

# KILLARK®

## LED FLOOD LIGHT SOLUTIONS

*..... Harsh and Hazardous Products .....*



**HSI=GREEN<sup>SM</sup>**  
HUBBELL SUSTAINABILITY INITIATIVE

[www.hubbell-killark.com](http://www.hubbell-killark.com)



**Harsh & Hazardous**

# Ex- LED Lighting and Control Switches








# LIGHTING

## LED FLOOD LIGHTS



### LIGHTING INDEX

PRODUCT	PAGE NO.	NEMA 4 (or 4X or IP66)	Class I, Div. 2 / Zone 2	Class I, Zone 2 Ex nR	Class II / III Div. I	Class II / III Div. 2	Class I, Div. 1 C, D / Zone 1	Class I, Div. 1 A, B, C, D / Zone 1	IECEX Zone 1	ATEX Zone 1	IECEX Zone 2	ATEX Zone 2
 KFLC Series .....	2-3	X	X		X	X						
 KFL Series .....	4-5	X	X		X	X					X	X
 KFLH Series .....	6-7	X	X		X	X					X	X
 KF1L Series .....	8-9	X	X		X	X	X		X	X	X	X
 Lighting Switches .....	10-11											



## COMPACT FLOOD – INTRODUCTION & LOGIC



Class I, Div. 2, Groups A,B,C,D  
 Class I, Zone 2, Groups IIC, IIB, IIA  
 Class II, Div. 1 & 2, Groups E,F,G  
 Class III  
 NEMA 4X

File LR11713

### PETROBRIGHT® LED

#### FEATURES-SPECIFICATIONS Applications

LED Compact 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 spot lighting or walkways in 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 1; Class II, Division 1; Class III
- CSA C22.2 no. 137-M1981 electric luminaires for use in hazardous locations
- Enclosed and gasketed
- NEMA 3, 4X, IP66

#### Materials

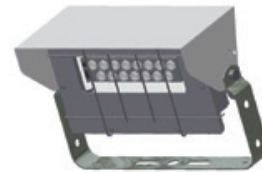
- Body and lens frame corrosion resistant copper-free aluminum alloy with baked powder epoxy/polyester finish, electrostatically applied for complete, uniform corrosion protection
- All external hardware – stainless steel
- Thermal shock and impact resistant extra heavy-duty glass lens
- High temperature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

#### LED Flood Features and Standards

- One 3/4" NPT hub & R-21 3/4" x 1/2" reducer is standard
- Crisp White Light for Excellent Color Rendering – Chromaticity 5000 K (CCT); approx. 70 CRI
- Energy Savings – High lumens per watt
- Long Life – 100,000+ maintenance free hours to 70% initial lumens
- Ambient suitability -40°C to 55°C
- Instant On – Including after power interruption
- 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

Patented Fixture Design

KFLC with KFS-6 Slipfitter mount on 2" pipe

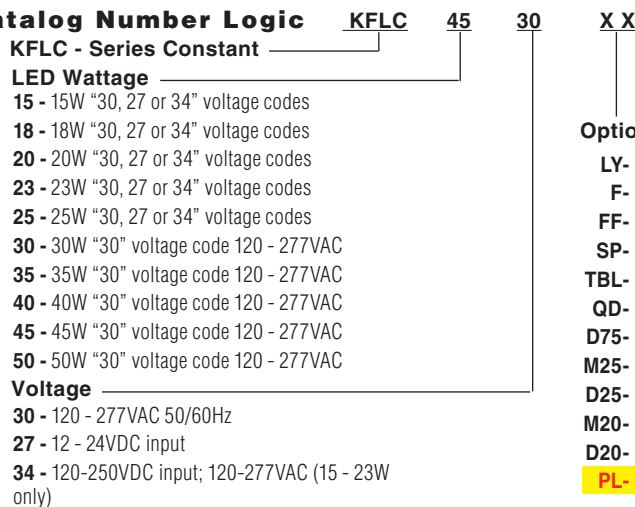


Dark Sky Visor KFLC-DARK



\* 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](http://www.ies.org)

