

# Hazardous location LED Flood Lights



#### **CERTIFICATIONS AND COMPLIANCES**

NEC and CEC	IEC and ATEX (94/9/EC)
Cl. I, Zone 1, Group IIB	Zones 1 & 21 and 2 & 22
UL: Class I, Zone 1, AEx d IIB T4 Gb	ATEX: II 2G Ex d IIB T4 Gb II 2D Ex tb IIICT 130°C Db IP67 (or IP65)
cUL: Ex d IIBT4 Gb X	IECEx: Ex d IIB T4 Gb Ex tb IIICT 130°C Db IP67 (or IP65)
Certificate/file number: UL/cUL E353024	Certificate numbers: DEMKO 14 ATEX 1208667X IECEx UL 14.0048X

#### **GENERAL SPECIFICATIONS**

Model	EF1A -11	EF1A -12				
Rated Voltage	24V DC 100 to 240V AC					
Voltage Range	21.6 to 26.4V DC	90 to 264V AC				
Rated Power (typ.)	17W (at rated voltage)	19W (at rated voltage)				
Dielectric Strength	500V AC 1 minute input - FG 2000V AC 1 minute input					
Insulation Resistance	$100 M\Omega$ minimum (500V DC megger) input - FG					
Vibration Resistance (damage limits)	Frequency 5 to 55Hz, amplitude 0.5mm					
Shock Resistance (damage limits)	1000m/s <sup>2</sup>					
Operating Temperature	-20 to +50°C (no freezing)					
Operating Humidity	45 to 85% RH (no condensation)					
Storage Temperature	-35 to +70°C (no freezing)					
Life	Over 50,000 hours (The illumination duration in which the brightness maintains a minimum of 70% of initial value at 25°C)					
Material	Housing: aluminum, front panel: stainless steel, mounting bracket: stainless steel Lens surface: reinforced glass					
Weight (approx.)	2.9Kg (without mounting bracket), 3.1Kg (with mounting bracket)					

#### PRODUCT DESCRIPTION

With UL Class I, Zone 1 and Type 4X ratings, the EF1A series can be used in hazardous locations, making it well-suited to handle applications in oil & gas industries, water treatment, chemical plants, painting booths and more. This design also allows for increased mounting versatility with mounting options including adjustable, fixed angle, or no mounting bracket. And with major international certifications, EF1A can even be used in applications worldwide.

### **KEY FEATURES**

- Hazardous location LED flood lights (Class I, Zone 1 and Zone 2)
- Heavy-duty aluminum housing with reinforced glass lens
- Narrow-angle and wide-angle beam models available
- Clear or translucent lenses
- Available with adjustable, fixed angle or no mounting bracket
- Four conduit sizes available
- Type 4X (IP67) without switch
- Type 3S (IP65) with switch



## **PART NUMBERS**

## WITHOUT PUSHBUTTON SWITCH - TYPE 4X (IP67)

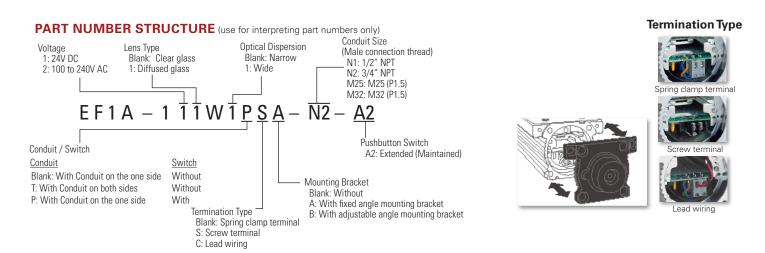
Rated Voltage	Optical Dispersion	Mounting Bracket	Lens Type ①	Conduit Entry ②	Termination Type ③	Conduit Size (Male connection thread) ④	Part No.
100 to	Narrow	Without (4-M6 screw on the back of EF1A)	Blank: Clear glass 1: Diffused glass	Blank: One Side T: Both Sides	Terminal S: Screw Terminal	N1: 1/2"NPT N2: 3/4"NPT M25: M25 (P1.5) M32: M32 (P1.5)	EF1A-12①W②③-④
		With (Fixed angle)					EF1A-120W@3A-@
		With (Adjustable angle)					EF1A-12@W@3B-4
240V AC	Wide	Without (4-M6 screw on the back of EF1A)					EF1A-12@W1@3-4
		With (Fixed angle)					EF1A-12@W1@3A-4
		With (Adjustable angle)					EF1A-12@W1@3B-49
24V DC	Narrow	Without (4-M6 screw on the back of EF1A)					EF1A-11@W@3-@
		With (Fixed angle)					EF1A-11@W@3A-4
		With (Adjustable angle)					EF1A-11@W@3B-4
	Wide	Without (4-M6 screw on the back of EF1A)					EF1A-11@W1@3-4
		With (Fixed angle)					EF1A-11@W1@3A-@
		With (Adjustable angle)					EF1A-11@W1@3B-49

