

## EF1A Series

### Hazardous locations: Oil & Gas, Water Treatment, Chemical Plants, Painting Booths

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.

- 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
- IP65 (with switch)



#### LED Optical Specifications

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

#### Certifications and Compliances

NEC and CEC	IEC and ATEX (94/9/EC)
Cl. I, Zone 1, Groups 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 IIIC T 130°C Db IP67 (or IP65)
c-UL: Ex d IIB T4 Gb X	IECEx: Ex d IIB T4 Gb Ex tb IIIC T 130°C Db IP67 (or IP65)
Certificate/file number: UL/c-UL E353024	Certificate numbers: DEMKO 14 ATEX 1208667X IECEx UL 14.0048X

#### General Specifications

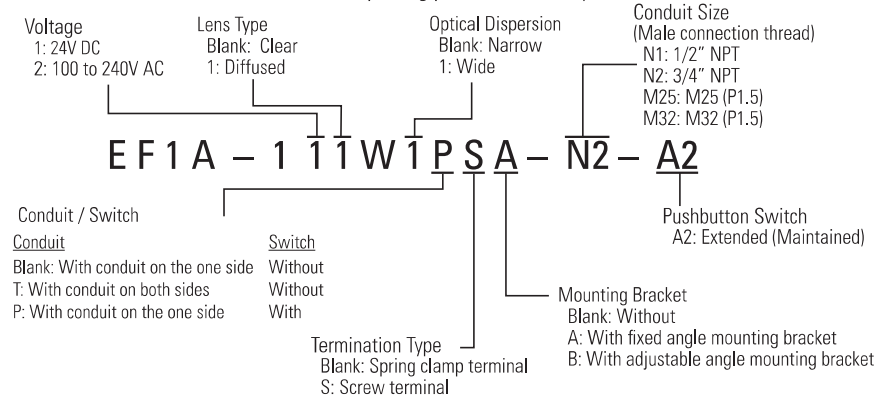
Model	EF1A -11	EF1A -12
Rated Voltage	24V DC	100 to 240V AC
Voltage Range	21.6 to 26.4V DC	90 to 264V AC
Rated Power (Typ.)	17W (at rated voltage)	19W (at rated voltage)
Dielectric Strength	500V AC 1 minute input - FG	2000V AC 1 minute input - FG
Insulation Resistance	100MΩ minimum (500V DC megger) input - 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 <sup>1</sup>	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: reinforced glass	
Weight (approx.)	2.9Kg (without mounting bracket), 3.1Kg (with mounting bracket)	

## Part Numbers

Rated Voltage	Optical Dispersion	Lens Type ①	Conduit Entry ②	Termination Type ③	Conduit Size ④	Pushbutton Switch ⑤	Mounting Bracket	Part No.	
100 to 240V AC	Narrow	Blank: Clear glass 1: Diffused glass	Blank: One Side T: Both Sides P: One Side (An- other Side Switch)*	Blank: Spring Clamp Terminal S: Screw Terminal	N1: 1/2"NPT N2: 3/4"NPT M25: M25 (P1.5) M32: M32 (P1.5)	Empty: Without pushbutton switch - type 4x (IP67)	Without (4-M6 screw on the back of EF1A)	EF1A-12①W②③-④-⑤	
							With (Fixed angle)	EF1A-12①W②③A-④-⑤	
							With (Adjustable angle)	EF1A-12①W②③B-④-⑤	
	Wide						Without (4-M6 screw on the back of EF1A)	EF1A-12①W1②③-④-⑤	
							With (Fixed angle)	EF1A-12①W1②③A-④-⑤	
							With (Adjustable angle)	EF1A-12①W1②③B-④-⑤	
24V DC	Narrow					A2: With pushbutton switch - type 3S (IP65)	(Male connection thread)	Without (4-M6 screw on the back of EF1A)	EF1A-11①W②③-④-⑤
								With (Fixed angle)	EF1A-11①W②③A-④-⑤
								With (Adjustable angle)	EF1A-11①W②③B-④-⑤
	Wide	Without (4-M6 screw on the back of EF1A)	EF1A-11①W1②③-④-⑤						
		With (Fixed angle)	EF1A-11①W1②③A-④-⑤						
		With (Adjustable angle)	EF1A-11①W1②③B-④-⑤						