#### Catalog Number Logic



© Fusing not for Canadian Marine Installations

#### Options

- **LY-** Less Yoke for Wall Mount
- **F-** Single Fuse ⊕
- **FF-** 2 Fuses ⊕
- **SP-** Surge Protection
- **TBL-** Terminal Blocks Looping
- **QD-** QuickDisconnect
- **D75-** Dual 3/4" threaded NPT entry
- **M25-** Single M25 Slip-hole Entry
- **D25-** Two M25 Slip-hole Entry
- **M20-** Single M20 Slip-hole Entry
- **D20-** Dual M20 Slip-hole Entry
- **PL-** Polycarbonate Lens



## COMPACT FLOOD – ORDERING & TECHNICAL DATA

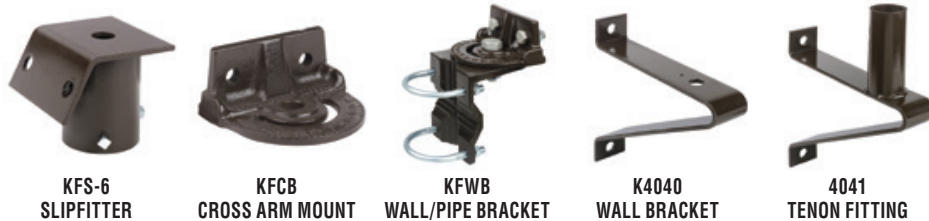
ORDERING INFORMATION AND AMBIENT SUITABILITY						C1D2		C1D2		C2D1		L70	
CATALOG NO.	WEIGHT LBS./KG	WATTS	VOLTAGE	AMPS	LUMENS	40°C	55°C	40°C	55°C	40°C	55°C	TM-21	CALCULATED
KFLC1527	9.50 / 4.31	15	12-24VDC	1.3-0.6	1435	T6	T6	T4	T3B	T4A	T4A	60100	270000
KFLC1530			120-277VAC	0.2-0.1									
KFLC1534			120-250VDC	0.2-0.1									
KFLC1827		18	12-24VDC	1.5-0.8	1830	T6	T6	T4	T3B	T4A	T4A	72600	278000
KFLC1830			120-277VAC	0.2-0.1									
KFLC1834			120-250VDC	0.2-0.1									
KFLC2027		20	12-24VDC	1.7-0.8	2170	T6	T6	T4	T3B	T4A	T4A	60100	270000
KFLC2030			120-277VAC	0.2-0.1									
KFLC2034			120-250VDC	0.2-0.1									
KFLC2327		23	12-24VDC	1.9-1.0	2550	T6	T6	T4	T3B	T4A	T4A	60100	270000
KFLC2330			120-277VAC	0.2-0.1									
KFLC2334			120-250VDC	0.2-0.1									
KFLC2527		25	12-24VDC	2.1-1.0	2667	T6	T6	T4	T3B	T4A	T4A	72600	278000
KFLC2530			120-277VAC	0.2-0.1									
KFLC2534			120-250VDC	0.2-0.1									
KFLC3030		30	120-277VAC	0.26-0.11	2662	T6	T6	T4	T3B	T4A	T4A	60100	270000
KFLC3530		35		0.30-0.13	3302	T6	T6	T4	T3B	T4A	T4A	60100	270000
KFLC4030		40		0.34-0.15	4039	T6	T6	T4	T3B	T4A	T4A	72600	278000
KFLC4530		45		0.38-0.17	4718	T6	T6	T4	T3B	T4A	T4A	72600	278000
KFLC5030		50		0.42-0.18	5353	T6	T6	T4	T3B	T4A	T4A	60300	190000

Extra high lumen per watt LED's

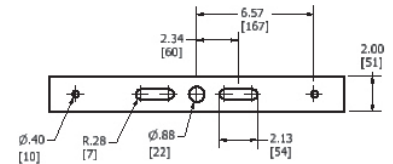
\* KFLC 30-50w Lumens are LM-79 absolute photometry. 15-25W are calculated based on driver output current.

\*\* All wattages are available as "30" voltage code 120-277VAC.

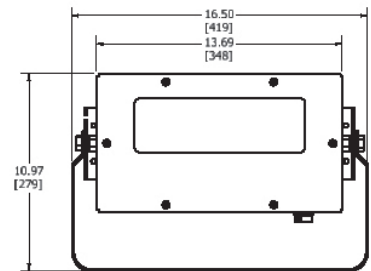
\*\* TM-21 based values require very long duration testing. IES TM-21 "official reported" is based on at 8,000 to 10,000 hours of LED chip manufacturer's LM-80 Testing at printing.



