK

* LM-xx & TM-xx are Illumination Engineering Society Standards designed to promote uniformity in testing procedures among test labs and manufacturers. For more information go to www.ies.org

IEC Units include Qty. 3 6mm terminals plus external ground as standard

Catalog Number Logic



Consult website for current list of approved luminaires

Construction Note:
 Models with dual metric entries are tapped with one plugged and the standard 3/4" NPT entry will be plugged.

Ⓞ Fusing not for Canadian or Marine Installations
 Ⓞ 347V-480V +40°C Max

- PL - Polycarbonate Lens**
- F** - Single FuseⓄ
- FF** - Double FuseⓄ
- TBL** - Terminal Blocks **Looping** (Std. w/IEX)
- P1** - 120V Photocell, factory installed
- P2** - 208V-277V Photocell, factory installed
- P3** - 347V Photocell, factory installed
- QD** - Quick Disconnect
- D20** - 2x M20 entries
- D25** - 2x M25 entries
- D75** - 2 x 3/4" NPT
- SY** - 316 SS Yoke
- IEX** - IECEx & ATEX includes TBL and External Ground (to 125W)

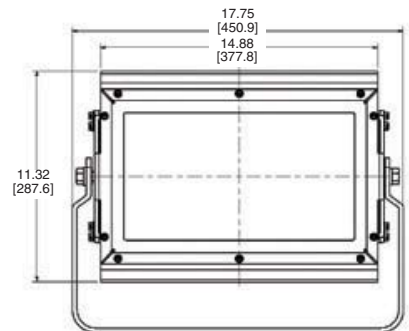


C1D2 FLOOD – ORDERING INFORMATION & TECHNICAL DATA

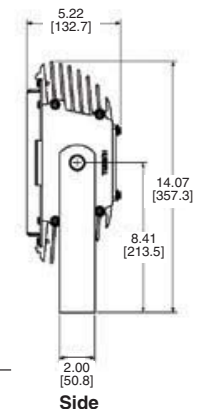
| ORDERING INFORMATION AND AMBIENT SUITABILITY | | | | | | C1D2 ^④ | | C1D2 ^④ SIMULTANEOUS | | C2D1 ^④ | | IEC ZONE 2 ^⑤ | | IEC ZONE 21 ^⑤ | | L70 | | |
|--|----------------|------------|------------|--------------------|---------------------|-------------------|------|--------------------------------|-----------|-------------------|-----------|-------------------------|------|--------------------------|--------|-------|------------|--------|
| CATALOG NO. ^① | WEIGHT LBS./KG | WATTS | VOLTAGE | AMPS ^{①②} | LUMENS ^③ | 40°C | 55°C | 40°C | 55°C | 40°C | 55°C | 40°C | 55°C | 40°C | 55°C | TM-21 | CALCULATED | |
| KFL06030 | 30.00 / 13.61 | 60 | 120-277VAC | 0.50-0.20 | 6111 | T6 | T5 | T3C | T3C | T3C (EFG) | T3C (EFG) | T6 | T5 | 145-70 | 160-85 | 60100 | 270000 | |
| KFL07030 | | 70 | 120-277VAC | 0.60-0.30 | 9742 | T6 | T5 | T3C | T3C | T3C (EFG) | T3C (EFG) | T6 | T5 | 145-70 | 160-85 | 72600 | 278000 | |
| KFL07530 | | 75 | 120-277VAC | 0.60-0.30 | 7454 | T6 | T5 | T3C | T3C | T3C (EFG) | T3C (EFG) | T6 | T5 | 145-70 | 160-85 | 60100 | 270000 | |
| KFL08530 | | 85 | 120-277VAC | 0.70-0.30 | 10840 | T6 | T5 | T3C | T3C | T3C (EFG) | T3C (EFG) | T6 | T5 | 145-70 | 160-85 | 72600 | 278000 | |
| KFL08533 | | | 347-480VAC | 0.24-0.17 | | | | | | | | | | | | | | |
| KFL08534 | | | 120-250VDC | 0.70-0.27 | | | | | | | | | | | | | | |
| KFL09030 | | 90 | 120-277VAC | 0.80-0.40 | 9023 | T6 | T5 | T3C | T3C | T3C (EFG) | T3C (EFG) | T6 | T5 | 145-70 | 160-85 | 60100 | 270000 | |
| KFL09033 | | | 347-480VAC | 0.28-0.23 | | | | | | | | | | | | | | |