\* End of Part No. is marked A2 (pushbutton switch)

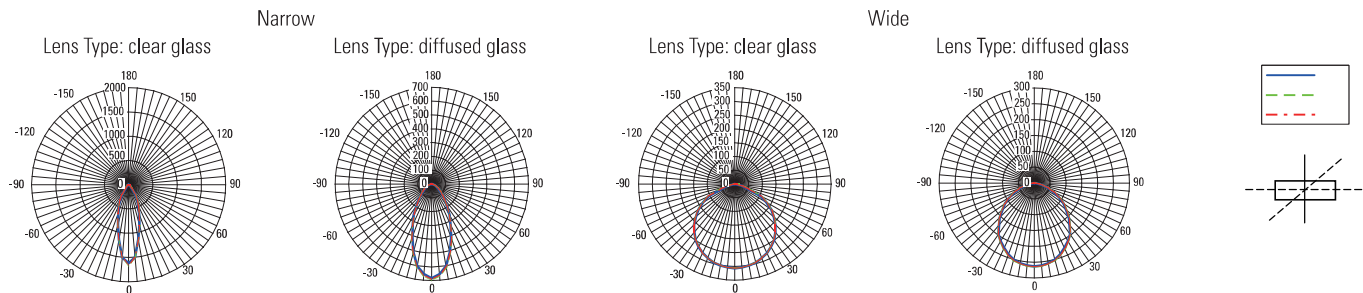
## Part Number Structure (use for interpreting part numbers only)