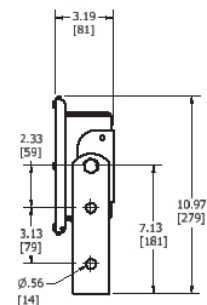
### Dimensions



Trunnion Mounting Detail



Front



Side

KFL MOUNTS AND ACCESSORIES ①	
CATALOG NUMBER	DESCRIPTION
KFLC-DARK ②	Reflector for field addition - No uplight at 45° to 70°
KFLCG	Guard
KFLC-DOOR ②	Replacement Door Assembly
NWP-HUBA	3/4" Aluminum Hub; Replacement or Additional (Max. 4)
VMSC10 ③	Safety Cable (through yoke)
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.

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 70°.



## 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  
 cSP US File LR11713  
 IEC Ex Rated model (w/IEX suffix)  
 Zone 2 and Zone 21 areas  
 Ex nA IIC T6...T3, Gc  
 Ex tb IIC 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

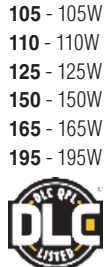
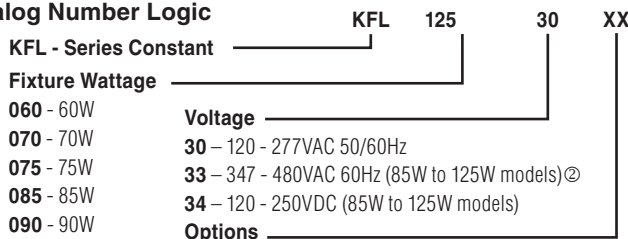


Dark Sky Visor KFL-DARK

\* 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](http://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

#### 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)

#### Construction Note:

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

① Fusing not for Canadian or Marine Installations

② 347V-480V +40°C Max

# LIGHTING

KFL SERIES

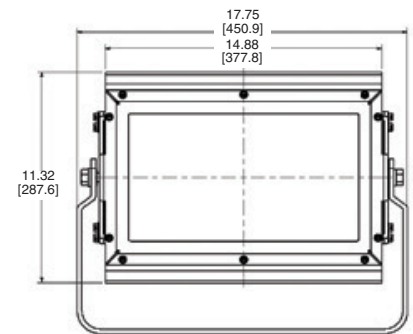


## C1D2 FLOOD – ORDERING INFORMATION & TECHNICAL DATA

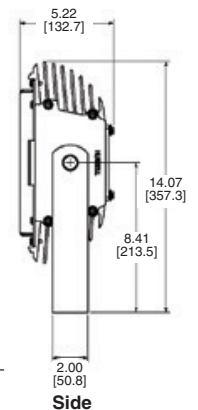
ORDERING INFORMATION AND AMBIENT SUITABILITY						C1D2 <sup>④</sup>		C1D2 <sup>④</sup> SIMULTANEOUS		C2D1 <sup>④</sup>		IEC ZONE 2 <sup>④</sup>		IEC ZONE 21 <sup>⑤</sup>		L70		
CATALOG NO. <sup>①</sup>	WEIGHT LBS./KG	WATTS	VOLTAGE	AMPS <sup>①②</sup>	LUMENS <sup>③</sup>	40°C	55°C	40°C	55°C	40°C	55°C	40°C	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.

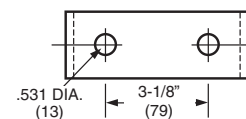
### Dimensions



### Front



### Side



### Trunnion Mounting Detail



**KFS-6**  
Slipfitter



**KFCB**  
Cross Arm Mount



**KFWB**  
Wall/Pipe Bracket



**K4040**  
Wall Bracket



**4041**  
Tenon Fitting

### KFL MOUNTS AND ACCESSORIES<sup>①</sup>

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. Uses with KFS-6.
KFLG <sup>②</sup>	Wire Guard, 316 Stainless Steel (not used with KFL-DARK)
VMSC10 <sup>②</sup>	10' Stainless Steel Safety Cable with loop grip
KFL-DARK <sup>③⑥</sup>	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 <sup>④⑤</sup>	Replacement Internal Reflector and Lens Assembly

- 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°.
- 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.