## WITH PUSHBUTTON SWITCH - TYPE 3S (IP65)

Rated Voltage	Optical Dispersion	Mounting Bracket	Lens Type ①	Conduit Entry ②	Termination Type ③	Conduit Size (Male connection thread) ④	Part No.
100 to 240V AC	Narrow	Without (4-M6 screw on the back of EF1A)	Blank: Clear glass 1: Diffused glass	P: One Side (Another Side Switch) *	1 0 1	N1: 1/2"NPT N2: 3/4"NPT M25: M25 (P1.5) M32: M32 (P1.5)	EF1A-12①WP③-④-A2
		With (Fixed angle)					EF1A-12①WP③A-④-A2
		With (Adjustable angle)					EF1A-12①WP③B-④-A2
	Wide	Without (4-M6 screw on the back of EF1A)					EF1A-12@W1P@-@-A2
		With (Fixed angle)					EF1A-12@W1P3A-4-A2
		With (Adjustable angle)					EF1A-12@W1P3B-4-A2
	Narrow	Without (4-M6 screw on the back of EF1A)					EF1A-11 @WP3-4-A2
24V DC		With (Fixed angle)					EF1A-11@WP3A-4-A2
		With (Adjustable angle)					EF1A-11@WP3B42
	Wide	Without (4-M6 screw on the back of EF1A)					EF1A-11@W1P@-@-A2
		With (Fixed angle)					EF1A-11@W1P3A-4-A2
		With (Adjustable angle)					EF1A-11@W1P3B-4-A2

<sup>\*</sup> End of Part No. is marking A2 (pushbutton switch)

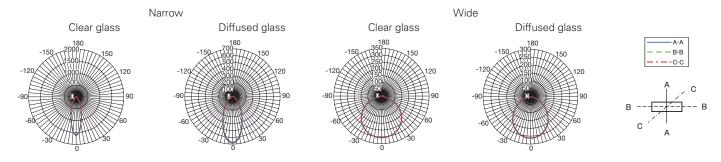
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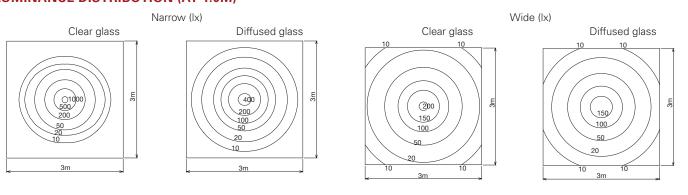
#### **LED OPTICAL SPECIFICATIONS**

Lens Type	Cle	ear	Diffused				
Collecting Lens (Optical Dispersion)	With	Without	With	Without			
Number of LEDs	16						
Color Temperature (typ.)	5700K (Cool White)						
Total Luminous Flux (typ.)	960lm						
Reference Illuminance (typ.) At 1.0m directory below	1100lx	450lx	205lx	175lx			

## **OPTICAL DISPERSION (CD/1000LM)**

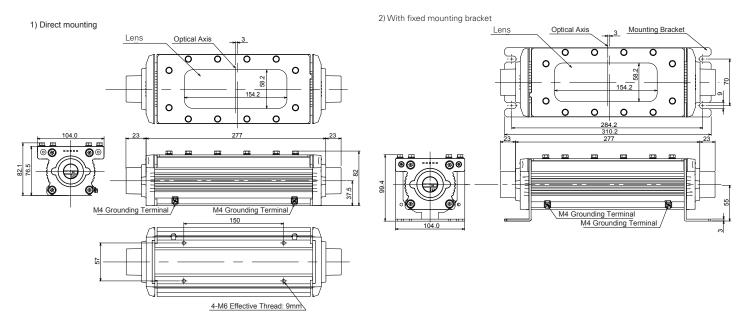


## **ILLUMINANCE DISTRIBUTION (AT 1.0M)**



#### **DIMENSIONS (MM)**

3) With angle adjustable bracket



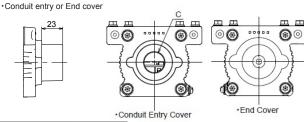
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Lens Optical Axis 3 Mounting Bracket

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M4 grounding terminal
M4 grounding terminal

(4) Dimension of conduit entry and ON/OFF switch and end cover





M25 M32 •With ON/OFF Switch