| KFL09034 | | | 120-250VDC | 0.80-0.36 | | | | | | | | | | | | | | |
| KFL10530 | | 105 | 120-277VAC | 0.90-0.40 | 10370 | T4A | T4A | T3C | T3C | T3C (EFG) | T3C (EFG) | T4 | T4 | 145-70 | 160-85 | 60100 | 270000 | |
| KFL10533 | | | 347-480VAC | 0.31-0.23 | | | | | | | | | | | | | | |
| KFL10534 | | | 120-250VDC | 0.90-0.36 | | | | | | | | | | | | | | |
| KFL11030 | | 110 | 120-277VAC | 0.90-0.40 | 13780 | T6 | T5 | T3C | T3C | T3C (EFG) | T3C (EFG) | T6 | T5 | 145-70 | 160-85 | 72600 | 278000 | |
| KFL11033 | | | 347-480VAC | 0.31-0.23 | | | | | | | | | | | | | | |
| KFL11034 | | | 120-250VDC | 0.90-0.36 | | | | | | | | | | | | | | |
| KFL12530 | | 125 | 120-277VAC | 1.00-0.50 | 15340 | T6 | T5 | T3C | T3C | T3C (EFG) | T3C (EFG) | T6 | T5 | 145-70 | 160-85 | 72600 | 278000 | |
| KFL12533 | | | 347-480VAC | 0.35-0.29 | | | | | | | | | | | | | | |
| KFL12534 | | | 120-250VDC | 1.00-0.45 | | | | | | | | | | | | | | |
| KFL15030 | | 150 | 120-277VAC | 1.25-0.54 | 18550 | T5 | - | T3C | - | T3C (EFG) | - | - | - | - | - | - | 60300 | 190000 |
| KFL16530 | | 165 | 120-277VAC | 1.38-0.60 | 19220 | T5 | - | T3C | - | T3C (EFG) | - | - | - | - | - | - | 72600 | 278000 |
| KFL19530 | 195 | 120-277VAC | 1.63-0.70 | 21940 | T5 | - | T3C | - | T3C (EFG) | - | - | - | - | - | - | 72600 | 278000 | |

- ① Cat. nos. are 120-277VAC models, see logic for 347-480V.
- ② Amperage measured at 120VAC; 277VAC calculated
- ③ Extra high Lumens per Watt LED models
- ④ Use 75° minimum Supply Wire @40°C Ambient; 90 @55°C Ambient
- ⑤ First number is lens temperature under 25mm layer of dust; Second number is lens temp. for dust cloud.

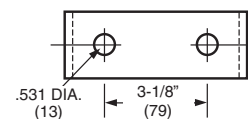
Dimensions



Front



Side



Trunnion Mounting Detail



KFS-6 Slipfitter **KFCB** Cross Arm Mount **KFVB** Wall/Pipe Bracket **K4040** Wall Bracket **4041** Tenon Fitting

| KFL MOUNTS AND ACCESSORIES ^① | |
|---|--|
| CATALOG NUMBER | DESCRIPTION |
| KFS-6 | Steel Slipfitter for 2" Pipe (2-3/8" o.d.) Tenon. Slips 3.75" Over Pipe. |
| KFCB | Heavy Duty Cast-Iron Crossarm Fitting for Horizontal Trunion |
| KFVB | Heavy Duty Wall Mount and/or Pipe Clamp Fitting Clamps 2" Pipe (2-3/8" o.d.) Through 2-1/2" Pipe (2-7/8" o.d.) |
| K4040 | Heavy Duty Steel Wall Bracket. (Must be with KFCB Crossarm Fitting). |
| 4041 | Heavy Duty Steel Wall Bracket 2" Pipe (2-3/8" o.d.) Tenon Fitting. Uses with KFS-6. |
| KFLG ^⑥ | Wire Guard, 316 Stainless Steel (not used with KFL-DARK) |
| VMSC10 ^⑦ | 10' Stainless Steel Safety Cable with loop grip |
| KFL-DARK ^{⑧⑨} | Dark Sky Visor, White Painted Aluminum (not used with KFLG) |
| KFL-DOOR | Replacement Door and Lens Assembly (for units w/o internal reflectors) |
| KFL-DOOR2 ^{④⑤} | Replacement Internal Reflector and Lens Assembly |