# KILLARK

## C1D2 FLOOD – INTRODUCTION & LOGIC



**PETROBRIGHT® LED**



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)



### 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

### 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<sup>②</sup> 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

**PATENTED LENS and REFLECTOR DESIGN**



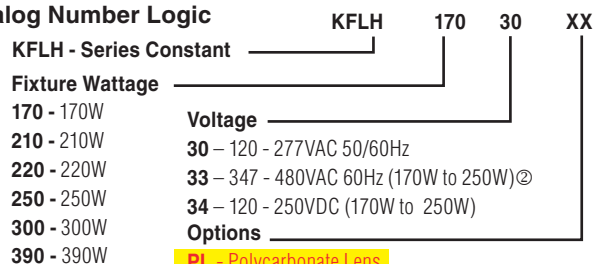
KFLH Luminaire

Dark Sky Visor KFLH-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](http://www.ies.org)

Supplemental surge protection included as standard for AC models only

### Catalog Number Logic



- F** - Single Fuse<sup>①</sup>
- FF** - Double Fuse<sup>①</sup>
- TBL** - Terminal Blocks **Looping**
- P1** - 120V Photocell, factory installed
- P2** - 208V-277V Photocell, factory installed
- P3** - 347V Photocell, factory installed
- QD** - Quick Disconnect
- D20** - 2x M20 entries
- IEX** - IEXEx includes TBL & External ground

**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

<sup>①</sup> Fusing not for Canadian or Marine Installations  
<sup>②</sup> 347V-480V +40°C Max

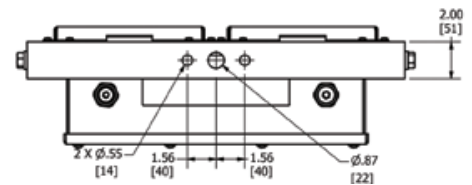
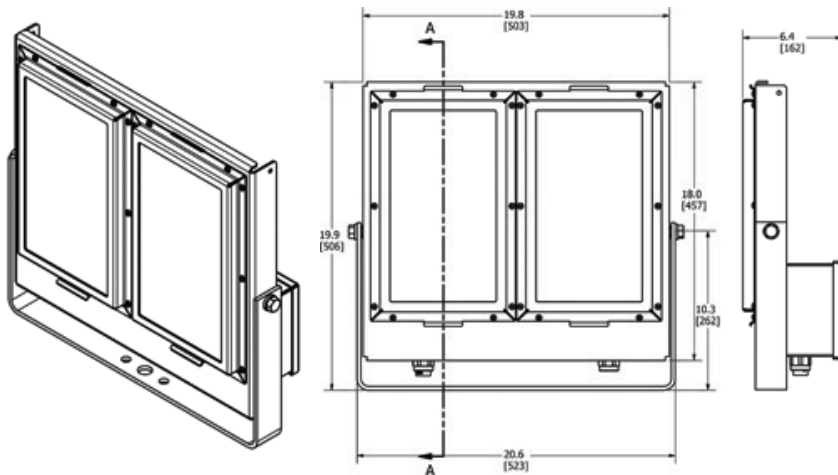
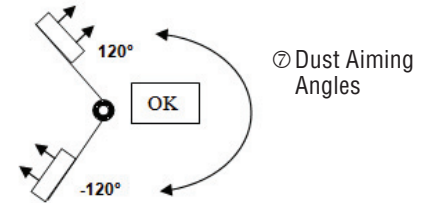




## C1D2 FLOOD – ORDERING INFORMATION & TECHNICAL DATA

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

- ① Cat. Nos. are 120 through 277VAC 50/60Hz; see logic for 347-480V or 125-250VDC input
- ② Amperage measured at 120VAC; 277VAC calculated
- ③ Extra High Lumens per Watt LED Models
- ④ Use 75°C Supply Wire @ 40°C Ambient; 90°C Wire @ 55°C Ambient
- ⑤ 55°C only for 170W through 250W at 120-277VAC 50/60Hz or 125-250VDC; not 480VAC
- ⑥ For Dust Applications, limit aiming angle between 120° and -120° to minimize buildup - see figure at right
- ⑦ 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°.