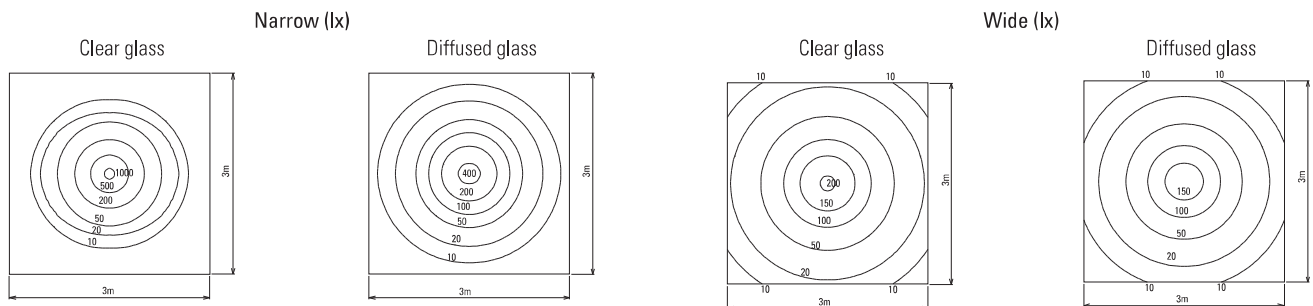
## Termination Type



## Optical Dispersion (cd/1000lm)

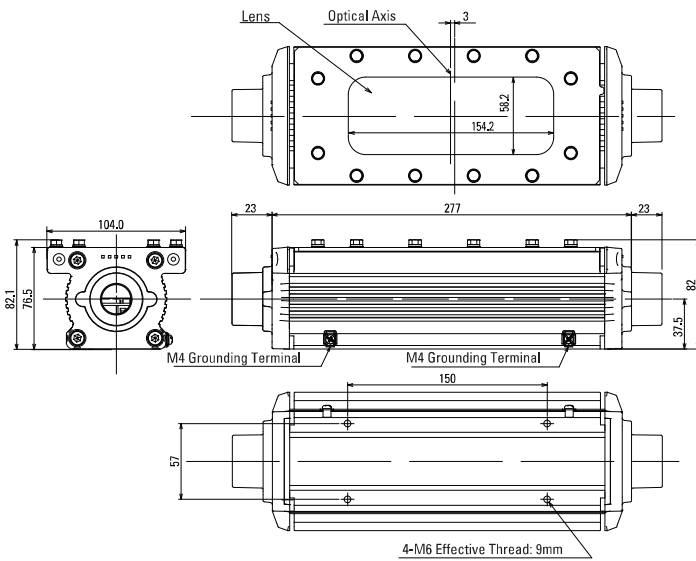


## Illuminance Distribution (at 1.0m)

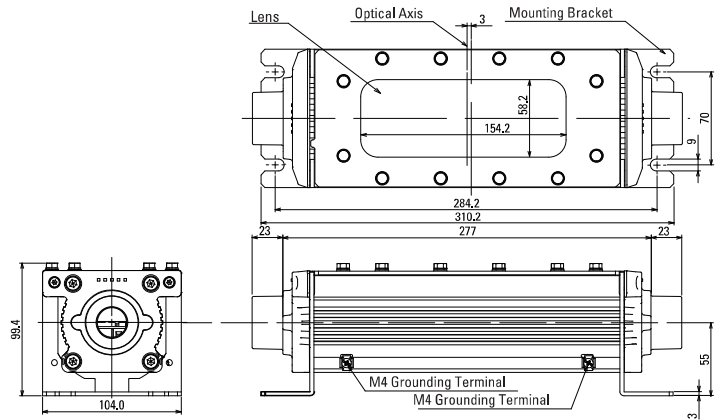


## Dimensions

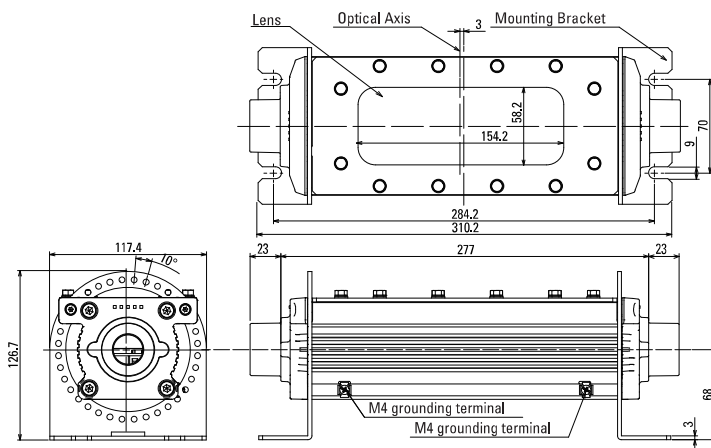
1) Direct mounting



2) With fixed mounting bracket

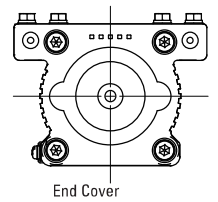
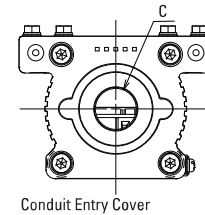
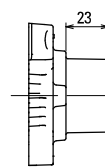


3) With angle adjustable bracket



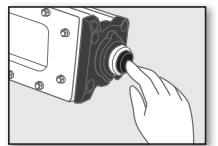
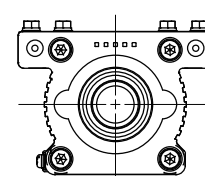
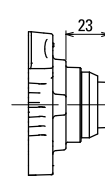
(4) Dimension of conduit entry and ON/OFF switch and end cover

Conduit entry or End cover



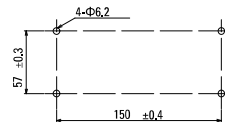
Conduit entry size	C
N1	1/2" NPT
N2	3/4" NPT
M25	M25 <sup>P1.5</sup>
M32	M32 <sup>P1.5</sup>

With ON/OFF Switch

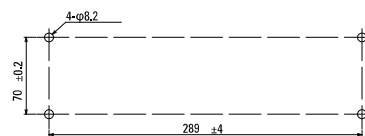


(5) Mounting hole layout

1) Direct mounting



2) With mounting bracket/angle adjustable bracket



(6) Attachments

- Instruction Manual.....1
- Hexagon Wrench (3).....1 (only with bracket)
- Hexagon Wrench (5).....1



With angle adjustable bracket