- ① Fittings available to adapt trunion mount floodlights to crossarms, poles and walls. Must be ordered separately.
- ② Drop limit 1'. Attaches to luminaire cable provision and to mounting structure.
- ③ Designed to eliminate uplight when aimed at 45°.
- ④ Only for models factory supplied with internal reflector.
- ⑤ Not backward compatible with units originally shipped without internal reflector.
- ⑥ KFLG and KFL-DARK cannot be used together.

LIGHTING



C1D2 FLOOD – INTRODUCTION & LOGIC



PETROBRIGHT® LED



FEATURES-SPECIFICATIONS Applications

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Typical applications include manufacturing plants, and certain chemical and petrochemical processing facilities, sewage treatment plants, off-shore and dockside installations, garages and storage facilities.

Compliances

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- CSA C22.2 no. 137-M1981 electric luminaires for use in hazardous locations
- Enclosed and gasketed
- NEMA 3, 4X
- IP66

Materials

- Body and lens frame corrosion resistant copper-free aluminum alloy with baked powder epoxy/polyester finish, electrostatically applied for complete, uniform corrosion protection
- All external hardware – stainless steel
- Thermal shock and impact resistant glass lens (Polycarbonate available)
- High temperature silicone gasketing
- Trunnion heavy gauge 316 stainless steel

LED Flood Features and Standards

- Crisp White Light for Excellent Color Rendering – Chromaticity 5000K (CCT); approx. 70 CRI
- Energy Savings – High lumens per watt
- Long Life – to 100,000+ maintenance free hours to 70% initial lumens
- Ambient suitability -40°C to 55°C up to 250W[Ⓣ] to -50°C for non-hazardous applications
- Instant On – Including after power interruption
- World Voltage 120 – 277VAC 50/60Hz
- Solder-LESS LED Board Connections – Vibration Resistant
- LM80-08* Measurement of lumen maintenance for LED light sources
- LM79-08* Certified “Absolute” Photometry, including Chromaticity Color for Solid State Lighting
- L70 Values – Industry Nomenclature for Hours of use to 70% of initial Lumens – TM-21* & Calculated

Class I, Div. 2, Groups A, B, C, D
 Class I, Zone 2, IIC, IIB, IIA
 Class II, Div. 1 & 2, Groups E, F, G
 Class III
 Suitable for wet locations
 Marine Rated (US only)
 NEMA 3, 4X
 IP66

IEC Ex Rated Model (w/ IEX suffix)
 Zone 2 and Zone 21 areas
 Ex nA IIC T6...T3, Gc
 Ex tb IIC T105°C Db
 Tamb -50°C ≤ Ta ≤ +55°C, IP66
 IECEx Certificate
 QPS 15.0011
 ATEX Certificate
 CML 15ATEX4079X (nA)
 & CML 15ATEX3080X (tb)