## C1D1 FLOOD – INTRODUCTION & LOGIC



**Class I, Div. 1&2, Groups B,C,D**  
**Class I, Zone 1&2, Groups IIB+H2, IIA**  
**Class II, Div. 1&2, Groups EFG, Class III**  
**Enclosure Type 4X, IP66 (-50°C to +55°C)**

File LR11713

IEC Ex Rated model (w/IEX or IEX4B suffix) Zone 1, Zone 21  
 Ex de IIB+H2 T6..T5, Gb, IP66  
 Tamb -20°C ≤ Ta ≤ +55°C; Option LT for -50°C ≤ Ta ≤ +55°CⓈ  
 Ex de IIB T6..T5, Gb, -50°C ≤ Ta ≤ +55°CⓈ  
 Ex tb IIIC T90°C Db, -50°C ≤ Ta ≤ +55°CⓈ  
 Certificate IECEx CSA 14.0010  
 ATEX Certificate SIRA14ATEX1159X

## PETROBRIGHT® LED

### FEATURES-SPECIFICATIONS

#### Applications

LED KF1L Series Explosion-proof 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 1598A
- UL-844 Standard for lighting fixtures for hazardous locations, Class I, Division 1; Class II, Division 1; Class III
- CSA C22.2 no. 137-M1981 electric luminaires for use in hazardous locations
- IEX or IEX4B suffix for Zone 1 and Zone 21 to IEC 60079-0,60079-1,60079-31, 60079-7 Standards
- Enclosed and gasketed
- NEMA 3, 4X
- IP66

#### 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 extra heavy-duty glass lens
- High temperature silicone gasketing
- Trunnion heavy gauge 316 SS

### LED Flood Features and Standards

- **Factory Sealed Construction**
- One 3/4" NPT & one M20 entry standard (see logic for other choices)
- **Supplemental surge protection (AC models 120-277VAC only) and looping terminals are standard**
- Crisp White Light for Excellent Color Rendering – Chromaticity 5000 K (CCT); approx. 70 CRI
- Energy Savings – High lumens per watt
- Long Life – 100,000+ maintenance free hours to 70% initial lumens
- 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

### Patent Pending Fixture Design



KF1L with KFS-6 Slipfitter mount on 2" pipe

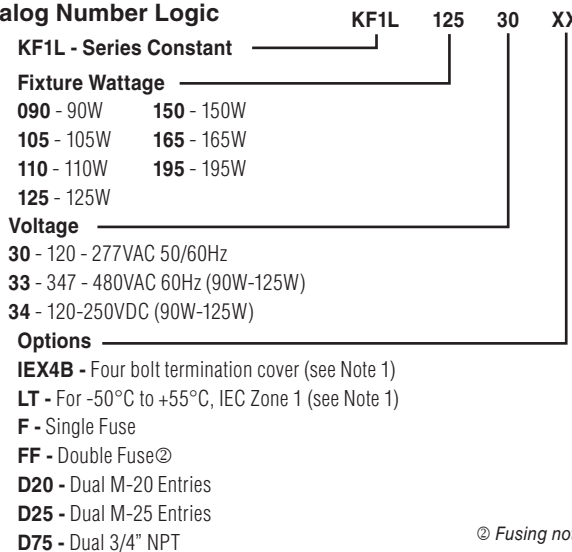


Dark Sky Visor KF1L-DARK

Suitable for Paint Spray

\* 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](http://www.ies.org)

### Catalog Number Logic



Ⓢ Construction/Certification Notes: KF1L units are standard with one 3/4" NPT hub & one M20 hub – both plugged, with an 8-bolt factory sealed termination chamber, suitable for CID1 BCD -50°C to +55°C and IEC Zone 1 Ex de suitable for -20°C to 55°C.

Use option LT for models needing IEC Zone 1, -50°C to +55°C suitability for hydrogen.

Option IEX4B utilizes 4 terminal cover bolts for Ex de and maintains all ratings EXCEPT CID1 BCD.

See logic for other entry options

Ⓢ Fusing not for Canadian or Marine Installations

# LIGHTING

**KF1L SERIES**



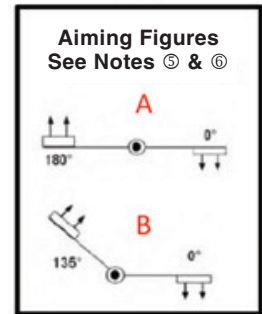
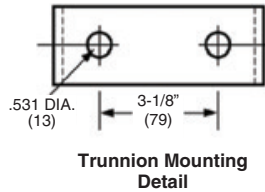
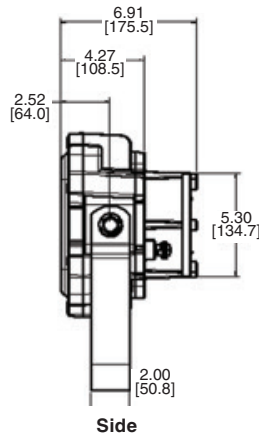
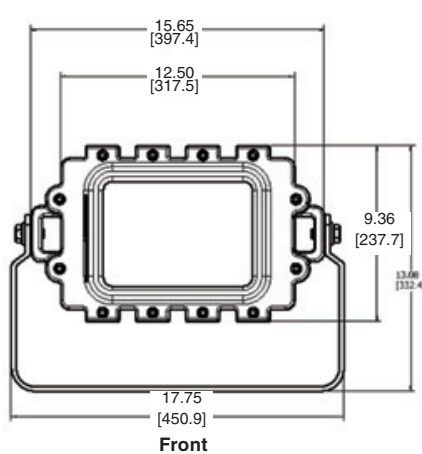
## C1D1 FLOOD – ORDERING & TECHNICAL DATA

ORDERING INFORMATION AND AMBIENT SUITABILITY						C1D1		C2D1		IEC ZONE 1		IEC ZONE 21		L70	
CATALOG NO.	WEIGHT LBS./KG	WATTS	VOLTAGE	AMPS	LUMENS	40°C	55°C	40°C	55°C	40°C	55°C	40°C	55°C	TM-21	CALCULATED
KF1L09030	46.00 / 20.87	90	120-277VAC	0.72-0.31	7182	T6	T6	(EFG)	⊙	T6	T5	160-75	175-90	60100	270000
KF1L09033			347-480VAC	0.25-0.18											
KF1L09034			120-250VDC	0.72-0.28											
KF1L10530		105	120-277VAC	0.85-0.37	8362	T6	T6	(EFG)	⊙	T6	T5	160-76	175-91	60100	270000
KF1L10533			347-480VAC	0.29-0.21											
KF1L10534			120-250VDC	0.85-0.33											
KF1L11030		110	120-277VAC	0.95-0.41	10590	T6	T6	(EFG)	⊙	T6	T5	160-77	175-92	72600	278000
KF1L11033			347-480VAC	0.33-0.24											
KF1L11034			120-250VDC	0.95-0.37											
KF1L12530		125	120-277VAC	1.10-0.48	11590	T6	T6	(EFG)	⊙	T6	T5	160-78	175-93	72600	278000
KF1L12533			347-480VAC	0.38-0.28											
KF1L12534			120-250VDC	1.10-0.43											
KF1L15030		150	120-277VAC	1.25-0.54	13280	T5	-	-	-	-	T5	-	-	60300	190000
KF1L16530		165	120-277VAC	1.38-0.60	13760	T5	-	-	-	-	T5	-	-	72600	278000
KF1L19530		195	120-277VAC	1.63-0.70	15707	T5	-	-	-	-	T5	-	-	72600	278000

- ① Yellow highlighted models have extra high lumen LED's.
- ② See logic for 347-480V availability
- ③ Amperage measured at 120VAC; 277VAC calculated
- ④ Use minimum 75° Supply Wire @40°C Ambient; 90°@55°C Ambient
- ⑤ CID1 40°/55° & C2D1 40°C use Aiming Figure "A" below.

- Ⓞ 55°C C2D1 EFG T3C Aiming Figure "B", 55° C2D1 EF T3A Aiming Figure "A"
- Ⓞ First number is lens temperature under 25mm layer of dust; Second number is lens temp for dust cloud.
- \*\* TM-21 based values require very long duration testing. IES TM-21 "official reported" is based on at 8,000 to 10,000 hours of LED chip manufacturer's LM-80 Testing at printing.

### Dimensions



KFL MOUNTS AND ACCESSORIES①	
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.
KFLG	Wire Guard, 316 Stainless Steel
VMSC10	10' Stainless Steel Safety Cable with loop grip②
KF1L-DARK	Dark Sky Visor, White Painted Aluminum③
KF1L-DOOR	Replacement Door and Lens Assembly

- 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°.