PATENTED LENS and REFLECTOR DESIGN



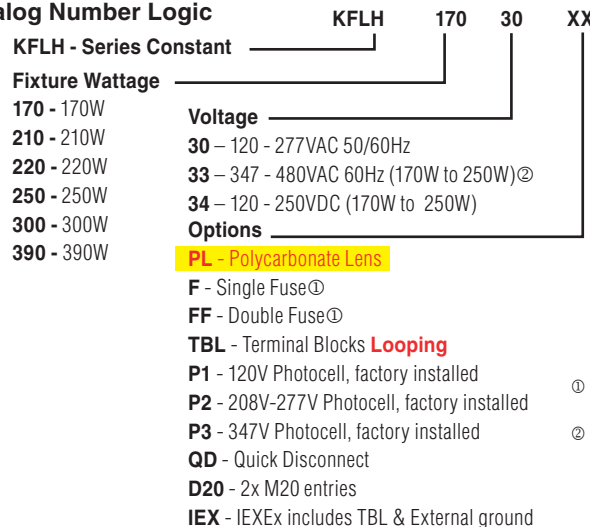
KFLH Luminaire

Dark Sky Visor KFLH-DARK

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Supplemental surge protection included as standard for AC models only

Catalog Number Logic



Construction Note:
 Standard with two 3/4" NPT entries with one plugged
 Models for dual metric entries have slip holes with metric locknuts and certified blanking plugs

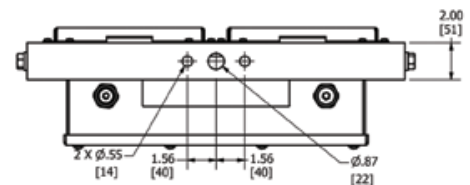
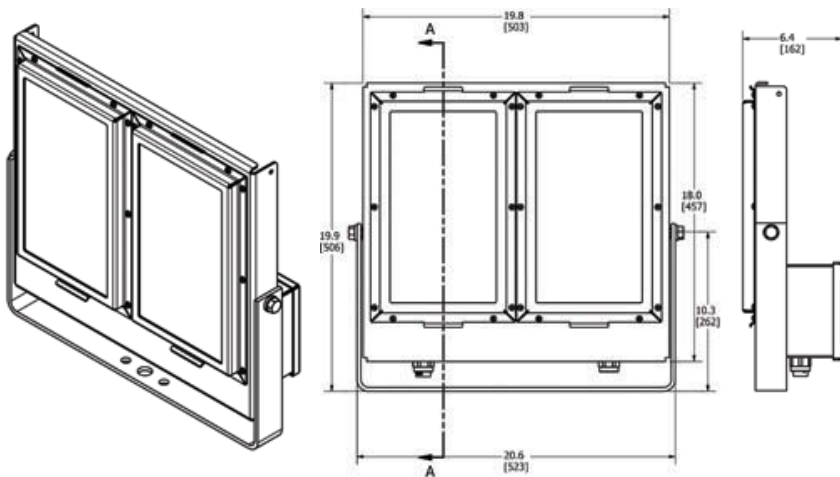
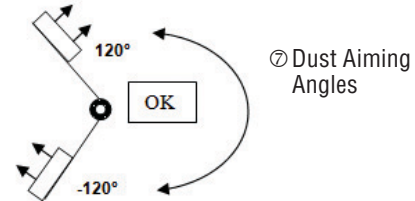
Ⓣ Fusing not for Canadian or Marine Installations
 Ⓣ 347V-480V +40°C Max