KFS-6 Slipfitter



KFCB Cross Arm Mount



KFWB Wall/Pipe Bracket



K4040 Wall Bracket



4041 Tenon Fitting



## TUMBLER SWITCH



XS-3C



Complete Unit When Assembled

Class I, Div. 1 & 2, Groups C, D  
 Class I, Zones 1 & 2, Groups IIB, IIA  
 Class II, Div. 1 & 2, Groups E, F, G  
 Class III  
 NEMA 7 (C, D) 9 (E, F, G)

LISTED - FILE E53360

Certified - File LR11712

APPROVED File OP7A5.AE  
 See files for details or call Killark.

### FEATURES-SPECIFICATIONS

#### Applications

Used where making, breaking, or changing connections in an electric circuit are required.

#### Features

**XS and XST Series** are front lever rotary operated switch assemblies with standard provisions for padlocking in either "ON" or "OFF" position. The lever is connected to a threaded stainless steel shaft which passes through the cover.

XS TUMBLER SWITCH						
CATALOG NUMBER					SWITCH STYLE	SWITCH RATING 120/277 VAC, 1Ø
COVER		HUB SIZE	COMPLETE UNITS (BOX, COVER AND SWITCH)			
WITH DEVICE	WITHOUT DEVICE		DEAD-END	FEED-THRU		
XS-1C	XNS-1C	1/2"	XS-11C	XS-41C	1-POLE	20A <sup>ⓐ</sup>
		3/4"	XS-21C	XS-51C		
XS-2C	XNS-2C	1/2"	XS-12C	XS-42C	2-POLE	20A <sup>ⓐ</sup>
		3/4"	XS-22C	XS-52C		
XS-8C	XNS-8C	1/2"	XS-18C	XS-48C	3-POLE	①
		3/4"	XS-28C	XS-58C		
XS-3C	XNS-3C	1/2"	XS-13C	XS-43C	3-WAY/ SPDT No center off	20A <sup>ⓐ</sup>
		3/4"	XS-23C	XS-53C		
XS-5C	XNS-5C	1/2"	XS-15C	XS-45C	SPDT Center off	20A <sup>ⓐ</sup>
		3/4"	XS-25C	XS-55C		
XS-6C	XNS-6C	1/2"	XS-16C	XS-46C	DPDT No center off	20A <sup>ⓐ</sup>
		3/4"	XS-26C	XS-56C		
XS-7C	XNS-7C	1/2"	XS-17C	XS-47C	DPDT Center off	20A <sup>ⓐ</sup>
		3/4"	XS-27C	XS-57C		
XS-1D	XNS-1D	1/2"	XS-11D	XS-41D	1-POLE	30A <sup>ⓐ</sup>
		3/4"	XS-21D	XS-51D		
XS-2D	XNS-2D	1/2"	XS-12D	XS-42D	2-POLE	30A <sup>ⓐ</sup>
		3/4"	XS-22D	XS-52D		
XS-4C	—	—	—	—	4-WAY	20A <sup>ⓐ</sup>

① Rated 15 amperes, 240/480 VAC., 3Ø: 3HP-240 VAC., 5 HP-480 VAC.

ⓐ Horsepower rated 1 HP at 120VAC, 2 HP at 240VAC.

Certified - File LR11712

XS TUMBLER SWITCH				
HUB SIZE	CATALOG NUMBER		SWITCH STYLE	SWITCH RATING 347 VAC, 1Ø
	COMPLETE UNITS (BOX, COVER AND SWITCH)			
	DEAD-END	FEED-THRU		
3/4"	XST15-21C	XST15-51C	1-Pole	15a
1"	XST15-31C	XST15-61C		
3/4"	XST20-21C	XST20-51C	1-pole	20a
1"	XST20-31C	XST20-61C		
3/4"	XST15-23C	XST15-53C	3-way/spdt No center off	15a
1"	XST15-33C	XST15-63C		
3/4"	XST20-23C	XST20-53C	3-way/spdt No cover off	20a
1"	XST20-33C	XST20-63C		