C1D2 FLOOD – ORDERING INFORMATION & TECHNICAL DATA

| ORDERING INFORMATION AND AMBIENT SUITABILITY | | | | | | C1D2 (C1Z2) | | C1D2 SIMULTANEOUS | | C2D1 | | L70 | |
|--|----------------|------------|------------|-----------|----------|-------------|------|-------------------|------|------|-------|--------|------------|
| CATALOG NO. | WEIGHT LBS./KG | WATTS | VOLTAGE | AMPS | LUMENS | 40°C | 55°C | 40°C | 55°C | 40°C | 55°C | TM-21 | CALCULATED |
| KFLH17030 | 25.00 / 11.3 | 170 | 120-277VAC | 1.46-0.63 | 21620 | T4A (T4) | T4 | T4 | T3C | T4 | T3C | 72600 | 278000 |
| KFLH17033 | | | 347-480VAC | 0.51-0.36 | | T4 | T4 | T4 | T3C | | | | |
| KFLH17034 | | | 120-250VDC | 1.46-0.56 | | T4 | T4 | T4 | T3C | | | | |
| KFLH21030 | | 210 | 120-277VAC | 1.75-0.75 | 21220 | T4A (T4) | T4 | T4 | T3C | T4 | T3C | 60100 | 270000 |
| KFLH21033 | | | 347-480VAC | 0.61-0.43 | | T4 | T4 | T4 | T3C | | | | |
| KFLH21034 | | | 120-250VDC | 1.75-0.68 | | T4 | T4 | T4 | T3C | | | | |
| KFLH22030 | | 220 | 120-277VAC | 1.88-0.81 | 26970 | T4A (T4) | T4 | T4 | T3C | T4 | T3C | 72600 | 278000 |
| KFLH22033 | | | 347-480VAC | 0.65-0.47 | | T4 | T4 | T4 | T3C | | | | |
| KFLH22034 | | | 120-250VDC | 1.88-0.73 | | T4 | T4 | T4 | T3C | | | | |
| KFLH25030 | | 250 | 120-277VAC | 2.17-0.94 | 30950 | T4A (T4) | T4 | T4 | T3C | T4 | T3C | 72600 | 278000 |
| KFLH25033 | | | 347-480VAC | 0.75-0.54 | | T4 | T4 | T4 | T3C | | | | |
| KFLH25034 | | | 120-250VDC | 2.17-0.85 | | T4 | T4 | T4 | T3C | | | | |
| KFLH30030 | 300 | 120-277VAC | 2.48-1.07 | 37030 | T4A (T4) | T4 | - | - | - | - | 60300 | 107000 | |
| KFLH39030 | 390 | 120-277VAC | 3.30-1.43 | 40410 | T4A (T4) | T4 | - | - | - | - | 60300 | 190000 | |

- Ⓐ Cat. Nos. are 120 through 277VAC 50/60Hz; see logic for 347-480V or 125-250VDC input
- Ⓑ Amperage measured at 120VAC; 277VAC calculated
- Ⓒ Extra High Lumens per Watt LED Models
- Ⓓ Use 75°C Supply Wire @ 40°C Ambient; 90°C Wire @ 55°C Ambient
- Ⓔ 55°C only for 170W through 250W at 120-277VAC 50/60Hz or 125-250VDC; not 480VAC
- Ⓕ For Dust Applications, limit aiming angle between 120° and -120° to minimize buildup - see figure at right
- Ⓖ L70 is time in hours to 70% of initial lumens remaining. TM-21 based values require very long duration testing and is denoted "official reported" and is based on at least 6,000 minimum, to 12,000 hours testing (at time of printing). "Calculated" values by the major chip vendors utilized predict L70 life up to 278,000 hours.



| KFLH MOUNTS AND ACCESSORIES ① | |
|-------------------------------|--|
| CATALOG NUMBER | DESCRIPTION |
| KFS-6 | Steel Slipfitter for 2" Pipe (2-3/8" o.d.) Tenon. Slips 3.75" Over Pipe. |
| KFCB | Heavy Duty Cast-Iron Crossarm Fitting for Horizontal Trunnion |
| KFWB | Heavy Duty Wall Mount and/or Pipe Clamp Fitting Clamps 2" Pipe (2-3/8" o.d.) Through 2-1/2" Pipe (2-7/8" o.d.) |
| K4040 | Heavy Duty Steel Wall Bracket. (Must be with KFCB Crossarm Fitting). |
| 4041 | Heavy Duty Steel Wall Bracket 2" Pipe (2-3/8" o.d.) Tenon Fitting. Use with KFS-6. |
| KFLG | Wire Guard, 316 Stainless Steel (order 2 per fixture) |
| VMSC10 ② | 10' Stainless Steel Safety Cable with loop grip |
| KFLH-DARK ③ | Dark Sky Visor, White Painted Aluminum |
| KFLH-DOOR | Replacement Internal Reflector and Lens Assembly (order 2 per fixture as required) |



- ① Fittings available to adapt trunnion mount floodlights to crossarms, poles and walls. Must be ordered separately.
- ② Drop limit 1'. Attaches to luminaire cable provision and to mounting structure.
- ③ Designed to eliminate uplight when aimed at 45°.