# CONTROLS

HKH SERIES



## SIZE 1 NON-METALLIC 2 POLE ROCKER SWITCH



**ATEX/IECEX Certified**

CE 0539 Ex II 2 G Ex de IIC T4 Gb  
 CE 0539 Ex II 2 D Ex tb IIIC T4 Db IP66  
 DEMKO 15 ATEX 1405X  
 Ex de IIC Gb  
 Ex tb IIIC Db IP66  
 IECEX UL 15.0054X  
 Ambient Range:  $-45^{\circ}\text{C} \leq \text{Ta} \leq 60^{\circ}\text{C}$

**cULus Certified**

Class I, Zone 1, AEx de IIC Gb / Ex de IIC Gb X  
 Zone 21, AEx tb IIIC Db IP66 / Ex tb IIIC Db IP66 X  
 Class I, Division 2, Groups A, B, C, D  
 Class II, Division 1, Groups E, F, G (Canada Only)  
 Class II, Division 2, Groups E, F, G  
 Class III  
 UL50, 50E, 508, UL60079-0, -1, -7, -31  
 Type 3, 4, 4X, 12, 13  
 Ambient Range:  $-45^{\circ}\text{C} \leq \text{Ta} \leq 60^{\circ}\text{C}$



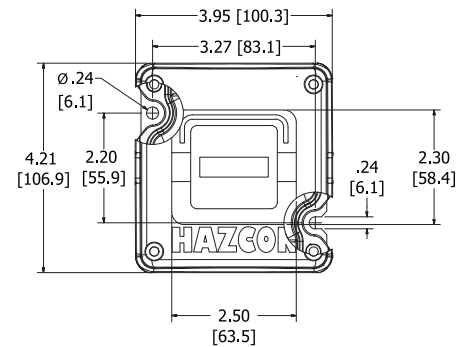
**FEATURES-SPECIFICATIONS**

# HAZCON™

Rocker Switch Single Throw Double Pole  
 Luminous fluorescent strip supplied for ease of locating.  
 One entry listed is located at bottom.

**Contact Block Features:**

- **UL Electrical Rating:** 690Vac, 20A, 50-60Hz, 60Vdc, 5A, 110Vdc, 2A, 255Vdc, 1.5A, 1/2 HP @120Vac, 1 HP@208/240/277Vac, A600/P600- Pilot Duty 350Vac- Tungsten Lamp.
- **Wire Allowances:** WIRE RANGE with 1 or 2 WIRES: #22 to #12 AWG (SOL & STR) and #10 AWG (STR).
- **IEC Electrical Ratings:** AC690V 16A AC-12, 50-60 Hz, AC230V 16A AC-15, 50-60Hz, DC60V 5A DC-12, DC125 1A DC-12.
- **Wire Allowances:** WIRE RANGE with 1 or 2 WIRES: 0.5 to 2.5mm (SOL & STR) and 4.0mm<sup>2</sup> (STR)
- Silver Alloy contacts with Gold Flashing.



Enclosure depth 4.5" (114mm)

HKH ROCKER SWITCH MAINTAINED IN 2 POSITIONS				
CATALOG NUMBER DIN RAIL MOUNT	ENTRY SIZE	CONTACT ARRANGEMENT		CONTACT BLOCKS
		IEC	NEMA	
HKH1AND2RS4K8	3/4" NPT SS HUB			2 N.O.
HKH1ANDARS4	M20 Clearance hole			

HKH ROCKER SWITCH MAINTAINED IN 2 POSITIONS				
CATALOG NUMBER DIN RAIL MOUNT	ENTRY SIZE	CONTACT ARRANGEMENT		CONTACT BLOCKS
		IEC	NEMA	
HKH1AND2RS1K8	3/4" NPT SS HUB			1 N.C. / 1 N.O.
HKH1ANDARS1	M20 Clearance hole			



**KILLARK**<sup>®</sup>

3940 Dr. Martin Luther King Drive  
St. Louis, MO 63113  
TEL: (314) 531-0460 FAX: (314) 531-7164  
www.hubbell-killark.com • killarkinfo@hubbell.com

**Hubbell Electrical Systems**

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**Hubbell Canada LP**

870 Brock Road South  
Pickering, Ontario L1W 1Z8  
(905) 839-1138  
infohclp@hubbell-canada.com

**Hubbell de Mexico**

Av. Insurgentes Sur 1228, Piso 8  
Col. Tlacoquemécatl Del Valle  
C.P. 03200, Mexico D.F.  
Tel: (01 52) 559-151-9999  
info@hubbell.com.mx

